ETHOS URBAN

15 August 2019

13070/17532

Penrith City Council
601 High Street
Penrith NSW 2750

DA18/0381 (2018/342126) STAGE 3 EAST WEST CONNECTOR ROAD, PENRITH CITY COUNCIL

This amendment application has been prepared by Ethos Urban on behalf of Maryland Development Company Pty Ltd (Lendlease) in relation to a development application currently before the Land and Environment Court, originally submitted to Penrith City Council for the construction of Stage 3 of the East West Connector Road, St Marys.

The amendment seeks to add remediation of contaminated land to the development application.

This application is supported by the following documents:

- Contamination Management Plan for Stages 1 to 3 of the East West Connector Road, prepared by JBS&G (**Attachment A**);
- Phase 1 Preliminary Site Assessment East West Connector Road, prepared by JBS&G (**Attachment B**);
- Remedial Action Plan Stage 2b and Stage 3 – East West Connector Road, prepared by JBS&G (**Attachment C**);
- Phase 2 Environmental Site Assessment Stage 3, prepared by JBS&G (**Attachment D**); and
- Interim Advice IA2 Variation Section 34 – Stages 1 to 3, East West Connector Road, prepared by Zoic Environmental (**Attachment E**).

1.0 Background

DA18/0381 was lodged with Penrith City Council on 18 April 2018 and seeks consent for the development of Stage 3 of the East West Connector Road, being the intersection of the Dunheved Link Road and Links Road within the St Marys ADI site, St Marys.

Specifically, the application sought consent for the demolition of the existing haul road and intersection and the construction of the Dunheved Link Road / Links Road intersection comprising:

- importation and reuse of material to elevate the road above flood levels;
- widening of existing road footprint;
- installation of road underlay;
- provision of new pavement and street lighting;
- provision of pedestrian and cycle paths along the road corridor;
- services upgrades where required;
- stormwater upgrades as required; and
- street lighting upgrade to suit design alignment.

This amendment to the existing application has been prepared in response to contamination investigation results identifying that remediation of part of the proposed site is required and seeks development consent for Category 1 Remediation Works within the development description. Further description of the proposed amendments and environmental assessment follows below.

2.0 Amended Development Description

Based on the proposed amendments to the application, the development description is intended to be updated per below. Words proposed to be deleted are shown in ~~**bold strike through**~~ and words to be inserted are shown in ***bold italics***.

The demolition of the existing haul road and intersection and the construction of the Dunheved Link Road / Links Road intersection comprising

- importation and reuse of material to elevate the road above flood levels;
- widening of existing road footprint;
- installation of road underlay;
- provision of new pavement and street lighting;
- provision of pedestrian and cycle paths along the road corridor;
- services upgrades where required;
- stormwater upgrades as required; ~~**and**~~
- street lighting upgrade to suit design alignment***; and***
- ***Category 1*** Remediation ~~**(if required)**~~ ***within the DA boundary***.

2.1 Amended Proposal Lot Descriptions

At the time of lodgement, the Stage 3 of the East West Connector Road affected Lot 1 DP1132380.

Since the lodgement of the applications, numerous lot registrations associated with the Central Precinct development have resulted in lot descriptions changing across the broader St Marys site, however no change has occurred to the lot details subject to this Stage 3 application. Only part of Lot 1 DP1132380 is affected by the application.

3.0 Proposed amendments to the application

The proposed amendments to the development applications comprises the clarification of the type of remediation required on the site as Category 1 Remediation under the State Environmental Planning Policy 55 – Remediation of Land (SEPP55), being remediation that requires consent. Category 1 Remediation, under Clause 9(d) of SEPP55, includes remediation work that is 'development for which another State environmental planning policy or a regional environmental plan requires development consent'.

The site is subject to the Sydney Regional Environmental Plan No.20 – Hawkesbury-Nepean River (SREP20), which under Clause 8(2), specifies:

> *Any such development that may be carried out only with development consent is indicated in the item by the words Consent required. The council of the area in which development is*

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proposed to be carried out is the consent authority for that development for the purposes of this plan, except where the Act provides otherwise.

Furthermore, Clause 11(4) of SREP20 provides as follows:

(4) Remediation of contaminated land
Definition:
Removing soil or other deposits from, or otherwise remediating, contaminated land. For the purposes of this definition, contaminated land means land on which hazardous substances occur at concentration levels above background levels, where an assessment (carried out in accordance with guidelines circulated to councils by the Department) has indicated the substances pose, or are likely to pose, an immediate or long-term hazard to human health or to the environment.

As such, the proposed development involves Category 1 Remediation and therefore requires development consent.

At the time of lodgement of the applications, it was not known to what extent remediation may have been required. This has been clarified through on-site investigations by JBS&G after lodgement (refer to **Attachments A** and **B**).

4.0 Proposed Category 1 Remediation

A Phase 2 Environmental Site Assessment (**Attachment D**) has been undertaken by JBS&G.

The Phase 2 Assessment identified that concentrations of heavy metals, Poly aromatic hydrocarbons (PAHs), Total Recoverable Hydrocarbons (TRH)/BTEX (Benzene, toluene, ethylbenzene and Xylenes), Organochlorine pesticides (OCPs), Polychlorinated Biphenyls (PCBs) and asbestos were reported below the site adopted health-based criteria, and no asbestos containing material was observed in samples. Concentrations of copper and zinc did exceed conservative ecological investigation levels, however for the proposed use as a road were not considered relevant.

Analysis of per- and poly-fluroalkyl substances (PFAS) identified detectable levels in a number of locations, included where concentrations exceeded the adopted criteria. PFAS impacted soil is present, associated with soils adjacent to the Dunheved Open Channel and in Links Road in the western portion of the proposed Stage 3 intersection.

4.1 Remediation Action Plan

The Remediation Action Plan (**Attachment C**) sets out the approach to manage the remediation of the identified PFAS within the Dunheved Links Road footprint.

The preferred remediation options and/or management adopted by NSW EPA have been established within the NEPC (2013) Assessment of Site Contamination Policy Framework as follows:

- On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level; and
- Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site; or

If the above options are not practicable:

- Consolidation and isolation of the soil on site with a properly designed barrier; and
- Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill; or

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- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

It is proposed that impacted soils are removed from the Stage 2b and Stage 3 site and placed within the designated PFAS impacted soils stockpiling area to undergo remediation at a later stage, following EPA endorsement of the final remedial strategies.

4.1.1 Remediation Approach

The intended remediation works proposed as part of the amended applications involves the excavation of PFAS impacted area which falls within the Stage 2b East West Connector Road and Stage 3 Dunheved Links Road alignment to an approximate depth of 1m below ground surface.

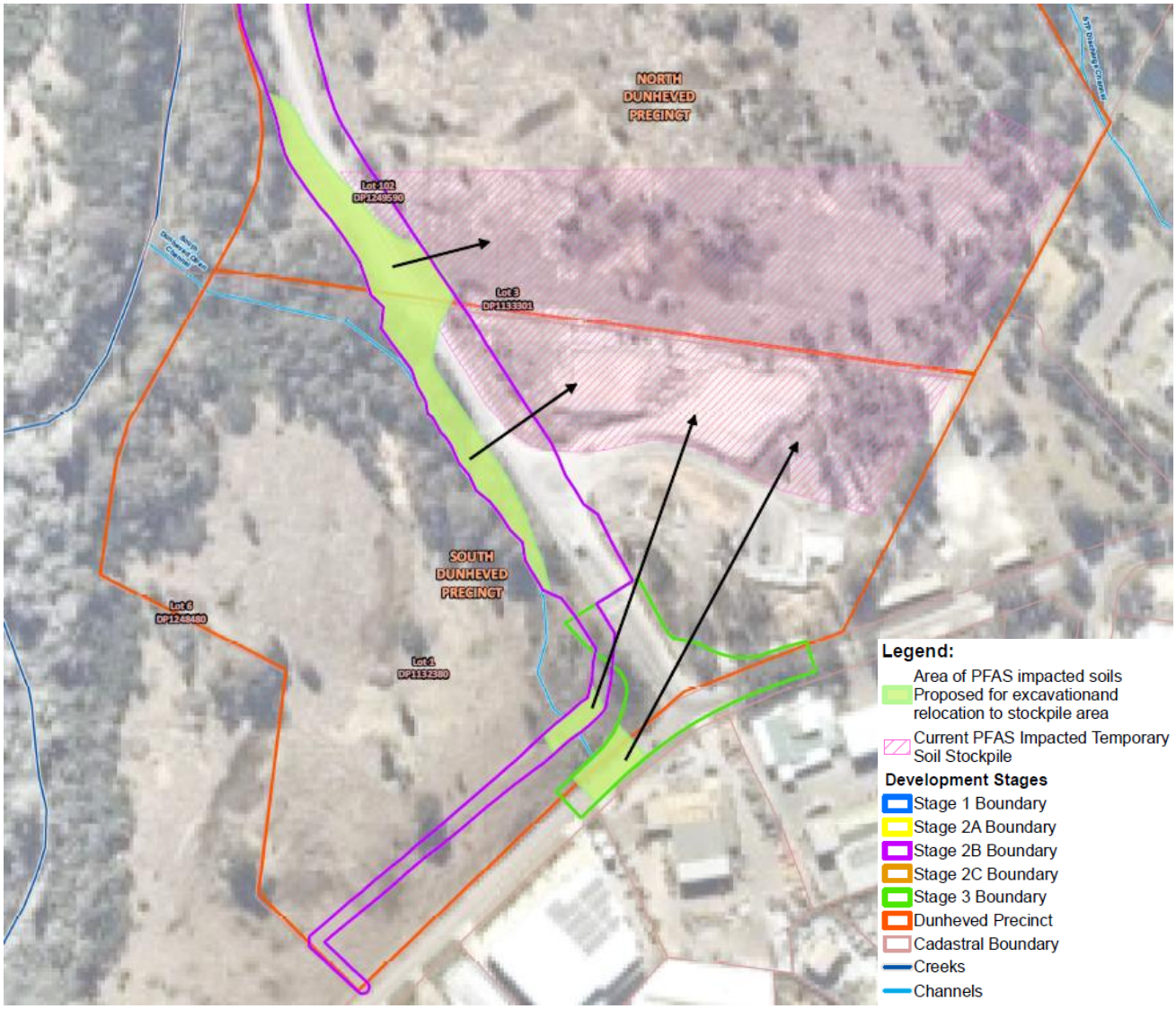

Figure 1 Extent of remediation proposed

Source: JBS&G

The excavated PFAS impacted soils will be relocated to the PFAS impacted soil stockpile located within the Dunheved Precinct to the east of the proposed road alignment (**Figure 1**). It is estimated that the excavated material is approximately 5,000m^3, covering an area of 6,000m^2, across both the Stage 2 and 3 sites.

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The materials within the PFAS impacted soils stockpile will undergo remediation at an unknown later date, following endorsement of a remedial strategy by the EPA including adoption of PFAS in soil criteria. This is anticipated to be the subject of a future development application/approval.

Within the extent of the roadway, confirmation of the remedial extent will be achieved through soil validation sampling along excavation walls and floor. Where detectable PFAS concentrations are identified in samples (above the laboratory limit of reporting) further excavation shall be required followed by collection of additional validation samples until all validation samples characterizing in situ soils are free of detectable PFAS concentrations. Preparation of a validation report to document this will be issued.

The proposed remediation methodology does not include incineration of excavated PFAS materials, and the extent of the contaminated soils is less than 3 hectares. Per above, the excavated material is approximately 5,000m^3, covering an area of 6,000m^2 across both the Stage 2 and Stage 3 application sites (noting Stage 2 is subject to separate development applications to Penrith City Council and Blacktown City Council). Therefore, the proposed remediation does not trigger the thresholds for designated development under Clause 15 Schedule 3 of the Environmental Planning and Assessment Regulation 2000. Any fill required to replace the excavated material will be obtained from elsewhere within the St Marys site or imported from outside the site, and will be validated as suitable prior to deposition to land.

It is concluded that the site can be made suitable for the proposed use in accordance with Clause 7 of SEPP 55, subject to the remedial works described above being carried out in accordance with the Remedial Action Plan (RAP).

5.0 Additional Environmental Assessment

The following provides additional environmental assessment addressing the key matters assessed in the original applications.

5.1 Flooding and Stormwater

The original assessment for flooding and stormwater concluded that the proposed East West Connector Road works result in an outcome consistent with, and in some parts better, than that outcome approved under the broader Bulk Earthworks DA14/1228 to Penrith City Council.

The proposed remediation works will not impact on the flooding and stormwater assessment, as no changes to the final level of the road is proposed, maintained at a 1% AEP flood immunity. No impacts on flood levels in the Regional Open Space area within the Penrith LGA (proposed to be filled) are expected with no works proposed in that location.

5.2 Flora and Fauna

Removal of trees is to be fully contained within the existing road corridor as assessed as part of the original two applications. Vegetation in this corridor was assessed as being removed to enable construction of the road, and as such the proposed remediation will not impact on the existing assessment outcomes, with no additional vegetation proposed to be removed.

5.3 Traffic and Transport

Traffic was assessed as part of the original application and identified that the impact of the East West Connector Road would result in the intersections of the East West Connector Road, Dunheved Link Road and Links Road operating sufficiently. The remediation as proposed would not result in any changes to traffic outcomes.

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5.4 Heritage

There are no heritage items near to the site that would be affected by the remediation works, and no further assessment is required.

5.5 Construction Management

No change to construction hours are proposed to complete the remediation activities.

The nearest residential property to the work site is located in Ropes Crossing at the eastern end of the Connector Road, approximately 1.3km to the north-east. The location of the construction works is considered remote enough to reduce any construction noise and dust impacts on neighbouring residents, with the nearest receivers to the site being light industrial premises adjacent to Links Road, outside the St Marys site.

The work sites location away from residential receptors will reduce the impacts from noise, vibration and dust associated with the construction works. Notwithstanding, mitigation measures to reduce noise and vibration, and dust and air quality impacts as a result of construction at the site will be implemented. A Construction Environmental Management Plan will be prepared as part of construction certificate documentation.

6.0 Conclusion

The proposed amendment to the existing DA18/0381 application seeks to clarify that Category 1 Remediation is included. Further investigations since the original lodgement of the application to Penrith Council identified PFAS affected areas within the alignment of the proposed Dunheved Link Road requires remediation to ensure the site is made suitable for the proposed use pursuant to Clause 7 of SEPP 55.

The remediation approach proposed involves the excavation of the affected land and placement in stockpiles within the Dunheved Precinct. Future remediation of the affected soil within the stockpiles would be subject to a separate development application, pending endorsement of remedial strategy by the EPA.

We trust that this information is sufficient to enable a prompt assessment of the applications.

Yours sincerely,

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APPENDIX A

Contamination Management Plan for Stages 1 to 3 of the East West Connector Road

JBS&G

Minter Ellison

Contamination Management Plan for Stages 1 to 3 of the East West Connector Road

St Mary's, NSW

14 August 2019

54782/123244 (Rev 0)

JBS&G

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Minter Ellison
Contamination Management Plan for Stages 1 to 3 of the East West Connector Road

St Mary's NSW

14 August 2019

54782/123244 (Rev 0)
JBS&G

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Appendices

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Appendix B – Material Tracking Sheets

Appendix C – Summary of Environmental Data held for the EWCR Corridor

Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Areas of Environmental Concern
B(a)P	Benzo(a)pyrene
Bgs	Below Ground Surface
COPC	Contaminants of Potential Concern
DP	Deposited Plan
EPA	NSW Environmental Protection Authority
ESA	Environmental Site Assessment
EWCR	East West Connector Road
HHERA	Human Health and Ecological Risk Assessment
JSE	Jordan Springs East
NEPC	National Environmental Pretention Measure
OCPs	Organochlorine pesticides
PAHs	Polyaromatic Hydrocarbons
PCBs	Polychlorinated biphenyls
PFAS	Per- and poly-fluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
ROS	Regional Open Space
SAQP	Sampling Analysis and Quality Plan
VOCs	Volatile Organic Compounds

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1. Introduction and Background

1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd to prepared a contamination management plan (CMP) for the proposed East West Connector Road (the site) inclusive of Stages 1, 2 and 3. The EWCR is located substantially within the former ADI St Marys property ('the property') noting a portion of Stage 3 is also located within Links Road St Mary's, NSW. The corridor site is proposed to be developed into a multi lane roadway as necessary infrastructure to the Central Precinct Development site.

The EWCR is planned to comprise a roadway to connect the Jordan Springs East (JSE) Development site with the Suburb of Ropes Crossing. The EWCR corridor currently exists as a paved road dating from the site's former use as a munitions storage facility and/or as a haul road associated with the development works occurring within the overall development site. The (roadway) site is approximately 3 km in total length and is split into 3 Stages. The Regional Open Space (ROS) area is included within Stage 2 of the EWCR and comprises approximately 25 ha of proposed park land and sports field adjacent area to the JSE development. The location of the site is provided in **Figure 1**, the layout of the site including surrounding areas and the division of stages is provided in **Figures 2** to **4**.

Previous environmental investigation works conducted within the site area which falls within the St Marys ADI property includes the Southern Sector East validation reports (ADI 1996). Ultimately, this report and others lead to a number of site audit statements (SAS) being prepared and more specifically the site (portion within former ADI St Marys) is covered by three previously issued SAS prepared by HLA-Envirosciences (CHK001/1 Kidd 1999a), (CHK001/6 Kidd 1999b) and (CHK001/7 Kidd 1999c). The reports confirm that the property was suitable for proposed uses with the exception of excluded areas such as footprints of original buildings, car parks, roads and stockpiles that were inaccessible when previous works were conducted.

More recently, JBS&G has conducted a number of environmental investigations throughout the former ADI St Marys site and nearby areas to supplement the previous historical assessments. These reports have included UXO clearance (where necessary), management of pavement removal for historical road and/or building footprints, and environmental sampling with associated reporting. Reports conducted which fall within the EWCR area included:

- Phase 1 Preliminary Site Assessment East West Connector Road – East West Connector Road Jordan Springs East, NSW (Rev 2) 17 April 2019 (JBS&G 2019a[1])
- Environmental Site Assessment Stage 1 of the EWCR (JBS&G 2018a[2]);
- Environmental Site Assessment Stage 2 of the EWCR (JBS&G 2019b[3]);
- Environmental Site Assessment Stage 3 of the EWCR (JBS&G 2019c[4]);
- Environmental Site Assessment for the W Series Buildings within the Regional Open Space area of Central Precinct (JBS&G 2019d);

[1] *Phase 1 Preliminary Site Assessment East West Connector Road – East West Connector Road Jordan Springs East, NSW (Rev 2*) JBS&G Australia Pty Ltd 17 April 2019 (JBS&G 2019a)

[2] *Environmental Site Assessment and unexploded Ordnance Clearance for Stage 1 of the East West Connector Road – Ropes Crossing to Jordan Springs East, NSW (Rev A*) JBS&G Australia Pty Ltd 10 October 2018 (JBS&G 2018a)

[3] *Environmental Site Assessment and unexploded Ordnance Clearance for Stage 2 of the East West Connector Road – Ropes Crossing to Jordan Springs East, NSW (Rev 0*) JBS&G Australia Pty Ltd 6 February 2019 (JBS&G 2019a)

[4] *Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road, Links Road St Mary's, NSW (Rev 0)* JBS&G Australia Pty Ltd 14 August 2019 (JBS&G 2019c)

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- Environmental Site Assessment W Series buildings within Regional Open Space Area (JBS&G 2019e[5]); and
- Additional Analytes Summary Letter for the Dunheved Industrial Precinct (JBS&G 2018b[6])

In addition, a comprehensive PFAS investigation (JBS&G 2018c[7]) was also conducted throughout the property, including creeks and tributaries that run through the site and in an area identified as Dunheved which the Dunheved Link road runs through (in proximity of Stage 2 of the EWCR).

The previous works conducted provides a detailed environmental data set to characterise the contamination status of the site. However there is a requirement for a range of management requirements with the works inclusive of; additional sampling and analysis to confirm the current environmental characterisation of the proposed roadway corridor; management of a range of materials / soils during the proposed roadway construction works inclusive of implementation of an unexpected finds protocol; management of bitumen and pavement materials; management of PFAS impacted soils; and further management of demolition / earthworks materials, with the proposed construction of the EWCR.

This CMP provides framework to allow the implementation of the management requirements for the EWCR construction works. Further to this, the management requirements have been developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

The CMP is considered to fulfil Penrith City Council (PCC) and Blacktown City Council (BCC) DA consent conditions regarding the proposed EWCR development.

1.2 Characterisation of Environmental Conditions within the EWCR

Extensive sampling and analysis have been conducted throughout and within proximity of the EWCR corridor as consistent with the extent of assessments detailed in **Section 1.1**. The analytical data and sample locations as generated by these works have been provided to **Appendix C**. The site is found to be generally environmentally suitable from a contamination perspective for the proposed development. It is noted however that a portion of Stage 2 and Stage 3 areas are impacted by elevated levels of PFAS in soils. A process is currently underway to determine the significance of these levels with the NSW EPA. A strategy of interim management of PFAS impacted soils within the Dunheved precinct of the overall St Marys site is being implemented while this NSW EPA consultation process occurs. Noting the current stage of this process, all soils with detectable levels of PFAS constituents within the corridor will require to be transferred to the existing storage area with Dunheved for interim management. The required actions for these works are included in a Remedial Action Plan (RAP) developed for implementation during the development of the roadway (JBS&G 2019f[8]). This CMP will support the implementation of the RAP.

1.3 Objective

The objective of this CMP is to provide a framework to manage potential contamination issues that may be encountered during the roadway construction works.

1.4 Assessments to Support the CMP

The implementation of the CMP will include collection of additional sampling and analysis data to confirm current environmental characterisations of the site area, management of Unexpected Finds

[5] *Environmental Site Assessment – W Series Building Footprints within Regional Open Space Area – Central Precinct, NSW (Rev B*) JBS&G Australia Pty Ltd 19 July 2019 (JBS&G 2019e)
[6] *Additional analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (Rev A*) JBS&G Australia Pty Ltd 31 December 2018 (JBS&G 2018a)
[7] *PFAS Assessment at Former ADI St Mary's Development Site – St Mary's and Llandilo, NSW (rev B*). JBS&G Australia Pty Ltd November 2018 (JBS&G 2018c)
[8] *Remedial Action Plan – East West Connector Road, St Marys, NSW (Rev 0*) JBS&G Australia Pty Ltd 14 August 2019 (JBS&G 2019f)

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including potential UXO and asbestos, management requirements for stockpiles, management of bitumen pavements, and characterisation and material tracking requirements to apply during construction works of the EWCR.

It is also understood that imported fill materials will be required to create the proposed site levels during construction works. As such imported fill materials and site reused soils will be required to comply with the procedures of the existing Imported Fill Protocol (IFP).

It is additionally noted that the procedures provided for UXO will only come into operation if additional non cleared items are identified as unexpected finds during the construction works (all apparent areas as visible at the surface as paved areas / former buildings have been cleared at the time of preparation of this CMP) and/or if the existing concrete culvert at the southern extent of the ROS is removed during the construction works.

Asbestos management will only come into operation if either greater than 10 m^2 of ACM is identified or if friable asbestos (FA) or asbestos fines (AF) are encountered as unexpected finds during works.

1.5 Responsibility for CMP Implementation

The Property Owner, or their nominated representative (project manager, Principal Contractor, Superintendent, etc), is required to manage the implementation of the CMP. It is noted that where specific procedures are technical or complex in nature, appropriately qualified agents may be appointed to fulfil the requirements of the procedure and/or advise the appropriate implementation of the procedure.

1.6 Terminology

Provided in the tables below are the terminology relevant to the EWCR.

Table 1.1 Terminology

Abbreviation	Term	Definition
ACM Bonded	Asbestos Containing Materials Bonded	Bonded ACM comprises ACM which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. This term is restricted to material that cannot pass a 7 mm x 7mm sieve. Equivalent to "non-friable" asbestos in *How to Manage and control asbestos in the workplace Code of Practice* (Safe Work Australia 2017).
AF	Asbestos Fines	AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7mm sieve. Equivalent to "friable" asbestos in *How to Manage and control asbestos in the workplace Code of Practice* (Safe Work Australia 2017).
Ammunition	Ammunition	A device charged with explosives, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in connection with defence or offence including demolitions. Certain ammunition can be used for training, ceremonial or other non-operational purposes.
AMP	Asbestos Management Plan	See **Section 4**
AOC	Area of Concern	An area identified as containing potential contamination. Also referred to as Quarantined Area.
Category A	Category A ordnance Item	An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc.) and containing explosive filling, but excluding small arms ammunition.
Category B	Category B Ordnance Item	An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc.) and not containing explosive filling, but excluding small arms ammunition.

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Abbreviation	Term	Definition
Central Precinct	Central Precinct	The Central Development site located west of the EWCR**.**
CMP	Contamination Management Plan	This plan.
Dunheved	Dunheved Industrial Precinct	The Dunheved Industrial Precinct within the property as shown on **Figure 1**.
DUXOP	Defence Unexploded Ordnance Panel	The panel of contractors and consultants from whom the Department of Defence selects remembers for UXO related tasks.
EWCR	East West Connector Road	The site as shown on **Figures 1** to **4**.
FA	Fibrous Asbestos	FA comprises friable asbestos material and includes severely weather cement sheet, insulation products and woven asbestos material. Defined as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. Equivalent to "friable" asbestos in *How to Manage and control asbestos in the workplace Code of Practice* (Safe Work Australia 2011).
IFP	Imported Fill Protocol	*Imported Fill Protocol – Central Precinct, Llandilo, NSW*. October 2015 (Rev 3i) JBS&G Australia Pty Ltd (JBS&G 2015) and *Dunheved Addendum to the Imported Fill Protocol – Central Precinct Llandilo, NSW*. 11 December 2017 (Rev 0) JBS&G Australia Pty Ltd (JBS&G 2017c)
Induction	Site Specific Induction	The *Work Health and Safety Act 2011* (WHS Act) main objective is to secure the health and safety of workers and workplaces. A site specific induction is necessary for all workers on the Central Precinct to understand the site specific risks.
Metallic Debris	Metallic Debris	Debris comprising metal (ferrous) items. May include fragments of former ordnance items.
Ordnance	Ordnance	Any item of potential military origin. See Ammunition, Category A and B Ordnance Item and UXO
PFAS Impacted Soils	PFAS Impacted Soils	Soils impacted with levels of PFAS constituents above laboratory reporting limits.
Property	Former St Marys ADI Property	The whole of the landholding formerly known as the ADI St Marys Property as shown on **Figure 1**.
Quarantined Area	Quarantined Area	Area removed from development activities due to potential contamination. Also see AOC.
Site	Site	The subject area, where potential contamination has been found.
UXO	Unexploded Ordnance	Explosive ordnance that has been primed, fused, armed or otherwise prepared for action and which has been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or material but remains unexploded either by malfunction or design or for any cause. UXO includes items of military ammunition or explosives removed from their original resting place for any reason, including souveniring.

2. Unexpected Finds Protocol

The St Marys ADI property inclusive of the EWCR has previously been the subject of number of environmental investigations. However, given the size of the EWCR there is potential for the presence of unexpected finds of contamination during bulk excavation. The unexpected Finds Protocol (UFP) is summarised in **Appendix B** and is detailed in the following sections.

The objective of the UFP is to provide clear guidance on the safe and appropriate actions in the event of encountering potential chemical or ordnance contamination during development works. Where such material is uncovered the UFP prescribes the quarantining of the relevant area of concern, allowing other works to proceed unhindered, while the area of concern is assessed and, if necessary, the impacted materials removed, and validated.

Areas of Concern (AOC) may be identified by the Principal Contractor, Environmental Consultant or a site worker. The AOC will be quarantined by the Principal Contractor by means of some appropriate barrier to prevent access to the area. The quarantined area/s will be communicated with workers during the daily tool box talks. The Site Auditor shall be notified of the Unexpected Find.

Two classes of potential contamination are discussed separately below: chemical (including potential asbestos containing materials) and ordnance.

Previous investigations of the development site have been undertaken to assess contaminants of potential concern. However, ground conditions between sampling points may vary, and further hazards may arise from unexpected sources and/or in unexpected locations during site earthworks. The nature of any residual hazards which may be present at the site are generally detectable through visual or olfactory means, for example:

1. >10 m^2 of ACM fragments encountered in one location (visible);
2. Fibrous asbestos material;
3. Metallic debris, potential UXO (visible);
4. Drums / bottles / containers of chemicals (visible);
5. Construction / demolition waste (visible);
6. Ash and/or slag contaminated soils / fill materials (visible);
7. Petroleum contaminated soils (staining / discolouration visible); and
8. Volatile organic compound contaminated soils (odorous).

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances be identified (or any other unexpected potentially hazardous substance), works should cease and the environmental consultant shall be notified who will advise on required assessment and/or the required removal activities. This may include implementation of **Section 3** where UXO is identified or implementation of the AMP in **Section 4** where greater than 10 m^2 of ACM or if FA/AF is encountered. The Site Auditor shall be notified by the environmental consultant and liaise with the environmental consultant in the development of a response to the Unexpected Find.

An enlarged version of the unexpected finds protocol, suitable for use on site, should be posted in the Site Office and referred to during the Site Specific Induction by the Principal Contractor.

3. Potential Explosive Ordnance Materials

3.1 State the Problem

While the site has been investigated and remediated for metallic debris and / or ordnance items the potential remains for unexpected finds of ordnance related materials during the redevelopment of the precinct that were not readily apparent at the surface at the time that the UXO clearance was undertaken. It is further noted that a culvert within the southern area of Stage 2 (as shown on **Figure 3**) has been identified as a structure which has not undergone search previously and as such, if the feature is proposed to be removed, UXO clearance as per the procedures below would be required (though UXO occurrence here would be highly unlikely).

Potential explosive ordnance material may be indicated in the field by:

- Munitions shells / projectiles;
- Flares;
- Ammunition packaging;
- Grenade components; or
- Metal debris not identifiable as non-munitions or of uncertain origin.

Should potential ordnance material be uncovered, the earthworks will cease immediately and the Principal Contractor informed. The area should be quarantined, by means of some appropriate barrier to prevent access to the area to protect the workforce from potential injury.

The Environmental Consultant shall contact an appropriately qualified Ordnance Contractor, to assess the item and/or the area.

Should the Ordnance Contractor consider the object(s) to be non-ordnance or harmless fragments of ordnance, the object(s) can be removed and disposed of appropriately. The quarantine restrictions can be lifted and the earthworks continued.

If the Ordnance Contractor identifies the object(s) as potential explosive ordnance, the Ordnance Contractor shall inform the Environmental Consultant and Principal Contractor, and arrange disposal.

Based on the nature of find, it may be recommended that a geophysical survey of the area be undertaken to establish whether the item was an individual piece, one of a number of pieces or a disposal pit. Further surveys are mandatory if the explosive ordnance is considered a Category A item or more than three readily identifiable Category B items are found at one location.

- Category A - An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and containing explosive filling, but excluding small arms ammunition.
- Category B - An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and not containing explosive filling, but excluding small arms ammunition.

Any additional ordnance surveys should be designed to characterise the extent and character of the ordnance contamination and then (or concurrently) to remove the contaminant so the area is safe for the development activities to resume. These surveys should be undertaken by an Ordnance Contractor, with the objective of characterising and delineating the extent of the explosive ordnance contamination.

The Ordnance Contractor will prepare a report on the investigations undertaken, any removal / management works undertaken and validation surveys completed. The quarantine restrictions on the area can be removed and the earthworks resumed.

3.2 Objectives (Decision)

The principal objectives for UXO clearance are:

- Locate, remove and validate the ordnance potentially present within fill materials within the AOC.
- Confirm/validate the removal of the ordnance via review and reporting of clearance documentation.
- If required, confirm there are no items the size of a complete 20 mm projectile within 150 mm of the finished surface within the site.

3.3 Identify Inputs to the Decision

Inputs identified to determine the location of ordnance within the AOC include progress records including dig sheets, images, shallow search logs and clearance certificates covering the AOC.

3.4 Define the Study Boundaries

Each AOC identified and investigated and where required, removed, will be surveyed to provide accurate boundaries.

3.5 Methodology

Shallow Search

The AOC will be marked out with rope into two one metre lanes between 20 – 40 m in length.

The area will then be searched with a MineLab F3 UXO Metal Detector with a black cap to locate all metallic objects in the top 150 mm of the ground surface. A GPS will be attached to the operator to track the walked lanes.

All metallic items of the size of a 20 mm projectile or greater will be identified, recorded and removed from the AOC.

Deep Search and Imaging

An imaging survey (deep search) utilising an EM61 Deep Metal Detector (MK1 unit) on a 0.75 to 1.0 m line spacing and a Differential Global Positioning System (DGPS) for the positioning of the digital data will be undertaken.

Data will be processed and imaged using suitable UXO data processing package.

The criteria for target investigation will be based on a clearance to a depth of one (1) metre for ordnance items such as 20 pound (lb.) projectile and greater.

The threshold for interpretation is set at 3.5 mV with lower amplitude anomalies picked at the discretion of the Processing Geophysicist.

Location Pegging

Anomalies will be pegged and investigated using an EM61 Deep Digital Metal Detector in relocation mode.

Item Removal

On removal of a metallic item from an AOC, the location will be searched again to ensure a deeper item is not being masked by the original find. This process will be repeated until the location gives no more responses.

The initial search is a 0.5 m radius around the peg. If nothing is found the search will be extended to 1.5 m radius around each peg. If after the extended search nothing is found the ordnance supervisor (or senior operator if ordnance supervisor is original searcher) will search the peg to 1.5 m radius. If nothing is found the find will be recorded as an unable to locate (UTL).

Daily calibration

F3 Minelab (Shallow Search)

The F3 MineLab is calibrated firstly by using the set procedures in the F3 Manual using the 'Test Piece' supplied by the manufacturer with the detector. This confirms that the detector is working to correct specifications to confirm the sensitivity of the unit.

Before proceeding into the field the unit is also operated over the field test site where a 20mm projectile is buried at 150 mm depth. Provided a signal is obtained over this target the unit is ready for field operations.

This information will be noted on the Daily Diary.

EM61 (Deep Search)

Prior to Geophysical data collection each day, the EM61 will be run over a test pit to confirm the successful operation of the unit as detailed below:

- A backfilled test pit will be set-up on site containing various items (equal or greater than a 20 lb) anticipated to be buried on the site.
- The items will be buried, horizontally, at varying depths of up to 1 m (from top of target) to confirm the correct operation of the EM61 Deep Metal detector and its ability to meet the specifications for the deep search.
- The EM61 will be allowed to warm up until the readings stabilises (usually 10-15 minutes).
- The EM61 will then be moved to an area determined as a 'clean' area and the instrument will be nulled.
- Once this has been completed data will be collected over the backfilled test pit.
- The ability of the equipment to detect the seeded target will be assessed by the Geophysicist in the field.
- The test data will also be stored with all other data to show evidence of the systems functionality.

This calibration method will be used to establish a cut-off for detection of the EM61 Deep Search detector.

Limit of Reporting

A trial of the response of the EM61 must give a 3.5 mV response over a 20 lb projectile, buried at a depth of 1 m prior to use on site.

All data anomalies are to be selected for investigation at a level of 3.5 mV and above. However, a small number of targets with slightly lower amplitude will also be picked at the discretion of the Processing Geophysicist.

At the completion of anomaly investigation, a 10% of area shallow search will be carried out with an appropriate Electromagnetic Detector. If during QC a metallic item is located of a size equivalent to or greater than a 20 mm projectile, the search grid will be subject to a 100% shallow search again followed by a QC search.

The survey is carried out using Digital Global Positioning System (DGPS) for positioning then the operator is to ensure at the end of each line that positional accuracy is better than 0.3 m.

At the end of the day, data will be downloaded to a processing computer and checked for inconsistencies.

Checks include rejecting noisy lines. Lines will be redone if problems are encountered.

Data will be processed and interpreted by a Geophysicist. At the completion of processing a Senior Processing Geophysicist will complete a QC review of each grid.

To assure procedures are effective, at the completion of the clearance operation a 10% of area QC check will be performed. During any of the QC checks, location of a fail-size item within the soil will trigger a 100% repeat search of that grid.

4. Asbestos Management Plan

An Asbestos Management Plan (AMP) has been developed for potential implementation if unexpected asbestos finds of greater than 10 m^2 of asbestos containing materials (ACM) asbestos impacted soils as asbestos fines (AF) or friable asbestos (FA) are encountered at the site during roadway development works. Though previous assessments have not identified asbestos containing materials, there is a potential that localised areas may be present within the extent of the proposed EWCR construction site and will require consideration as unexpected finds.

The plan requires management to ensure protection of human health of site workers, future site workers and the neighbouring community. This AMP also outlines the requirements for managing any potentially asbestos impacted fill materials identified as unexpected finds.

4.1 Objectives

The purpose of this AMP is to outline the required procedures for handling and disposing of any identified ACM and asbestos impacted soils during the bulk earthworks of the EWCR and to outline the measures required to protect the health and safety of site workers who may encounter asbestos containing materials or asbestos impacted soils whilst completing the planned works and to prevent any adverse health effects on any future workers or neighbouring community in accordance with relevant National Codes of Practice and Work Health and Safety Legislation.

Specifically, the objectives are to:

- Outline, monitor and enforce safe working condition for all workers;
- Outline, monitor and enforce safe environmental conditions for all persons outside of the Area of Concern;
- Outline, monitor and enforce procedures to manage works within asbestos impacted soils identified in the EWCR during works;
- Outline measures for the safe onsite storage and, if required, off-site disposal of asbestos materials in accordance with all relevant legal and statutory requirements; and
- Outline ongoing management requirements of the site to ensure the risk posed by any potential asbestos contamination is properly managed.

4.2 AMP Responsibilities during Redevelopment Works

4.2.1 Appointment of Principal Contractor

In accordance with the provisions of the *Work Health and Safety Regulation 2011* prepared under the *Work Health and Safety Act 2011* a "person conducting a business or undertaking" (PCBU), or Principal Contractor needs to be engaged.

4.2.2 Responsibilities of the Principal Contractor

Responsibilities of the Principal Contractor include, but are not limited to the following; The Principal Contractor must:

- Be responsible for the proposed project work at all times until the work is completed;
- Ensure that all persons involved with proposed project work have undertaken occupational health and safety training if ACM is identified;
- Keep records of induction training for workers and any specific training;
- Ensure that any subcontractors provide safe work method statements for the activities for which they are engaged;
- Monitor any subcontractors to ensure that they are complying with the safe work method statements; and
- Maintain a hazardous substances register for all hazardous substances used or present on EWCR.

The Principal Contractor is responsible for co-ordinating health and safety activities for the project. Other responsibilities of the Principal Contractor include:

- Compliance with occupational health and safety and environmental legislation, regulations, standards, codes and the EWCR specific rules relating to safety contained in this AMP;
- Ensuring that sufficient funds are available to procure the necessary health and safety equipment such as personal protective equipment (PPE);
- Managing accident and emergency procedures;
- Managing workplace injury management and rehabilitation.

The Principal Contractor has the authority to provide for the auditing of compliance with the provisions of this AMP, suspension or modification of work practices, and administration of disciplinary actions for individuals whose conduct does not meet the requirements set forth herein.

4.2.3 Asbestos Consultant or Competent Person

An Asbestos Consultant, or Competent person, shall be engaged to assess any suspected asbestos containing materials when encountered during the redevelopment of the EWCR. The asbestos consultant or competent person shall also complete airborne asbestos monitoring and dust monitoring during any asbestos works. Where required, air monitoring will be conducted in accordance with **Section 4.6.1**.

The Asbestos Consultant shall:

- Provide on-site supervision of all potential asbestos works;
- Complete static asbestos air monitoring during any potential asbestos works and display daily results for the information of workers;
- Provide on-site advice, if required, in relation to suspected asbestos containing materials and the management of asbestos issues associated with the works; and
- Be available, if required, for consultation with regards to the conditions and requirements of this AMP.

Should asbestos be encountered during the planned excavation works, additional clearance inspections and clearance asbestos air monitoring may be required to confirm the suitability of the Area of Concern prior to works recommencing.

4.2.4 Class A/ B Licensed Asbestos Removal Contractor

A Class A (friable) or Class B (non-friable) licensed asbestos removal contractor shall be engaged if ACM is identified. The asbestos removal contractor will remove ACM or asbestos impacted soils from the Area of Concern and dispose of them to a suitably licensed waste facility. The licensed asbestos removal contractor will be the primary person responsible and in charge for works on site involving ACM or asbestos impacted soils.

Their responsibilities include:

- Complete a site walkover and 'emu-pick' to remove any observed ACM on the ground surface prior to any topsoil stripping works commencing;
- Completion of required WorkCover permits (friable asbestos removal) or notifications (non-friable asbestos removal);
- Prepare a site-specific Asbestos Removal Control Plan (ARCP) prior to any asbestos removal works being completed;
- Ensuring compliance with relevant legislation and the conditions of this AMP;
- Removal and disposal of asbestos containing materials or asbestos impacted soils from the site in accordance with relevant legislation;
- Ensure appropriate environmental and safety controls outlined in this AMP are maintained for the duration of the works;
- Assisting all site sub-contractors where required in complying with relevant legislation and the procedures outlined in this AMP; and
- Completion of a final site walkover and removal of all visible asbestos containing material from the ground surface across the site.

4.3 Summary of Contaminant Type

Friable asbestos is defined by Safe Work Australia in the Code of Practice – How to Safely Remove Asbestos (2011) as being "…material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos". This includes asbestos fibre impacted soils and asbestos fines as identified by laboratory analysis.

Non-friable asbestos material is defined by Safe Work Australia (2011) as being "…material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound." This includes bonded asbestos fragments found in soils, subject to laboratory analysis for respirable fibres.

Mechanical disturbance of the fragments may result in the release of fibres and therefore, such activities should be managed to prevent any fibres becoming airborne. The health effects of asbestos are detailed in enHealth (2005)[9] Management of Asbestos in the Non- Occupational Environment.

The primary issue associated with the asbestos contamination is inhalation of respirable fibres if the materials were to be disturbed and abraded.

A secondary issue with asbestos contamination is disposal of excess spoil that may be impacted with asbestos.

[9] *Management of Asbestos in the non-occupational environment.* enHealth, 2005 (enHealth 2005)

4.4 Health and Safety Management

4.4.1 Safe Work Method Statements

Safe work method statements must be prepared by the Principal Contractor or by subcontractors completing significant intrusive works and also covering other aspects of the proposed project works not related to significant intrusive works, are to be prepared and approved by the Principal Contractor prior to those activities commencing.

Safe Work Method Statements must:

- Describe how work is to be carried out;
- Identify the safety risks;
- Describe the control measures that must be applied to the work;
- Describe the equipment used in the work;
- Describe any standards or codes applicable to the work; and
- Training and qualifications required of persons undertaking the work.

  Safe work method statements for all workers must be reviewed and approved by the Principal Contractor.

4.4.2 Site Access Control

The Principal Contractor shall ensure if works are to occur in an area in which ACM has been identified that the construction area is securely fenced and access is controlled. Entrance to the asbestos area will be via a dedicated entry point which will contain the following features in addition to site security measures as required for a construction site as per relevant health and safety provisions:

- Readily identifiable and delineated site access / egress point. Where possible this location shall be visibly identifiable by site fencing / barricading;
- Decontamination unit for all workers to remove PPE and dispose of contaminated articles and will also include a hand wash and boot wash facility. The decontamination unit will be located in close proximity of the designated site access / egress point;
- Signage including “No Entry Without Required PPE” and a contact number for members of the public to direct any queries / complaints; and
- Emergency contact details.

The overall construction site boundary will be secured by fencing. It is anticipated if areas of ACM are identified then localised active construction site access points maybe delineated within the overall site boundaries. Access to the construction site will be controlled and permitted by the Principal Contractor only after persons entering the site have been advised of the potential contamination hazards. This shall at least include notification of the potential presence of asbestos containing materials and asbestos impacted soils.

If ACM is identified then any authorised person accessing the site should do so in accordance with health and safety requirements as indicated in this AMP. The implementation of the health, safety and environmental requirements should be administered by the Principal Contractor.

Site access will not be allowed until the workers have been inducted, have signed in, and if entering the asbestos area must have donned the required PPE (**Section 4.4.5**). Upon exiting the site, personnel must remove and dispose of/clean the PPE in the provided decontamination area.

Asbestos removal boundaries (if required) shall be determined by the Principal Contractor in consultation with the asbestos consultant and will vary according to the location and size of the required daily activities. Any asbestos removal boundaries will be designed to allow other site works not involving significant intrusive works to continue without being required to adhere to this AMP.

It may be found that the asbestos removal boundaries require to be assigned to the site boundaries, in which case all site workers must adhere to the requirements of this AMP.

4.4.3 Training and Certification

The Principal Contractor must not allow any person to carry out project works unless he/she are satisfied that the person has undergone OHS induction training.

The OHS induction training required by the Regulation is as follows:

- General occupational health and safety training for construction work;
- Work activity based health and safety training (job specific training); and
- Site-specific health and safety induction training.

For each person carrying out project works, for a period of three years, the Principal Contractor must keep a record of the following:

- A copy of relevant statements of OHS induction training, or a statement indicating that the Principal Contractor is satisfied that the relevant OHS induction training has been undertaken; and
- A brief description of the site-specific training undertaken by the person.

4.4.4 Site Safety Induction

If ACM is identified it is the responsibility of the Principal Contractor to ensure all persons carrying out construction work on site are given site-specific occupational health and safety training. The induction shall be undertaken by the Principal Contractor. The induction shall be undertaken as per a standard presentation which will address the following topics as per the requirements of this AMP:

- Identification of any site-specific hazards and risk control measures in relation to the asbestos impacted nature of the site;
- Regulatory requirements or codes of practice relevant to identified site specific hazards as restricted to asbestos impact;
- Directions on what to do if suspected asbestos containing materials or asbestos impacted soils are encountered;
- Site orientation at least including location of asbestos decontamination areas at site access / egress points; and
- Site specific safety rules in relation to asbestos.

The Principal Contractor is responsible for establishing site specific safety rules. The rules must be displayed in an easily observable location (nominally in the site office) so as to ensure that all site workers, have ready access.

At the completion of the Induction Presentation, each worker shall be required to acknowledge that they have understood the requirements for the site works and health, safety and environmental obligations by completion of a Site Induction Form.

4.4.5 Personal Protective Equipment (PPE) Requirements

Prior to any asbestos containing materials or asbestos impacted soils being encountered, no additional PPE is required above the standard construction site PPE outlined by the Principal

Contractor for the site. Should suspected ACM be identified then the supervising asbestos consultant should be contacted, the following additional items of PPE are required in addition to the standard construction site PPE outlined by the Principal Contractor for the site, and applies for any ground workers within the asbestos work area, as defined by the supervising asbestos consultant:

- Disposable 'tyvek' coverall suits must be worn;
- Disposable gloves – non disposable gloves must be cleaned within the decontamination unit in accordance with Safe Work Australia (2011);
- P2 class respirator or higher – non disposable respirators must be cleaned in the decontamination unit in accordance with Safe Work Australia (2011) and
- Laceless steel capped rubber soled work shoes or gumboots.

Plant operators must close cabin doors and windows and set air conditioning to re-circulate when operating within the asbestos work area.

4.4.6 Management of Subcontractors

If ACM is identified then workers on-site will be required to adopt the provisions of this AMP and will be advised of potential safety and environmental issues on site during site-specific induction training. This induction will include the occupational health and safety responsibilities, requirements and controls for all workers on site. All workers activities involved in asbestos works will be monitored by the Principal Contractor, the licensed asbestos removal contractor and the Asbestos Consultant to ensure compliance with the requirements of this AMP.

Workers whose work will be performed on-site, or who otherwise could be exposed to health and safety hazards, will be advised of known hazards through distribution of site information contained in this AMP.

They shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations. All workers are responsible for:

- Providing their own personal protective equipment as required by the Principal
- Conditions set out in this AMP;
- Training their employees in accordance with applicable laws;
- Providing medical surveillance and obtaining medical approvals for their employees, as appropriate;
- Ensuring their employees are advised of and meet the minimum requirements of this AMP and any other additional measures required by their site activities; and
- Designating their own site safety officer.

Workers must sign an acceptance form prior to commencing work on site. Workers may only modify, and then only to improve, the conditions specified in this AMP with approval from the Principal Contractor, or his nominee.

4.5 Environmental Management

4.5.1 Asbestos Works

In the event that significant asbestos contamination is identified and intrusive works are to be carried out in the asbestos work area then the following management measures will apply:

Prior to any intrusive work commencing:

- Review of the information available for the site;
- Approval for the works must be sought from the Principal Contractor who will assess whether the works are necessary or if there is an alternative that will not result in exposure of ACM impacted soils. The Principal Contractor's must review the job specific risk assessment (JSRA) and safe work method statements (SWMS) and ensure that workers who will undertake the works are inducted into the AMP;
- The asbestos consultant must complete supervision of the significant intrusive works and complete regular inspections for the presence of visible asbestos. Static airborne asbestos monitoring must also be completed by the asbestos consultant for the duration of significant intrusive works;
- The works area must be isolated from casual entry using temporary barriers and only personnel inducted in the requirements of the AMP will be permitted to enter the works area;
- Sufficient space must be provided within the works area to allow stockpiling of spoil from excavations, if required, in accordance with **Section 4.5.4**;
- A water supply must be provided to the works area for the purpose of maintaining exposed asbestos impacted fill or soil in the excavations and stockpiles in a moist state;
- Personnel entering the works area must wear appropriate PPE in accordance with **Section 4.4.5**;
- Stockpiles of excavated spoil must be managed in accordance with **Section 4.5.4** and **4.5.5**; and
- Air monitoring requirements must be met as outlined in **Section 4.6**.

Should visible asbestos be identified by the asbestos consultant or airborne asbestos monitoring results identify airborne asbestos fibres in the vicinity of the works area, specific requirements for working with asbestos containing materials or asbestos impacted materials shall be enforced as outlined in **Section 4.5.2**.

4.5.2 Specific Requirements for Working with Asbestos Impacted Material

Asbestos may be present in non-friable or friable form. In the event that either friable or non-friable asbestos is encountered, as determined by the asbestos consultant, the following procedures shall be implemented for the remaining significant earthworks to ensure workers safety and to mitigate any potential offsite migration of contamination.

Friable and Non-Friable Asbestos

Prior to Excavation

- Workers and visitors to the asbestos work area will be made aware of the encountered soil contamination and only authorised people shall enter the asbestos work area, which must contain a perimeter barrier separate to the site boundaries to restrict entry. Where the asbestos work area boundary is also the site perimeter boundary, an exclusion zone of at least 5 m shall be erected beyond the site perimeter boundary (if practical/possible) to restrict access to the asbestos work area.
- Asbestos removal caution signs shall be placed on the perimeter barrier (or exclusion zone barrier, whichever is furthest from the asbestos removal work area), as per AS1319.

During Excavation/Transport/Disposal

- A WorkCover permit for friable asbestos removal works or WorkCover notification for non-friable asbestos removal works shall be sought by the licensed asbestos removal contractor. Friable asbestos removal permits must be submitted at least 7 days prior to any friable asbestos being disposed off-site.
- All wastes will be classified, managed and disposed in accordance with the Waste Classification Guidelines: Part 1 Classifying Waste (EPA 2014).
- Personnel within the excavation work area shall wear a Tyvek suit, respirator (e.g. half faced P2 respirator), disposable gloves and laceless steel capped rubber soled work shoes or gumboots at all times when within the asbestos work area and until clearance certification is provided by the asbestos consultant.
- Any obvious pieces of asbestos containing materials shall be picked up and placed into a labelled asbestos waste bag and set aside in a designated waste storage area for off-site disposal.
- The excavation shall be kept damp by water spraying at all times during excavation to reduce the possibility of dust generation.
- Personal protective equipment used during the works, such as disposable coverall suits and half faced respirators, shall be disposed of as asbestos waste.
- Airborne asbestos monitoring shall be conducted for the duration of the excavation works.
- Any stockpiled excavated material shall be kept moist and covered if left for more than 24 hours.
- Appropriate leak proof transport vehicles must be used to transport materials offsite.
- Transport vehicle shall be covered prior to leaving site and any material removed from wheels to prevent tracking outside the site.
- Backfill of any areas to required levels must only be completed with clean imported material classified as VENM as per Waste Classification Guidelines: Part 1 Classifying Waste (EPA

2014[10]) and can include mulch and landscaping materials and must be classified as VENM as per Waste Classification Guidelines: Part 1 Classifying Waste (EPA 2014) and can include mulch and landscaping materials.

Post Excavation

- Any excavation floor and walls shall be inspected by the asbestos consultant who is trained and experienced in the identification of asbestos. Any visible ACM shall be removed by the licensed asbestos removal contractor.
- Where friable asbestos has been encountered, validation samples shall be collected from the excavation walls and base and analysed at a NATA Accredited testing laboratory for the presence of asbestos. Clearance airborne asbestos monitoring shall also be conducted following the completion of the excavation and reinstatement works to be included in clearance certification. Clearance monitoring is not required if only non-friable asbestos is encountered.
- Upon receipt of both visual and laboratory data (where required) confirming the absence of asbestos, the asbestos work area shall be deemed suitable for reoccupation and a clearance letter shall be provided by the asbestos consultant.

4.5.3 Disposal and Storage of Asbestos Containing Materials

Where asbestos fragments or other forms of asbestos are identified either during redevelopment works or on the ground surface, these materials should be removed under the supervision of a licensed asbestos removal contractor and in accordance with Safe Work Australia (2011).

The asbestos materials should be placed into heavy-duty 200µm (minimum thickness) polythene bags that are no more than 1200 mm long and 900mm wide. The bags should be labelled as asbestos waste, sealed and placed in a designated waste area for off-site disposal.

4.5.4 Stockpile Management

Any stockpiles of excavated materials, including topsoil and grass cover, will be periodically sprayed with water to control dusts.

In the event that covers are required, they shall extend beyond the perimeter of the stockpiles and shall be secured to prevent being blown away by wind.

Stockpiles must be placed in a secure location onsite and covered if to remain for more than 24 hours.

[10] Waste Classification Guidelines Part 1: Classifying Waste. EPA November 2014

4.5.5 Dust Management

Dust levels shall be managed by ensuring:

- All stockpiles will be either periodically wetted down or covered to control dusts;
- Water sprays will be used on the excavation areas, stockpiles and haulage pathways;
- Any haulage vehicles shall be covered and leave via the designated (stabilised) site access;
- All haulage vehicles and plant and equipment shall be washed down whenever they leave the Asbestos in Soil (ASBINS) work area.
- All access roads are sufficiently maintained to ensure no visible dust at the site boundary; and
- Dust suppressors will be fitted to equipment as required.

If dust is visible at the site boundary, then additional dust control measures shall be employed, which may include:

- Temporarily suspending activities until winds speeds reduce; and/or
- Additional use of water sprays.

4.5.6 Waste Management

There shall be no wastes brought onto the site for storage, treatment, processing, reprocessing or disposal unless permitted by a licence issued under the *Protection of the Environment Operations Act 1997*.

All wastes will be classified, managed and disposed in accordance with the *Waste Classification Guidelines: Part 1 Classifying Waste* (EPA 2014).

All wastes disposed off-site will be controlled as per the EPA's requirements for waste tracking and acceptance. These are as follows:

- Obtain a written consignment authorisation number from an EPA-licensed waste disposal or treatment facility before moving waste to the facility.
- Accurately complete a waste data form signed by the consignor before the waste is dispatched.
- The waste consignor, the waste transporter and the waste facility must each keep a copy of the waste data form for up to four years for auditing purposes.
- The waste consignor must give a completed copy of the waste data form to the transporter, who must check that it is completed and then sign it. The driver must carry the waste data form in the vehicle.
- The transporter must give a completed copy of the waste data form to the waste facility on arrival at the destination. The waste facility operator must check the load details on the form. The waste data form must be signed by a representative of the waste facility on receipt of the waste at the destination.
- The waste consignor must receive from the waste facility written confirmation of receipt of the waste within 21 days of dispatch. This must be kept for up to four years for auditing purposes.

4.6 Monitoring Program

In the event that significant asbestos is found a monitoring program may be needed to ensure that the control measures being implemented at the site are effective, the following monitoring procedures will be implemented:

- Daily static airborne asbestos fibre monitoring at site boundaries during significant asbestos works; and
- Clearance monitoring (if friable asbestos is encountered only).
- Site Inspections.

4.6.1 Daily Static Airborne Asbestos Fibre Monitoring

During excavation works or any other works that may disturb significant asbestos in soil on site, airborne asbestos fibre monitoring may be undertaken by the Asbestos Consultant using calibrated portable air sampling pumps. Monitoring will be conducted at 4 locations around the site boundaries each day over an approximate 4 to 6 hour period and targeting any neighbouring sensitive receptors and with consideration to the daily location of works.

At the end of each monitoring period the pump and attached filter will be collected and analysed at a NATA-accredited laboratory in accordance with NOHSC Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition (NOHSC:3003 [2005]).

The results of air monitoring will be available on a 24-hour turnaround time basis. Daily air monitoring reports shall be displayed in a common area outside of the asbestos work area (e.g. site office or lunch shed) or be able to be produced upon request.

The following action levels will be applied upon receipt of daily results, as outlined in the Safe Work Australia (2011):

- Reading of less than 0.01 fibres/mL – control measures in place are working effectively, site works to continue;
- Reading between 0.01 and 0.02 fibres / mL – a review of control measures shall be completed in the work area; and
- Reading greater than 0.02 fibres / mL – works shall cease until the cause of contamination is identified and rectified.

It is noted that these action levels adopted are more conservative than the exposure standard for airborne asbestos (0.1 fibres/mL (TWA)) as outlined in the Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC: 1003(1995)] for an 8 hour shift.

4.6.2 Clearance Monitoring

In the event that friable asbestos is encountered during the excavation works, clearance airborne asbestos monitoring shall be required following the friable asbestos removal. Following the completion of all earthworks, backfill of the excavated area and installation of the proposed car park, clearance air monitoring will take place in the vicinity of the work area to ensure that there is no residual contamination remaining at the site.

Ambient air conditions clearance will be gained by recording airborne asbestos concentration levels in all sampling locations below 0.01 fibres / mL.

4.6.3 Site Inspections

Following the completion of any asbestos removal works, a final site walkover will be completed by the asbestos consultant to inspect the site ground surface for the presence of ACM. Any ACM observed will be removed and placed in asbestos waste bags in accordance with Safe Work Australia (2011). Once a successful inspection has been completed and both the licensed asbestos removal contractor and the asbestos consultant are satisfied there is no visible residual asbestos impacts on the ground surface, the area shall be deemed suitable for re-occupation and a clearance report issued by the asbestos consultant.

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5. Stockpile, Soil and Material Management

During works it is understood that additional sampling and analysis works to confirm the site's environmental characterisation, bitumen pavement removal and management, and cut to fill works involving reuse of site stockpiles and importation of fill for use to create site levels will occur. It is further noted that receipt and accumulation of stockpiled material has occurred within the Stage 2 ROS area associated with recent UXO clearance and demolition works.

In order to confirm the environmental characterisation of the site and to further ensure appropriate management of materials at the site to maintain the environmental characterisation, the following procedures shall be implemented during works.

5.1 Reuse of Bituminous Materials

Bituminous materials associated with former roads are understood to exist throughout the site. The majority of these materials have been ripped up and stockpiled adjacent to the former roads to allow for UXO clearance works and environmental investigation.

Previous characterisation works of bitumen pavement within Stage 1 and Stage 2a (JBS&G 2018d[11]) identified the materials as suitable for reuse within the proposed paved road portion of the site subject to material tracking procedures in **Section 6**. Prior to reuse of pavements from Stages 2b, 2c and 3, the bitumen pavement will be assessed similar to Stages 1 and 2a, and reused on site if it meets site criteria. Materials which do not meet reuse criteria will be managed as an unexpected find (see **Section 2**).

As such all bitumen materials require reuse within the paved road portion of the site including survey upon placement to meet this requirement. Material tracking and survey requirements as per **Section 6** will be required to confirm this process.

To ensure this occurs, the environmental consultant shall be notified when the materials are reused so they can confirm the appropriate requirements are met.

A survey shall be supplied to the environmental consultant following reuse to confirm the materials were reused below the paved road.

5.2 Characterisation of Soil stockpiles

As noted various stockpiles within the Stage 2c (ROS) area require to be characterised by the environmental consultant. The environmental consultant will be responsible for undertaking the required characterisation sampling based on either the *Waste Classification Guidelines Part 1: Classifying Waste* (EPA 2014) or one of NSW EPA's general exemptions[12]. Upon receipt of the analytical results the environmental consultant is responsible for providing appropriate documentation (e.g. material characterisation report, waste classification etc.) to the EWCR earthworks or other re-use by the principal contractor. It is suggested that these works are conducted prior to bulk earthworks commencing. Assessment of analytical results for materials to be re-used on-site shall be by reference to criteria nominated in **Section 5.9**.

The proposed sampling frequency and analytical schedule is presented in **Table 5.1**.

[11] *Paved Road Reuse Letter – East West Connector Road, Jordan Springs East to Ropes Crossing, NSW (Rev 1*) JBS&G Australia Pty Ltd 27 July 2018 (JBS&G 2018d)

[12] NSW EPA List of General Orders and Exemptions: http://www.epa.nsw.gov.au/wasteregulation/recovery-exemptions.htm accessed on 24/02/2015

Table 5.1: Material Characterisation – Analytical Schedule

Validation Area	Sampling Frequency	Analytes
Characterisation of material for beneficial reuse offsite (VENM, ENM or any other suitable material granted an applicable EPA Resource Recovery Order under the Protection of the Environment Operations (Waste) Regulation 2014)	VENM - minimum 1 per 1000 m^3 minimum 3 per source site up to a maximum of 10. ENM – see *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 The excavated natural material order 2014* http://www.epa.nsw.gov.au/resources/waste/rro14-excavated-natural-material.pdf	Analytes dependent upon EPA exemption or source site characteristic. As a minimum: Heavy metals TPH/BTEX PAHs OCPs/PCBs PFAS Asbestos EC (ENM) pH (ENM) RTA T276 (276 (rubber plastic, bitumen, paper, cloth, paint and wood) (ENM)
Contaminated material requiring disposal offsite (waste classification, if identified through unexpected find)	Minimum of 1 sample per 25 m^3 of material for any chemically contaminated material. Minimum of 1 per 250 m^3 up to 200 m3 then lower rate for >200 m3 of materials for the asbestos fibre impacted areas.	TPH/BTEX, PAHs, heavy metals, OCP/PCBs, asbestos and TCLP (if required). Where Explosives and/or PFAS are a contaminant of concern within an assessment area these will also be analysed,
Imported fill material (VENM or ENM only)	VENM - minimum 1 per 1000 m^3 minimum 3 per source site up to a maximum of 10. ENM – see *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 The excavated natural material order 2014* http://www.epa.nsw.gov.au/resources/waste/rro14-excavated-natural-material.pdf	Analytes dependent upon EPA exemption or source site characteristic. As a minimum: Heavy metals TPH/BTEX PAHs OCPs/PCBs Asbestos EC (ENM) pH (ENM) RTA T276 (276 (rubber plastic, bitumen, paper, cloth, paint and wood) (ENM)
Reuse on the Central Precinct AND/OR Characterisation of Potentially Contaminated Soils	1 sample per 25 m^3 for stockpiles less than 100 m^2. 1 sample per 100 m^2 or a minimum of 3 samples for stockpiles larger than 100 m^2. Any reduced sampling density will require approval by the auditor. If an area requires assessing sampling will be conducted in accordance with EPA 1995[13] and NEPC (2013)[14].	TPH/BTEX, PAHs, heavy metals, OCP/PCBs and asbestos, and explosives[1] and/or PFAS where an identified contaminant of concern. ----------

[1] Explosives will include, but not limited to, RDX (research department explosive), TNT (trinitrotoluene), 2,4-DNT (2,4-Dinitrotoluene) and 2,6-DNT (2,6-dinitrotoluene).

[2] It is noted that additional sampling regarding PFAS may be required but will be dependent on SP30 PFAS assessment, as discussed in **Section 5.2**

[13] *Contaminated Sites: Sampling Design Guidelines*, NSW EPA. September 1995 (EPA 1995)

[14] *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*, National Environment Protection Council, 2013 (NEPC 2013).

Material to be moved on the site shall be tracked as per one of the following classifications:

- Contaminated material for off-site treatment and disposal / management as Hazardous Waste (if required);
- Contaminated material for off-site disposal as Restricted Waste (if required);
- Contaminated material for off-site disposal as Special Waste, co classified as Restricted Waste (if required);
- Contaminated material for off-site disposal as Special Waste, co classified as General Solid Waste;
- Contaminated material for off-site disposal as General Solid Waste;
- Contaminated material for asbestos picking / removal;
- Validated material for site re-use in the Dunheved Industrial Precinct;
- Surplus soils as excavated natural material; and/or
- Surplus soils as virgin excavated natural material.

5.3 Imported Fill

Approximately 20,000 m^2 of VENM was imported to the property between October and November 2018 by Wards Civil with materials reviewed and approved by JBS&G (further endorsed by Zoic as the Site Auditor) in accordance with the Imported Fill Protocol (IFP, JBS&G 2015[15]) and the addendum IFP JBS&G (2017[16]). These materials are understood to be temporarily stockpiled within EW7 of Central precinct and is sufficient to meet the proposed site filling requirements.

However, if additional imported fill is required, the environmental consultant must be notified and the imported fill material must comprise virgin excavated natural material (VENM[17]), or excavated natural material (ENM[18]) or meet the requirements of an applicable EPA exemption (e.g. recovered aggregate Order 2014) and have been sampled in accordance with the Imported Fill Protocol (JBS&G 2015).

Prior to importation of material onto the site, the contractor/supplier shall provide, at a minimum, the following information to the environmental consultant for prior evaluation in order to obtain an approval on the potential acceptability of the material for use at the site:

- Details of the source site history, source site address, and characteristics of the material (such as colour, soil type, odours); and
- Details of any sampling performed for purposes of certification.

Prior to and during the importation of VENM or ENM, visual inspection must be undertaken to verify the appearance of the material is consistent with the source material description. The material must be accompanied by a summary report which includes laboratory report(s) from a NATA accredited laboratory and chain of custody documentation, in additional to other QA/QC documentation to demonstrate the samples were obtained in accordance with the applicable recycled material exemption. In addition to the above information from the supplier, following the importation of the

[15] *Imported Fill Protocol – Central Precinct, Llandilo, NSW*. October 2015 (Rev 3i) JBS&G Australia Pty Ltd (JBS&G 2015)
[16] *Dunheved Addendum to the Imported Fill Protocol – Central Precinct Llandilo, NSW*. 11 December 2017 (Rev 0) JBS&G Australia Pty Ltd (JBS&G 2017c)
[17] As defined in *Waste Classification Guidelines Part 1: Classifying Waste*, EPA, November 2014 (EPA 2014)
[18] Protection of the Environment Operations (waste) Regulation 2005 – General Exemption Order Under Part 6, Clause 51 and 51A. *The excavated natural material exemption 2014* (EPA 2014)

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material a visual inspection is need to confirm there is no visible asbestos, staining or odours and that the material delivered meets, in general, the description of the source material.

5.4 Materials Requiring Offsite Disposal

Contaminated soils and ACM to be disposed off-site require a waste classification in accordance with EPA (2014) *Waste Classification Guidelines Part 1: Classifying Waste*. The presence of asbestos in fill materials must be noted in the preparation of the waste classification.

Should a works area contain explosives as a contaminant of concern, materials will still be classified as per EPA 2014. Reference will be given to the *Transport of Dangerous Goods Code* to determine if the waste exhibits any explosive properties. Should the waste be classified as a *hazardous waste* an immobilisation approval may need to be obtained from the EPA in accordance with *Waste Classification Guidelines Part 2: Immobilisation of Waste* (EPA 2014b).

5.5 Reuse of Suitable Material on the Central Precinct

Where materials are proposed to be reused within the site, these need to have either been assessed as suitable for use on-site against relevant land use criteria (see **Section 5.9** for criteria specific to the EWCR site) and in accordance with sampling regime provided in **Table 5.1**. Where previous data is available from existing reports and the material source is known, that data may be used to meet reuse suitability requirements. Available data is summarised to **Appendix C**.

Notwithstanding the analytical based criteria in **Section 5.9**, materials that are proposed within the ROS area, or otherwise other potentially accessible areas within the EWCR corridor shall be free of anthropogenic materials. Anthropogenic materials as removed during processing of soils in these areas will require to be disposed.

Material that does not meet any of the adopted land use criteria, and is therefore not suitable within any areas of the site, will be disposed off-site consistent with *Waste Classification Guidelines*, 2014, NSW EPA and current material management approaches

5.6 Additional Characterisation of Site Areas

Sampling and analysis completed to date within the bushland areas has not identified levels of environmental constituents that are considered to pose a potential health or ecological risk. Sampling has been undertaken on a coarse grid however, and there is potential uncertainty as a function of the spacing of the sample points. Additional sampling and analysis is proposed to be undertaken within these areas to confirm the findings of the existing environmental assessments as completed at each. The requirements for additional sampling and analysis is summarised following as specific to site area and/or potential site feature / contaminant.

Consistent with **Section 5.2**, it is recommended that these works are undertaken prior to, or other preliminary stages, of earthworks.

5.6.1 Bushland Area in Stage 2c

Additional sampling and analysis are proposed to be undertaken at the bushland area as located at the south of the ROS. An additional 27 (approximately 1 per hectare) sample locations shall be undertaken throughout this area as consistent with the sample locations as shown on **Figure 5**. Other potential contamination such as stockpiled materials will be sampled as per **Section 5.6.2** below. If potential areas of contamination are identified such as anthropogenic material in fill, sample locations will be targeted towards those areas. Sample locations shall be undertaken by testpitting using an excavator to a depth of at least 0.3 m into natural materials (bgs) at all locations. Sampling by hand may be conducted in heavily vegetated areas, where hand methods are conducted intrusion into natural materials shall also be required. Both excavator and hand methods will be required to recover sufficient sample volume so asbestos quantification can occur via the procedure below.

A near surface soil sample shall be obtained from each location and analysed for the potential contaminants of concern, noting PFAS has not been identified in this area:

- Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn);
- Total recoverable hydrocarbons (TRH);
- Volatile organic compounds (VOCs);
- Polycyclic aromatic hydrocarbons (PAHs);
- Organochlorine pesticides (OCPs); and
- Polychlorinated biphenyls (PCBs).

An additional bulk sample of at least a volume of 10 L shall be collected from each location and sieved through a 7 mm sieve. The oversize through the sieve shall be inspected for the presence of asbestos containing materials (ACM). A volume of 500 ml of the undersize materials shall be sub-sampled for asbestos analysis.

5.6.2 Stockpiles within Stage 2c

A number of stockpiles are present in proximity of the Munitions Bund area as shown on **Figure 6**. The stockpiles have been previously inspected by JBS&G and observed to be substantially present as excavated natural materials, generally free of significant anthropogenic materials or otherwise other indicators of contamination. The stockpiles require formal sampling and analysis to confirm the visual observations of the absence of contamination.

This shall be undertaken by collection of a minimum of 3 samples or one sample per 25m^3 for stockpile volumes less than 200m^3, and sampling of any larger stockpiles at a rate of one sample per 250 m^3 with a minimum of 10 samples collected for stockpiles over 200m^3 to allow for the calculation of the 95% UCL value (if required). Samples shall be collected by excavator with representative sample location collected throughout the stockpiles. Excavation of testpits will allow thorough inspection of stockpiled soils/materials for anthropogenic inclusions. Should unexpected contamination such as petroleum hydrocarbons or unusual odours sampling densities and analytical suite will be modified as per the unexpected find protocol (**Section 2**). It is noted that soils/stockpiles with anthropogenic inclusions will not be suitable for use within ROS areas. Additionally, sampling of stockpile footprints may also be required depending on the characterisation results of stockpiles. Stockpile samples shall be analysed for: heavy metals; TRH; VOCs; PAHs; PFAS; OCPs; PCBs and asbestos as per **Section 5.6.1**. A bulk sample shall be further collected and assessed for asbestos consistent with the methodology in **Section 5.6.1**.

It is also noted that amongst these stockpiles are a number of mulch stockpiles, as shown on **Figure 6**. Based on the generally low levels of contamination identified on the site and mulch stockpiled being made up of surface vegetation, mulch or organic plant materials are not proposed to be sampled. Visual inspection of the mulch for anthropogenic inclusions and asbestos is proposed to be conducted. Inspection will be undertaken with the aid of an excavator to inspect materials at the centre of stockpiles. Photographic record will be maintained.

5.6.3 Culvert at South of Regional Open Space

An existing concrete culvert is present at the south of the ROS area. The whole of the EWCR corridor has been assessed for UXO's apart from the area of this culvert. On the basis of the assessments completed to date it is considered highly unlikely that the area under the culvert is affected by UXO.

Where the concrete culvert is required to be removed by EWCR construction works, the opportunity shall be taken to conduct a UXO survey at this area to confirm the absence of UXO's or otherwise metallic debris. The survey shall be undertaken consistent with the provisions of **Section 3**. The presence of the concrete culvert precludes this assessment from currently being undertaken.

UXO's do not pose a potential risk where the concrete culvert is retained in position, however, given the requirement for development including filling, it is recommended that the culvert is removed and cleared to allow for a final Site Audit report to be prepared.

5.6.4 Stage 2b and Stage 3 Data Gap Assessment

A low potential for contamination has been identified within Stage 2b and Stage 3 of the EWCR, as shown on **Figures 2** and **3**. Consistent with this low potential, limited sampling and analysis has been completed in these areas.

The requirements for this Data Gap assessment including sampling and analytical program is provided in **Section 5.4** of the Stage 2b and Stage 3 EWCR RAP (JBS&G 2019f). The proposed approximate sampling locations for this assessment is provided in **Figures 7** and **8**.

5.6.5 Fill Depth and Potential Occurrence of Asbestos

The investigations completed to date within the EWCR corridor have generally found minimal depths of fill materials as present within the corridor (generally less than 0.3 m bgs). Fill materials have further been found to be generally free of anthropogenic materials, inclusive of ACM. Therefore, while the presence of asbestos is unlikely it is possible, and additional assessment along the length of the corridor is proposed to be undertaken in conjunction with Stage 2b and Stage 3 Data Gap Assessment (**Section 5.6.4**) to confirm previous characterisation of fill materials, and to further characterise absence of ACM.

It is proposed to undertake testpits along the length of the corridor to a depth of at least 500 mm below the observed depth of fill materials. The testpits are proposed to be undertaken on a 20 m spacing, as shown by the proposed sample locations in **Figure 8**. The rate of sampling is considered conservative in relation to the "possible" presence of asbestos and Table 1 of the WA DoH (2009) guidance. Each location shall be inspected to confirm the depth of the fill. A 10 L sample shall be further collected at each location and assessed for the presence of potential ACM by sieving through a 7 mm aperture sieve and inspection of the oversize for potential ACM. A volume of 500 ml of the undersize materials shall be sub-sampled for asbestos analysis.

If locations are identified during this assessment that have ACM present or otherwise have deeper depths of fill materials, then these areas shall be managed consistent with the provisions to **Sections 2** and **4** of this CMP.

5.6.6 PFAS Sampling beneath South Creek Bridge (Stage 2a)

In order to characterise the potential for PFAS impact to be moving through South Creek, directly beneath the South Creek bridge in Stage 2a, it is proposed to collect 4 soil samples within the South Creek banks directly beneath the bridge.

Two samples shall be collected as close to the creek bank/water interchange, with the second two samples collected approximately 5 m further back from the water on either side.

5.7 Soil Sampling Methodology

Characterisation samples required to be collected of as from the areas discussed in previous sections shall require.

5.7.1 Soil Sampling

The soil sampling method shall be determined by the Field Scientist as consistent with the observations of the site sub-surface and appropriate to generate representative samples.

Where sample locations are placed by boreholes, undisturbed samples, as collected by push tube is preferred where able to be effectively implemented. Otherwise samples may be recovered from solid flight augers, hand tools or via test pitting. Re-usable equipment shall require to be decontaminated between sampling locations.

Where asbestos quantification is required, sufficient sample volume to obtain a 10 L sample will be requires, as such test pits are the preferred approach where asbestos quantification is conducted.

5.7.2 Soil Sample Containers and Preservation

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination shall be noted on field reporting sheets/field logs.

Soil samples collected for PFAS analysis will be required to be conducted as per *PFAS National Environmental Management Plan (January 2018)* and will require appropriate 250mL HDPE jars supplied by the laboratory. Sample labelling shall use of a ball-point pen.

The sample labels shall record sample identification number and date and time of sampling. Sample containers shall be transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form shall be completed and forwarded with the samples to the testing laboratory.

5.8 Quality Assurance / Quality Control

A quality assurance / quality control (QA/QC) program shall be undertaken with each of the data collection tasks nominated in the CMP, to allow calculation of data quality indicators (DQI's) to assess data reliability. Subject to the works being completed the QA/QC program shall comprise:

- Preparation and analysis of blind and split duplicate samples at a frequency of at least one duplicate(s) per 20 primary samples;
- Preparation and submission of trip blank samples;
- Preparation of rinsate blank samples from non-disposable sampling equipment;
- Request, retention and submission of trip spike samples for analysis;
- Collection of samples by appropriately trained and experienced JBS&G staff and transfer of samples to new laboratory supplied sample containers;
- Assessment of analysis of samples within holding times;
- Submission of samples for analysis by a NATA accredited laboratory; and
- Laboratory QA/QC check s inclusive of surrogate spikes, laboratory blanks, laboratory duplicates, laboratory control samples and matrix spikes.

5.9 Assessment of Soil Data

Soils data shall be compared to commercial / industrial criteria as advised to *National Environment Protection Assessment of Site Contamination) Measure*, 1999 (as amended 2013), National Environment Protection Council (NEPC 2013) to determine environmental suitability for use within the roadway corridor. PFAS constituents shall be assessed to the laboratory reporting limit in lieu of an agreed criteria, typically 0.005 mg/kg. The soil criteria is below the current national human health based and ecological guidance values (NEMP 2018) and the proposed draft values, and the criteria is considered sufficiently conservative for the intended land use (roadway and regional sports precinct) prior to site specific criteria being agreed with the NSW EPA.

Statistical analysis of data sets (except asbestos) may be undertaken to facilitate comparison of a 95% UCL_{avg} estimate of a contaminant levels to adopted criteria where a statistically defensible dataset can be prepared. In these cases, reference should be made to guidance in NEPC (2013) and *Sampling Design Guidelines*, 1995, NSW EPA.

5.10 Requirement for Groundwater Assessment

No beneficial use of groundwater is proposed within the extent of the water table. No portions of site works as proposed within the EWCR construction is anticipated to intercept groundwater.

Levels of site constituents as assessed within the site have not been found to pose a potential risk of groundwater contamination apart from PFAS sources from areas outside the roadway corridor. The removal of PFAS impacted soils in accordance with the RAP (JBS&G 2019f) will mitigate impacts to groundwater.

At this stage, it is not proposed to formerly assess groundwater within the extent of the EWCR corridor. This shall be revised where soil contamination is identified by the extent of works as described throughout **Section 5**, or otherwise as identified through an unexpected find in **Section 2**. The implementation of any groundwater assessment shall be undertaken consistent with the general guidance in **Section 2**, as it shall be as the result of an otherwise unexpected find.

It is noted that ongoing liaison is occurring with the NSW EPA as low level PFAS contamination in groundwater in proximity of the south-east of Stage 2 and Stage 3 of the EWCR corridor as consistent with the process described in **Section 5.7**. A summary of groundwater conditions and management requirements for groundwater are provided in the broader scale RAP for the former St Marys Development Site (JBS&G 2019g[19]). The proposed construction of the roadway, and the extent of the EWCR site noting the management works as otherwise being undertaken in **Section 5.7**, is not anticipated to affect the remedial approach as is currently being determined with the EPA.

[19] *Remedial Action Plan – Former ADI St Marys Development Site, St Marys and Llandilo, NSW (Rev D*) JBS&G Australia Pty Ltd 21 June 2019 (JBS&G 2019g)

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6. Material Tracking

The movement of all bulk quantities of construction materials (including earthworks derived material, PFAS impacted materials, bituminous materials form demolition works and/or any pavement materials) on the site during any remedial or construction activities is required to be subject to a material tracking system. The material tracking system shall be administered by the Principal Contractor and reviewed by JBS&G for inclusion in the post fill validation reports.

Material tracking shall be required for all materials moved / excavated from a location on the site and not wholly replaced in the same locations on the same day of material movement (i.e. soils excavated for testpitting / assessment do not require material tracking, however all other material does).

6.1 Material Tracking Data

To this extent, all excavation and filling works as undertaken with all reused site materials, relocated PFAS impacted materials and bituminous materials shall require the following information to be recorded by the consultant based only on information provided by the contractor and verified by the consultant, with respect to material placement activities:

- Date;
- Estimated volume (cubic metres);
- Type of material;
- Depth of placement (RL) if required (i.e. if material is only suitable for placement at a specified depth due to aesthetic, human health or ecological consideration). Or otherwise approximate elevation of placement where PFAS impacted soils are added to the current stockpile of PFAS impacted soils within the Dunheved site;
- Source (from) information in terms of MGA56 co-ordinates as established by site GPS and/or survey and/or the site specific grid location (grid system to be supplied in SRAP);
- Placement (to) information in terms of MGA56 co-ordinates as established by site GPS and/or survey and/or the site specific grid location;
- Reference document (where necessary, i.e. ESA report, characterisation report and/or validation report or virgin excavated natural material / excavated natural material classification);
- Purpose of placement (surplus to site requirements, interim management of PFAS impacted soils etc); and
- Comments (when required).

In addition to the above, it is suggested the consultant is on hand to record these activities as necessary, including the generation of a photographic log detailing placement/fill etc.

To ensure the materials are suitable for the final placement location proposed land use, material which has been removed for the purposes of environmental management / processing (i.e. removal of anthropogenic materials from stockpiles / soils at the ROS), and is proposed to be moved again subsequent to the completion / validation of environmental management / processing works:

- Material tracking forms for the replacement of the material shall make reference to the initial material tracking forms generated by the excavation of the materials for management / processing; and
- Reference all associated environmental data.

As part of the validation of the material tracking forms, mass / material balances shall be assessed at each stage where additional material tracking forms are generated for particular site material.

It is the responsibility of the Principal Contractor to ensure the material tracking record sheet(s) are completed and submitted to the Environmental Consultant regularly. The Environmental Consultant has ownership of the material tracking system on receipt of all the necessary information from the contractor.

The Environmental Consultant is required to review the submitted material tracking record sheet(s) and to investigate/resolve any discrepancies. Following this review, a copy of the material tracking record sheet(s) is to be forwarded to the Principal Contractor. Ideally this would occur within two days of the Environmental Consultant verifying the material tracking record sheet(s) from the contractor.

6.2 Material Characterisation Forms and Sheets

Following characterisation works, a material characterisation form will be provided by the environmental consultant to the Principal contractor and will include conditions on reuse requirements if any. Material Characterisation form is provided in **Appendix B**.

Additionally, a material taking sheet including information such as time/date, truck registration, load quantity and MCF registration number will need to be kept. Material tracking sheets are also provided in **Appendix B**.

7. Reporting

A range of environmental sampling and analysis, records of physical observations and material tracking data will be generated through the implementation of this CMP. A EWCR Contamination Management Summary Report shall be required to be prepared at the cessation of the earthworks as undertaken with the construction of the EWCR. This report shall contain as a minimum:

- All field notes as collected by the environmental consultant;
- Full incident descriptions of any unexpected finds;
- Environmental sampling and analysis as specific to each of the areas nominated in **Sections 5.6.1**, **5.6.2**, **5.6.4**, **5.6.5** and **5.7**;
- Any additional UXO clearances as required by works described in **Section 5.6.3**, or otherwise required in response to an Unexpected Find;
- Any environmental and/or occupational monitoring as required in response to observation of asbestos / ACM;
- All material tracking records;
- All waste disposal documentation as require din response to surplus soils generated by site works;
- Assessment of QA/QC and data reliability; and
- On the basis of the extent of data historically available and that additionally collected under the requirements of the CMP, a characterisation of the environmental status of the roadway corridor and a statement of suitability as to use as a roadway.

8. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

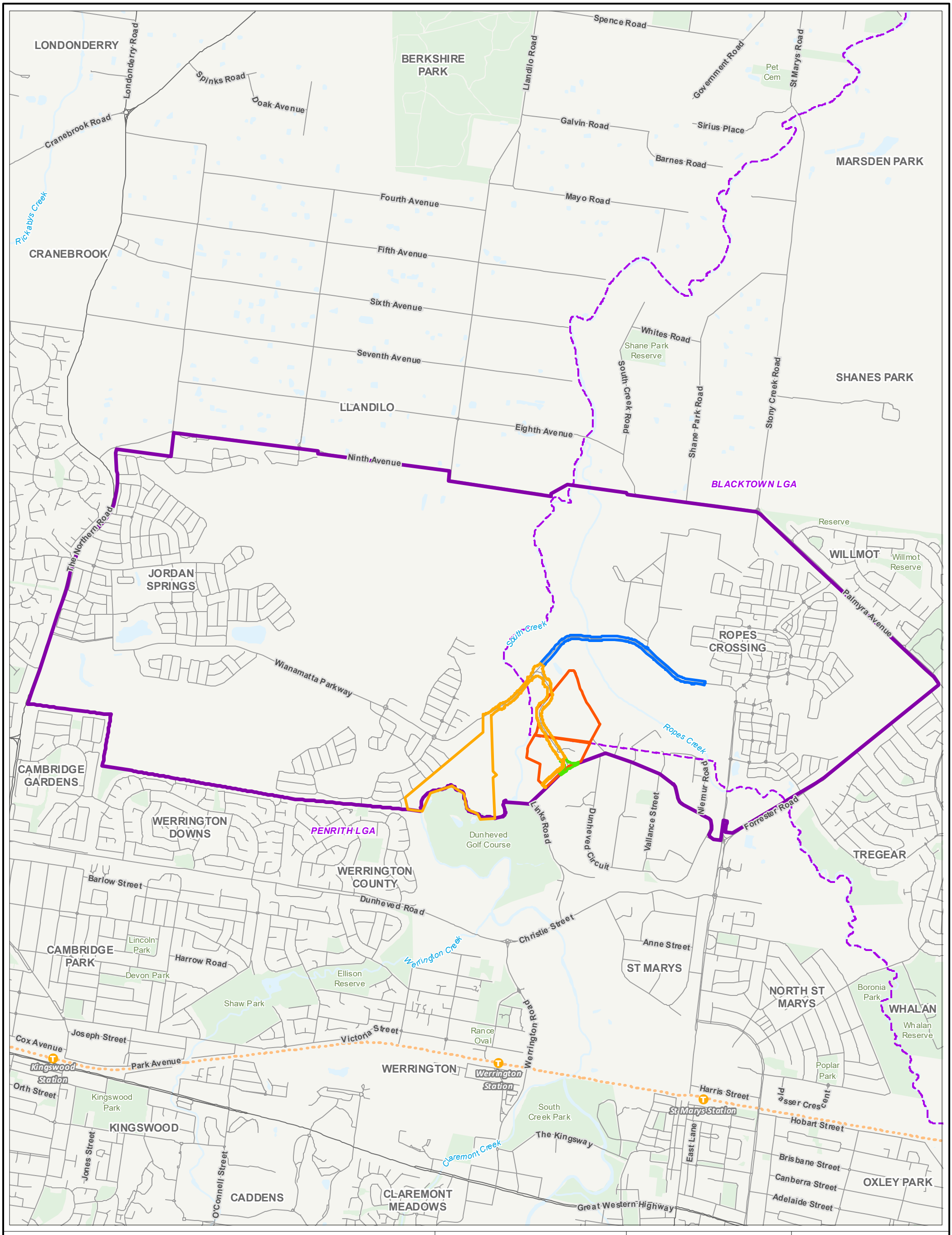
Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

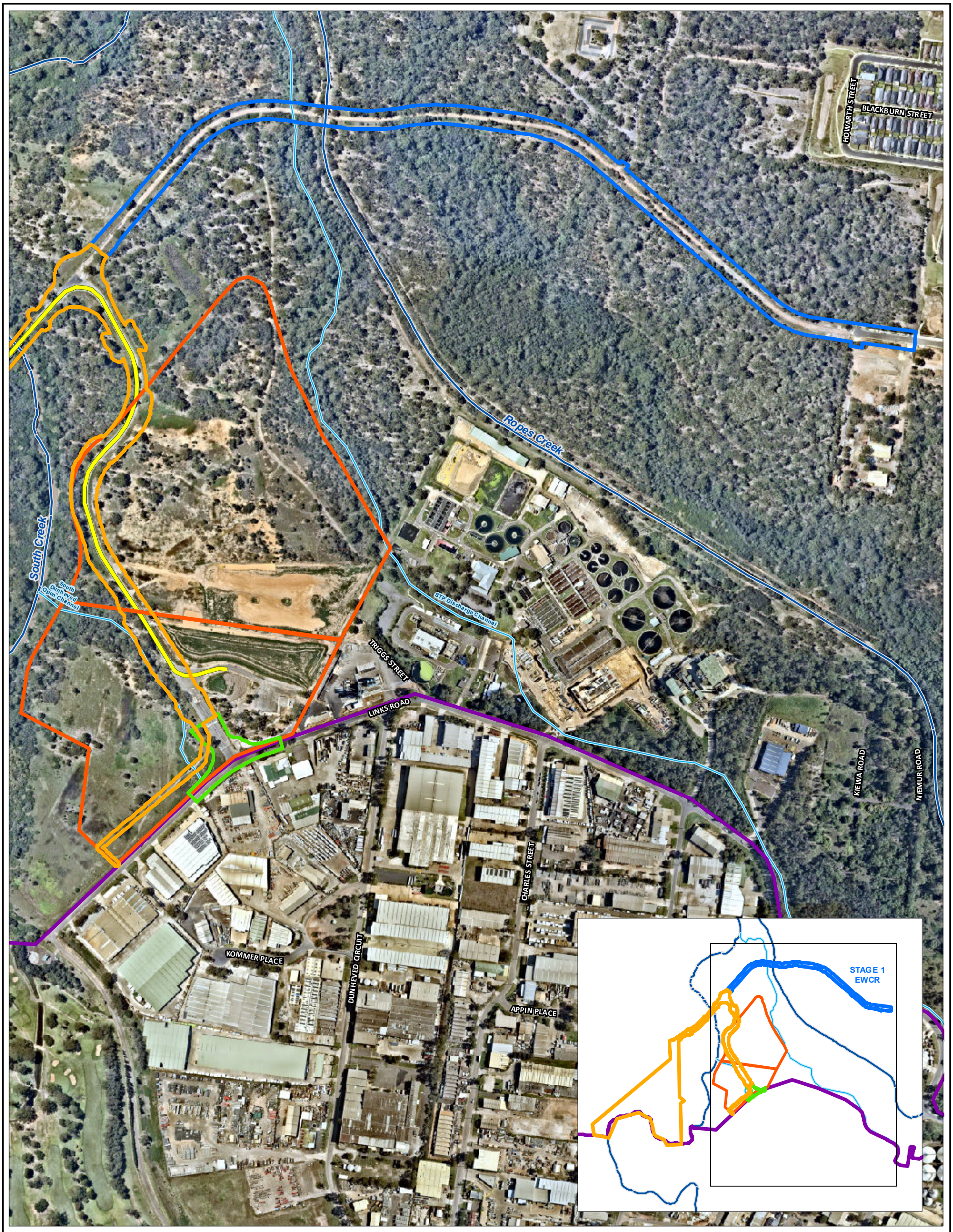
- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- LGA boundary
- Parks and reserves
- Waterbody area
- Waterway
- Primary Road
- Local Road
- Train Line
- Train Station

JBS&G

0 375 750 metres

Job No: 54782		Scale: 1:27,500		**Central Precinct**
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		**SITE LOCATION**
Drawn By: RF	Checked By: GB	Version: R06 Rev B	Date: 25-Jul-2019	**FIGURE 1**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_01_Site_Location.mxd
Time Saved: 30/07/2019 20:07:30 | Version: 10.6.0.20180730



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Channels
- Creeks

JBS&G

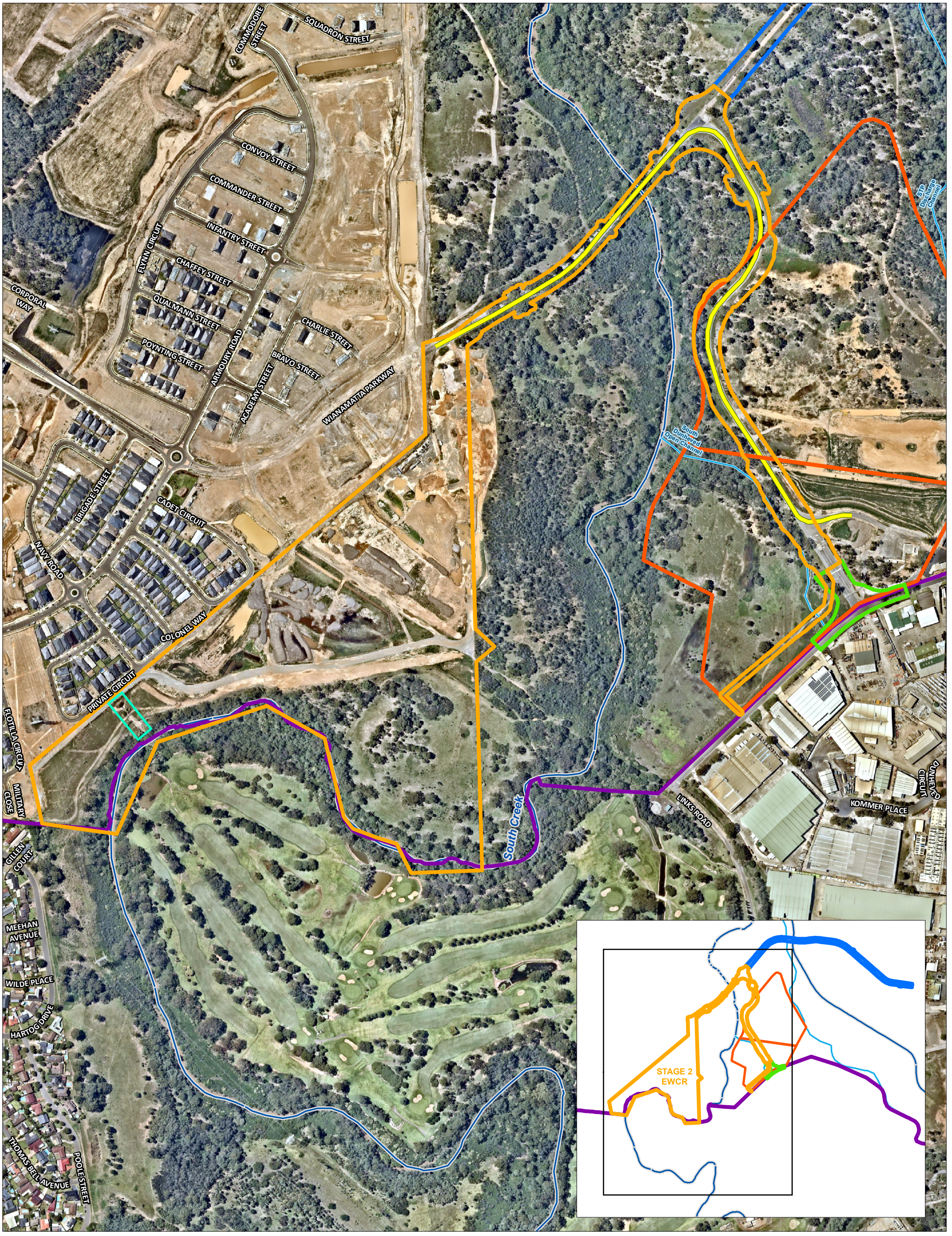
0 75 150
metres

Central Precinct

STAGE1 OF THE EAST WEST CONNECTOR ROAD (EWCR) SITE LAYOUT

Job No: 54782		Scale: 1:5,500		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R06 Rev B	Date: 25-Jul-2019	**FIGURE 2**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_02_Stage1_EWCR_Site_Layout.mxd
Time Saved: 29/07/2019 10:18:12 AM



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Culvert which requires UXO search
- Channels
- Creeks

JBS&G

0 75 150 metres

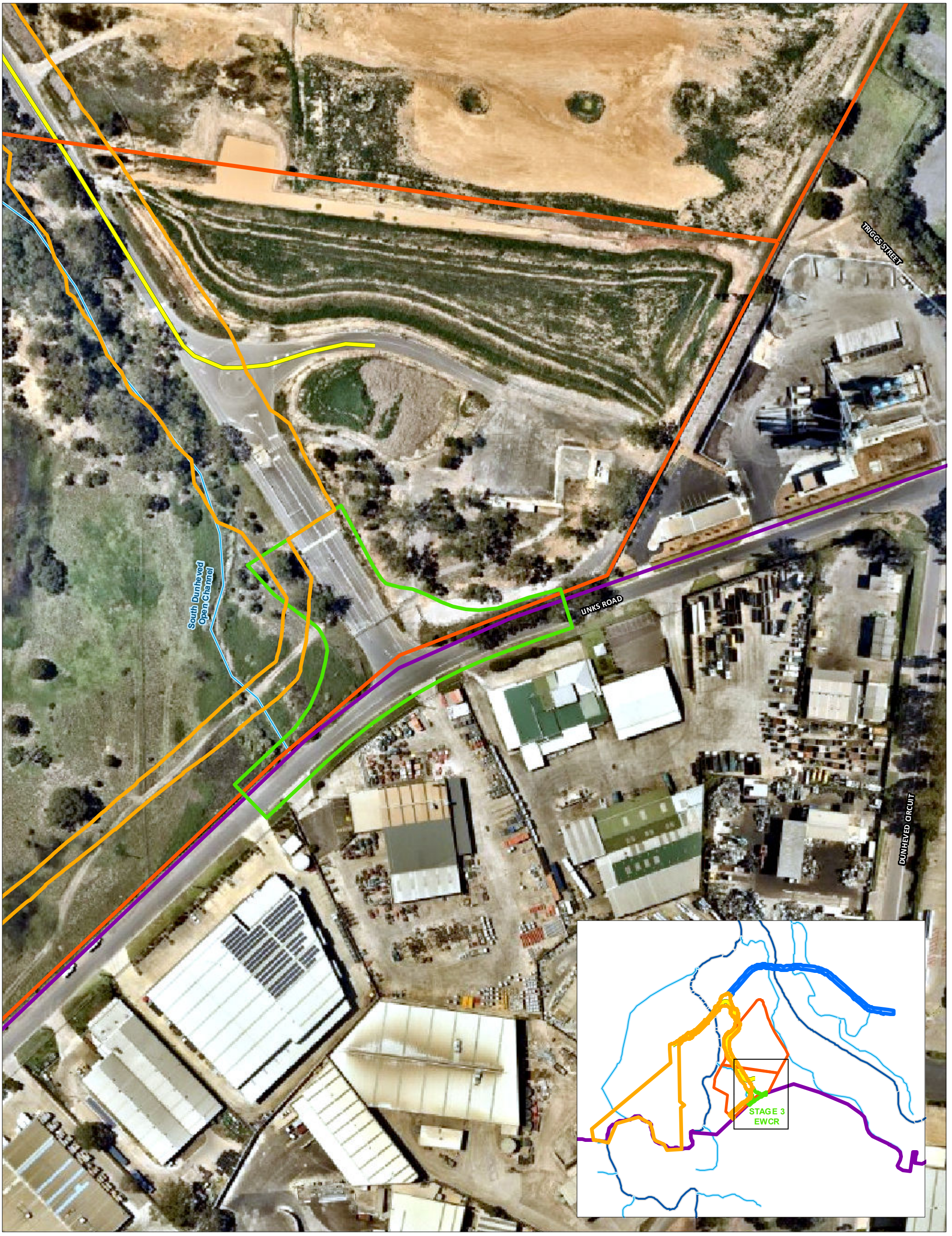
Central Precinct

STAGE 2 OF THE EAST WEST CONNECTOR ROAD (EWCR) SITE LAYOUT

Job No: 54782		Scale: 1:5,500		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: AS	Checked By: GB	Version: R06 Rev B	Date: 09-Aug-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_03_Stage2_EWCR_Site_Layout.mxd
Time Saved: 10/12/2018 20:07:30 20181229

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Channels
- Creeks

JBS&G

0 20 40 metres

Central Precinct

STAGE 3 OF THE EAST WEST CONNECTOR ROAD (EWCR) SITE LAYOUT

Job No: 54782		Scale: 1:1,564		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R06 Rev B	Date: 25-Jul-2019	**FIGURE 4**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_04_Stage3_EWCR_Site_Layout.mxd
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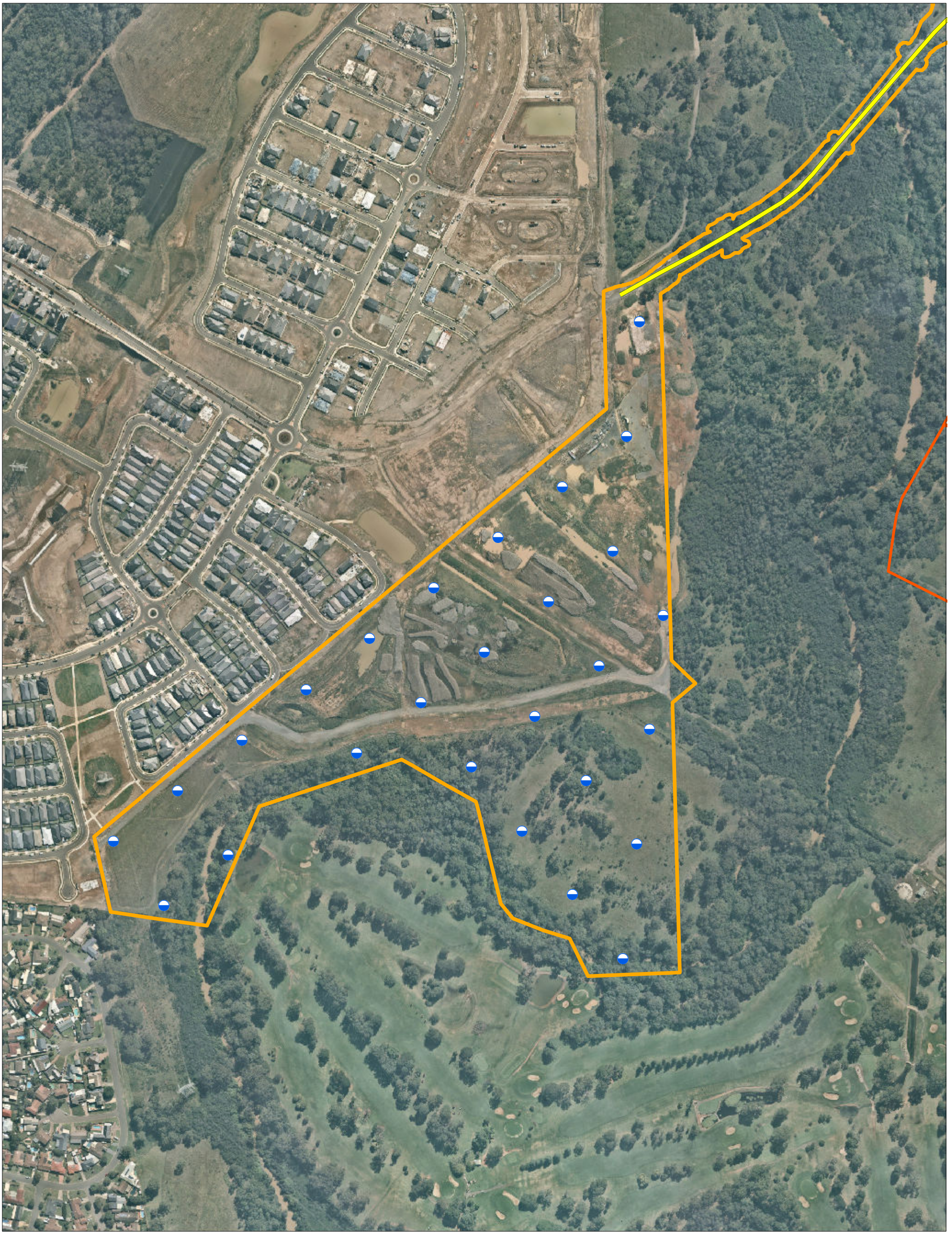


Legend:

- Dunheved Precinct
- Stage 2 Boundary
- Haulage Road
- Proposed Sample Location

Note: Samples may be eliminated if areas has been assessed previously

JBS&G

0 50 100
metres

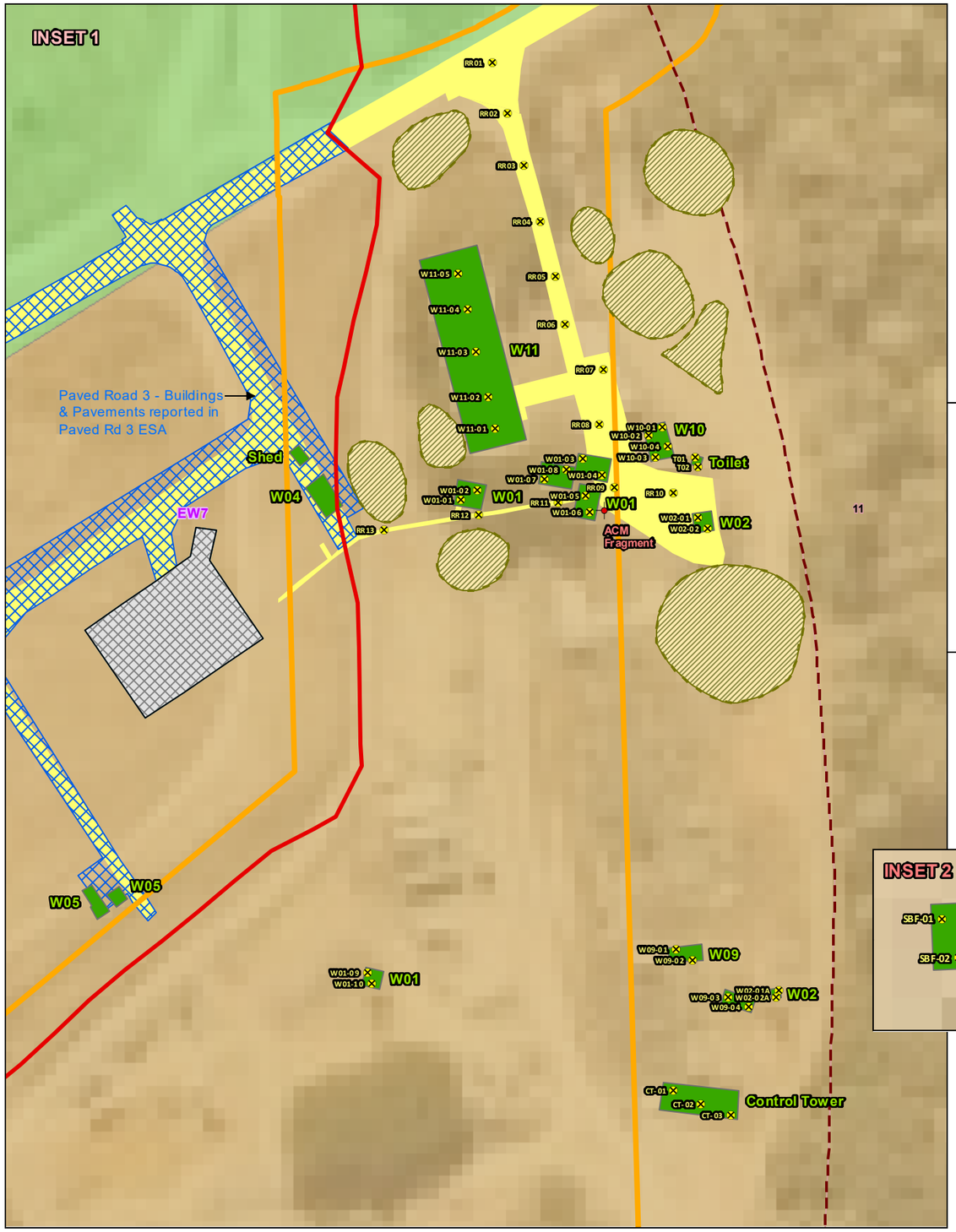
Central Precinct

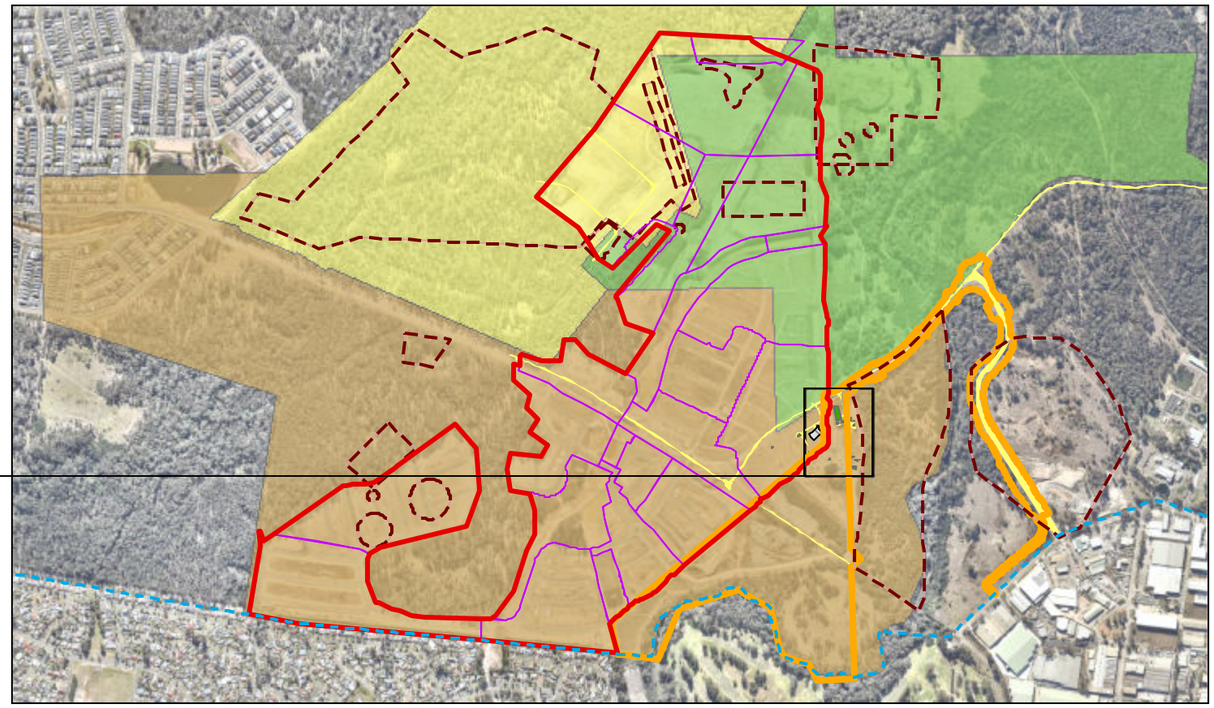
STAGE 2C - INFILL SAMPLING LOCATIONS

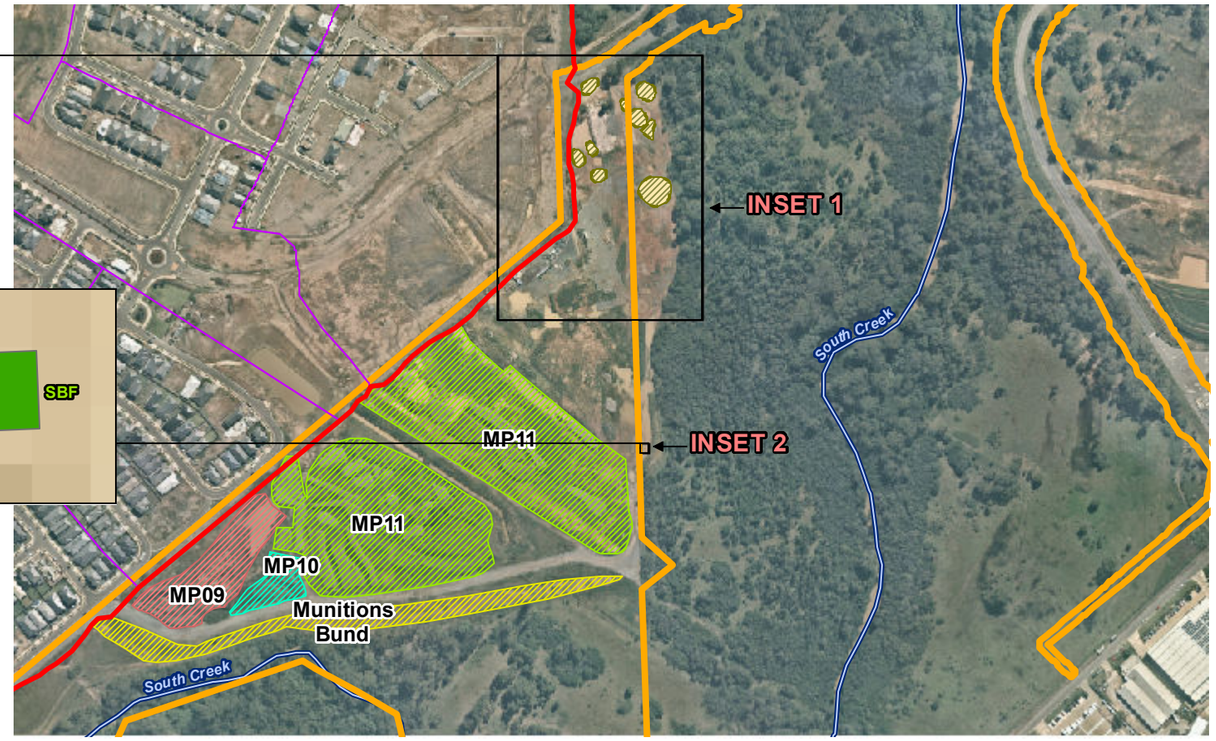
Job No: 54782		Scale: 1:4,250		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R06 Rev B	Date: 25-Jul-2019	**FIGURE 5**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_05_Stage2c_InfillSampleLocations.mxd
Last Saved by: RF on 20181229

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019







Source: Base Image - © Near Map www.nearmap.com, imagery date 22-07-2017

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0 10 20 40 m

Scale: 1:1,100

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
B	Original Issue - R06	RF	25-07-2019

Legend:

- CHK001/1 Audit Statement Boundary
- Former Areas of Environmental Concern (Approximate Locations)
- Central Precinct
- Earthworks Boundary
- CHK001/6 Building Extent (IW Building Series)
- CHK001/6 Concrete Building Footprint (IW Building Series)
- CHK001/6 Bitumen Roads
- Paved Road 3
- Central Sector West
- North Western Sector
- Southern Sector West

East West Connector Road Site

- Stage 2 Boundary
- Stockpile Locations

Additional Stockpiles

- MP09 - Soil Stockpile
- MP10 - Soil Stockpile
- MP11 - Mulch Stockpile
- Munitions Bund

JBS&G

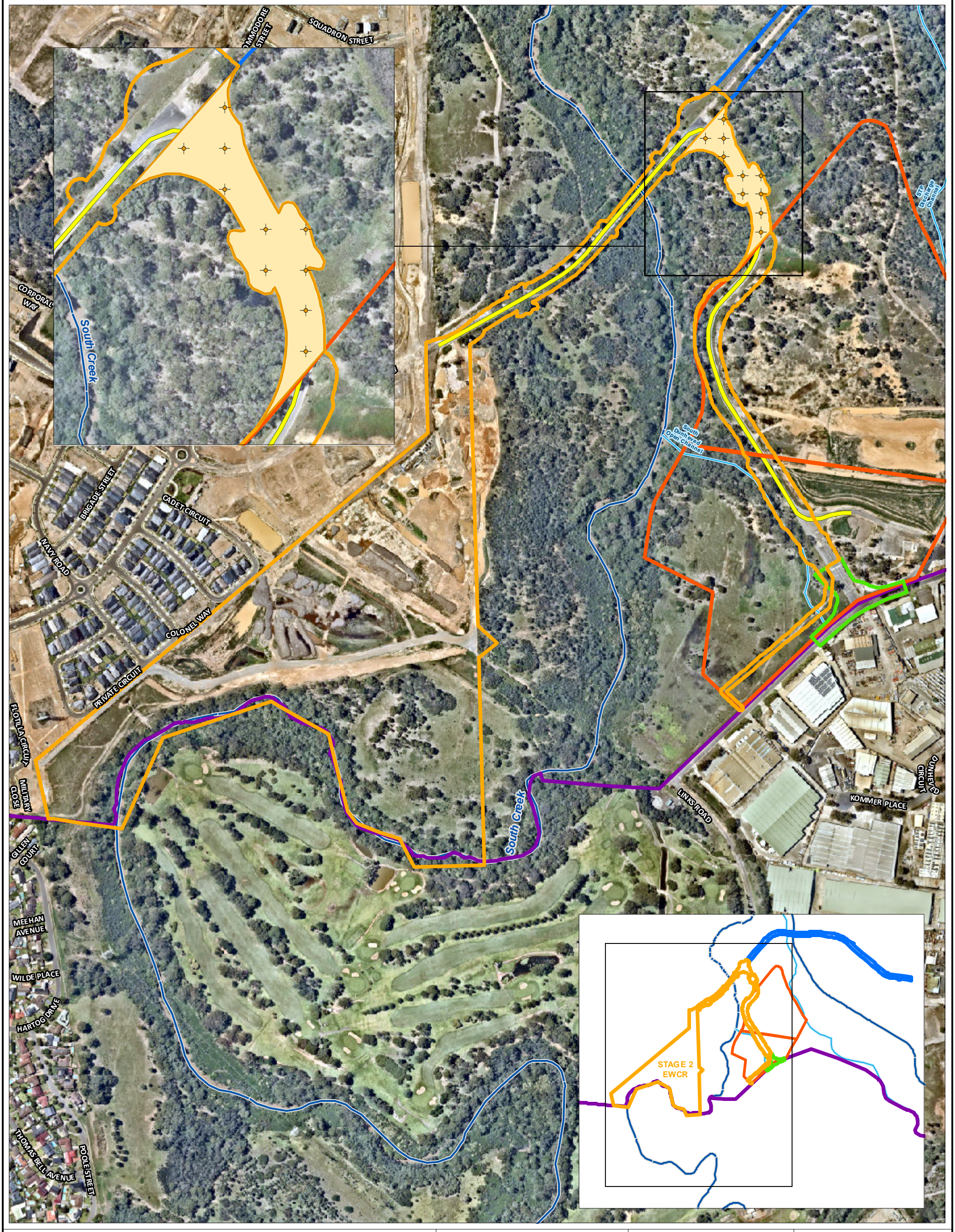
Figure 6: Stage 2c Stockpile Locations and Munitions Bund

Client: Minter Ellsion

Project: Central Precinct

Job No: 54782 File Name: 54782_06

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Channels
- Creeks
- Stage 2 - Area of Additional Characterisation
- Stage 2 - Additional Characterisation Sample Locations

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0 75 150 metres

Job No: 54782 | Scale: 1:5,500

Client: Minter Ellison | Coord. Sys. GDA 1994 MGA Zone 56

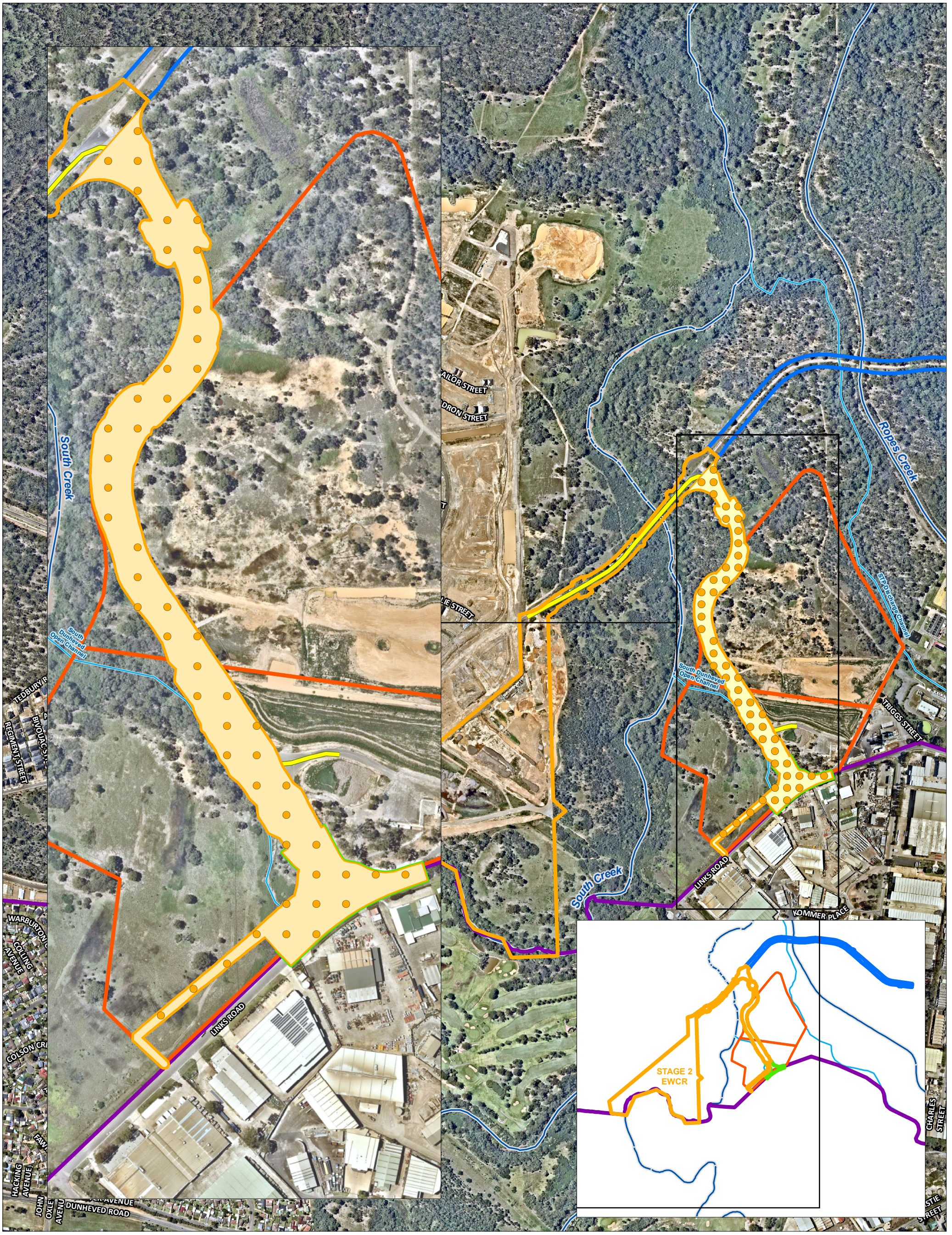
Drawn By: RF | Checked By: GB | Version: R06 Rev B | Date: 25-Jul-2019

Central Precinct

STAGE 2B ADDTIONAL CHARACTERISATION SAMPLE LOCATIONS

FIGURE 7

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_07_Stage2b_AdditionalCharacterisationSamples.mxd
Last Saved on: 20181229



Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 2b and 3 Area of Fill and Asbestos Quantifiaction

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Channels
- Creeks

JBS&G

0 120 240
metres

Central Precinct

STAGE 2B AND STAGE 3 DATA GAP ASSESSMENT LOCATIONS

Job No: 54782		Scale: 1:8,500		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R06 Rev B	Date: 14-Aug-2019	**FIGURE 8**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R06 Rev B\54782_08_Stage2b_3_Fill_AsbestosQuantificationSamples.mxd
Created on: 14/08/2019 by: 20181229

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Appendix A Unexpected Finds Protocol

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

BE AWARE
UNEXPECTED HAZARDS MAY BE PRESENT

asbestos

Chemical bottles

Blood stains

odours

ash / slag

demolition waste

if you <u>SEE</u> or <u>SMELL</u> anything unusual

<u>STOP WORK</u> & contact the Site Foreman

do not restart working before the area has been investigated and cleared by an Environmental Consultant

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Appendix B Material Tracking Sheets

MCF Form

Material Details	
Completed by	
Date	
Material Identification (physical properties and inclusion)	
Summary of Material Classification	
JBS&G Material Classification Reference	**MCF Number: 001** This unique number is required to be recorded on materials tracking documentation
Source Location Site won material (grid reference and RL) Source site address	
Volume of Material	
Land Use Suitability (this material is suitable, from a contamination perspective, for use in the following areas)	
Reuse onsite without any further requirements	√ YES □ NO
Reuse onsite at a depth of 2 m or more below final surface levels	√ YES □ NO
Reuse onsite at a depth of 0.1 m or more below final surface levels	√ YES □ NO
Within Road Roadways	√ YES □ NO
Off-Site Disposal	□ YES □ NO √ N/A

Material Tracking Sheet

Materials Tracking Form Part A (Materials Received, Excavated, Stored or Placed)										
Completed by:										
Date:										
Comment (Are there any visual or olfactory indicators of contamination):										
# of Loads.	**Time**	**Truck Rego / Plant ID**	**Load Quantity (m^3)**	**MCF Reference No**	**Source Location**	**Temporary Stockpiled Y/N and ID**	**Final Placement Location Y/N**	**Placement location (grid reference)**	**Reduced level of placement m AHD (final placement only)**	**GPS Coordinates (final placement only)**

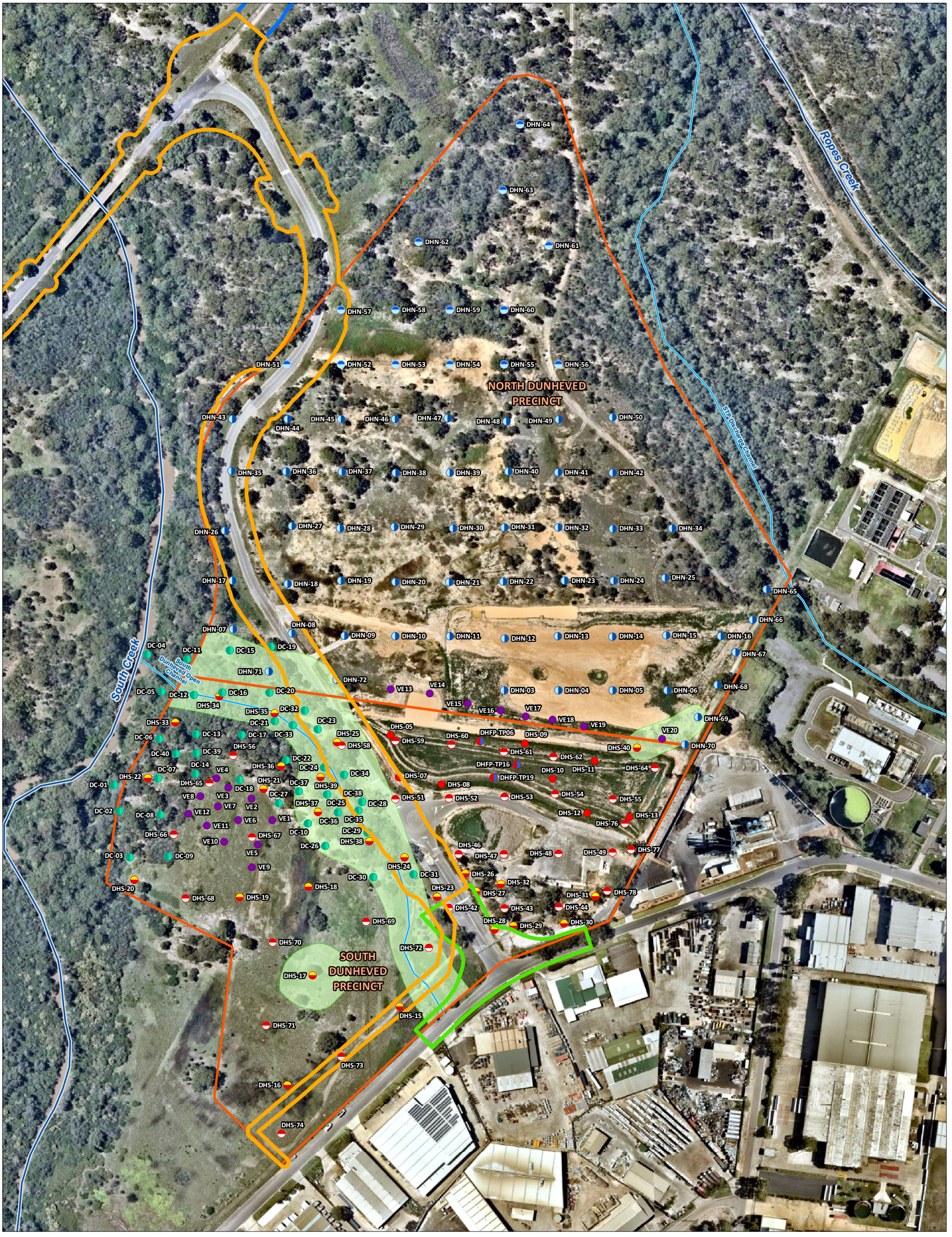
Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Appendix C Summary of Environmental Data held for EWCR Corridor

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Stage 2b Data

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Creeks
- Channels
- Proposed PFAS Remediation Areas

Soil Sample Location

- Dunheved South - Dec 2017
- Dunheved South - Sep 2017
- Dunheved South - Feb 2018
- Dunheved South - May 2018
- Dunheved North - May 2018
- Material Characterisation Dunheved May 2018
- Adjoining Dunheved South - July 2018
- Dunheved North - Nov 2018

JBS&G

0 40 80 metres

Central Precinct

SOIL SAMPLE LOCATIONS DUNHEVED

Job No: 54782		Scale: 1:3,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: FH	Checked By: GB	Version: R03 Rev B	Date: 12-Apr-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\54782_03_Sample_locations.mxd
Time saved: 11:48 AM 20191228

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 2 Boundary
- Proposed PFAS Remediation Areas
- Creeks
- Channels
- Soil Sample Location - Stage 2

JBS&G

0 20 40
metres

Central Precinct

SOIL SAMPLING LOCATIONS

Job No: 54782		Scale: 1:1,750		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: L20 Rev 0	Date: 15-Jul-2019	**FIGURE 1**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\L20 Rev 0\54782_01_Soil_Sampling_Locations.mxd
Data Source: LPI Web Services 20191228 © Department of Finance, Services & Innovation 2017

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

	Explosives in Soil										Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEXN											
	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	Tetryl	4-Amino-2,6-dinitrotoluene	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	GL-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	GL-C10 Fraction	GL-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthrazene	Benz(a)anthracene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.1	0.1	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)											160		850	310	1800		350	770																	370				
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																									1700	3300	170		215	75	165	135			180					
NEPM 2013 Soil HIL D											3000	900	3600	240000	1500	730	6000	400000																						
NEPM 2013 Soil HSL D - Sensitive Setting																											-		250	3	-	-			230	-				
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																								
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																								
Field ID	**Date**	**Report Number**																																							
Dunheved South																																								
DHS-07	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	7.3	<0.4	23	19	17	<0.1	13	29	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	13-Dec-17	182018	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6	<0.4	17	15	13	<0.1	8	21	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1
DHS-15-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	2.9	<0.4	130	44	11	<0.1	120	67	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-23-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	5.7	<0.4	20	8.5	14	<0.1	5.4	10	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-24-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	8.5	<0.4	28	13	17	<0.1	6.2	18	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	32	9.8	21	<0.1	8.6	21	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
Dunheved North																																									
DHN-8 0-0.1	04-May-18	597159	-	-	-	-	-	-	-	-	-	-	5.1	<0.4	19	15	19	0.1	6.7	22	<20	<20	<50	59	59	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-26_0.4-0.5	07-May-18	597366	-	-	-	-	-	-	-	-	-	-	9.5	<0.4	26	17	24	<0.1	18	39	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	4.3	<0.4	20	13	14	<0.1	9.3	26	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

Polycyclic Aromatic Hydrocarbons

Field ID	Date	Report Number	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.5	0.5	0.5	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																		
NEPM 2013 ESL Commercial and Industrial, Coarse Soil			1.4															
NEPM 2013 Soil HIL D				40	40	40						40				4000		
NEPM 2013 Soil HSL D - Sensitive Setting																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																		
Dunheved South																		
DHS-07	13-Dec-17	577258	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	13-Dec-17	182018	<0.05	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.172[#1]	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1
DHS-15-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-23-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-24-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dunheved North																		
DHN-8 0-0.1	04-May-18	597159	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-26_0.4-0.5	07-May-18	597366	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#7]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Organochlorine Pesticides

Field ID	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 EIL - Commercial Industrial (Site Specific)									640			
NEPM 2013 ESL Commercial and Industrial, Coarse Soil												
NEPM 2013 Soil HIL D			45				530				3600	
NEPM 2013 Soil HSL D - Sensitive Setting												
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D												
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL												
Dunheved South												
DHS-07	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
QA20171212-01	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	<0.1	<0.1	<0.2[#7]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DHS-15-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
DHS-23-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
DHS-24-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
DHS-25-0-0.1	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Dunheved North												
DHN-8 0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
DHN-26_0.4-0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
DHN-35 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05

Field ID	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	gamma-Chlordane	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Aroclor 1016	Aroclor 1221
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)														
NEPM 2013 ESL Commercial and Industrial, Coarse Soil														
NEPM 2013 Soil HIL D				100				50			2500	160		
NEPM 2013 Soil HSL D - Sensitive Setting														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL														
Dunheved South														
DHS-07	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
QA20171212-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
DHS-15-0-0.1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-23-0-0.1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-24-0-0.1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-25-0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
Dunheved North														
DHN-8 0-0.1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.5	<0.1
DHN-26_0.4-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHN-35 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

			Polychlorinated Biphenyls						Chlorinated Benzenes	Nitrobenzenes			Nitrotoluenes				Ionic Balance		
			Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Hexachlorobenzene	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	µS/cm	ph Units
EQL			0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1		0.1	0.1	0.05	10	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																			
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																			
NEPM 2013 Soil HIL D								7	80										
NEPM 2013 Soil HSL D - Sensitive Setting																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																			
Field ID	**Date**	**Report Number**																	
Dunheved South																			
DHS-07	13-Dec-17	577258	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1	<0.5	<0.5	<1	-	<0.5	<0.5	17	64	5.2
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-
QC20171212-01	13-Dec-17	182018	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-
DHS-15-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-23-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-24-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	9.4	64	8.1
Dunheved North																			
DHN-8 0-0.1	04-May-18	597159	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-
DHN-26_0.4-0.5	07-May-18	597366	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table B: Asbestos in Soil Results
Job Number: 54020
Job Name: Dunheved Investigation

			Asbestos Field					Asbestos Laboratory													Asbestos - Trace Analysis				
			Approximate Volume of Soil	Approx. Sample Mass#1	Mass ACM	Mass Asbestos in ACM#2	Asbestos from ACM in soil#3	Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			L	g	g	g	%w/w	g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																									
NEPM 2013 Soil HIL D							0.05		0.05					0.001					0.01	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																									
South Dunheved																									
DHS-07	13-Dec-17	577258	10	16300	0	0	0	643	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QA20171212-01	13-Dec-17	577258	10	16300	0	0	0	669	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QC20171212-01	13-Dec-17	182018	10	16300	0	0	0	583	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-15-0-0.1	12-Feb-18	584878	10	16300	0	0	0	1114	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-23-0-0.1	12-Feb-18	584878	10	16300	0	0	0	755	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-24-0-0.1	12-Feb-18	584878	10	16300	0	0	0	735	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-25-0-0.1	12-Feb-18	584878	10	16300	0	0	0	902	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-26-0-0.1	12-Feb-18	584878	10	16300	0	0	0	711	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
North Dunheved																									
DHN-8 0-0.1	04-May-18	597159	10	16300	0	0	0	459	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-26_0.4-0.5	07-May-18	597366	10	16300	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-35 0-0.1	08-May-18	597594	10	16300	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-71 0.4-0.5	08-May-18	597594	10	16300	0	0	0	498	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Table App C PFAS Analytical Results for Stage 2b EWCR
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

Field_ID		Sampled_Date-Time	PFAS																																				
			2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEPA (2018) Ecological Indirect exposure - Residential																															0.01	0.01								
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils																0.1															0.009	0.009								
HEPA (2018) Human Health Screening Levels - Public Open Space																10															1	1								
HEPA (2018) Human Health Screening Levels - Commercial/Industrial																100															20	20								
HEPA (2018) Soil Indirect - Commercial and Industrial																															0.14	0.14								
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial																48															60	60								
HEPA (2018) Soil Direct Toxicity - Public Open Space																10															1	1								
Dunheved North																																								
DHN-17 0-0.1	DHN-17 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0097	0.0097	<0.05	<0.01	0.0097	0.0097	-	-	-
DHN-26_0-0.1	DHN-26_0-0.1	07-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-35 0-0.1	DHN-35 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-43 0-0.1	DHN-43 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-51 0-0.1	DHN-51 0-0.1	10-09-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-57 0-0.1	DHN-57 0-0.1	10-09-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	0.013	0.013	0.013	0.013	0.013	-	-	-
DHN-72 0.3-0.5	DHN-72 0.3-0.5	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0077	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	0.017	<0.05	0.0247	0.0247	0.0247	-	-	-
DHN-72 0-0.1	DHN-72 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.005	0.28	0.2887	0.2997	0.2997	0.291	0.2997	-	-	-
DHN-72_0-0.1	DHN-72_0-0.1	07-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-8 0-0.1	DHN-8 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
Dunheved South																																								
DHS-07		13-12-17	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.005	-	-	-	-	-
DHS-15-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	<0.005	<0.005	0.0052	<0.05	<0.01	-	-	-	-	-
DHS-23-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-24-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
QA2010212-02		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
QC20180212-02		12-02-18	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0002	-	-	-	-	-	-	-	-	-	-	-	0.0006	-	0.0005	0.0011	-	-	-	-	-	-	-	-
DHS-25-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-26-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-51-5.2-5.3	DHS-51-5.2-5.3	01-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHS-58 0-0.1	DHS-58 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHS-73 0-0.1	DHS-73 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
Adjoining Dunheved South																																								
DC-19 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.015	<0.05	0.015	0.015	0.015	-	-	-
QA20180703-02	DC-19 0.0-0.1	03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018	0.018	<0.05	0.018	0.018	0.018	-	-	-
QC20180703-02	QC20180703-02	03-07-18	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	0.0023	-	0.015	0.0173	0.018	-	-	-	-	-	-
DC-19 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	<0.005	<0.005	0.0052	<0.05	<0.01	<0.005	0.0052	-	-	-
DC-23 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	<0.005	0.13	0.1399	0.1456	0.1456	0.1357	0.1456	-	-	-
DC-23 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.029	0.029	<0.05	0.029	0.029	0.029	-	-	-
DC-23 0.6-0.8	DC-23 0.6-0.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 1.4-1.6	DC-23 1.4-1.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 2.4-2.6	DC-23 2.4-2.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 3.4-3.6	DC-23 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0093	0.0093	<0.05	<0.01	0.0093	0.0093			
DC-23 4.6-4.8	DC-23 4.6-4.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0069	0.0069	<0.05	<0.01	0.0069	0.0069			
DC-23 5.6-5.8	DC-23 5.6-5.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 6.3-6.5	DC-23 6.3-6.5	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-28 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	0.11	0.11	0.11	0.11	0.11	-	-	-
DC-29 0.0-0.1		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0073	0.0073	<0.05	<0.01	0.0073	0.0073	-	-	-
DC-31 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DC-32 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0057	<0.05	<0.01	0.0057	0.0057	-	-	-
DC-34 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.027	0.027	<0.05	0.027	0.027	0.027	-	-	-
DC-34 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.025	<0.005	0.28	0.305	0.305	0.305	0.28	0.305	-	-	-
DC-34 0.6-0.8	DC-34 0.6-0.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.13	0.13	0.13	0.13	0.13	0.13			
DC-34 1.4-1.6	DC-34 1.4-1.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.051	0.051	0.051	0.051	0.051	0.051			
DC-34 2.4-2.6	DC-34 2.4-2.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.035	0.035	<0.05	0.035	0.035	0.035			
DC-34 3.4-3.6	DC-34 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
QA20180802-02	DC-34 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.015	<0.05	0.015	0.015	0.015			
QC20180802-02		02-08-18	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0002	0.0006	-	-	-	-	-	-	-	-	-	-	0.0018	-	0.0057	0.0075	-	-	-	-	-	-	-	-
DC-34 4.4-4.6	DC-34 4.4-4.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-34 5.0-5.2	DC-34 5.0-5.2	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-35 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.034	0.034	<0.05	0.034	0.034	0.034	-	-	-
QA/QC																																								

Table App C PFAS Analytical Results for Stage 2b EWCR
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

	PFAS																																		
	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01			
HEPA (2018) Ecological Indirect exposure - Residential																												0.01	0.01							
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils														0.1														0.009	0.009							
HEPA (2018) Human Health Screening Levels - Public Open Space														10														1	1							
HEPA (2018) Human Health Screening Levels - Commercial/Industrial														100														20	20							
HEPA (2018) Soil Indirect - Commercial and Industrial																												0.14	0.14							
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial														48														60	60							
HEPA (2018) Soil Direct Toxicity - Public Open Space														10														1	1							
Field_ID		**Sampled_Date-Time**																																		
TRIP BLANK	596738	02-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597159	04-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597366	07-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597594	08-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597692	09-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	605971	03-07-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	610490	02-08-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TB	621017	03-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			
TB	624659	25-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			
TB	624659	25-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			

Notes
* It is noted that the SP30 footprint samples included are of the current surface level and following additional scrape up

Surface samples beneath SP30 which were scraped up and relocated to Dunheved, ie not representative of the current SP30 footprint surface

Table A - Stage 2 Assessment
Project Number: 54782
Project Name: Stage 2 - Jordan Springs PFAS Assessment

			PFAS																																			Other
			2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)	% Moisture 103oC
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL			0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.05	1
NEMP 2018 PFAS Human Health Screening Values - Industrial/Commercial																		50							20						20	20						
NEPM 2018 PFAS Ecological Indirect Exposure - Industrial/Commercial																															0.01							
Sample ID	**Sample Date**	**Laboratory Report Number**																																				
ST201 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	19
ST201 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	11
QA20190707-02	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
QC20190707-02	7/07/2019	221253	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0005	0.0006	-	-	-	-
ST202 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	13
ST202 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
ST203 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	9.5
ST203 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	18
ST204 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.0088 #1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0088	<0.005	0.0088	<0.01	<0.05	15
ST204 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	14
ST206 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	9.9
ST206 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	19
ST207 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	13
ST207 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	11
ST208 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
ST208 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	17

Data Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.

Stage 2c Data

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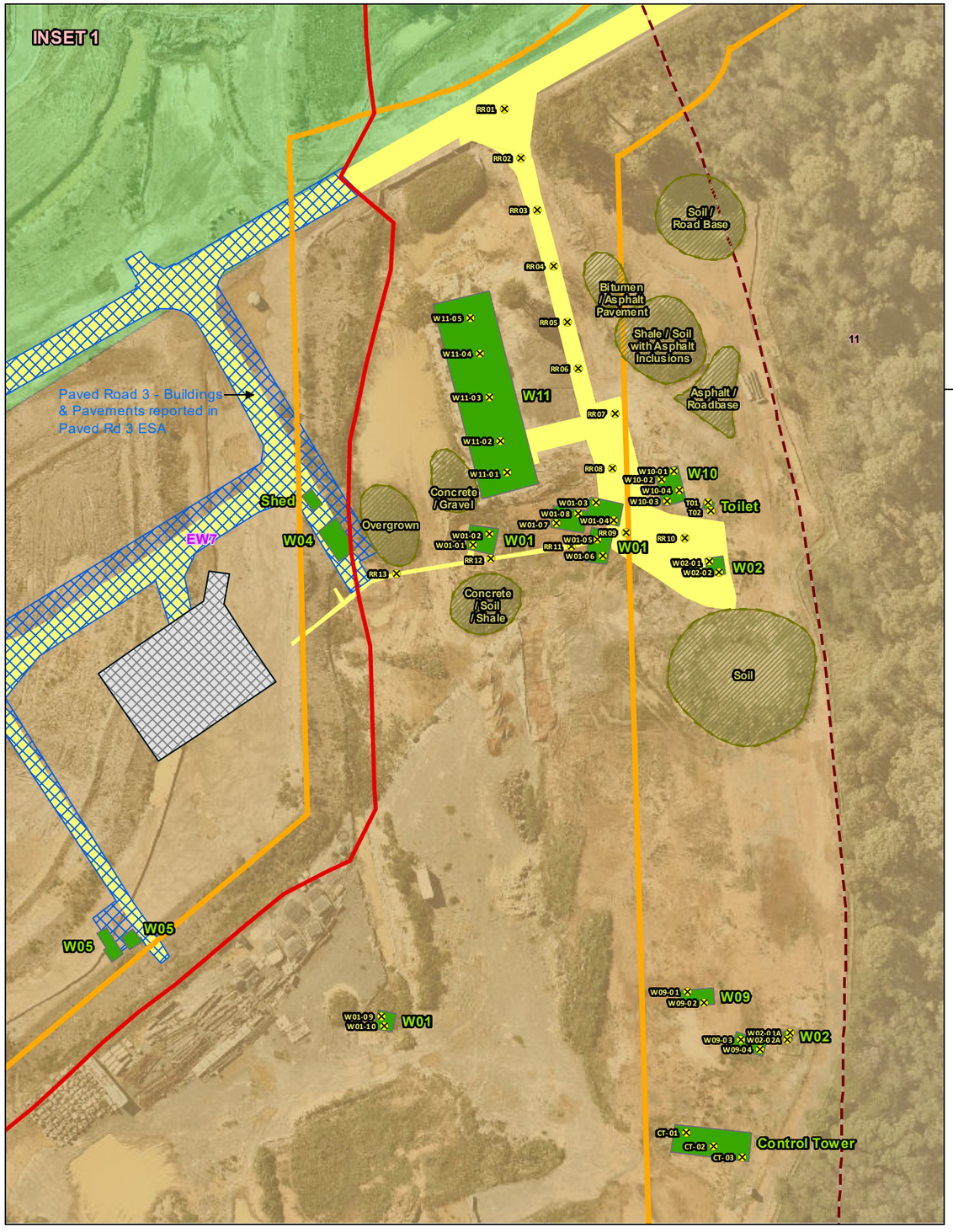

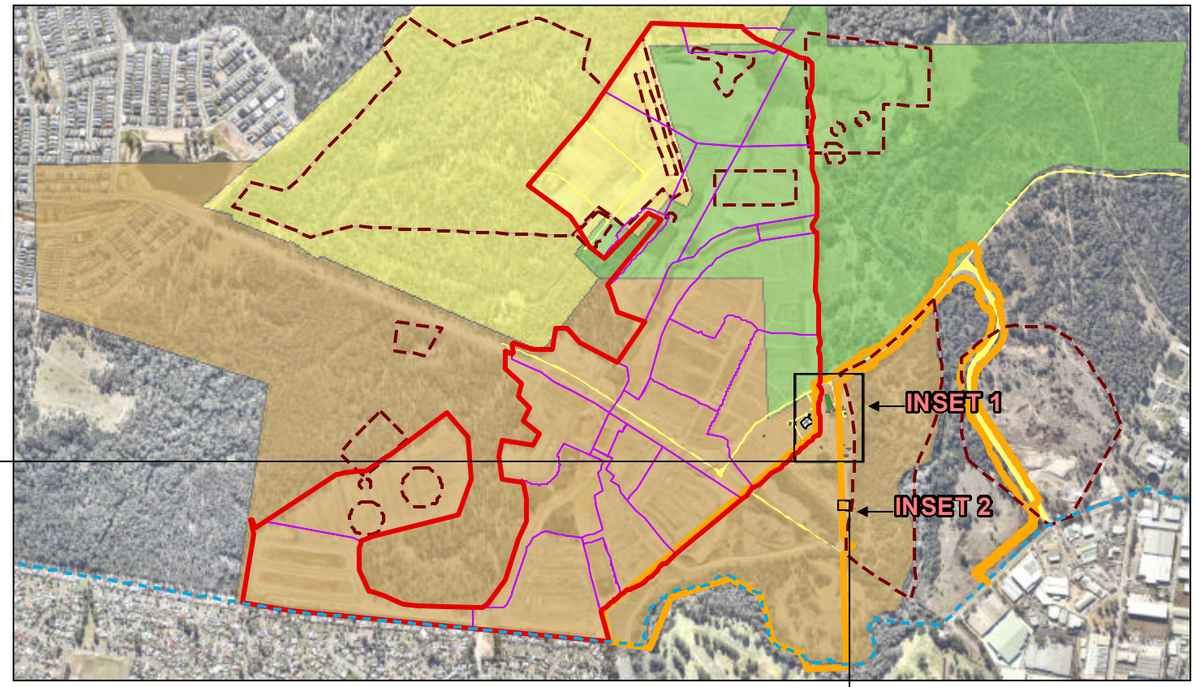

Source: Base Image - © Near Map www.nearmap.com, imagery date 22-07-2017

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0 10 20 40 m

Scale: 1:1,100

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Original Issue - R16	RF	18-07-2019

Legend:

- CHK001/1 Audit Statement Boundary
- Former Areas of Environmental Concern (Approximate Locations)
- Central Precinct
- Earthworks Boundary
- CHK001/6 Building Extent (IW Building Series)
- CHK001/6 Concrete Building Footprint (IW Building Series)
- CHK001/6 Bitumen Roads
- Paved Road 3
- Central Sector West
- North Western Sector
- Southern Sector West

East West Connector Road Site

- Stage 2 Boundary
- Stockpile Locations

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Figure 3: Building Footprints and Sample Locations

Client: Marylands Development Company

Project: Central Precinct

Job No: 54020 File Name: 54020_03

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table A: Soil Analytical Results
Project Number: 54020
Project Name: W Series Buildings - Central Precinct

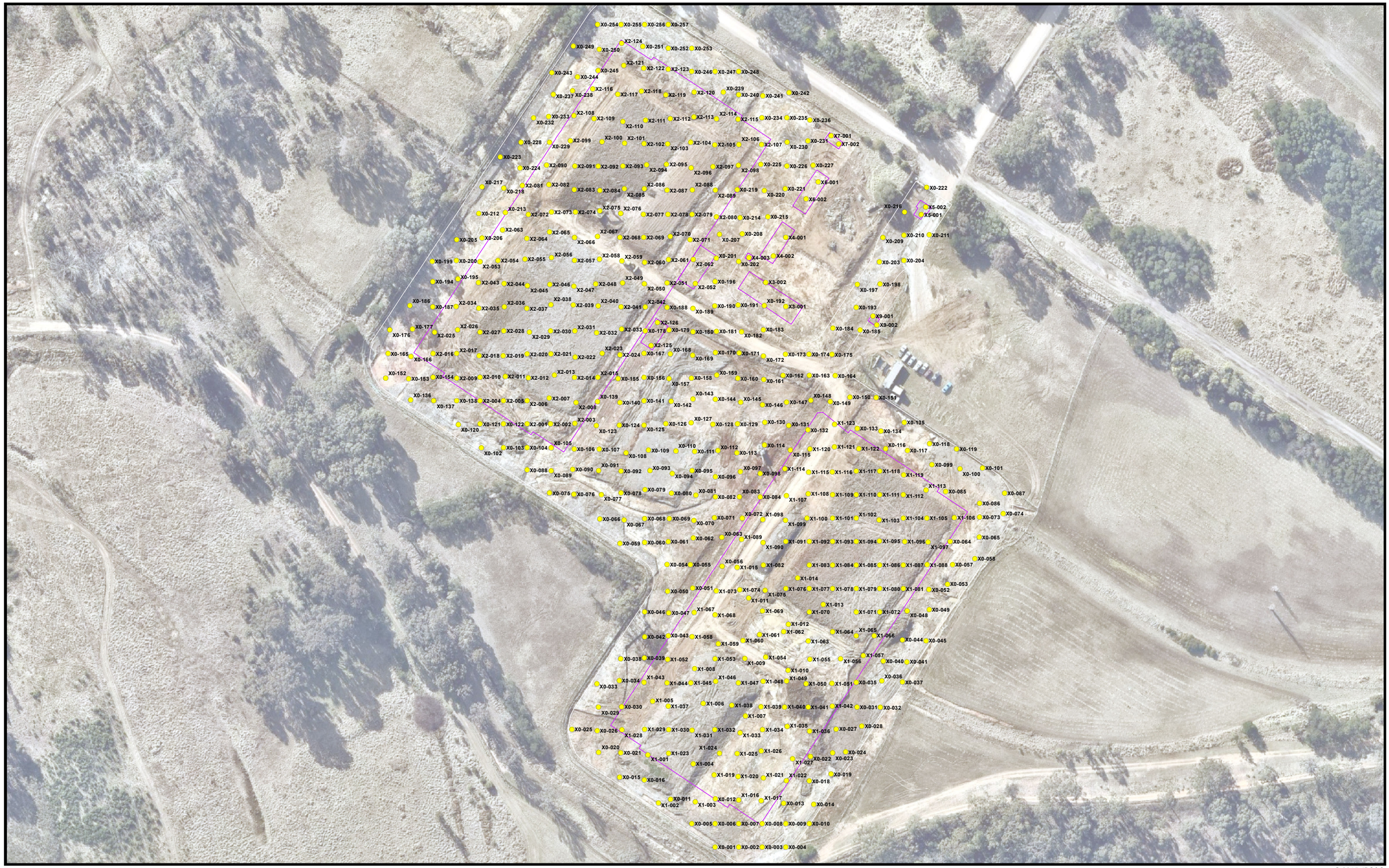
				Asbestos										Heavy Metal								Micro		OCP																									
				Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	E.coli	Salmonella Volume/Mass Tested	Hexachlorobenzene	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	alpha-Chlordane	gamma-Chlordane	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor
				g	%w/w	%w/w	g	g	g	g	g	g	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MPN/G	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL														2	0.4	5	5	5	0.1	5	5	1		0.05	0.05	0.05	0.05	0.05	0.05			0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 EIL - Urban Residential (generic)														100		410	230	1100		270	770												180													
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A					0.01																																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL						0.001																																										
NEPM 2013 Soil HIL A														100	20	100	6000	300	40	400	7400			10			6					50				240					10			6
NEPM 2013 Soil HSL A - Sensitive Setting																																															
Field_ID	**LocCode**	**Sampled_Date-Time**	**Matrix_Description**	**Lab_Report_Number**																																												
RR-01 0-0.1	RR-01 0-0.1	06-05-19	Paved Roads	654586	674	0	<0.001	0	0	0	0	0	0	11	<0.4	28	17	19	<0.1	14	36	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR-02 0-0.1	RR-02 0-0.1	06-05-19	Paved Roads	654586	560	0	<0.001	0	0	0	0	0	0	6.7	<0.4	18	16	17	<0.1	12	33	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR-03 0-0.1	RR-03 0-0.1	06-05-19	Paved Roads	654586	573	0	<0.001	0	0	0	0	0	0	7.5	<0.4	17	15	19	<0.1	10	28	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR-04 0.2-0.3	RR-04 0.2-0.3	06-05-19	Paved Roads	654586	669	0	<0.001	0	0	0	0	0	0	8	<0.4	16	17	20	<0.1	12	29	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR-07 0-0.1	RR-07 0-0.1	06-05-19	Paved Roads	654586	688	0	<0.001	0	0	0	0	0	0	4.7	<0.4	18	20	13	<0.1	17	43	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC20190506-01	RR-07 0-0.1	06-05-19		654586	512	0	<0.001	0	0	0	0	-	0	5	<0.4	16	19	15	<0.1	17	47	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QA20190506-01	QA20190506-01	06-05-19		217148	648	0	<0.001	-	-	-	-	-	-	4	<0.4	12	19	14	<0.1	14	47	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
RR08 0-0.1	RR08 0-0.1	07-05-19	Paved Roads	654586	570	0	<0.001	0	0	0	0	0	0	5.2	<0.4	14	16	15	<0.1	12	35	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR09 0.2-0.3	RR09 0.2-0.3	07-05-19	Paved Roads	654586	479	0	<0.001	0	0	0	0	0	0	4	<0.4	12	9.3	14	<0.1	11	28	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC20190507-01	RR09 0.2-0.3	07-05-19		654586	428	0	<0.001	0	0	0	0	-	0	4.2	<0.4	12	11	14	<0.1	9.8	21	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QA20190507-01	QA20190507-01	07-05-19		217148	505	0	<0.001	-	-	-	-	-	-	<4	<0.4	12	9	16	<0.1	9	18	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
RR09 0-0.1	RR09 0-0.1	07-05-19	Paved Roads	654586	514	0	<0.001	0	0	0	0	0	0	9.4	<0.4	26	17	19	<0.1	14	35	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR11 0-0.1	RR11 0-0.1	07-05-19	Paved Roads	654586	530	0	<0.001	0	0	0	0	0	0	12	<0.4	22	25	24	<0.1	12	42	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RR13 0-0.1	RR13 0-0.1	07-05-19	Paved Roads	654586	611	0	<0.001	0	0	0	0	0	0	5.4	<0.4	14	12	21	<0.1	6.8	19	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-01 0.2-0.3	W01-01 0.2-0.3	06-05-19	W01 Buildings	654586	627	0	<0.001	0	0	0	0	0	0	5.4	<0.4	14	13	19	<0.1	8.4	22	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-01 0-0.1	W01-01 0-0.1	06-05-19	W01 Buildings	654586	687	0	<0.001	0	0	0	0	0	0	5.6	<0.4	15	17	19	<0.1	11	100	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-02 0-0.1	W01-02 0-0.1	06-05-19	W01 Buildings	654586	479	0	<0.001	0	0	0	0	0	0	7.8	<0.4	23	14	15	<0.1	9.4	34	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-03 0-0.1	W01-03 0-0.1	06-05-19	W01 Buildings	654586	700	0	<0.001	0	0	0	0	0	0	4.6	<0.4	11	16	14	<0.1	9.8	62	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-04 0-0.1	W01-04 0-0.1	06-05-19	W01 Buildings	654586	502	0	<0.001	0	0	0	0	0	0	4.4	<0.4	11	14	14	<0.1	8.7	190	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-05 0-0.1	W01-05 0-0.1	06-05-19	W01 Buildings	654586	591	0	<0.001	0	0	0	0	0	0	7	<0.4	18	23	25	<0.1	12	64	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC20190506-02	W01-05 0-0.1	06-05-19		654586	684	0	<0.001	0	0	0	0	0	-	0	7.2	<0.4	17	23	23	<0.1	10	45	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QA20190506-02	QA20190506-02	06-05-19		217148	676	0	<0.001	-	-	-	-	-	-	5	<0.4	13	21	21	<0.1	8	46	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
W01-06 0.5-0.6	W01-06 0.5-0.6	06-05-19	W01 Buildings	654586	753	0	<0.001	0	0	0	0	0	0	5.5	<0.4	16	11	18	<0.1	6.1	18	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-06 0-0.1	W01-06 0-0.1	06-05-19	W01 Buildings	654586	841	0	<0.001	0	0	0	0	0	0	2.6	<0.4	140	56	8.4	<0.1	130	88	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-07 0-0.1	W01-07 0-0.1	06-05-19	W01 Buildings	654586	701	0	<0.001	0	0	0	0	0	0	7.4	<0.4	17	19	19	<0.1	11	46	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-08 0-0.1	W01-08 0-0.1	06-05-19	W01 Buildings	654586	501	0	<0.001	0	0	0	0	0	0	8.9	<0.4	19	22	22	<0.1	14	68	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W01-09 0-0.1	W01-09 0-0.1	07-05-19	W01 Buildings	654586	702	0	<0.001	0	0	0	0	0	0	5.6	<0.4	15	13	16	<0.1	9.1	22	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC20190507-02	W01-09 0-0.1	07-05-19		654586	671	0	<0.001	0	0	0	0	0	-	0	5.3	<0.4	15	13	14	<0.1	8.5	21	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QA20190507-02	QA20190507-02	07-05-19		217148	614	0	<0.001	-	-	-	-	-	-	4	<0.4	13	12	15	<0.1	8	17	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
W01-10 0-0.1	W01-10 0-0.1	07-05-19	W01 Buildings	654586	714	0	<0.001	0	0	0	0	0	0	5.3	<0.4	15	11	16	<0.1	10	20	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-01 0.4-0.5	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	886	0	<0.001	0	0	0	0	0	0	<2	<0.4	6.4	<5	<5	<0.1	<5	13	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-01 0-0.1	W10-01 0-0.1	15-07-19	W11 Buildings	665740	854	0	<0.001	0	0	0	0	0	0	<2	<0.4	7	<5	<5	<0.1	<5	16	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-02 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	749	0	<0.001	0	0	0	0	0	0	<2	<0.4	7.1	<5	8.3	<0.1	<5	14	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-02 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	898	0	<0.001	0	0	0	0	0	0	<2	<0.4	9.8	6.6	15	<0.1	<5	25	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-03 0-0.1	W10-03 0-0.1	15-07-19	W11 Buildings	665740	829	0	<0.001	0	0	0	0	0	0	2.8	<0.4	11	6.2	13	<0.1	5.4	31	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-03 0.4-0.5	W10-04 0-0.1	15-07-19	W11 Buildings	665740	686	0	<0.001	0	0	0	0	0	0	<2	<0.4	6.7	<5	8.3	<0.1	<5	13	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-04 0-0.1	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	765	0	<0.001	0	0	0	0	0	0	<2	<0.4	5.7	<5	8.5	<0.1	<5	13	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-04 0.4-0.5	W10-01 0-0.1	15-07-19	W11 Buildings	665740	795	0	<0.001	0	0	0	0	0	0	2.8	<0.4	6.9	<5	6.9	<0.1	<5	12	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-05 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	832	0	<0.001	0	0	0	0	0	0	<2	<0.4	8.5	6.9	11	<0.1	<5	19	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
W11-05 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	744	0	<0.001	0	0	0	0	0	0	<2	<0.4	10	5.6	13	<0.1	<5	18	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table A: Soil Analytical Results
Project Number: 54020
Project Name: W Series Buildings - Central Precinct

								Organic																																PAH			
								Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic	C6-C9 Fraction	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Naphthalene	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4-dinitrotoluene	2,6-Dinitrotoluene	2,4,6-trinitrotoluene	2-nitrotoluene	3-nitrotoluene	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Carcinogenic PAHs as B(a)P TEQ	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.05	0.05	0.05	1	0.1	0.1	20	50	100	100	100	50	20	20	0.5	1	0.5	0.5			1	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5
NEPM 2013 EIL - Urban Residential (generic)																						170																					
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																300	2800		120		180																			0.7			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																										
NEPM 2013 Soil HIL A										300	20																													3	3	3	3		
NEPM 2013 Soil HSL A - Sensitive Setting																					110		45	3																				
Field_ID	**LocCode**	**Sampled_Date-Time**	**Matrix_Description**	**Lab_Report_Number**																																							
RR-01 0-0.1	RR-01 0-0.1	06-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR-02 0-0.1	RR-02 0-0.1	06-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR-03 0-0.1	RR-03 0-0.1	06-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR-04 0.2-0.3	RR-04 0.2-0.3	06-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR-07 0-0.1	RR-07 0-0.1	06-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
QC20190506-01	RR-07 0-0.1	06-05-19		654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	-	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	<0.5
QA20190506-01	QA20190506-01	06-05-19		217148	<0.1	<0.1	<0.1	-	-	-	<25	<25	<100	<100	<50	<50	-	<25	<1	-	-	<1	<1	<1	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1
RR08 0-0.1	RR08 0-0.1	07-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR09 0.2-0.3	RR09 0.2-0.3	07-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
QC20190507-01	RR09 0.2-0.3	07-05-19		654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	-	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	<0.5
QA20190507-01	QA20190507-01	07-05-19		217148	<0.1	<0.1	<0.1	-	-	-	<25	<25	<100	<100	<50	<50	-	<25	<1	-	-	<1	<1	<1	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1
RR09 0-0.1	RR09 0-0.1	07-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR11 0-0.1	RR11 0-0.1	07-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
RR13 0-0.1	RR13 0-0.1	07-05-19	Paved Roads	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-01 0.2-0.3	W01-01 0.2-0.3	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-01 0-0.1	W01-01 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-02 0-0.1	W01-02 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-03 0-0.1	W01-03 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-04 0-0.1	W01-04 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-05 0-0.1	W01-05 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
QC20190506-02	W01-05 0-0.1	06-05-19		654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	-	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	<0.5
QA20190506-02	QA20190506-02	06-05-19		217148	<0.1	<0.1	<0.1	-	-	-	<25	<25	<100	<100	<50	<50	-	<25	<1	-	-	<1	<1	<1	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1
W01-06 0.5-0.6	W01-06 0.5-0.6	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-06 0-0.1	W01-06 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-07 0-0.1	W01-07 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-08 0-0.1	W01-08 0-0.1	06-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W01-09 0-0.1	W01-09 0-0.1	07-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
QC20190507-02	W01-09 0-0.1	07-05-19		654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	-	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	<0.5
QA20190507-02	QA20190507-02	07-05-19		217148	<0.1	<0.1	<0.1	-	-	-	<25	<25	<100	<100	<50	<50	-	<25	<1	-	-	<1	<1	<1	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1
W01-10 0-0.1	W01-10 0-0.1	07-05-19	W01 Buildings	654586	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	<1	<0.5	<0.5	-	-	<1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-01 0.4-0.5	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-01 0-0.1	W10-01 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-02 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-02 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-03 0-0.1	W10-03 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-03 0.4-0.5	W10-04 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-04 0-0.1	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-04 0.4-0.5	W10-01 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-05 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5
W11-05 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	<0.05	<0.05	<0.05	<1	<0.1	<0.1	<20	<50	<100	<100	<100	<50	<20	<20	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<1.21	<0.5	<0.5

Table A: Soil Analytical Results
Project Number: 54020
Project Name: W Series Buildings - Central Precinct

												PCB								TPH				Volatile					
												Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Total)	Pyrene	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)
												mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL												0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	20	50	50	50	0.1	0.1	0.1	0.1	0.2	0.3
NEPM 2013 EIL - Urban Residential (generic)																			170																					
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																		50	70	85			105
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																							
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																							
NEPM 2013 Soil HIL A										300																			1							160			
NEPM 2013 Soil HSL A - Sensitive Setting								3																										0.5	55				40
Field_ID	**LocCode**	**Sampled_Date-Time**	**Matrix_Description**	**Lab_Report_Number**																																			
RR-01 0-0.1	RR-01 0-0.1	06-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR-02 0-0.1	RR-02 0-0.1	06-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR-03 0-0.1	RR-03 0-0.1	06-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR-04 0.2-0.3	RR-04 0.2-0.3	06-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR-07 0-0.1	RR-07 0-0.1	06-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20190506-01	RR-07 0-0.1	06-05-19		654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20190506-01	QA20190506-01	06-05-19		217148	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<100	<100	-	<0.2	<1	<0.5	<1	<2	<1
RR08 0-0.1	RR08 0-0.1	07-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR09 0.2-0.3	RR09 0.2-0.3	07-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20190507-01	RR09 0.2-0.3	07-05-19		654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20190507-01	QA20190507-01	07-05-19		217148	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<100	<100	-	<0.2	<1	<0.5	<1	<2	<1
RR09 0-0.1	RR09 0-0.1	07-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR11 0-0.1	RR11 0-0.1	07-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
RR13 0-0.1	RR13 0-0.1	07-05-19	Paved Roads	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-01 0.2-0.3	W01-01 0.2-0.3	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-01 0-0.1	W01-01 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-02 0-0.1	W01-02 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-03 0-0.1	W01-03 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-04 0-0.1	W01-04 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-05 0-0.1	W01-05 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20190506-02	W01-05 0-0.1	06-05-19		654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20190506-02	QA20190506-02	06-05-19		217148	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<100	<100	-	<0.2	<1	<0.5	<1	<2	<1
W01-06 0.5-0.6	W01-06 0.5-0.6	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-06 0-0.1	W01-06 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-07 0-0.1	W01-07 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-08 0-0.1	W01-08 0-0.1	06-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W01-09 0-0.1	W01-09 0-0.1	07-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QC20190507-02	W01-09 0-0.1	07-05-19		654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
QA20190507-02	QA20190507-02	07-05-19		217148	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<50	<100	<100	-	<0.2	<1	<0.5	<1	<2	<1
W01-10 0-0.1	W01-10 0-0.1	07-05-19	W01 Buildings	654586	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-01 0.4-0.5	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-01 0-0.1	W10-01 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-02 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-02 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-03 0-0.1	W10-03 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-03 0.4-0.5	W10-04 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-04 0-0.1	W10-01 0.4-0.5	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-04 0.4-0.5	W10-01 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-05 0-0.1	W10-02 0-0.1	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3
W11-05 0.4-0.5	W10-03 0.2-0.3	15-07-19	W11 Buildings	665740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3



Source: Base Image - © Near Map 28-07-2015

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0 15 30 60 m

Scale: 1:1,480

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Original Issue - R01	SE	20-11-2015

Legend:

- CHK001/6 Buildings
- CHK001/6 Building Concrete Footprint
- In-Site Sampling Locations

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Figure 5A: X Series Compound Layout and In-Situ Sample Locations

Client: Maryland Development Company

Project: Central Precinct

Job No: 50374 File Name: 50374_05A

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table App C
Project Number 54782
Stage 2c Samples within X series

Field_ID	Date	SampleCode	Lab Number	Depth	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin
					Metals & Metalloids								Polycyclic Aromatic Hydrocarbons																								Polychlorinated Biphenyls									
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.05	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																				10														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																				170														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7[#3]																													
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7[#3]																													
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400							3[#9]											3[#9]					300[#10]									1[#11]		
Site Specific Criteria									230			200							3																											
NEPM 2013 Soil HSL A - Sensitive Setting																																3[#8]														
X0-001_0-0.2	30-06-15	S15-Jl00331	463565	0-0.2	5.6	<0.4	23	27	45	<0.1	25	89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-002 0.0-0.1	03-09-15	S15-Se05371	471226	0-0.1	5.7	<0.4	15	17	9.6	0.7	8.7	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	0.7	<0.5	1.3	<0.5	0.6095[#5]	<0.5	<0.5	<0.5	1.1	3.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-002 0.2-0.4	03-09-15	S15-Se05372	471226	0.2-0.4	4.6	<0.4	11	15	14	0.5	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-003_0-0.1	30-06-15	S15-Jl00334	463565	0-0.1	10	<0.4	26	18	24	<0.1	6.5	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-004 0.0-0.2	03-09-15	S15-Se05373	471226	0-0.2	4.6	<0.4	14	15	15	0.3	5.1	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-004 0.3-0.5	03-09-15	S15-Se05374	471226	0.3-0.5	6.2	<0.4	14	17	14	0.3	<5	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-005_0.1-0.3	30-06-15	S15-Jl00337	463565	0.1-0.3	3.5	<0.4	61	63	15	<0.1	51	82	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
~~X0-005_0.7-0.8~~	~~30-06-15~~	~~S15-Jl00339~~	~~463565~~	~~0.7-0.8~~	~~18~~	~~<0.4~~	~~26~~	~~25~~	~~920~~	~~<0.1~~	~~9.2~~	~~34~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~0.6~~	~~1.2~~	—	~~<0.5~~	—	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<1.21[#8]~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	—	~~<0.1~~	—	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.05~~	~~<0.05~~
X0-006_0.3-0.5	30-06-15	S15-Jl00342	463565	0.3-0.5	3.1	<0.4	47	25	8.8	<0.1	40	59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-006_0-0.2	30-06-15	S15-Jl00341	463565	0-0.2	6.8	<0.4	30	20	14	<0.1	17	81	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-007 0.0-0.1	01-09-15	S15-Se01484	470781	0-0.1	18	<0.4	15	20	20	<0.1	6.9	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-007 0.1-0.3	01-09-15	S15-Se01485	470781	0.1-0.3	7.5	<0.4	11	19	12	<0.1	5.1	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-008 0.0-0.15	01-09-15	S15-Se01486	470781	0-0.15	9.8	<0.4	12	13	7.9	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-008 0.4-0.6	01-09-15	S15-Se01488	470781	0.4-0.6	7.2	<0.4	12	12	12	<0.1	5.9	190	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-009 0.15-0.3	01-09-15	S15-Se01491	470781	0.15-0.3	20	<0.4	25	16	29	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-009 0.4-0.6	01-09-15	S15-Se01492	470781	0.4-0.6	13	<0.4	16	12	15	<0.1	<5	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-010 0.0-0.1	01-09-15	S15-Se01494	470781	0-0.1	9	<0.4	10	30	12	<0.1	16	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-010 0.3-0.5	01-09-15	S15-Se01495	470781	0.3-0.5	15	<0.4	18	19	11	<0.1	6.4	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-011 0.0-0.1	01-09-15	S15-Se01496	470781	0-0.1	8.7	<0.4	16	32	14	<0.1	18	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-011 0.3-0.5	01-09-15	S15-Se01497	470781	0.3-0.5	13	<0.4	15	18	15	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-012 0.0-0.1	01-09-15	S15-Se01498	470781	0-0.1	11	<0.4	13	16	7.3	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-012 0.2-0.4	01-09-15	S15-Se01499	470781	0.2-0.4	14	<0.4	13	20	15	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-013 0.15-0.3	03-09-15	S15-Se05376	471226	0.15-0.3	5.4	<0.4	14	15	9.2	0.2	7.7	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC97	03-09-15	S15-Se05445	471226	0.15-0.3	10	<0.4	32	19	11	<0.1	22	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC97A	03-09-15	133730-4	133730		<4	<0.4	33	14	5	<0.1	29	47	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-013 0.3-0.5	03-09-15	S15-Se05377	471226	0.3-0.5	6.4	<0.4	25	20	9.6	0.2	19	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-014 0.0-0.2	03-09-15	S15-Se05379	471226	0-0.2	7.5	<0.4	29	19	13	0.3	22	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-014 0.3-0.5	03-09-15	S15-Se05380	471226	0.3-0.5	6.1	<0.4	13	23	12	0.1	5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-015 0.0-0.1	01-09-15	S15-Se01502	470781	0-0.1	8.2	<0.4	12	15	10	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-015 0.7-0.9	01-09-15	S15-Se01503	470781	0.7-0.9	8.3	<0.4	11	15	12	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-016 0.0-0.1	01-09-15	S15-Se01500	470781	0-0.1	7.7	<0.4	20	17	11	<0.1	14	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-016 0.5-0.7	01-09-15	S15-Se01501	470781	0.5-0.7	12	<0.4	15	24	13	<0.1	5.4	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-018 0.0-0.1	03-09-15	S15-Se05381	471226	0-0.1	6.7	<0.4	16	16	33	0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-018 0.2-0.4	03-09-15	S15-Se05382	471226	0.2-0.4	5.8	<0.4	12	15	8.5	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-019 0.0-0.1	03-09-15	S15-Se05383	471226	0-0.1	6.9	<0.4	16	18	9	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-019 0.1-0.3	03-09-15	S15-Se05384	471226	0.1-0.3	6.5	<0.4	12	20	34	<0.1	6.9	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
~~X0-020 0.0-0.1~~	~~01-09-15~~	~~S15-Se01504~~	~~470781~~	~~0-0.1~~	~~7.9~~	~~<0.4~~	~~15~~	~~14~~	~~28~~	~~<0.1~~	~~8.4~~	~~540~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~0.6~~	~~1.2~~	–	~~<0.5~~	–	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<1.21[#8]~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	–	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.05~~	~~<0.05~~
X0-020 0.2-0.4	01-09-15	S15-Se01505	470781	0.2-0.4	9.7	<0.4	13	23	6.2	<0.1	7.2	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-021 0-0.15	15-10-15	S15-Oc11255	476042	0-0.15	6.8	<0.4	26	18	14	<0.1	17	59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-021 0.15-0.35	15-10-15	S15-Oc11256	476042	0.15-0.35	6.5	<0.4	30	18	12	<0.1	21	65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-022 0.0-0.1	03-09-15	S15-Se05385	471226	0-0.1	4.8	<0.4	11	14	20	<0.1	6.2	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-022 0.1-0.3	03-09-15	S15-Se05386	471226	0.1-0.3	8.1	<0.4	11	18	14	<0.1	8.4	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-023 0.0-0.15	03-09-15	S15-Se05387	471226	0-0.15	5.8	<0.4	15	18	9.4	<0.1	7.8	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-023 0.15-0.3	03-09-15	S15-Se05388	471226	0.15-0.3	5.5	<0.4	13	15	7.7	<0.1	5.4	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-024 0.0-0.2	03-09-15	S15-Se05390	471226	0-0.2	4	<0.4	13	12	<5	0.1	5.8	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-024 0.2-0.4	03-09-15	S15-Se05391	471226	0.2-0.4	7.3	<0.4	11	18	6.1	<0.1	8.6	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-025 0.0-0.2	01-09-15	S15-Se01506	470781	0-0.2	12	<0.4	15	13	24	<0.1	6.7	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-025 0.3-0.5	01-09-15	S15-Se01507	470781	0.3-0.5	10	<0.4	23	23	18	<0.1	21	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-026 0.0-0.2	01-09-15	S15-Se01508	470781	0-0.2	6.8	<0.4	15	12	17	<0.1	9.5	150	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-026 0.3-0.5	01-09-15	S15-Se01509	470781	0.3-0.5	4.3	<0.4	7.9	13	<5	<0.1	7.5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-027 0.0-0.15	02-09-15	S15-Se03229	470968	0-0.15	7.8	<0.4	18	16	20	<0.1	9.6	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC92	02-09-15	S15-Se03309	470968	0-0.15	6.7	<0.4	18	17	19	<0.1	12	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC92A	02-09-15	133709-4	133709		6	<0.4	15	15	24	<0.1	10	36	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-027 0.5-0.7	02-09-15	S15-Se03230	470968	0.1-0.7	4.3	<0.4	9.5	14	<5	<0.1	6	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-028 0.0-0.1	02-09-15	S15-Se03231	470968	0-0.1	6.2	<0.4	15	19	11	<0.1	6.1	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-028 0.2-0.4	02-09-15	S15-Se03232	470968	0.2-0.4	5.4	<0.4	13	19	15	<0.1	<5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-029 0.0-0.15	01-09-15	S15-Se01510	470781	0-0.15	7.7	<0.4	17	11	24	<0.1	7.1	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-029 0.15-0.3	01-09-15	S15-Se01511	470781	0.15-0.3	6.1	<0.4	14	13	11	<0.1	6.6	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-030 0.0-0.15	01-09-15	S15-Se01513	470781	0-0.15	9.9	<0.4	13	16	<5	<0.1	7.5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC88	01-09-15	S15-Se01658	470781	0-0.15	11	<0.4	24	12	13	<0.1	11	210	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC88A	01-09-15	133623-8	133623		5	<0.4	19	19	20	<0.1	7	140	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-030 0.2-0.4	01-09-15	S15-Se01514	470781	0.2-0.4	12	<0.4	16	18	12	<0.1	7.6	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-031 0.0-0.1	02-09-15	S15-Se03233	470968	0-0.1	8.5	<0.4	20	15	13	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-031 0.2-0.4	02-09-15	S15-Se03234	470968	0.2-0.4	7.8	<0.4	20	14	11	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-032 0.0-0.2	02-09-15	S15-Se03235	470968	0-0.2	6.6	<0.4	16	29	16	0.2	18	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-032 0.2-0.4	02-09-15	S15-Se03236	470968	0.2-0.4	4.8	<0.4	16	36	34	<0.1	18	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-033 0.0-0.2	01-09-15	S15-Se01515	470781	0-0.2	5.2	<0.4	12	13	11	<0.1	<5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-033 0.2-0.4	01-09-15	S15-Se01516	470781	0.2-0.4	5.7	<0.4	15	14	8.5	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-034 0.15-0.3	01-09-15	S15-Se01518	470781	0.15-0.3	6.1	<0.4	16	12	16	<0.1	<5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-034 0.3-0.5	01-09-15	S15-Se01519	470781	0.3-0.5	5.7	<0.4	14	14	7.9	<0.1	<5	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-035 0.0-0.1	02-09-15	S15-Se03238	470968	0-0.1	6.4	<0.4	16	13	13	<0.1	6	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-035 0.3-0.5	02-09-15	S15-Se03239	470968	0.3-0.5	7.2	<0.4	18	23	12	<0.1	5.7	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-036 0.0-0.15	02-09-15	S15-Se03240	470968	0-0.15	4.3	<0.4	36	15	7.8	<0.1	23	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-036 0.15-0.3	02-09-15	S15-Se03241	470968	0.15-0.3	5.5	<0.4	29	19	7.1	<0.1	23	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-037 0.0-0.1	02-09-15	S15-Se03243	470968	0-0.1	9.8	0.9	21	32	34	<0.1	17	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-037 0.2-0.4	02-09-15	S15-Se03244	470968	0.2-0.4	8.1	<0.4	22	16	12	<0.1	<5	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-038 0.0-0.15	01-09-15	S15-Se01521	470781	0-0.15	6.3	<0.4	25	22	13	<0.1	18	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-038 0.15-0.3	01-09-15	S15-Se01522	470781	0.15-0.3	13	<0.4	24	18	11	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-039 0.0-0.15	01-09-15	S15-Se01524	470781	0-0.15	5.5	<0.4	13	13	9.4	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-039 0.2-0.4	01-09-15	S15-Se01525	470781	0.2-0.4	9.2	<0.4	19	20	15	<0.1	5.6	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-040 0.3-0.5	31-08-15	S15-Au26660	470534	0.3-0.5	6.9	<0.4	15	17	14	<0.1	5	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-040 0-0.2	31-08-15	S15-Au26659	470534	0-0.2	6.6	<0.4	18	9.9	11	<0.1	7.3	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-041 0.15-0.3	31-08-15	S15-Au26656	470534	0.15-0.3	5.6	<0.4	23	24	13	<0.1	18	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-041 0-0.15	31-08-15	S15-Au26655	470534	0-0.15	6.9	<0.4	24	21	10	<0.1	18	55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-042 0.0-0.1	01-09-15	S15-Se01526	470781	0-0.1	6.6	<0.4	18	15	12	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-042 0.1-0.3	01-09-15	S15-Se01527	470781	0.1-0.3	8.3	<0.4	19	19	16	<0.1	<5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-043 0.0-0.2	01-09-15	S15-Se01528	470781	0-0.2	6.8	<0.4	18	15	11	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-043 0.2-0.4	01-09-15	S15-Se01529	470781	0.2-0.4	2.5	<0.4	12	19	16	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-044 0.4-0.6	31-08-15	S15-Au26654	470534	0.4-0.6	10	<0.4	16	15	18	<0.1	6.4	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-044 0-0.2	31-08-15	S15-Au26653	470534	0-0.2	5.9	<0.4	17	14	7.1	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-045 0.0-0.2	02-09-15	S15-Se03245	470968	0-0.2	4.7	<0.4	14	19	11	<0.1	9.5	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-045 0.3-0.5	02-09-15	S15-Se03246	470968	0.3-0.5	9.1	<0.4	21	13	15	<0.1	<5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-046 0.0-0.15	01-09-15	S15-Se01530	470781	0-0.15	9.1	<0.4	20	17	12	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-046 0.15-0.3	01-09-15	S15-Se01531	470781	0.15-0.3	9.4	<0.4	23	16	13	<0.1	<5	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-047 0.0-0.1	01-09-15	S15-Se01533	470781	0-0.1	6.3	<0.4	14	14	12	<0.1	<5	66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-047 0.1-0.3	01-09-15	S15-Se01534	470781	0.1-0.3	5.3	<0.4	15	15	11	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-048 0.15-0.3	31-08-15	S15-Au26627	470534	0.15-0.3	5.2	<0.4	11	17	19	<0.1	<5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-048 0-0.15	31-08-15	S15-Au26626	470534	0-0.15	7.8	<0.4	15	14	14	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC78	31-08-15	S15-Au26712	470534	0-0.15	8.8	<0.4	20	14	12	<0.1	<5	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA78	31-08-15	133542-9	133542		5	<0.4	12	15	25	<0.1	7	23	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-049 0.3-0.5	31-08-15	S15-Au26619	470534	0.3-0.5	8.9	<0.4	18	17	18	<0.1	6.7	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-049 0-0.2	31-08-15	S15-Au26618	470534	0-0.2	6.4	<0.4	27	22	10	<0.1	25	97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-050 0.0-0.15	20-08-15	S15-Au17030	469476	0-0.15	7.6	<0.4	26	21	25	<0.1	14	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-050 0.3-0.5	20-08-15	S15-Au17032	469476	0.3-0.5	5.9	<0.4	18	16	13	<0.1	8.6	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-051 0.0-0.2	20-08-15	S15-Au17035	469476	0-0.2	7.3	<0.4	17	18	16	<0.1	9.7	51	<0.5	<0.5	<0.5	0.8	0.9	1.1	1.4	1.7	-	<0.5	-	<0.5	0.7	1	<0.5	1.9	<0.5	1.363[#5]	<0.5	<0.5	0.9	1.4	7.6	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05

Table App C
Project Number 54782
Stage 2c Samples within X series

					Metals & Metalloids								Polycyclic Aromatic Hydrocarbons																								Polychlorinated Biphenyls									
					Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.05	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																				10														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																				170														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7#3																													
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7#3																													
NEPM 2013 Soil HIL A					100#4	20	100#5	6000	300#6	40#7	400	7400							3#9											3#9					300#10									1#11		
Site Specific Criteria									230			200							3																											
NEPM 2013 Soil HSL A - Sensitive Setting																																3#8														
Field_ID	Date	SampleCode	Lab Number	Depth																																										
X0-051 0.2-0.4	20-08-15	S15-Au17036	469476	0.2-0.4	11	<0.4	17	19	12	<0.1	7.4	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-052 0-0.15	31-08-15	S15-Au26615	470534	0-0.15	6.9	<0.4	20	16	15	<0.1	14	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-052 015-0.3	31-08-15	S15-Au26616	470534	0.15-0.3	9.4	<0.4	21	16	11	<0.1	12	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-053 0.3-0.5	31-08-15	S15-Au26625	470534	0.3-0.5	9	<0.4	22	15	18	<0.1	9.2	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-053 0-0.2	31-08-15	S15-Au26624	470534	0-0.2	7.6	<0.4	31	19	12	<0.1	21	59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-054 0.0-0.2	20-08-15	S15-Au17038	469476	0-0.2	15	<0.4	35	25	41	<0.1	5.5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-054 0.2-0.4	20-08-15	S15-Au17039	469476	0.2-0.4	6.9	<0.4	18	18	12	<0.1	5.2	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_055 0.0-0.15	06-08-15	S15-Au05851	468034	0-0.15	17	<0.4	34	23	19	<0.1	11	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_055 0.2-0.4	06-08-15	S15-Au05852	468034	0.2-0.4	15	<0.4	24	34	16	<0.1	11	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_056 0.2-0.4	06-08-15	S15-Au05854	468034	0.2-0.4	8.4	<0.4	16	17	17	<0.1	7.4	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_056 0.5-0.7	06-08-15	S15-Au05855	468034	0.5-0.7	6.7	<0.4	13	16	10	<0.1	7.5	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-057 0.2-0.4	31-08-15	S15-Au26629	470534	0.2-0.4	6.1	<0.4	12	13	13	<0.1	10	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-057 0-0.2	31-08-15	S15-Au26628	470534	0-0.2	6.6	<0.4	13	11	18	<0.1	7.9	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC77	31-08-15	S15-Au26711	470534	0-0.2	5.3	<0.4	10	14	18	<0.1	9	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA77	31-08-15	133542-8	133542		6	<0.4	13	16	24	<0.1	12	33	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-058 0.3-0.5	31-08-15	S15-Au26606	470534	0.3-0.5	11	<0.4	16	24	9	<0.1	9.9	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-058 0-0.2	31-08-15	S15-Au26605	470534	0-0.2	6.6	<0.4	13	27	16	<0.1	16	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-059 0.0-0.15	20-08-15	S15-Au17040	469476	0-0.15	7.5	<0.4	40	32	22	<0.1	39	76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-059 0.15-0.3	20-08-15	S15-Au17041	469476	0.15-0.3	5.8	<0.4	18	18	14	<0.1	6.6	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-060 0.0-0.15	20-08-15	S15-Au17043	469476	0-0.15	6.4	<0.4	23	32	18	<0.1	29	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-060 0.2-0.4	20-08-15	S15-Au17044	469476	0.2-0.4	5.5	<0.4	16	18	12	<0.1	7.5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-061 0.0-0.1	20-08-15	S15-Au17045	469476	0-0.1	15	<0.4	33	22	29	<0.1	9.2	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-061 0.2-0.4	20-08-15	S15-Au17046	469476	0.2-0.4	11	<0.4	30	19	16	<0.1	6.7	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_062 0.15-0.35	06-08-15	S15-Au05857	468034	0.15-0.35	8.5	<0.4	22	17	20	<0.1	8.3	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_062 0.5-0.7	06-08-15	S15-Au05858	468034	0.5-0.7	12	<0.4	20	28	21	<0.1	8.8	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_063 0.0-0.15	06-08-15	S15-Au05859	468034	0-0.15	10	<0.4	24	21	16	<0.1	14	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_063 0.3-0.5	06-08-15	S15-Au05861	468034	0.3-0.5	8.4	<0.4	16	14	13	<0.1	5.2	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_063 1.0-1.2	06-08-15	S15-Au05863	468034	1-1.2	12	<0.4	19	27	31	<0.1	19	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-064 0.2-0.4	31-08-15	S15-Au26631	470534	0.2-0.4	7.3	<0.4	18	13	17	<0.1	8.4	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-064 0-0.2	31-08-15	S15-Au26630	470534	0-0.2	5.8	<0.4	18	13	12	<0.1	11	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-065 0.2-0.4	31-08-15	S15-Au26613	470534	0.2-0.4	6.3	<0.4	9.3	15	8.2	<0.1	8.3	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-065 0-0.2	31-08-15	S15-Au26612	470534	0-0.2	3.5	<0.4	75	29	<5	<0.1	71	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-066 0.0-0.2	20-08-15	S15-Au17047	469476	0-0.2	8.2	<0.4	36	35	17	<0.1	40	89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-066 0.2-0.4	20-08-15	S15-Au17048	469476	0.2-0.4	10	<0.4	24	18	23	<0.1	13	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-067 0.15-0.3	20-08-15	S15-Au17051	469476	0.15-0.3	4	<0.4	34	42	16	<0.1	62	97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-067 0.3-0.5	20-08-15	S15-Au17052	469476	0.3-0.5	4.4	<0.4	17	17	12	<0.1	6.5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-068 0.0-0.2	20-08-15	S15-Au17054	469476	0-0.2	12	<0.4	24	23	15	<0.1	6.4	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-068 0.2-0.4	20-08-15	S15-Au17055	469476	0.2-0.4	5.8	<0.4	15	16	12	<0.1	5.6	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-069 0.0-0.15	20-08-15	S15-Au17056	469476	0-0.15	11	<0.4	25	23	27	<0.1	15	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-069 0.3-0.5	20-08-15	S15-Au17058	469476	0.3-0.5	5.9	<0.4	35	34	17	<0.1	39	61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-070 0.2-0.4	04-08-15	S15-Au02468	467573	0.2-0.4	10	<0.4	15	20	16	<0.1	5.4	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-070 0-015	04-08-15	S15-Au02467	467573	0-0.15	8.8	<0.4	19	16	21	<0.1	5.5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_071 0.0-0.15	06-08-15	S15-Au05864	468034	0-0.15	9	<0.4	22	18	21	<0.1	7	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_071 0.2-0.4	06-08-15	S15-Au05865	468034	0.2-0.4	16	<0.4	26	31	15	<0.1	9.2	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_072 0.0-0.2	06-08-15	S15-Au05866	468034	0-0.2	8.6	<0.4	17	21	16	<0.1	6.3	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_072 0.5-0.7	06-08-15	S15-Au05867	468034	0.5-0.7	11	<0.4	15	17	9.4	<0.1	7.5	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-073 0.15-0.3	31-08-15	S15-Au26602	470534	0.15-0.3	6.4	<0.4	22	16	7.8	<0.1	16	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC75	31-08-15	S15-Au26709	470534	0.15-0.3	5.5	<0.4	15	14	5.4	<0.1	7.8	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA75	31-08-15	133542-6	133542		<4	<0.4	20	14	13	<0.1	16	25	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-073 0-0.15	31-08-15	S15-Au26601	470534	0-0.15	3.7	<0.4	23	16	5.6	<0.1	20	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-074 0.3-0.5	31-08-15	S15-Au26608	470534	0.3-0.5	7.9	0.5	20	23	16	<0.1	14	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-074 0-0.2	31-08-15	S15-Au26607	470534	0-0.2	6.9	<0.4	19	29	14	<0.1	20	57	<0.5	<0.5	<0.5	0.7	0.8	1.2	1.5	1.7	-	1.5	-	0.6	1.4	0.7	<0.5	1	<0.5	1.473#5	0.5	<0.5	<0.5	0.8	8	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-075 0.15-0.3	20-08-15	S15-Au17062	469476	0.15-0.3	17	<0.4	26	16	17	<0.1	5.1	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-075 0.5-0.7	20-08-15	S15-Au17064	469476	0.5-0.7	8.9	<0.4	22	17	15	<0.1	7	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-076 0.0-0.15	20-08-15	S15-Au17065	469476	0-0.15	14	<0.4	37	22	26	<0.1	16	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-076 0.15-0.3	20-08-15	S15-Au17066	469476	0.15-0.3	5.5	<0.4	25	18	13	<0.1	12	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-077_0.0-0.2	18-08-15	M15-Au14221	469118	0-0.2	5.7	<0.4	18	16	9.4	<0.1	5.8	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-077_0.2-0.4	18-08-15	M15-Au14222	469118	0.2-0.4	8.5	<0.4	18	16	9.4	<0.1	<5	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC26	18-08-15	M15-Au14307	469118	0.2-0.4	7.5	<0.4	20	19	11	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC26A	18-08-15	132954-4	132954		<4	<0.4	13	12	11	<0.1	4	13	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-078_0.0-0.15	18-08-15	M15-Au14223	469118	0-0.15	5.1	<0.4	21	25	11	<0.1	18	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-078_0.15-0.3	18-08-15	M15-Au14224	469118	0.15-0.3	12	<0.4	24	24	14	<0.1	<5	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_79 0.4-0.6	31-07-15	S15-Au01700	467448	0.4-0.6	7.2	<0.4	20	14	9.1	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_79 0-0.15	31-07-15	S15-Au01698	467448	0-0.15	3.1	<0.4	16	52	<5	<0.1	59	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-080 0.2-0.35	04-08-15	S15-Au02470	467573	0.2-0.35	2.2	<0.4	71	29	<5	<0.1	65	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-080 0.4-0.6	04-08-15	S15-Au02471	467573	0.4-0.6	8.9	<0.4	18	18	28	<0.1	6.8	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-081 0.3-0.5	04-08-15	S15-Au02473	467573	0.3-0.5	8.6	<0.4	17	19	14	<0.1	6	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-081 0-0.2	04-08-15	S15-Au02472	467573	0-0.2	7.9	<0.4	18	16	21	<0.1	5.5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_082 0.0-0.15	06-08-15	S15-Au05868	468034	0-0.15	11	<0.4	22	23	19	<0.1	9.9	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_082 0.7-0.9	06-08-15	S15-Au05871	468034	0.7-0.9	7.2	<0.4	12	19	6.2	<0.1	<5	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_083 0.0-0.2	06-08-15	S15-Au05872	468034	0-0.2	9	<0.4	21	25	19	<0.1	9.1	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_083 0.5-0.7	06-08-15	S15-Au05874	468034	0.5-0.7	15	<0.4	26	35	13	<0.1	9.8	55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_084 0.0-0.15	06-08-15	S15-Au05875	468034	0-0.15	10	<0.4	23	21	14	<0.1	8.8	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_084 0.4-0.6	06-08-15	S15-Au05877	468034	0.4-0.6	7.1	<0.4	13	16	20	<0.1	5.6	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-085 0.3-0.5	31-08-15	S15-Au26593	470534	0.3-0.5	5.4	<0.4	8.3	14	6.5	<0.1	6.5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-085 0-0.2	31-08-15	S15-Au26592	470534	0-0.25	7.1	<0.4	19	16	11	<0.1	13	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-086 0.2-0.4	31-08-15	S15-Au26595	470534	0.2-0.4	7	<0.4	20	14	10	<0.1	14	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-086 0-0.2	31-08-15	S15-Au26594	470534	0-0.2	8.3	<0.4	19	14	12	<0.1	10	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-087 0.3-0.5	31-08-15	S15-Au26599	470534	0.3-0.5	5.7	<0.4	13	27	11	<0.1	17	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-087 0-0.15	31-08-15	S15-Au26597	470534	0-0.15	6.7	<0.4	17	23	12	<0.1	16	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC74	31-08-15	S15-Au26708	470534	0-0.15	5.7	<0.4	21	23	13	<0.1	16	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA74	31-08-15	133542-5	133542		<4	<0.4	17	21	16	<0.1	17	45	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-088_0.0-0.1	18-08-15	M15-Au14225	469118	0-0.1	6	<0.4	17	16	11	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-088_0.1-0.3	18-08-15	M15-Au14226	469118	0.1-0.3	5.7	<0.4	18	16	11	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC25	18-08-15	M15-Au14306	469118	0.1-0.3	8.4	<0.4	21	19	12	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC25A	18-08-15	132954-3	132954		<4	<0.4	12	15	11	<0.1	4	12	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-089_0.0-0.2	19-08-15	S15-Au15547	469287	0-0.2	8	<0.4	32	20	18	<0.1	15	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
X0-090_0.0-0.15	19-08-15	S15-Au15549	469287	0-0.15	14	<0.4	32	20	28	<0.1	12	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
~~QC30~~	~~19-08-15~~	~~S15-Au15674~~	~~469287~~	~~0-0.15~~	~~8.1~~	~~<0.4~~	~~26~~	~~19~~	~~22~~	~~<0.1~~	~~12~~	~~520~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~0.6~~	~~1.2~~	~~-~~	~~<0.5~~	~~-~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<1.21#8~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~-~~	~~<0.5~~	~~-~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.5~~	~~<0.05~~	~~<0.05~~
QC30A	19-08-15	133148-3	133148		6	<0.4	25	14	36	<0.1	11	32	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-090_0.3-0.5	19-08-15	S15-Au15551	469287	0.3-0.5	9.4	<0.4	28	21	14	<0.1	9	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
X0-091_0.0-0.2	18-08-15	M15-Au14227	469118	0-0.2	8.1	<0.4	22	20	12	<0.1	12	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-091_0.3-0.5	18-08-15	M15-Au14228	469118	0.3-0.5	3.8	<0.4	13	13	8.2	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_092 0.15-0.3	31-07-15	S15-Au01702	467448	0.15-0.3	5.6	<0.4	20	31	11	<0.1	23	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_092 0.6-0.8	31-07-15	S15-Au01704	467448	0.6-0.8	7.5	<0.4	18	16	10	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_092 0-0.15	31-07-15	S15-Au01701	467448	0-0.15	4.5	<0.4	28	26	7.4	<0.1	25	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC02	31-07-15	S15-Au01714	467448	0-0.15	4.3	<0.4	49	23	<5	<0.1	41	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC02A	31-07-15	132200-1	132200		5	<0.4	29	19	15	<0.1	20	34	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172#2	<0.1	<0.1	<0.1	<0.1	-	0#9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0_093 0.15-0.3	31-07-15	S15-Au01706	467448	0.15-0.3	2.5	<0.4	9.5	53	<5	<0.1	63	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_093 0-0.15	31-07-15	S15-Au01705	467448	0-0.15	3.4	<0.4	15	42	<5	<0.1	45	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-094 0.2-0.3	04-08-15	S15-Au02475	467573	0.2-0.3	4	<0.4	16	39	23	<0.1	21	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-094 0.3-0.5	04-08-15	S15-Au02476	467573	0.3-0.5	6.8	<0.4	16	17	11	<0.1	8.1	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-095 0.15-0.25	04-08-15	S15-Au02478	467573	0.15-0.25	2.9	<0.4	14	47	<5	<0.1	50	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-095 0-0.15	04-08-15	S15-Au02477	467573	0-0.15	4.4	<0.4	17	42	8.8	<0.1	44	78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-096 0.3-0.5	04-08-15	S15-Au02482	467573	0.3-0.5	7.6	<0.4	13	18	7.2	<0.1	<5	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-096 0-0.15	04-08-15	S15-Au02480	467573	0-0.15	8	<0.4	16	16	17	<0.1	8.8	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_097 0.0-0.15	06-08-15	S15-Au05878	468034	0-0.15	7.5	<0.4	18	19	21	<0.1	8.5	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_097 0.2-0.4	06-08-15	S15-Au05879	468034	0.2-0.4	8.5	<0.4	19	23	12	<0.1	7.6	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#8	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05

Table App C
Project Number 54782
Stage 2c Samples within X series

Field_ID	Date	SampleCode	Lab Number	Depth	Metals & Metalloids: Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Polycyclic Aromatic Hydrocarbons: Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	Polychlorinated Biphenyls: Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.05	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																				10														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																				170														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7[#3]																													
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7[#3]																													
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400							3[#9]											3[#9]					300[#10]									1[#11]		
Site Specific Criteria									230			200							3																											
NEPM 2013 Soil HSL A - Sensitive Setting																																3[#8]														
X0_098 0.0-0.15	06-08-15	S15-Au05881	468034	0-0.15	7.4	<0.4	16	19	15	<0.1	6.5	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0_098 0.15-0.35	06-08-15	S15-Au05882	468034	0.15-0.35	4	<0.4	11	16	23	<0.1	5.1	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-099 0.15-0.3	31-08-15	S15-Au26584	470534	0.15-0.3	6.1	<0.4	11	9.3	8.9	<0.1	6.4	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-099 0-0.15	31-08-15	S15-Au26583	470534	0-0.15	4.8	<0.4	11	8.9	14	<0.1	6.2	8.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC70	31-08-15	S15-Au26704	470534	0-0.15	6.6	<0.4	16	9.5	13	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA70	31-08-15	133542-1	133542		5	<0.4	16	9	21	<0.1	7	11	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X0-100 0.15-0.3	31-08-15	S15-Au26590	470534	0.15-0.3	4.2	<0.4	11	13	8.1	<0.1	6.3	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-100 0-0.15	31-08-15	S15-Au26589	470534	0-0.15	5.6	<0.4	24	24	7.4	<0.1	23	66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-101 0.4-0.6	31-08-15	S15-Au26588	470534	0.4-0.6	8.5	<0.4	14	24	13	<0.1	15	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	1.2	-	0.5	-	0.6	0.6	0.6	<0.5	1.4	<0.5	0.697[#5]	0.5	<0.5	1	1.2	6.4	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X0-101 0-0.15	31-08-15	S15-Au26586	470534	0-0.15	6	<0.4	13	24	14	<0.1	15	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-01 0-0.1	12-02-15	S15-Fe09298	447301	0-0.1	4	<0.4	79	29	13	<0.05	69	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
X1-02 0-0.1	12-02-15	S15-Fe09300	447301	0-0.1	5.6	<0.4	23	31	22	<0.05	25	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-03 0-0.1	12-02-15	S15-Fe09302	447301	0-0.1	4.5	<0.4	13	13	12	<0.05	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-04 0-0.1	12-02-15	S15-Fe09304	447301	0-0.1	5.3	<0.4	20	18	11	<0.05	13	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-05 0-0.2	12-02-15	S15-Fe09306	447301	0-0.2	6.2	<0.4	21	13	38	<0.05	5.4	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-06 0-0.1	12-02-15	S15-Fe09308	447301	0-0.1	5.3	<0.4	27	18	11	<0.05	19	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-07 0-0.1	12-02-15	S15-Fe09310	447301	0-0.1	6.6	<0.4	22	17	88	<0.05	11	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-08 0.2-0.4	12-02-15	S15-Fe09313	447301	0.2-0.4	4.9	<0.4	16	15	12	<0.05	<5	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-09 0-0.1	12-02-15	S15-Fe09315	447301	0-0.1	6.5	<0.4	16	16	10	<0.05	<5	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-10 0-0.1	12-02-15	S15-Fe09317	447301	0-0.1	5.3	<0.4	15	18	12	<0.05	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-11 0-0.1	12-02-15	S15-Fe09319	447301	0-0.1	5	<0.4	15	17	11	<0.05	6	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-12 0-0.1	12-02-15	S15-Fe09321	447301	0-0.1	6.7	<0.4	23	19	16	<0.05	7.8	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
QC01	12-02-15	S15-Fe09330	447301	0-0.1	4.9	<0.4	14	15	11	<0.05	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
QC01A	12-02-15	123610-1	123610		4	<0.4	11	14	11	<0.1	2	12	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-13 0-0.1	12-02-15	S15-Fe09323	447301	0-0.1	4.1	<0.4	12	13	9	<0.05	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-14 0-0.1	12-02-15	S15-Fe09325	447301	0-0.1	7.1	<0.4	34	17	14	<0.05	18	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-15 0-0.3	12-02-15	S15-Fe09328	447301	0-0.3	9.2	<0.4	27	20	32	<0.05	<5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-
X1-016_0-0.2	30-06-15	S15-Jl00345	463565	0-0.2	6.4	<0.4	15	15	11	<0.1	<5	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-017 0.0-0.1	03-09-15	S15-Se05392	471226	0-0.1	4.9	<0.4	14	15	12	<0.1	5.7	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-017 0.3-0.5	03-09-15	S15-Se05393	471226	0.3-0.5	4.9	<0.4	13	14	11	<0.1	5.1	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-019 0.0-0.1	03-09-15	S15-Se05394	471226	0-0.1	7.3	<0.4	13	15	7.3	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-019 0.2-0.4	03-09-15	S15-Se05395	471226	0.2-0.4	7.9	<0.4	17	17	21	<0.1	6.8	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-020 0.0-0.1	03-09-15	S15-Se05396	471226	0-0.1	13	<0.4	26	17	39	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-020 0.2-0.4	03-09-15	S15-Se05397	471226	0.2-0.4	4.9	<0.4	15	17	12	<0.1	7.7	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-021 0.0-0.1	03-09-15	S15-Se05398	471226	0-0.1	4.1	<0.4	19	15	7.5	<0.1	13	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-021 0.2-0.4	03-09-15	S15-Se05399	471226	0.2-0.4	4.4	<0.4	12	14	8.1	<0.1	<5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC96	03-09-15	S15-Se05444	471226	0.2-0.4	4.9	<0.4	8.6	14	15	<0.1	<5	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC96A	03-09-15	133730-3	133730		4	<0.4	13	13	11	<0.1	4	14	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-022 0.0-0.1	03-09-15	S15-Se05400	471226	0-0.1	6.6	<0.4	21	17	8.6	<0.1	14	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-022 0.2-0.4	03-09-15	S15-Se05401	471226	0.2-0.4	5.6	<0.4	12	14	13	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-023 0.1-0.3	15-10-15	S15-Oc11259	476042	0.1-0.3	7.1	<0.4	17	17	8.9	<0.1	<5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-023 0-0.1	15-10-15	S15-Oc11258	476042	0-0.1	7.7	<0.4	26	25	9.7	<0.1	20	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-024 0.15-0.3	03-09-15	S15-Se05403	471226	0.15-0.3	6.5	<0.4	14	16	10	<0.1	6.8	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-024 0.3-0.5	03-09-15	S15-Se05404	471226	0.3-0.5	6.6	<0.4	16	16	9.3	<0.1	9.5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-025 0.0-0.1	03-09-15	S15-Se05406	471226	0-0.1	6	<0.4	22	16	9.7	<0.1	14	30	<0.5	<0.5	<0.5	0.9	1.3	1.7	2	2.2	-	1.3	-	0.7	1.1	1.1	<0.5	1.3	<0.5	1.958[#5]	0.6	<0.5	<0.5	1.4	9.7	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC95	03-09-15	S15-Se05443	471226	0-0.1	4.6	<0.4	30	17	13	<0.1	22	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC95A	03-09-15	133730-2	133730		<4	<0.4	16	14	9	<0.1	11	19	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-025 0.2-0.4	03-09-15	S15-Se05407	471226	0.2-0.4	7.8	<0.4	13	15	24	<0.1	6.3	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-026 0.0-0.15	03-09-15	S15-Se05408	471226	0-0.15	9.2	<0.4	31	20	15	<0.1	17	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-026 0.2-0.4	03-09-15	S15-Se05409	471226	0.2-0.4	4.5	<0.4	14	17	13	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-027 0.0-0.1	03-09-15	S15-Se05410	471226	0-0.1	8.8	<0.4	16	17	14	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-027 0.3-0.5	03-09-15	S15-Se05411	471226	0.3-0.5	6.2	<0.4	9.9	15	9.3	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-028 0.0-0.2	01-09-15	S15-Se01553	470781	0-0.2	7.5	<0.4	12	16	9.7	<0.1	6.9	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-028 0.3-0.5	01-09-15	S15-Se01554	470781	0.3-0.5	8.7	<0.4	11	28	13	<0.1	11	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-029 0.2-0.4	15-10-15	S15-Oc11261	476042	0.2-0.4	5.5	<0.4	14	14	7.8	<0.1	5.3	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-029 0-0.2	15-10-15	S15-Oc11260	476042	0-0.2	6.6	<0.4	20	16	13	<0.1	14	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-030 0.5-0.7	15-10-15	S15-Oc11263	476042	0.5-0.7	5.8	<0.4	13	14	6.9	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-030 0-0.1	15-10-15	S15-Oc11262	476042	0-0.1	7.8	<0.4	23	18	11	<0.1	15	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	0.05
X1-031 0.3-0.5	15-10-15	S15-Oc11266	476042	0.3-0.5	7.9	<0.4	19	18	12	<0.1	5.2	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-031 0-0.15	15-10-15	S15-Oc11264	476042	0-0.15	5.7	<0.4	26	25	8.9	<0.1	16	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	0.09
X1-032 0.1-0.3	15-10-15	S15-Oc11268	476042	0.3-0.3	7.8	<0.4	21	19	16	<0.1	12	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-032 0-0.1	15-10-15	S15-Oc11267	476042	0-0.1	8.4	<0.4	26	20	17	<0.1	14	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-033 0.0-0.2	03-09-15	S15-Se05412	471226	0-0.2	12	<0.4	23	21	15	<0.1	5.3	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-033 0.2-0.4	03-09-15	S15-Se05413	471226	0.2-0.4	7.6	<0.4	15	19	14	<0.1	6.1	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-034 0.0-0.1	03-09-15	S15-Se05414	471226	0-0.1	8.8	<0.4	19	16	17	<0.1	5.9	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-034 0.2-0.4	03-09-15	S15-Se05415	471226	0.2-0.4	6.6	<0.4	24	19	19	<0.1	6.5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-035 0.0-0.1	03-09-15	S15-Se05416	471226	0-0.1	7.2	<0.4	18	17	16	<0.1	7.4	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-035 0.2-0.4	03-09-15	S15-Se05417	471226	0.2-0.4	7.3	<0.4	13	15	13	<0.1	7.3	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-036 0.0-0.15	03-09-15	S15-Se05418	471226	0-0.15	6.3	<0.4	14	14	24	<0.1	7.4	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC94	03-09-15	S15-Se05442	471226	0-0.15	5.6	<0.4	14	19	18	<0.1	9.9	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC94A	03-09-15	133730-1	133730		5	<0.4	15	14	19	<0.1	7	18	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-036 0.2-0.4	03-09-15	S15-Se05419	471226	0.2-0.4	5.8	<0.4	15	16	17	<0.1	10	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-038 0.1-0.3	15-10-15	S15-Oc11270	476042	0.1-0.3	8.3	<0.4	21	19	15	<0.1	6.6	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-038 0-0.1	15-10-15	S15-Oc11269	476042	0-0.1	6.2	<0.4	33	22	8.5	<0.1	25	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-039 0.0-0.1	02-09-15	S15-Se03257	470968	0-0.1	2.7	<0.4	20	18	11	<0.1	15	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-039 0.6-0.8	02-09-15	S15-Se03258	470968	0.6-0.8	3.9	<0.4	12	17	17	<0.1	6.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-040 0.0-0.1	02-09-15	S15-Se03259	470968	0-0.1	3.2	<0.4	19	19	11	<0.1	13	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-040 0.5-0.7	02-09-15	S15-Se03260	470968	0.5-0.7	5.5	<0.4	16	21	28	<0.1	8.8	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-041 0.0-0.1	02-09-15	S15-Se03261	470968	0-0.1	3.7	<0.4	17	23	18	<0.1	8.4	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-041 0.6-0.8	02-09-15	S15-Se03262	470968	0.6-0.8	4.8	<0.4	14	19	20	<0.1	9.3	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-042 0.0-0.1	02-09-15	S15-Se03263	470968	0-0.1	4.6	<0.4	18	19	13	<0.1	14	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-042 0.2-0.4	02-09-15	S15-Se03264	470968	0.2-0.4	4.4	<0.4	13	19	13	<0.1	6.9	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-043 0.0-0.2	01-09-15	S15-Se01555	470781	0-0.2	11	<0.4	17	20	19	<0.1	7.9	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC87	01-09-15	S15-Se01657	470781	0-0.2	10	<0.4	24	14	11	<0.1	5.6	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC87A	01-09-15	133623-7	133623		6	<0.4	18	14	35	<0.1	8	22	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-043 0.2-0.4	01-09-15	S15-Se01556	470781	0.2-0.4	7.8	<0.4	13	22	6.8	<0.1	11	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-044 0.0-0.1	01-09-15	S15-Se01557	470781	0-0.1	9.2	<0.4	18	19	15	<0.1	10	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-044 0.3-0.5	01-09-15	S15-Se01558	470781	0.3-0.5	6.7	<0.4	11	19	11	<0.1	5.8	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-045 0.1-0.3	15-10-15	S15-Oc11272	476042	0.1-0.3	6.5	<0.4	17	18	11	<0.1	<5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-045 0-0.1	15-10-15	S15-Oc11271	476042	0-0.1	6.3	<0.4	40	21	9.9	<0.1	30	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-046 0.2-0.4	15-10-15	S15-Oc11274	476042	0.2-0.4	9	<0.4	22	19	12	<0.1	6.1	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-046 0-0.1	15-10-15	S15-Oc11273	476042	0-0.1	7.4	<0.4	38	18	10	<0.1	25	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	0.19
X1-047 0.1-0.3	15-10-15	S15-Oc11276	476042	0.1-0.3	7.8	<0.4	20	18	12	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-047 0-0.1	15-10-15	S15-Oc11275	476042	0-0.1	6.5	<0.4	24	17	8.7	<0.1	12	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-048 0.0-0.1	02-09-15	S15-Se03265	470968	0-0.1	4.6	<0.4	12	20	9	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-048 0.2-0.4	02-09-15	S15-Se03266	470968	0.2-0.4	3.5	<0.4	10	16	12	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-049 0.0-0.2	02-09-15	S15-Se03267	470968	0-0.2	5.2	<0.4	19	18	12	<0.1	13	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-049 0.3-0.5	02-09-15	S15-Se03268	470968	0.3-0.5	2.3	<0.4	15	22	17	<0.1	5.6	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-050 0.0-0.1	02-09-15	S15-Se03269	470968	0-0.1	5.3	<0.4	16	18	17	<0.1	8	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-050 0.1-0.3	02-09-15	S15-Se03270	470968	0.1-0.3	5.5	<0.4	11	18	9.1	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-051 0.0-0.1	02-09-15	S15-Se03271	470968	0-0.1	6.1	<0.4	18	18	12	<0.1	6.7	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-051 0.1-0.3	02-09-15	S15-Se03272	470968	0.1-0.3	7.5	<0.4	19	20	18	<0.1	6.7	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-052 0.0-0.1	01-09-15	S15-Se01559	470781	0-0.1	10	<0.4	18	19	11	<0.1	9.6	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-052 0.2-0.4	01-09-15	S15-Se01560	470781	0.2-0.4	15	<0.4	22	20	20	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-053 0.1-0.3	15-10-15	S15-Oc11278	476042	0.3-0.3	3.6	<0.4	13	13	6.3	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-053 0-0.1	15-10-15	S15-Oc11277	476042	0-0.1	6.9	<0.4	28	16	9.6	<0.1	18	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	1.9
QC01-15/10	15-10-15	S15-Oc11279	476042	0-0.1	7.2	<0.4	30	18	12	<0.1	20	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#5]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	0.56

Table App C
Project Number 54782
Stage 2c Samples within X series

Field_ID	Date	SampleCode	Lab Number	Depth	Metals & Metalloids								Polycyclic Aromatic Hydrocarbons																								Polychlorinated Biphenyls									
					Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.05	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																				10														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																				170														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7[#3]																													
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7[#3]																													
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400							3[#9]											3[#9]					300[#10]									1[#11]		
Site Specific Criteria									230			200							3																											
NEPM 2013 Soil HSL A - Sensitive Setting																																3[#8]														
QC01A-15/10	15-10-15	135939-1	135939		<4	<0.4	40	15	6	<0.1	37	32	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5		-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#1]	<0.1	<0.1	<0.1	<0.1	-	0[#6]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	0.9
X1-054 0.4-0.6	31-08-15	S15-Au26644	470534	0.4-0.6	7.4	<0.4	18	14	8	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-054 0-0.1	31-08-15	S15-Au26643	470534	0-0.1	8.6	<0.4	20	21	16	<0.1	<5	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-055 0.3-0.5	31-08-15	S15-Au26648	470534	0.3-0.5	5.2	<0.4	13	16	9.5	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-055 0-0.1	31-08-15	S15-Au26647	470534	0-0.1	7	<0.4	20	17	17	<0.1	7.5	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-056 0.3-0.5	31-08-15	S15-Au26652	470534	0.3-0.5	5.3	<0.4	14	17	9.5	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-056 0-0.2	31-08-15	S15-Au26651	470534	0-0.2	5.7	<0.4	19	17	9.4	<0.1	11	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-057 0.9-1.1	31-08-15	S15-Au26650	470534	0.9-1.1	6.8	<0.4	16	15	13	<0.1	<5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-057 0-0.1	31-08-15	S15-Au26649	470534	0-0.1	4.4	<0.4	14	21	14	<0.1	<5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC79	31-08-15	S15-Au26713	470534	0-0.1	6.9	<0.4	17	17	14	<0.1	<5	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA79	31-08-15	133542-10	133542		<4	<0.4	14	22	20	<0.1	5	12	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-058 0.0-0.1	01-09-15	S15-Se01561	470781	0-0.1	8.9	<0.4	13	21	11	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-058 0.1-0.3	01-09-15	S15-Se01562	470781	0.1-0.3	6.8	<0.4	12	16	7.8	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-059 0.3-0.5	31-08-15	S15-Au26640	470534	0.3-0.5	5.1	<0.4	14	15	11	<0.1	<5	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-059 0-0.1	31-08-15	S15-Au26639	470534	0-0.1	6.5	<0.4	15	15	9.7	<0.1	<5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-060 0.1-0.3	31-08-15	S15-Au26634	470534	0.1-0.3	7.9	<0.4	21	19	15	<0.1	<5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-060 0-0.1	31-08-15	S15-Au26633	470534	0-0.1	12	<0.4	21	17	12	<0.1	<5	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-061 0.1-0.3	31-08-15	S15-Au26636	470534	0.1-0.3	5.1	<0.4	15	15	11	<0.1	<5	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-061 0-0.1	31-08-15	S15-Au26635	470534	0-0.1	6	<0.4	16	17	7.8	<0.1	6.6	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-062 0.4-0.6	31-08-15	S15-Au26638	470534	0.4-0.6	4.5	<0.4	14	15	9	<0.1	<5	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-062 0-0.1	31-08-15	S15-Au26637	470534	0-0.1	3.7	<0.4	11	12	6	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-063 0.5-0.7	31-08-15	S15-Au26642	470534	0.5-0.7	4.3	<0.4	12	15	9.1	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-063 0-0.1	31-08-15	S15-Au26641	470534	0-0.1	5.2	<0.4	39	20	6.3	<0.1	33	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-064 0.4-0.6	31-08-15	S15-Au26646	470534	0.4-0.6	3	<0.4	7.1	9.1	5.4	<0.1	<5	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-064 0-0.2	31-08-15	S15-Au26645	470534	0-0.2	6.8	<0.4	16	19	12	<0.1	7.1	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-065 0.0-0.15	27-08-15	M15-Au24475	470301	0-0.15	6	<0.4	18	17	11	<0.1	7.7	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC58	27-08-15	M15-Au24523	470301	0-0.15	5.7	<0.4	20	15	9.7	<0.1	9.8	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC58A	27-08-15	133384-4	133384		6	<0.4	29	18	15	<0.1	12	32	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-065 0.3-0.5	27-08-15	M15-Au24476	470301	0.3-0.5	7	<0.4	24	19	12	<0.1	13	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-066 0.2-0.8	31-08-15	S15-Au26623	470534	0.2-0.8	7	<0.4	17	16	12	<0.1	<5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-066 0-0.2	31-08-15	S15-Au26622	470534	0-0.2	6	<0.4	18	18	11	<0.1	11	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-067 0.0-0.15	01-09-15	S15-Se01563	470781	0-0.15	12	<0.4	22	18	14	<0.1	<5	9.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC86	01-09-15	S15-Se01656	470781	0-0.15	4.9	<0.4	16	16	10	<0.1	<5	9.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC86A	01-09-15	133623-6	133623		5	<0.4	16	12	14	<0.1	3	13	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-067 0.2-0.4	01-09-15	S15-Se01564	470781	0.2-0.4	16	<0.4	25	25	17	<0.1	6.4	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-068 0.0-0.1	01-09-15	S15-Se01565	470781	0-0.1	7.2	<0.4	14	16	9.2	<0.1	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-068 0.1-0.3	01-09-15	S15-Se01566	470781	0.1-0.3	4.6	<0.4	13	15	9.6	<0.1	<5	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-069 0.0-0.2	01-09-15	S15-Se01567	470781	0-0.2	4.4	<0.4	12	13	6.9	<0.1	<5	12	<0.5	<0.5	<0.5	0.7	0.8	1	1.3	1.6	-	0.6	-	<0.5	0.9	1.2	<0.5	0.7	<0.5	1.31[#5]	<0.5	<0.5	<0.5	1.3	6.2	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC85	01-09-15	S15-Se01655	470781	0-0.2	6.9	<0.4	34	22	7.4	<0.1	25	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC85A	01-09-15	133623-5	133623		<4	<0.4	20	13	11	<0.1	14	17	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-069 0.2-0.4	01-09-15	S15-Se01568	470781	0.2-0.4	5.6	<0.4	14	21	7.7	<0.1	11	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-070 0.15-0.3	27-08-15	M15-Au24473	470301	0.15-0.3	5.9	<0.4	17	19	13	<0.1	14	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-070 0.6-0.8	27-08-15	M15-Au24474	470301	0.6-0.8	8.5	<0.4	26	26	21	<0.1	20	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-071 0.2-0.4	27-08-15	M15-Au24471	470301	0.2-0.4	6.6	<0.4	22	21	13	<0.1	17	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC59	27-08-15	M15-Au24524	470301	0.2-0.4	6.4	<0.4	18	16	12	<0.1	6.9	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC59A	27-08-15	133384-5	133384		5	<0.4	24	19	14	<0.1	16	28	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-071 1.4-1.6	27-08-15	M15-Au24472	470301	1.4-1.6	3.4	<0.4	13	12	8	<0.1	5.4	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-072 0.0-0.15	27-08-15	M15-Au24469	470301	0-0.15	5.6	<0.4	21	17	12	<0.1	11	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC64	27-08-15	M15-Au24529	470301	0-0.15	6.2	<0.4	24	19	14	<0.1	15	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC64A	27-08-15	133384-10	133384		5	<0.4	32	19	13	<0.1	22	44	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-072 0.8-1.0	27-08-15	M15-Au24470	470301	0.8-1	5.2	<0.4	17	15	11	<0.1	6	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-073 0.0-0.15	01-09-15	S15-Se01570	470781	0-0.15	7	<0.4	18	18	15	<0.1	7.8	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-073 0.2-0.4	01-09-15	S15-Se01571	470781	0.2-0.4	7.5	<0.4	10	14	9.9	<0.1	5.6	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-074 0.0-0.2	01-09-15	S15-Se01572	470781	0-0.2	4.1	<0.4	14	16	8	<0.1	5.2	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-074 0.2-0.4	01-09-15	S15-Se01573	470781	0.2-0.4	10	<0.4	20	16	8.3	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-075 0.15-0.3	01-09-15	S15-Se01575	470781	0.15-0.3	8	<0.4	20	18	9.6	<0.1	10	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-075 0.3-0.5	01-09-15	S15-Se01576	470781	0.3-0.5	8.2	<0.4	36	20	8.7	<0.1	27	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-076 0.3-0.5	27-08-15	M15-Au24467	470301	0.3-0.5	5.2	<0.4	18	27	14	<0.1	20	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC55	27-08-15	M15-Au24520	470301	0.3-0.5	7	<0.4	22	19	14	<0.1	17	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC55A	27-08-15	133384-1	133384		5	<0.4	21	15	14	<0.1	9	44	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
QC55A - TRIPLICATE	27-08-15	133384-16	133384		7	<0.4	23	13	16	<0.1	10	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-076 1.0-1.2	27-08-15	M15-Au24468	470301	1-1.2	3.5	<0.4	14	14	12	<0.1	7.5	64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-077 0.15-0.3	27-08-15	M15-Au24465	470301	0.15-0.3	6.1	<0.4	19	17	9.5	<0.1	7.3	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-077 0.7-0.9	27-08-15	M15-Au24466	470301	0.7-0.9	6	<0.4	18	22	9.9	<0.1	17	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-078 0.0-0.15	27-08-15	M15-Au24463	470301	0-0.15	7.7	<0.4	25	19	15	<0.1	12	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC60	27-08-15	M15-Au24525	470301	0-0.15	7.4	<0.4	19	21	19	<0.1	10	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC60A	27-08-15	133384-6	133384		8	<0.4	32	22	21	<0.1	16	34	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-078 1.2-1.4	27-08-15	M15-Au24464	470301	1.2-1.4	6.6	<0.4	22	16	17	<0.1	12	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-079 0.15-0.3	27-08-15	M15-Au24461	470301	0.15-0.3	4.5	<0.4	12	12	6.8	<0.1	5.8	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC63	27-08-15	M15-Au24528	470301	0.15-0.3	8.8	<0.4	21	18	200	<0.1	6.7	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC63A	27-08-15	133384-9	133384		6	<0.4	21	17	160	<0.1	7	20	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-079 0.6-0.8	27-08-15	M15-Au24462	470301	0.6-0.8	5.1	<0.4	24	17	9.5	<0.1	15	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-080 0.0-0.15	27-08-15	M15-Au24459	470301	0-0.15	6.3	<0.4	25	26	20	<0.1	26	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-080 0.6-0.8	27-08-15	M15-Au24460	470301	0.6-0.8	5.3	<0.4	24	18	11	<0.1	16	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC65	27-08-15	M15-Au24530	470301	0.6-0.8	4.8	<0.4	15	15	8.1	<0.1	<5	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC65A	27-08-15	133384-11	133384		5	<0.4	18	14	14	<0.1	9	23	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-081 0.15-0.3	27-08-15	M15-Au24457	470301	0.15-0.3	6.8	<0.4	26	32	17	<0.1	30	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-081 1.1-1.3	27-08-15	M15-Au24458	470301	1.1-1.3	5.3	<0.4	11	12	6.9	<0.1	<5	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-082 0.0-0.2	02-09-15	S15-Se03273	470968	0-0.2	6.9	<0.4	19	25	16	<0.1	15	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-082 0.2-0.4	02-09-15	S15-Se03274	470968	0.2-0.4	6.1	<0.4	14	22	29	<0.1	7.2	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-083 0.15-0.3	27-08-15	M15-Au24455	470301	0.15-0.3	5.5	<0.4	23	23	17	<0.1	21	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-083 0.6-0.8	27-08-15	M15-Au24456	470301	0.6-0.8	6.5	<0.4	20	22	22	<0.1	14	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-084 0.0-0.15	27-08-15	M15-Au24453	470301	0.15-0.3	9.4	<0.4	32	21	21	<0.1	14	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC62	27-08-15	M15-Au24527	470301	0.15-0.3	14	<0.4	56	27	14	<0.1	13	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC62A	27-08-15	133384-8	133384		5	<0.4	18	19	17	<0.1	16	31	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-084 0.8-1.0	27-08-15	M15-Au24454	470301	0.8-1	8.7	<0.4	31	24	20	<0.1	20	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-085 0.0-0.15	27-08-15	M15-Au24451	470301	0-0.15	6.9	<0.4	21	27	13	<0.1	15	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-085 1.0-1.2	27-08-15	M15-Au24452	470301	1-1.2	6.1	<0.4	16	19	12	<0.1	<5	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-086 0.0-0.15	27-08-15	M15-Au24449	470301	0-0.15	7.6	<0.4	27	25	20	<0.1	13	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-086 0.8-1.0	27-08-15	M15-Au24450	470301	0.8-1	6.8	<0.4	29	27	10	<0.1	26	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC67	27-08-15	M15-Au24532	470301	0.8-1	6.2	<0.4	15	19	8.9	<0.1	9.8	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC67A	27-08-15	133384-13	133384		6	<0.4	22	16	10	<0.1	16	30	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-087 0.0-0.15	27-08-15	M15-Au24447	470301	0-0.15	7.3	<0.4	24	28	14	<0.1	23	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-087 0.3-0.5	27-08-15	M15-Au24448	470301	0.3-0.5	7.4	<0.4	24	22	14	<0.1	20	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC69	27-08-15	M15-Au24534	470301	0.3-0.5	6.7	<0.4	18	16	16	<0.1	5.9	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC69A	27-08-15	133384-15	133384		4	<0.4	20	18	13	<0.1	15	35	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-088 0.2-0.4	31-08-15	S15-Au26621	470534	0.2-0.4	7.4	<0.4	21	16	27	<0.1	6.8	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-088 0-0.2	31-08-15	S15-Au26620	470534	0-0.2	4.8	<0.4	16	13	9.8	<0.1	6.9	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1_089 0.0-0.2	06-08-15	S15-Au05913	468034	0-0.2	8.9	<0.4	19	19	23	<0.1	7.1	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1_089 0.2-0.4	06-08-15	S15-Au05914	468034	0.2-0.4	8	<0.4	14	22	12	<0.1	10	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-090 0.0-0.2	01-09-15	S15-Se01578	470781	0-0.2	7.2	<0.4	16	16	13	<0.1	8.3	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-090 0.2-0.4	01-09-15	S15-Se01579	470781	0.2-0.4	11	<0.4	18	16	23	<0.1	8.1	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-091 0.0-0.15	27-08-15	M15-Au24445	470301	0-0.15	5.2	<0.4	20	16	14	<0.1	9.1	24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-091 0.8-1.0	27-08-15	M15-Au24446	470301	0.8-1	6.5	<0.4	17	18	15	<0.1	13	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-092 0.0-0.15	27-08-15	M15-Au24443	470301	0-0.15	6.8	<0.4	25	24	16	<0.1	22	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-092 0.6-0.8	27-08-15	M15-Au24444	470301	0.6-0.8	8.4	<0.4	30	19	16	<0.1	12	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-093 0.15-0.3	27-08-15	M15-Au24441	470301	0.15-0.3	6.9	<0.4	23	20	14	<0.1	15	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-093 0.8-1.0	27-08-15	M15-Au24442	470301	0.8-1	5.9	0.4	23	16	14	<0.1	9.6	58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05

Table App C
Project Number 54782
Stage 2c Samples within X series

JBS&G

Metals & Metalloids

Field_ID	Date	SampleCode	Lab Number	Depth	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.05	1.00	1.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil												
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil												
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400
Site Specific Criteria									230			200
NEPM 2013 Soil HSL A - Sensitive Setting												
X1-094 0.3-0.5	27-08-15	M15-Au24439	470301	0.3-0.5	8.1	<0.4	27	25	12	<0.1	22	42
X1-094 1.7-1.9	27-08-15	M15-Au24440	470301	1.7-1.9	7.3	<0.4	15	11	19	<0.1	9.3	27
X1-095 0.15-0.3	27-08-15	M15-Au24437	470301	0.15-0.3	7	<0.4	22	25	24	<0.1	19	39
X1-095 1.2-1.4	27-08-15	M15-Au24438	470301	1.2-1.4	10	<0.4	29	17	12	<0.1	7.6	39
X1-096 0.0-0.15	27-08-15	M15-Au24435	470301	0-0.15	5.4	<0.4	18	16	7.2	<0.1	6.1	23
X1-096 0.8-1.0	27-08-15	M15-Au24436	470301	0.8-1	5.6	<0.4	25	22	17	<0.1	22	39
X1-097 0.15-0.3	27-08-15	M15-Au24433	470301	0.15-0.3	6.7	<0.4	18	17	14	<0.1	12	27
X1-097 0.8-1.0	27-08-15	M15-Au24434	470301	0.8-1	8.6	<0.4	24	20	17	<0.1	8.5	31
X1-098 0.0-0.15	01-09-15	S15-Se01580	470781	0-0.15	8.5	<0.4	22	19	11	<0.1	14	21
X1-098 0.2-0.4	01-09-15	S15-Se01581	470781	0.2-0.4	7.2	<0.4	14	17	32	<0.1	8.6	17
X1-099 0.0-0.2	02-09-15	S15-Se03275	470968	0-0.2	7	<0.4	15	16	18	<0.1	9.8	24
QC90	02-09-15	S15-Se03307	470968	0-0.2	7.5	<0.4	21	22	16	<0.1	12	22
QC90A	02-09-15	133709-2	133709		5	<0.4	16	14	21	<0.1	9	25
X1-099 0.5-0.7	02-09-15	S15-Se03276	470968	0.5-0.7	5.6	<0.4	13	17	21	<0.1	11	24
X1-100 0.0-0.15	01-09-15	S15-Se01582	470781	0-0.15	8.3	<0.4	18	17	14	<0.1	9.7	21
X1-100 0.15-0.3	01-09-15	S15-Se01583	470781	0.15-0.3	9	<0.4	15	17	11	<0.1	<5	19
X1-101 0.0-0.15	27-08-15	M15-Au24431	470301	0-0.15	5.7	<0.4	15	16	14	<0.1	7.8	24
X1-101 0.8-1.0	27-08-15	M15-Au24432	470301	0.8-1	7.8	<0.4	29	22	12	<0.1	21	39
X1-102 0.15-0.3	27-08-15	M15-Au24429	470301	0.15-0.3	6.1	<0.4	22	18	13	<0.1	12	33
X1-102 0.8-1.0	27-08-15	M15-Au24430	470301	0.8-1	5.7	<0.4	19	18	12	<0.1	14	40
X1-103 0.3-0.5	27-08-15	M15-Au24427	470301	0.3-0.5	4.7	<0.4	22	18	12	<0.1	15	31
X1-103 1.1-1.3	27-08-15	M15-Au24428	470301	1.1-1.3	6.2	<0.4	20	17	19	<0.1	7.1	25
X1-104 0.0-0.15	27-08-15	M15-Au24425	470301	0-0.15	6.2	<0.4	26	19	11	<0.1	20	46
X1-104 0.3-0.5	27-08-15	M15-Au24426	470301	0.3-0.5	6.3	<0.4	24	18	12	<0.1	16	67
X1-105 0.0-0.2	27-08-15	M15-Au24423	470301	0-0.2	5.8	<0.4	17	16	12	<0.1	13	24
X1-105 0.5-0.7	27-08-15	M15-Au24424	470301	0.5-0.7	6.2	<0.4	21	17	12	<0.1	13	30
X1-106 0.3-0.5	31-08-15	S15-Au26611	470534	0.3-0.5	5.2	<0.4	14	13	11	<0.1	7.1	14
X1-106 0-0.2	31-08-15	S15-Au26610	470534	0-0.2	4.7	<0.4	14	14	11	<0.1	8.8	77
X1-107 0.0-0.2	01-09-15	S15-Se01585	470781	0-0.2	8.3	<0.4	21	18	10	<0.1	14	22
X1-107 0.2-0.4	01-09-15	S15-Se01586	470781	0.2-0.4	10	<0.4	15	18	21	<0.1	7.5	24
QC84	01-09-15	S15-Se01654	470781	0.2-0.4	9.8	<0.4	15	18	18	<0.1	7.9	24
QC84A	01-09-15	133623-4	133623		5	<0.4	15	14	20	<0.1	7	23
X1-108 0.0-0.2	01-09-15	S15-Se01587	470781	0-0.2	6.7	<0.4	19	18	13	<0.1	11	30
X1-108 0.2-0.4	01-09-15	S15-Se01588	470781	0.2-0.4	7.7	<0.4	18	18	20	<0.1	11	32
X1-109 0.3-0.5	27-08-15	M15-Au24421	470301	0.3-0.5	6.4	<0.4	21	18	16	<0.1	11	31
X1-109 0.7-0.9	27-08-15	M15-Au24422	470301	0.7-0.9	6.7	<0.4	22	18	16	<0.1	8.1	26
X1-110 0.0-0.15	27-08-15	M15-Au24419	470301	0-0.15	5.1	<0.4	21	15	13	<0.1	16	44
X1-110 0.6-0.8	27-08-15	M15-Au24420	470301	0.6-0.8	5.7	<0.4	23	18	11	<0.1	15	35
X1-111 0.15-0.3	27-08-15	M15-Au24417	470301	0.15-0.3	6.4	<0.4	21	23	15	<0.1	15	37
X1-111 0.8-1.0	27-08-15	M15-Au24418	470301	0.8-1	6.3	<0.4	17	12	14	<0.1	12	24
X1-112 0.15-0.3	27-08-15	M15-Au24415	470301	0.15-0.3	6.3	<0.4	24	17	13	<0.1	15	40
X1-112 0.8-1.0	27-08-15	M15-Au24416	470301	0.8-1	5.8	<0.4	20	19	11	<0.1	11	29
X1-113 0.3-0.5	31-08-15	S15-Au26579	470534	0.3-0.5	5.4	<0.4	21	8	9	<0.1	5.2	8.2
X1-113 0-0.1	31-08-15	S15-Au26578	470534	0-0.1	2.9	<0.4	27	11	7.9	<0.1	15	14
QC72	31-08-15	S15-Au26706	470534	0-0.1	4.9	<0.4	20	7.4	8.9	<0.1	<5	11
QCA72	31-08-15	133542-3	133542		<4	<0.4	18	13	12	<0.1	6	17
X1_114 0.0-0.15	06-08-15	S15-Au05915	468034	0-0.15	8.2	<0.4	16	19	16	<0.1	7.7	38
X1_114 0.15-0.3	06-08-15	S15-Au05916	468034	0.15-0.3	6.1	<0.4	14	17	21	<0.1	6.8	29
X1-115 0.0-0.15	01-09-15	S15-Se01590	470781	0-0.15	8	<0.4	18	19	14	<0.1	11	35
X1-115 0.2-0.4	01-09-15	S15-Se01591	470781	0.2-0.4	7.7	<0.4	16	19	12	<0.1	9	28
X1-116 0.0-0.1	01-09-15	S15-Se01592	470781	0-0.1	6.5	<0.4	19	19	12	<0.1	11	30
QC83	01-09-15	S15-Se01653	470781	0-0.1	5.8	<0.4	22	17	11	<0.1	14	23
QC83A	01-09-15	133623-3	133623		5	<0.4	22	16	15	<0.1	9	25
X1-116 0.1-0.3	01-09-15	S15-Se01593	470781	0.1-0.3	8	<0.4	14	18	16	<0.1	13	36
X1-117 0.15-0.3	27-08-15	M15-Au24413	470301	0.15-0.3	6	<0.4	18	17	12	<0.1	11	26
X1-117 1.0-1.2	27-08-15	M15-Au24414	470301	1-1.2	8.9	<0.4	27	19	17	<0.1	14	30
X1-118 0.0-0.2	27-08-15	M15-Au24411	470301	0-0.2	7	<0.4	38	28	17	<0.1	29	64
X1-118 1.0-1.2	27-08-15	M15-Au24412	470301	1-1.2	7.1	<0.4	24	16	13	<0.1	11	28
X1-119 0.3-0.5	31-08-15	S15-Au26662	470534	0.3-0.5	5.4	<0.4	17	13	9.6	<0.1	8.6	17
X1-119 0-0.2	31-08-15	S15-Au26661	470534	0-0.2	4.9	<0.4	58	22	5.4	<0.1	44	45
QC71	31-08-15	S15-Au26705	470534	0-0.2	6.3	<0.4	44	18	7.7	<0.1	28	35
QCA71	31-08-15	133542-2	133542		<4	<0.4	36	17	12	<0.1	29	27
X1-120 0.0-0.15	01-09-15	S15-Se01594	470781	0-0.15	5.9	<0.4	16	16	16	<0.1	10	25
QC82	01-09-15	S15-Se01652	470781	0-0.15	7.4	<0.4	18	16	15	<0.1	10	27
QC82A	01-09-15	133623-2	133623		5	<0.4	25	16	18	<0.1	18	30
X1-120 0.2-0.4	01-09-15	S15-Se01595	470781	0.2-0.4	5	<0.4	12	19	15	<0.1	14	32
X1-121 0.0-0.15	01-09-15	S15-Se01596	470781	0-0.15	6.2	<0.4	18	15	11	<0.1	13	26
QC81	01-09-15	S15-Se01651	470781	0-0.15	6.8	<0.4	18	17	19	<0.1	12	29
QC81A	01-09-15	133623-1	133623		5	<0.4	19	16	21	<0.1	13	33
X1-121 0.2-0.4	01-09-15	S15-Se01597	470781	0.2-0.4	8.7	<0.4	16	15	9.4	<0.1	12	26
X1-122 0.0-0.15	02-09-15	S15-Se03277	470968	0-0.15	5.4	<0.4	18	18	19	<0.1	8.4	20
X1-122 0.15-0.3	02-09-15	S15-Se03278	470968	0.15-0.3	6.6	<0.4	17	21	26	<0.1	11	23
X1-123 0.0-0.1	02-09-15	S15-Se03280	470968	0-0.1	5.5	<0.4	13	18	18	<0.1	11	25
QC89	02-09-15	S15-Se03306	470968	0-0.1	5.3	<0.4	14	20	20	<0.1	13	26
QC89A	02-09-15	133709-1	133709		<4	<0.4	14	13	14	<0.1	11	28
X1-123 0.2-0.4	02-09-15	S15-Se03281	470968	0.2-0.4	3.9	<0.4	14	18	15	<0.1	17	34

Polycyclic Aromatic Hydrocarbons

Field_ID	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50	
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)																				10				
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)																				170				
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil					0.7[#3]																			
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil					0.7[#3]																			
NEPM 2013 Soil HIL A							3[#9]											3[#9]					300[#10]	
Site Specific Criteria							3																	
NEPM 2013 Soil HSL A - Sensitive Setting																				3[#8]				
X1-094 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-094 1.7-1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-095 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-095 1.2-1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-096 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-096 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-097 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-097 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-098 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-098 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-099 0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC90A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-099 0.5-0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-100 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-100 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-101 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-101 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-102 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-102 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-103 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-103 1.1-1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-104 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-104 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	0.5	1.2	-
X1-105 0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-105 0.5-0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-106 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-106 0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-107 0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-107 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC84A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-108 0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-108 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-109 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-109 0.7-0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-110 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-110 0.6-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-111 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-111 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-112 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-112 0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-113 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-113 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QCA72	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1_114 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1_114 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-115 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-115 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-116 0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC83	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC83A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-116 0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-117 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-117 1.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-118 0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-118 1.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-119 0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-119 0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QCA71	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-120 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC82	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC82A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-120 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-121 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC81	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC81A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-121 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-122 0.0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-122 0.15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
X1-123 0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC89A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#9]
X1-123 0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#8]	<0.5	<0.5	<0.5	<0.5	<0.5	-

Polychlorinated Biphenyls

Field_ID	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)										
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)										
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil										
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil										
NEPM 2013 Soil HIL A								1[#11]		
Site Specific Criteria										
NEPM 2013 Soil HSL A - Sensitive Setting										
X1-094 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-094 1.7-1.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-095 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-095 1.2-1.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-096 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-096 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-097 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-097 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-098 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-098 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-099 0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC90	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC90A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-099 0.5-0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-100 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-100 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-101 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-101 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-102 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-102 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-103 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-103 1.1-1.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-104 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-104 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-105 0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-105 0.5-0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-106 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-106 0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-107 0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-107 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC84	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC84A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-108 0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-108 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-109 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-109 0.7-0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-110 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-110 0.6-0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-111 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-111 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-112 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-112 0.8-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-113 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-113 0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC72	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA72	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1_114 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1_114 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-115 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-115 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-116 0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC83	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC83A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-116 0.1-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-117 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-117 1.0-1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-118 0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-118 1.0-1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-119 0.3-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-119 0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC71	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QCA71	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-120 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC82	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC82A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-120 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-121 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC81	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC81A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-121 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-122 0.0-0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-122 0.15-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
X1-123 0.0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC89	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
QC89A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
X1-123 0.2-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05

Table App C
Project Number 54782
Stage 2c Samples within X series

					Organochlorine Pesticides																						TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX						Nitrobenzenes	
Field_ID	Date	SampleCode	Lab Number	Depth	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Lindane	Methoxychlor	Toxaphene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	1,3,5-trinitrobenzene	1,3-dinitrobenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.20	0.10	0.30	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)								3																																						
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)								180																																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																																	25[#1]			25[#1]	125[#2]	125[#1]	10[#3]	1.5[#3]	10[#3]			10[#3]		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																	120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]	50[#3]	70[#3]	85[#3]			105[#3]		
NEPM 2013 Soil HIL A					6					240				50					10			6		10		300	20						280			280	50	50	0.7	NL	480			110		
Site Specific Criteria					6																													4500	6300											
NEPM 2013 Soil HSL A - Sensitive Setting																																				110[#12]		45[#13]	0.5[#8]	55[#8]				40[#8]		
										X0 Samples																																				
X0-001_0-0.2	30-06-15	S15-JI00331	463565	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-002 0.0-0.1	03-09-15	S15-Se05371	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-002 0.2-0.4	03-09-15	S15-Se05372	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-003_0-0.1	30-06-15	S15-JI00334	463565	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-004 0.0-0.2	03-09-15	S15-Se05373	471226	0-0.2	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-004 0.3-0.5	03-09-15	S15-Se05374	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-005_0.1-0.3	30-06-15	S15-JI00337	463565	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
~~X0-005_0.7-0.8~~	~~30-06-15~~	~~S15-JI00339~~	~~463565~~	~~0.7-0.8~~	~~<0.1[#8]~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.15[#2]~~	~~<0.05~~	~~<0.05~~	~~-~~	~~<0.1~~	~~<0.05~~	~~-~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<1~~	~~<20~~	~~<20~~	~~<50~~	~~<50~~	~~<50~~	~~<50~~	~~<100~~	~~<100~~	~~<50~~	~~<20~~	~~<20~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.2~~	~~<0.1~~	~~<0.3~~	~~<1~~	~~<0.5~~
X0-006_0.3-0.5	30-06-15	S15-JI00342	463565	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-006_0-0.2	30-06-15	S15-JI00341	463565	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-007 0.0-0.1	01-09-15	S15-Se01484	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-007 0.1-0.3	01-09-15	S15-Se01485	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-008 0.0-0.15	01-09-15	S15-Se01486	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-008 0.4-0.6	01-09-15	S15-Se01488	470781	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-009 0.15-0.3	01-09-15	S15-Se01491	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-009 0.4-0.6	01-09-15	S15-Se01492	470781	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-010 0.0-0.1	01-09-15	S15-Se01494	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	0.1	1.8	0.2	2	<1	<0.5
X0-010 0.3-0.5	01-09-15	S15-Se01495	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-011 0.0-0.1	01-09-15	S15-Se01496	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	76	61	140	<50	110	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.5	<0.1	0.6	<1	<0.5
X0-011 0.3-0.5	01-09-15	S15-Se01497	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-012 0.0-0.1	01-09-15	S15-Se01498	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-012 0.2-0.4	01-09-15	S15-Se01499	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-013 0.15-0.3	03-09-15	S15-Se05376	471226	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC97	03-09-15	S15-Se05445	471226	0.15-0.3	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC97A	03-09-15	133730-4	133730		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-013 0.3-0.5	03-09-15	S15-Se05377	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-014 0.0-0.2	03-09-15	S15-Se05379	471226	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-014 0.3-0.5	03-09-15	S15-Se05380	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-015 0.0-0.1	01-09-15	S15-Se01502	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-015 0.7-0.9	01-09-15	S15-Se01503	470781	0.7-0.9	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-016 0.0-0.1	01-09-15	S15-Se01500	470781	0-0.1	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-016 0.5-0.7	01-09-15	S15-Se01501	470781	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-018 0.0-0.1	03-09-15	S15-Se05381	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-018 0.2-0.4	03-09-15	S15-Se05382	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-019 0.0-0.1	03-09-15	S15-Se05383	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-019 0.1-0.3	03-09-15	S15-Se05384	471226	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
~~X0-020 0.0-0.1~~	~~01-09-15~~	~~S15-Se01504~~	~~470781~~	~~0-0.1~~	~~<0.1[#8]~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.15[#2]~~	~~<0.05~~	~~<0.05~~	~~-~~	~~<0.1~~	~~<0.05~~	~~-~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<1~~	~~<20~~	~~<20~~	~~<50~~	~~<50~~	~~<50~~	~~<50~~	~~<100~~	~~<100~~	~~<50~~	~~<20~~	~~<20~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.2~~	~~<0.1~~	~~<0.3~~	~~<1~~	~~<0.5~~
X0-020 0.2-0.4	01-09-15	S15-Se01505	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-021 0-0.15	15-10-15	S15-Oc11255	476042	0-0.15	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-021 0.15-0.35	15-10-15	S15-Oc11256	476042	0.15-0.35	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-022 0.0-0.1	03-09-15	S15-Se05385	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-022 0.1-0.3	03-09-15	S15-Se05386	471226	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-023 0.0-0.15	03-09-15	S15-Se05387	471226	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-023 0.15-0.3	03-09-15	S15-Se05388	471226	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-024 0.0-0.2	03-09-15	S15-Se05390	471226	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-024 0.2-0.4	03-09-15	S15-Se05391	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-025 0.0-0.2	01-09-15	S15-Se01506	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-025 0.3-0.5	01-09-15	S15-Se01507	470781	0.3-0.5	0.495[#5]	0.47	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-026 0.0-0.2	01-09-15	S15-Se01508	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-026 0.3-0.5	01-09-15	S15-Se01509	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-027 0.0-0.15	02-09-15	S15-Se03229	470968	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC92	02-09-15	S15-Se03309	470968	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC92A	02-09-15	133709-4	133709		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-027 0.5-0.7	02-09-15	S15-Se03230	470968	0.1-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-028 0.0-0.1	02-09-15	S15-Se03231	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-028 0.2-0.4	02-09-15	S15-Se03232	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-029 0.0-0.15	01-09-15	S15-Se01510	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-029 0.15-0.3	01-09-15	S15-Se01511	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-030 0.0-0.15	01-09-15	S15-Se01513	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC88	01-09-15	S15-Se01658	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC88A	01-09-15	133623-8	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-030 0.2-0.4	01-09-15	S15-Se01514	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-031 0.0-0.1	02-09-15	S15-Se03233	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-031 0.2-0.4	02-09-15	S15-Se03234	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-032 0.0-0.2	02-09-15	S15-Se03235	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	<0.3	<1	<0.5
X0-032 0.2-0.4	02-09-15	S15-Se03236	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	0.3	<1	<0.5
X0-033 0.0-0.2	01-09-15	S15-Se01515	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-033 0.2-0.4	01-09-15	S15-Se01516	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-034 0.15-0.3	01-09-15	S15-Se01518	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-034 0.3-0.5	01-09-15	S15-Se01519	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-035 0.0-0.1	02-09-15	S15-Se03238	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-035 0.3-0.5	02-09-15	S15-Se03239	470968	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-036 0.0-0.15	02-09-15	S15-Se03240	470968	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-036 0.15-0.3	02-09-15	S15-Se03241	470968	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-037 0.0-0.1	02-09-15	S15-Se03243	470968	0-0.1	0.255[#5]	0.23	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.3	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-037 0.2-0.4	02-09-15	S15-Se03244	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-038 0.0-0.15	01-09-15	S15-Se01521	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-038 0.15-0.3	01-09-15	S15-Se01522	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-039 0.0-0.15	01-09-15	S15-Se01524	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-039 0.2-0.4	01-09-15	S15-Se01525	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-040 0.3-0.5	31-08-15	S15-Au26660	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-040 0-0.2	31-08-15	S15-Au26659	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-041 0.15-0.3	31-08-15	S15-Au26656	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-041 0-0.15	31-08-15	S15-Au26655	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.2	<0.1	<0.3	<1	<0.5
X0-042 0.0-0.1	01-09-15	S15-Se01526	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-042 0.1-0.3	01-09-15	S15-Se01527	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-043 0.0-0.2	01-09-15	S15-Se01528	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-043 0.2-0.4	01-09-15	S15-Se01529	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-044 0.4-0.6	31-08-15	S15-Au26654	470534	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-044 0-0.2	31-08-15	S15-Au26653	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-045 0.0-0.2	02-09-15	S15-Se03245	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-045 0.3-0.5	02-09-15	S15-Se03246	470968	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-046 0.0-0.15	01-09-15	S15-Se01530	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-046 0.15-0.3	01-09-15	S15-Se01531	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-047 0.0-0.1	01-09-15	S15-Se01533	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-047 0.1-0.3	01-09-15	S15-Se01534	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-048 0.15-0.3	31-08-15	S15-Au26627	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-048 0-0.15	31-08-15	S15-Au26626	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC78	31-08-15	S15-Au26712	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA78	31-08-15	133542-9	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-049 0.3-0.5	31-08-15	S15-Au26619	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-049 0-0.2	31-08-15	S15-Au26618	470534	0-0.2	<0.25[#8]	<0.2	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-050 0.0-0.15	20-08-15	S15-Au17030	469476	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-050 0.3-0.5	20-08-15	S15-Au17032	469476	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-051 0.0-0.2	20-08-15	S15-Au17035	469476	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

Organochlorine Pesticides

Field_ID	Date	SampleCode	Lab Number	Depth	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Lindane	Methoxychlor	Toxaphene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)								3																			
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)								180																			
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																											
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																											
NEPM 2013 Soil HIL A					6					240				50					10			6		10		300	20
Site Specific Criteria					6																						
NEPM 2013 Soil HSL A - Sensitive Setting																											
X0-051 0.2-0.4	20-08-15	S15-Au17036	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-052 0-0.15	31-08-15	S15-Au26615	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-052 015-0.3	31-08-15	S15-Au26616	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-053 0.3-0.5	31-08-15	S15-Au26625	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-053 0-0.2	31-08-15	S15-Au26624	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-054 0.0-0.2	20-08-15	S15-Au17038	469476	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-054 0.2-0.4	20-08-15	S15-Au17039	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_055 0.0-0.15	06-08-15	S15-Au05851	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_055 0.2-0.4	06-08-15	S15-Au05852	468034	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_056 0.2-0.4	06-08-15	S15-Au05854	468034	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_056 0.5-0.7	06-08-15	S15-Au05855	468034	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-057 0.2-0.4	31-08-15	S15-Au26629	470534	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-057 0-0.2	31-08-15	S15-Au26628	470534	0-0.2	0.165[#5]	0.14	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC77	31-08-15	S15-Au26711	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QCA77	31-08-15	133542-8	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-058 0.3-0.5	31-08-15	S15-Au26606	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-058 0-0.2	31-08-15	S15-Au26605	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-059 0.0-0.15	20-08-15	S15-Au17040	469476	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-059 0.15-0.3	20-08-15	S15-Au17041	469476	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-060 0.0-0.15	20-08-15	S15-Au17043	469476	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-060 0.2-0.4	20-08-15	S15-Au17044	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-061 0.0-0.1	20-08-15	S15-Au17045	469476	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-061 0.2-0.4	20-08-15	S15-Au17046	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_062 0.15-0.35	06-08-15	S15-Au05857	468034	0.15-0.35	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_062 0.5-0.7	06-08-15	S15-Au05858	468034	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_063 0.0-0.15	06-08-15	S15-Au05859	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_063 0.3-0.5	06-08-15	S15-Au05861	468034	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_063 1.0-1.2	06-08-15	S15-Au05863	468034	1-1.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-064 0.2-0.4	31-08-15	S15-Au26631	470534	0.2-0.4	0.095[#5]	0.07	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-064 0-0.2	31-08-15	S15-Au26630	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-065 0.2-0.4	31-08-15	S15-Au26613	470534	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-065 0-0.2	31-08-15	S15-Au26612	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-066 0.0-0.2	20-08-15	S15-Au17047	469476	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-066 0.2-0.4	20-08-15	S15-Au17048	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-067 0.15-0.3	20-08-15	S15-Au17051	469476	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-067 0.3-0.5	20-08-15	S15-Au17052	469476	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-068 0.0-0.2	20-08-15	S15-Au17054	469476	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-068 0.2-0.4	20-08-15	S15-Au17055	469476	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-069 0.0-0.15	20-08-15	S15-Au17056	469476	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-069 0.3-0.5	20-08-15	S15-Au17058	469476	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-070 0.2-0.4	04-08-15	S15-Au02468	467573	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-070 0-015	04-08-15	S15-Au02467	467573	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_071 0.0-0.15	06-08-15	S15-Au05864	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_071 0.2-0.4	06-08-15	S15-Au05865	468034	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_072 0.0-0.2	06-08-15	S15-Au05866	468034	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_072 0.5-0.7	06-08-15	S15-Au05867	468034	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-073 0.15-0.3	31-08-15	S15-Au26602	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC75	31-08-15	S15-Au26709	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QCA75	31-08-15	133542-6	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-073 0-0.15	31-08-15	S15-Au26601	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-074 0.3-0.5	31-08-15	S15-Au26608	470534	0.3-0.5	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-074 0-0.2	31-08-15	S15-Au26607	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-075 0.15-0.3	20-08-15	S15-Au17062	469476	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-075 0.5-0.7	20-08-15	S15-Au17064	469476	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-076 0.0-0.15	20-08-15	S15-Au17065	469476	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-076 0.15-0.3	20-08-15	S15-Au17066	469476	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-077_0.0-0.2	18-08-15	M15-Au14221	469118	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-077_0.2-0.4	18-08-15	M15-Au14222	469118	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC26	18-08-15	M15-Au14307	469118	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC26A	18-08-15	132954-4	132954		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-078_0.0-0.15	18-08-15	M15-Au14223	469118	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-078_0.15-0.3	18-08-15	M15-Au14224	469118	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_79 0.4-0.6	31-07-15	S15-Au01700	467448	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_79 0-0.15	31-07-15	S15-Au01698	467448	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-080 0.2-0.35	04-08-15	S15-Au02470	467573	0.2-0.35	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-080 0.4-0.6	04-08-15	S15-Au02471	467573	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-081 0.3-0.5	04-08-15	S15-Au02473	467573	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-081 0-0.2	04-08-15	S15-Au02472	467573	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_082 0.0-0.15	06-08-15	S15-Au05868	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_082 0.7-0.9	06-08-15	S15-Au05871	468034	0.7-0.9	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_083 0.0-0.2	06-08-15	S15-Au05872	468034	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_083 0.5-0.7	06-08-15	S15-Au05874	468034	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_084 0.0-0.15	06-08-15	S15-Au05875	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_084 0.4-0.6	06-08-15	S15-Au05877	468034	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-085 0.3-0.5	31-08-15	S15-Au26593	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-085 0-0.2	31-08-15	S15-Au26592	470534	0-0.25	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-086 0.2-0.4	31-08-15	S15-Au26595	470534	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-086 0-0.2	31-08-15	S15-Au26594	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-087 0.3-0.5	31-08-15	S15-Au26599	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-087 0-0.15	31-08-15	S15-Au26597	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC74	31-08-15	S15-Au26708	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QCA74	31-08-15	133542-5	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-088_0.0-0.1	18-08-15	M15-Au14225	469118	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-088_0.1-0.3	18-08-15	M15-Au14226	469118	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC25	18-08-15	M15-Au14306	469118	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC25A	18-08-15	132954-3	132954		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-089_0.0-0.2	19-08-15	S15-Au15547	469287	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
X0-090_0.0-0.15	19-08-15	S15-Au15549	469287	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
~~QC30~~	~~19-08-15~~	~~S15-Au15674~~	~~469287~~	~~0-0.15~~	~~<0.1[#8]~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.15[#2]~~	~~<0.05~~	~~<0.05~~	~~-~~	~~<0.1~~	~~<0.05~~	~~-~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.05~~	~~<0.2~~	~~<1~~
QC30A	19-08-15	133148-3	133148		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0-090_0.3-0.5	19-08-15	S15-Au15551	469287	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
X0-091_0.0-0.2	18-08-15	M15-Au14227	469118	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-091_0.3-0.5	18-08-15	M15-Au14228	469118	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_092 0.15-0.3	31-07-15	S15-Au01702	467448	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_092 0.6-0.8	31-07-15	S15-Au01704	467448	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_092 0-0.15	31-07-15	S15-Au01701	467448	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC02	31-07-15	S15-Au01714	467448	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC02A	31-07-15	132200-1	132200		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X0_093 0.15-0.3	31-07-15	S15-Au01706	467448	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_093 0-0.15	31-07-15	S15-Au01705	467448	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-094 0.2-0.3	04-08-15	S15-Au02475	467573	0.2-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-094 0.3-0.5	04-08-15	S15-Au02476	467573	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-095 0.15-0.25	04-08-15	S15-Au02478	467573	0.15-0.25	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-095 0-0.15	04-08-15	S15-Au02477	467573	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-096 0.3-0.5	04-08-15	S15-Au02482	467573	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0-096 0-0.15	04-08-15	S15-Au02480	467573	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_097 0.0-0.15	06-08-15	S15-Au05878	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X0_097 0.2-0.4	06-08-15	S15-Au05879	468034	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1

TPHs (NEPC 1999), TRHs (NEPC 2013), BTEX, Nitrobenzenes

Field_ID	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	1,3,5-trinitrobenzene	1,3-dinitrobenzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.20	0.10	0.30	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)																			
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)																			
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil						25[#1]			25[#1]	125[#2]	125[#1]	10[#3]	1.5[#3]	10[#3]			10[#3]		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil						120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]	50[#3]	70[#3]	85[#3]			105[#3]		
NEPM 2013 Soil HIL A						280			280	50	50	0.7	NL	480			110		
Site Specific Criteria							4500	6300											
NEPM 2013 Soil HSL A - Sensitive Setting									110[#12]		45[#13]	0.5[#8]	55[#8]				40[#8]		
X0-051 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-052 0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.5	<0.1	0.6	<1	<0.5
X0-052 015-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-053 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-053 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-054 0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-054 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_055 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_055 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_056 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_056 0.5-0.7	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-057 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-057 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC77	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA77	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-058 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-058 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	0.1	0.8	<0.1	0.9	<1	<0.5
X0-059 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	<0.3	<1	<0.5
X0-059 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-060 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-060 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-061 0.0-0.1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-061 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_062 0.15-0.35	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_062 0.5-0.7	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_063 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_063 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_063 1.0-1.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-064 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-064 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-065 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-065 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-066 0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-066 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-067 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.2	<0.1	<0.3	<1	<0.5
X0-067 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-068 0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-068 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-069 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-069 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-070 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-070 0-015	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_071 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_071 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_072 0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_072 0.5-0.7	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-073 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC75	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA75	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-073 0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-074 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.7	<0.1	0.8	<1	<0.5
X0-074 0-0.2	<20	<20	58	75	130	<50	100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	<0.3	<1	<0.5
X0-075 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-075 0.5-0.7	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-076 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	<0.3	<1	<0.5
X0-076 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-077_0.0-0.2	<20	<20	74	63	140	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-077_0.2-0.4	<20	21	700	640	1400	<50	1200	150	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC26	<20	<20	160	100	260	<50	250	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC26A	<25	<50	200	230	-	<50	390	110	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-078_0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-078_0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_79 0.4-0.6	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_79 0-0.15	<20	<20	<50	83	83	<50	100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-080 0.2-0.35	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-080 0.4-0.6	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-081 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-081 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_082 0.0-0.15	<20	23	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_082 0.7-0.9	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_083 0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_083 0.5-0.7	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_084 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_084 0.4-0.6	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-085 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-085 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-086 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-086 0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-087 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-087 0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.7	<0.1	0.8	<1	<0.5
QC74	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	0.4	<1	<0.5
QCA74	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-088_0.0-0.1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-088_0.1-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC25	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC25A	<25	<50	<100	<100	-	<50	<100	100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-089_0.0-0.2	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-090_0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
~~QC30~~	~~<20~~	~~<20~~	~~<50~~	~~<50~~	~~<50~~	~~<50~~	~~<100~~	~~<100~~	~~<50~~	~~<20~~	~~<20~~	~~<0.1~~	~~<0.1~~	~~<0.1~~	~~<0.2~~	~~<0.1~~	~~<0.3~~	~~<1~~	~~<0.5~~
QC30A	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	-	-
X0-090_0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-091_0.0-0.2	<20	<20	58	<50	58	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-091_0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_092 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_092 0.6-0.8	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_092 0-0.15	<20	<20	<50	68	68	<50	100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC02	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC02A	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0_093 0.15-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_093 0-0.15	<20	<20	<50	56	56	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-094 0.2-0.3	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-094 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-095 0.15-0.25	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	1.2	<0.1	1.3	<1	<0.5
X0-095 0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	0.4	<1	<0.5
X0-096 0.3-0.5	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-096 0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_097 0.0-0.15	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_097 0.2-0.4	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

					Organochlorine Pesticides																						TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX						Nitrobenzenes	
					Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Lindane	Methoxychlor	Toxaphene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	1,3,5-trinitrobenzene	1,3-dinitrobenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.20	0.10	0.30	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)								3																																						
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)								180																																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																																	25[#1]			25[#1]	125[#2]	125[#1]	10[#3]	1.5[#3]	10[#3]			10[#3]		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																	120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]	50[#3]	70[#3]	85[#3]			105[#3]		
NEPM 2013 Soil HIL A					6					240				50					10			6		10		300	20						280			280	50	50	0.7	NL	480			110		
Site Specific Criteria					6																													4500	6300											
NEPM 2013 Soil HSL A - Sensitive Setting																																				110[#12]		45[#13]	0.5[#8]	55[#8]				40[#8]		
Field_ID	**Date**	**SampleCode**	**Lab Number**	**Depth**																																										
X0_098 0.0-0.15	06-08-15	S15-Au05881	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0_098 0.15-0.35	06-08-15	S15-Au05882	468034	0.15-0.35	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-099 0.15-0.3	31-08-15	S15-Au26584	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-099 0-0.15	31-08-15	S15-Au26583	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC70	31-08-15	S15-Au26704	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA70	31-08-15	133542-1	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X0-100 0.15-0.3	31-08-15	S15-Au26590	470534	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-100 0-0.15	31-08-15	S15-Au26589	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	<0.3	<1	<0.5
X0-101 0.4-0.6	31-08-15	S15-Au26588	470534	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X0-101 0-0.15	31-08-15	S15-Au26586	470534	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1 samples																																														
X1-01 0-0.1	12-02-15	S15-Fe09298	447301	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
X1-02 0-0.1	12-02-15	S15-Fe09300	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-03 0-0.1	12-02-15	S15-Fe09302	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-04 0-0.1	12-02-15	S15-Fe09304	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
X1-05 0-0.2	12-02-15	S15-Fe09306	447301	0-0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-06 0-0.1	12-02-15	S15-Fe09308	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-07 0-0.1	12-02-15	S15-Fe09310	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
X1-08 0.2-0.4	12-02-15	S15-Fe09313	447301	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-09 0-0.1	12-02-15	S15-Fe09315	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-10 0-0.1	12-02-15	S15-Fe09317	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
X1-11 0-0.1	12-02-15	S15-Fe09319	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-12 0-0.1	12-02-15	S15-Fe09321	447301	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
QC01	12-02-15	S15-Fe09330	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
QC01A	12-02-15	123610-1	123610		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	-	<25	<25	<0.2	<1	<0.5	<2	<1	-	-	-
X1-13 0-0.1	12-02-15	S15-Fe09323	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-14 0-0.1	12-02-15	S15-Fe09325	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-15 0-0.3	12-02-15	S15-Fe09328	447301	0-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-
X1-016_0-0.2	30-06-15	S15-JI00345	463565	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-017 0.0-0.1	03-09-15	S15-Se05392	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-017 0.3-0.5	03-09-15	S15-Se05393	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-019 0.0-0.1	03-09-15	S15-Se05394	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-019 0.2-0.4	03-09-15	S15-Se05395	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-020 0.0-0.1	03-09-15	S15-Se05396	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-020 0.2-0.4	03-09-15	S15-Se05397	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-021 0.0-0.1	03-09-15	S15-Se05398	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-021 0.2-0.4	03-09-15	S15-Se05399	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC96	03-09-15	S15-Se05444	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC96A	03-09-15	133730-3	133730		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-022 0.0-0.1	03-09-15	S15-Se05400	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-022 0.2-0.4	03-09-15	S15-Se05401	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-023 0.1-0.3	15-10-15	S15-Oc11259	476042	0.1-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-023 0-0.1	15-10-15	S15-Oc11258	476042	0-0.1	0.325[#2]	0.3	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-024 0.15-0.3	03-09-15	S15-Se05403	471226	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-024 0.3-0.5	03-09-15	S15-Se05404	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-025 0.0-0.1	03-09-15	S15-Se05406	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC95	03-09-15	S15-Se05443	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC95A	03-09-15	133730-2	133730		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-025 0.2-0.4	03-09-15	S15-Se05407	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-026 0.0-0.15	03-09-15	S15-Se05408	471226	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-026 0.2-0.4	03-09-15	S15-Se05409	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-027 0.0-0.1	03-09-15	S15-Se05410	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-027 0.3-0.5	03-09-15	S15-Se05411	471226	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-028 0.0-0.2	01-09-15	S15-Se01553	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-028 0.3-0.5	01-09-15	S15-Se01554	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-029 0.2-0.4	15-10-15	S15-Oc11261	476042	0.2-0.4	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-029 0-0.2	15-10-15	S15-Oc11260	476042	0-0.2	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-030 0.5-0.7	15-10-15	S15-Oc11263	476042	0.5-0.7	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-030 0-0.1	15-10-15	S15-Oc11262	476042	0-0.1	0.26[#2]	0.21	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-031 0.3-0.5	15-10-15	S15-Oc11266	476042	0.3-0.5	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-031 0-0.15	15-10-15	S15-Oc11264	476042	0-0.15	0.19[#2]	0.1	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-032 0.1-0.3	15-10-15	S15-Oc11268	476042	0.3-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-032 0-0.1	15-10-15	S15-Oc11267	476042	0-0.1	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-033 0.0-0.2	03-09-15	S15-Se05412	471226	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-033 0.2-0.4	03-09-15	S15-Se05413	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-034 0.0-0.1	03-09-15	S15-Se05414	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-034 0.2-0.4	03-09-15	S15-Se05415	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-035 0.0-0.1	03-09-15	S15-Se05416	471226	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-035 0.2-0.4	03-09-15	S15-Se05417	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-036 0.0-0.15	03-09-15	S15-Se05418	471226	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC94	03-09-15	S15-Se05442	471226	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC94A	03-09-15	133730-1	133730		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-036 0.2-0.4	03-09-15	S15-Se05419	471226	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-038 0.1-0.3	15-10-15	S15-Oc11270	476042	0.1-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-038 0-0.1	15-10-15	S15-Oc11269	476042	0-0.1	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-039 0.0-0.1	02-09-15	S15-Se03257	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-039 0.6-0.8	02-09-15	S15-Se03258	470968	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-040 0.0-0.1	02-09-15	S15-Se03259	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-040 0.5-0.7	02-09-15	S15-Se03260	470968	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-041 0.0-0.1	02-09-15	S15-Se03261	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-041 0.6-0.8	02-09-15	S15-Se03262	470968	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-042 0.0-0.1	02-09-15	S15-Se03263	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-042 0.2-0.4	02-09-15	S15-Se03264	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-043 0.0-0.2	01-09-15	S15-Se01555	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC87	01-09-15	S15-Se01657	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC87A	01-09-15	133623-7	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-043 0.2-0.4	01-09-15	S15-Se01556	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-044 0.0-0.1	01-09-15	S15-Se01557	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-044 0.3-0.5	01-09-15	S15-Se01558	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-045 0.1-0.3	15-10-15	S15-Oc11272	476042	0.1-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-045 0-0.1	15-10-15	S15-Oc11271	476042	0-0.1	0.125[#2]	0.1	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-046 0.2-0.4	15-10-15	S15-Oc11274	476042	0.2-0.4	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-046 0-0.1	15-10-15	S15-Oc11273	476042	0-0.1	0.33[#2]	0.14	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-047 0.1-0.3	15-10-15	S15-Oc11276	476042	0.1-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-047 0-0.1	15-10-15	S15-Oc11275	476042	0-0.1	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-048 0.0-0.1	02-09-15	S15-Se03265	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-048 0.2-0.4	02-09-15	S15-Se03266	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-049 0.0-0.2	02-09-15	S15-Se03267	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.4	<0.1	0.4	<1	<0.5
X1-049 0.3-0.5	02-09-15	S15-Se03268	470968	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-050 0.0-0.1	02-09-15	S15-Se03269	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-050 0.1-0.3	02-09-15	S15-Se03270	470968	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-051 0.0-0.1	02-09-15	S15-Se03271	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-051 0.1-0.3	02-09-15	S15-Se03272	470968	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-052 0.0-0.1	01-09-15	S15-Se01559	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	1.3	0.1	1.4	<1	<0.5
X1-052 0.2-0.4	01-09-15	S15-Se01560	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-053 0.1-0.3	15-10-15	S15-Oc11278	476042	0.3-0.3	<0.1[#5]	<0.05	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-053 0-0.1	15-10-15	S15-Oc11277	476042	0-0.1	2.66[#2]	0.76	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC01-15/10	15-10-15	S15-Oc11279	476042	0-0.1	0.82[#2]	0.26	<0.05	<0.05	<0.05	<0.15[#1]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	69	69	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

JBS&G

					Organochlorine Pesticides																							TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX						Nitrobenzenes	
					Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Lindane	Methoxychlor	Toxaphene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	1,3,5-trinitrobenzene	1,3-dinitrobenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.20	0.10	0.30	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)								3																																						
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)								180																																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																																	25[#1]			25[#1]	125[#2]	125[#1]	10[#3]	1.5[#3]	10[#3]			10[#3]		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																	120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]	50[#3]	70[#3]	85[#3]			105[#3]		
NEPM 2013 Soil HIL A					6					240				50					10			6		10		300	20						280			280	50	50	0.7	NL	480			110		
Site Specific Criteria					6																													4500	6300											
NEPM 2013 Soil HSL A - Sensitive Setting																																				110[#12]		45[#13]	0.5[#8]	55[#8]				40[#8]		
Field_ID	Date	SampleCode	Lab Number	Depth																																										
QC01A-15/10	15-10-15	135939-1	135939		1.3[#2]	0.4	<0.1	<0.1	<0.1	<0.3[#1]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-054 0.4-0.6	31-08-15	S15-Au26644	470534	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-054 0-0.1	31-08-15	S15-Au26643	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-055 0.3-0.5	31-08-15	S15-Au26648	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-055 0-0.1	31-08-15	S15-Au26647	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	66	66	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-056 0.3-0.5	31-08-15	S15-Au26652	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-056 0-0.2	31-08-15	S15-Au26651	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-057 0.9-1.1	31-08-15	S15-Au26650	470534	0.9-1.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-057 0-0.1	31-08-15	S15-Au26649	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC79	31-08-15	S15-Au26713	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA79	31-08-15	133542-10	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-058 0.0-0.1	01-09-15	S15-Se01561	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-058 0.1-0.3	01-09-15	S15-Se01562	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-059 0.3-0.5	31-08-15	S15-Au26640	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-059 0-0.1	31-08-15	S15-Au26639	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-060 0.1-0.3	31-08-15	S15-Au26634	470534	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-060 0-0.1	31-08-15	S15-Au26633	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-061 0.1-0.3	31-08-15	S15-Au26636	470534	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-061 0-0.1	31-08-15	S15-Au26635	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-062 0.4-0.6	31-08-15	S15-Au26638	470534	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-062 0-0.1	31-08-15	S15-Au26637	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-063 0.5-0.7	31-08-15	S15-Au26642	470534	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-063 0-0.1	31-08-15	S15-Au26641	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-064 0.4-0.6	31-08-15	S15-Au26646	470534	0.4-0.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-064 0-0.2	31-08-15	S15-Au26645	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-065 0.0-0.15	27-08-15	M15-Au24475	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	260	<50	260	<50	230	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC58	27-08-15	M15-Au24523	470301	0-0.15	0.125[#5]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC58A	27-08-15	133384-4	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-065 0.3-0.5	27-08-15	M15-Au24476	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	430	<50	430	<50	390	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-066 0.2-0.8	31-08-15	S15-Au26623	470534	0.2-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-066 0-0.2	31-08-15	S15-Au26622	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-067 0.0-0.15	01-09-15	S15-Se01563	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC86	01-09-15	S15-Se01656	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC86A	01-09-15	133623-6	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-067 0.2-0.4	01-09-15	S15-Se01564	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-068 0.0-0.1	01-09-15	S15-Se01565	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-068 0.1-0.3	01-09-15	S15-Se01566	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-069 0.0-0.2	01-09-15	S15-Se01567	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC85	01-09-15	S15-Se01655	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.2	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC85A	01-09-15	133623-5	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-069 0.2-0.4	01-09-15	S15-Se01568	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-070 0.15-0.3	27-08-15	M15-Au24473	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	22	160	<50	180	<50	140	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-070 0.6-0.8	27-08-15	M15-Au24474	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	36	78	<50	110	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-071 0.2-0.4	27-08-15	M15-Au24471	470301	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	22	310	<50	330	<50	270	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC59	27-08-15	M15-Au24524	470301	0.2-0.4	0.155[#5]	0.13	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	130	<50	130	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC59A	27-08-15	133384-5	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	180	<100	-	<50	180	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-071 1.4-1.6	27-08-15	M15-Au24472	470301	1.4-1.6	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-072 0.0-0.15	27-08-15	M15-Au24469	470301	0-0.15	0.075[#5]	0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	600	<50	600	<50	540	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC64	27-08-15	M15-Au24529	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC64A	27-08-15	133384-10	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-072 0.8-1.0	27-08-15	M15-Au24470	470301	0.8-1	0.075[#5]	0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-073 0.0-0.15	01-09-15	S15-Se01570	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-073 0.2-0.4	01-09-15	S15-Se01571	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-074 0.0-0.2	01-09-15	S15-Se01572	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-074 0.2-0.4	01-09-15	S15-Se01573	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-075 0.15-0.3	01-09-15	S15-Se01575	470781	0.15-0.3	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-075 0.3-0.5	01-09-15	S15-Se01576	470781	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-076 0.3-0.5	27-08-15	M15-Au24467	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	120	<50	120	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC55	27-08-15	M15-Au24520	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC55A	27-08-15	133384-1	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
QC55A - TRIPLICATE	27-08-15	133384-16	133384		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X1-076 1.0-1.2	27-08-15	M15-Au24468	470301	1-1.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	65	<50	65	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-077 0.15-0.3	27-08-15	M15-Au24465	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-077 0.7-0.9	27-08-15	M15-Au24466	470301	0.7-0.9	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	140	<50	140	<50	130	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-078 0.0-0.15	27-08-15	M15-Au24463	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	250	<50	250	<50	190	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC60	27-08-15	M15-Au24525	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	55	<50	55	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC60A	27-08-15	133384-6	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	300	<100	-	<50	290	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-078 1.2-1.4	27-08-15	M15-Au24464	470301	1.2-1.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	100	<50	100	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-079 0.15-0.3	27-08-15	M15-Au24461	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	130	<50	130	<50	140	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC63	27-08-15	M15-Au24528	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC63A	27-08-15	133384-9	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-079 0.6-0.8	27-08-15	M15-Au24462	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	420	<50	420	<50	310	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-080 0.0-0.15	27-08-15	M15-Au24459	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	1600	56	1700	86	1100	<100	86	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-080 0.6-0.8	27-08-15	M15-Au24460	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC65	27-08-15	M15-Au24530	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC65A	27-08-15	133384-11	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-081 0.15-0.3	27-08-15	M15-Au24457	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	360	<50	360	<50	280	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-081 1.1-1.3	27-08-15	M15-Au24458	470301	1.1-1.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-082 0.0-0.2	02-09-15	S15-Se03273	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.6	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.7	<0.1	0.7	<1	<0.5
X1-082 0.2-0.4	02-09-15	S15-Se03274	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-083 0.15-0.3	27-08-15	M15-Au24455	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	130	<50	130	<50	100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-083 0.6-0.8	27-08-15	M15-Au24456	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-084 0.0-0.15	27-08-15	M15-Au24453	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC62	27-08-15	M15-Au24527	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC62A	27-08-15	133384-8	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-084 0.8-1.0	27-08-15	M15-Au24454	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	1400	<50	1400	86	1000	<100	86	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-085 0.0-0.15	27-08-15	M15-Au24451	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	1100	1900	3000	<50	2400	2000	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-085 1.0-1.2	27-08-15	M15-Au24452	470301	1-1.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-086 0.0-0.15	27-08-15	M15-Au24449	470301	0-0.15	0.105[#5]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-086 0.8-1.0	27-08-15	M15-Au24450	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	540	<50	540	<50	400	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC67	27-08-15	M15-Au24532	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC67A	27-08-15	133384-13	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-087 0.0-0.15	27-08-15	M15-Au24447	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-087 0.3-0.5	27-08-15	M15-Au24448	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	80	<50	80	<50	<100	<100	<50	<20	<20	<0.1	<0.1	0.5	1.2	0.1	1.3	<1	<0.5
QC69	27-08-15	M15-Au24534	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC69A	27-08-15	133384-15	133384		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-088 0.2-0.4	31-08-15	S15-Au26621	470534	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-088 0-0.2	31-08-15	S15-Au26620	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1_089 0.0-0.2	06-08-15	S15-Au05913	468034	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1_089 0.2-0.4	06-08-15	S15-Au05914	468034	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-090 0.0-0.2	01-09-15	S15-Se01578	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-090 0.2-0.4	01-09-15	S15-Se01579	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.2	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-091 0.0-0.15	27-08-15	M15-Au24445	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-091 0.8-1.0	27-08-15	M15-Au24446	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-092 0.0-0.15	27-08-15	M15-Au24443	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	56	<50	56	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-092 0.6-0.8	27-08-15	M15-Au24444	470301	0.6-0.8	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	110	<50	110	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-093 0.15-0.3	27-08-15	M15-Au24441	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	61	<50	61	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-093 0.8-1.0	27-08-15	M15-Au24442	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

					Organochlorine Pesticides																						TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX						Nitrobenzenes	
Field_ID	Date	SampleCode	Lab Number	Depth	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Lindane	Methoxychlor	Toxaphene	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	1,3,5-trinitrobenzene	1,3-dinitrobenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00	0.10	0.10	0.10	0.20	0.10	0.30	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)								3																																						
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)								180																																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																																	25[#1]			25[#1]	125[#2]	125[#1]	10[#3]	1.5[#3]	10[#3]			10[#3]		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																	120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]	50[#3]	70[#3]	85[#3]			105[#3]		
NEPM 2013 Soil HIL A					6					240				50					10			6		10		300	20						280			280	50	50	0.7	NL	480			110		
Site Specific Criteria					6																													4500	6300											
NEPM 2013 Soil HSL A - Sensitive Setting																																				110[#12]		45[#13]	0.5[#8]	55[#8]				40[#8]		
X1-094 0.3-0.5	27-08-15	M15-Au24439	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	160	<50	160	<50	160	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-094 1.7-1.9	27-08-15	M15-Au24440	470301	1.7-1.9	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-095 0.15-0.3	27-08-15	M15-Au24437	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-095 1.2-1.4	27-08-15	M15-Au24438	470301	1.2-1.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-096 0.0-0.15	27-08-15	M15-Au24435	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-096 0.8-1.0	27-08-15	M15-Au24436	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	160	<50	160	<50	170	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-097 0.15-0.3	27-08-15	M15-Au24433	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-097 0.8-1.0	27-08-15	M15-Au24434	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-098 0.0-0.15	01-09-15	S15-Se01580	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-098 0.2-0.4	01-09-15	S15-Se01581	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-099 0.0-0.2	02-09-15	S15-Se03275	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC90	02-09-15	S15-Se03307	470968	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC90A	02-09-15	133709-2	133709		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-099 0.5-0.7	02-09-15	S15-Se03276	470968	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-100 0.0-0.15	01-09-15	S15-Se01582	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-100 0.15-0.3	01-09-15	S15-Se01583	470781	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-101 0.0-0.15	27-08-15	M15-Au24431	470301	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-101 0.8-1.0	27-08-15	M15-Au24432	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	100	<50	100	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-102 0.15-0.3	27-08-15	M15-Au24429	470301	0.15-0.3	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	51	<50	51	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.7	<0.1	0.8	<1	<0.5
X1-102 0.8-1.0	27-08-15	M15-Au24430	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-103 0.3-0.5	27-08-15	M15-Au24427	470301	0.3-0.5	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-103 1.1-1.3	27-08-15	M15-Au24428	470301	1.1-1.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-104 0.0-0.15	27-08-15	M15-Au24425	470301	0-0.15	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	660	<50	660	50	620	<100	50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-104 0.3-0.5	27-08-15	M15-Au24426	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-105 0.0-0.2	27-08-15	M15-Au24423	470301	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	65	<50	65	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-105 0.5-0.7	27-08-15	M15-Au24424	470301	0.5-0.7	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	310	<50	310	<50	280	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-106 0.3-0.5	31-08-15	S15-Au26611	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-106 0-0.2	31-08-15	S15-Au26610	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-107 0.0-0.2	01-09-15	S15-Se01585	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-107 0.2-0.4	01-09-15	S15-Se01586	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC84	01-09-15	S15-Se01654	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC84A	01-09-15	133623-4	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-108 0.0-0.2	01-09-15	S15-Se01587	470781	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-108 0.2-0.4	01-09-15	S15-Se01588	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-109 0.3-0.5	27-08-15	M15-Au24421	470301	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-109 0.7-0.9	27-08-15	M15-Au24422	470301	0.7-0.9	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-110 0.0-0.15	27-08-15	M15-Au24419	470301	0-0.15	0.075[#5]	0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	77	<50	77	<50	100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-110 0.6-0.8	27-08-15	M15-Au24420	470301	0.6-0.8	0.095[#5]	0.07	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-111 0.15-0.3	27-08-15	M15-Au24417	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-111 0.8-1.0	27-08-15	M15-Au24418	470301	0.8-1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-112 0.15-0.3	27-08-15	M15-Au24415	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	0.3	<0.1	0.4	<1	<0.5
X1-112 0.8-1.0	27-08-15	M15-Au24416	470301	0.8-1	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-113 0.3-0.5	31-08-15	S15-Au26579	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-113 0-0.1	31-08-15	S15-Au26578	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC72	31-08-15	S15-Au26706	470534	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA72	31-08-15	133542-3	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1_114 0.0-0.15	06-08-15	S15-Au05915	468034	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1_114 0.15-0.3	06-08-15	S15-Au05916	468034	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-115 0.0-0.15	01-09-15	S15-Se01590	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-115 0.2-0.4	01-09-15	S15-Se01591	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-116 0.0-0.1	01-09-15	S15-Se01592	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC83	01-09-15	S15-Se01653	470781	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC83A	01-09-15	133623-3	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-116 0.1-0.3	01-09-15	S15-Se01593	470781	0.1-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-117 0.15-0.3	27-08-15	M15-Au24413	470301	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-117 1.0-1.2	27-08-15	M15-Au24414	470301	1-1.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	71	<50	71	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-118 0.0-0.2	27-08-15	M15-Au24411	470301	0-0.2	0.135[#5]	0.11	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	82	66	150	<50	120	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-118 1.0-1.2	27-08-15	M15-Au24412	470301	1-1.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-119 0.3-0.5	31-08-15	S15-Au26662	470534	0.3-0.5	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-119 0-0.2	31-08-15	S15-Au26661	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC71	31-08-15	S15-Au26705	470534	0-0.2	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QCA71	31-08-15	133542-2	133542		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-120 0.0-0.15	01-09-15	S15-Se01594	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC82	01-09-15	S15-Se01652	470781	0-0.15	0.125[#5]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC82A	01-09-15	133623-2	133623		0.15[#5]	0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-120 0.2-0.4	01-09-15	S15-Se01595	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-121 0.0-0.15	01-09-15	S15-Se01596	470781	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC81	01-09-15	S15-Se01651	470781	0-0.15	0.085[#5]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC81A	01-09-15	133623-1	133623		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-121 0.2-0.4	01-09-15	S15-Se01597	470781	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-122 0.0-0.15	02-09-15	S15-Se03277	470968	0-0.15	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-122 0.15-0.3	02-09-15	S15-Se03278	470968	0.15-0.3	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
X1-123 0.0-0.1	02-09-15	S15-Se03280	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC89	02-09-15	S15-Se03306	470968	0-0.1	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5
QC89A	02-09-15	133709-1	133709		<0.2[#8]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1
X1-123 0.2-0.4	02-09-15	S15-Se03281	470968	0.2-0.4	<0.1[#8]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

							Nitrotoluenes					Explosives in Soil										
							Nitrobenzene	1,3,5-trinitrotoluene	1,3-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	2-&2-AM- DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.10	0.10		0.10	0.10									0.10	0.10	0.10
NEPC 2013 ESL, ElLs Aged Sediment (Ecological Significance)																						
NEPC 2013 ESL, ElLs Aged Sediment (Urban Residential)																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																						
NEPM 2013 Soil HIL A								15												1.5		10
Site Specific Criteria																						
NEPM 2013 Soil HSL A - Sensitive Setting																						
Field_ID	Date	SampleCode	Lab Number	Depth																		
ID-001_0-0.2	10-06-15	S15-I800331	463565	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-002 0.0-0.1	03-09-15	S15-Se05371	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-002 0.2-0.4	03-09-15	S15-Se05372	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-003_0-0.1	10-06-15	S15-I800334	463565	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-004 0.0-0.2	03-09-15	S15-Se05373	471226	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-004 0.3-0.5	03-09-15	S15-Se05374	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-005_0.1-0.3	10-06-15	S15-I800337	463565	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-005_0.7-0.8	10-06-15	S15-I800339	463565	0.7-0.8	<0.5	<1	--	<0.5	<0.5	--	--	--	--	--	--	--	--	--	<1	<0.5	<0.5
ID-006_0.3-0.5	10-06-15	S15-I800342	463565	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-006_0-0.2	10-06-15	S15-I800341	463565	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-007 0.0-0.1	01-09-15	S15-Se01484	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-007 0.1-0.3	01-09-15	S15-Se01485	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-008 0.0-0.15	03-09-15	S15-Se05486	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-008 0.4-0.6	01-09-15	S15-Se01488	470781	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-009 0.15-0.3	01-09-15	S15-Se01491	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-009 0.4-0.6	03-09-15	S15-Se05492	470781	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-010 0.0-0.1	01-09-15	S15-Se01494	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-010 0.3-0.5	01-09-15	S15-Se01495	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-011 0.0-0.1	01-09-15	S15-Se01496	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-011 0.3-0.5	03-09-15	S15-Se05497	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-012 0.0-0.1	01-09-15	S15-Se01498	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-012 0.2-0.4	01-09-15	S15-Se01499	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-013 0.15-0.3	03-09-15	S15-Se05376	471226	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC97	03-09-15	S15-Se05445	471226	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC97A	03-09-15	133730-4	133730		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ID-013 0.3-0.5	03-09-15	S15-Se05377	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-014 0.0-0.2	03-09-15	S15-Se05379	471226	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-014 0.3-0.5	03-09-15	S15-Se05380	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-015 0.0-0.1	01-09-15	S15-Se01502	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-015 0.7-0.9	03-09-15	S15-Se05503	470781	0.7-0.9	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-016 0.0-0.1	01-09-15	S15-Se01500	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-016 0.5-0.7	01-09-15	S15-Se01501	470781	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-018 0.0-0.1	03-09-15	S15-Se05381	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-018 0.2-0.4	03-09-15	S15-Se05382	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-019 0.0-0.1	03-09-15	S15-Se05383	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-019 0.1-0.3	03-09-15	S15-Se05384	471226	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-020 0.0-0.1	01-09-15	S15-Se01504	470781	0-0.1	<0.5	<1	--	<0.5	<0.5	--	--	--	--	--	--	--	--	--	<1	<0.5	<0.5
ID-020 0.2-0.4	01-09-15	S15-Se01505	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-021 0.0-0.15	15-10-15	S15-Oc112355	476042	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-021 0.15-0.35	15-10-15	S15-Oc112356	476042	0.15-0.35	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-022 0.0-0.1	03-09-15	S15-Se05385	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-022 0.1-0.3	03-09-15	S15-Se05386	471226	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-023 0.0-0.15	03-09-15	S15-Se05387	471226	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-023 0.15-0.3	03-09-15	S15-Se05388	471226	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-024 0.0-0.2	03-09-15	S15-Se05390	471226	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-024 0.2-0.4	03-09-15	S15-Se05391	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-025 0.0-0.2	01-09-15	S15-Se01506	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-025 0.3-0.5	01-09-15	S15-Se01507	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-026 0.0-0.2	01-09-15	S15-Se01508	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-026 0.3-0.5	01-09-15	S15-Se01509	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-027 0.0-0.15	02-09-15	S15-Se03229	470968	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC92	02-09-15	S15-Se03309	470968	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC92A	02-09-15	133709-4	133709		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ID-027 0.5-0.7	02-09-15	S15-Se03230	470968	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-028 0.0-0.1	02-09-15	S15-Se03231	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-028 0.2-0.4	02-09-15	S15-Se03232	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-029 0.0-0.15	01-09-15	S15-Se01510	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-029 0.15-0.3	01-09-15	S15-Se01511	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-030 0.0-0.15	01-09-15	S15-Se01513	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC88	02-09-15	S15-Se01658	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC88A	02-09-15	133623-8	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ID-030 0.2-0.4	01-09-15	S15-Se01514	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-031 0.0-0.1	02-09-15	S15-Se03233	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-031 0.2-0.4	02-09-15	S15-Se03234	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-032 0.0-0.2	02-09-15	S15-Se03235	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-032 0.2-0.4	02-09-15	S15-Se03236	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-033 0.0-0.2	01-09-15	S15-Se01515	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-033 0.2-0.4	01-09-15	S15-Se01516	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-034 0.15-0.3	01-09-15	S15-Se01518	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-034 0.3-0.5	01-09-15	S15-Se01519	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-035 0.0-0.1	02-09-15	S15-Se03238	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-035 0.3-0.5	02-09-15	S15-Se03239	470968	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-036 0.0-0.15	02-09-15	S15-Se03240	470968	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-036 0.15-0.3	02-09-15	S15-Se03241	470968	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-037 0.0-0.1	02-09-15	S15-Se03243	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-037 0.2-0.4	02-09-15	S15-Se03244	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-038 0.0-0.15	01-09-15	S15-Se01521	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-038 0.15-0.3	01-09-15	S15-Se01522	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-039 0.0-0.15	01-09-15	S15-Se01524	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-039 0.2-0.4	01-09-15	S15-Se01525	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-040 0.3-0.5	11-08-15	S15-Au26660	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-040 0-0.2	11-08-15	S15-Au26659	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-041 0.15-0.3	11-08-15	S15-Au26656	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-041 0-0.15	11-08-15	S15-Au26655	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-042 0.0-0.1	01-09-15	S15-Se01526	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-042 0.1-0.3	01-09-15	S15-Se01527	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-043 0.0-0.2	03-09-15	S15-Se05528	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-043 0.2-0.4	01-09-15	S15-Se01529	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-044 0.4-0.6	11-08-15	S15-Au26654	470534	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-044 0-0.2	11-08-15	S15-Au26653	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-045 0.0-0.2	02-09-15	S15-Se03245	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-045 0.3-0.5	02-09-15	S15-Se03246	470968	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-046 0.0-0.15	01-09-15	S15-Se01530	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-046 0.15-0.3	01-09-15	S15-Se01531	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-047 0.0-0.1	01-09-15	S15-Se01533	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-047 0.1-0.3	01-09-15	S15-Se01534	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-048 0.15-0.3	11-08-15	S15-Au26627	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-048 0-0.15	11-08-15	S15-Au26626	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC78	11-08-15	S15-Au26712	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA78	11-08-15	133542-9	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ID-049 0.3-0.5	11-08-15	S15-Au26619	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-049 0-0.2	11-08-15	S15-Au26618	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-050 0.0-0.15	20-08-15	S15-Au17030	469476	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-050 0.3-0.5	20-08-15	S15-Au17032	469476	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
ID-051 0.0-0.2	20-08-15	S15-Au17035	469476	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

						Nitrotoluenes					Explosives in Soil										
						Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.10	0.10	-	-	0.10	0.10	-	-	-	-	-	-	-	-	0.10	0.10	0.10
NEPC 2013 ESL, ESLs Aged Sediment (Ecological Significance)																						
NEPC 2013 ESL, ESLs Aged Sediment (Urban Residential)																						
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																						
NEPM 2013 Soil HIL A							15													1.5		10
Site Specific Criteria																						
NEPM 2013 Soil HSL A - Sensitive Setting																						
Field_ID	Date	SampleCode	Lab Number	Depth																		
AS-051 0.2-0.4	10-08-15	515-Au17036	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-052 0-0.15	11-08-15	515-Au26615	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-052 015-0.3	11-08-15	515-Au26616	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-053 0.3-0.5	11-08-15	515-Au26625	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-053 0-0.2	11-08-15	515-Au26624	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-054 0.0-0.2	10-08-15	515-Au17038	469476	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-054 0.2-0.4	10-08-15	515-Au17039	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_055 0.0-0.15	06-08-15	515-Au05851	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_055 0.2-0.4	06-08-15	515-Au05852	468034	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_056 0.2-0.4	06-08-15	515-Au05854	468034	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_056 0.5-0.7	06-08-15	515-Au05855	468034	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-057 0.2-0.4	11-08-15	515-Au26629	470534	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-057 0-0.2	11-08-15	515-Au26628	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC77	11-08-15	515-Au26711	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA77	31-08-15	133542-8	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS-058 0.3-0.5	11-08-15	515-Au26606	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-058 0-0.2	11-08-15	515-Au26605	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-059 0.0-0.15	10-08-15	515-Au17040	469476	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-059 0.15-0.3	10-08-15	515-Au17041	469476	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-060 0.0-0.15	10-08-15	515-Au17043	469476	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-060 0.2-0.4	10-08-15	515-Au17044	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-061 0.0-0.1	10-08-15	515-Au17045	469476	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-061 0.2-0.4	10-08-15	515-Au17046	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_062 0.15-0.35	06-08-15	515-Au05857	468034	0.15-0.35	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_062 0.5-0.7	06-08-15	515-Au05858	468034	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_063 0.0-0.15	06-08-15	515-Au05859	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_063 0.3-0.5	06-08-15	515-Au05861	468034	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_063 1.0-1.2	06-08-15	515-Au05863	468034	1-1.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-064 0.2-0.4	11-08-15	515-Au26631	470534	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-064 0-0.2	11-08-15	515-Au26630	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-065 0.2-0.4	11-08-15	515-Au26613	470534	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-065 0-0.2	11-08-15	515-Au26612	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-066 0.0-0.2	10-08-15	515-Au17047	469476	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-066 0.2-0.4	10-08-15	515-Au17048	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-067 0.15-0.3	10-08-15	515-Au17051	469476	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-067 0.3-0.5	10-08-15	515-Au17052	469476	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-068 0.0-0.2	10-08-15	515-Au17054	469476	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-068 0.2-0.4	10-08-15	515-Au17055	469476	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-069 0.0-0.15	10-08-15	515-Au17056	469476	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-069 0.3-0.5	10-08-15	515-Au17058	469476	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-070 0.2-0.4	04-08-15	515-Au02468	467573	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-070 0-015	04-08-15	515-Au02467	467573	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_071 0.0-0.15	06-08-15	515-Au05864	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_071 0.2-0.4	06-08-15	515-Au05865	468034	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_072 0.0-0.2	06-08-15	515-Au05866	468034	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_072 0.5-0.7	06-08-15	515-Au05867	468034	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-073 0.15-0.3	31-08-15	515-Au26602	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC75	31-08-15	515-Au26709	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA75	31-08-15	133542-6	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS-073 0-0.15	31-08-15	515-Au26601	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-074 0.3-0.5	11-08-15	515-Au26608	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-074 0-0.2	11-08-15	515-Au26607	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-075 0.15-0.3	10-08-15	515-Au17062	469476	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-075 0.5-0.7	10-08-15	515-Au17064	469476	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-076 0.0-0.15	10-08-15	515-Au17065	469476	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-076 0.15-0.3	10-08-15	515-Au17066	469476	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-077_0-0.2	18-08-15	M15-Au14221	469118	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-077_0.2-0.4	18-08-15	M15-Au14222	469118	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC26	18-08-15	M15-Au14307	469118	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC26A	18-08-15	132954-4	132954		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS-078_0.0-0.15	18-08-15	M15-Au14223	469118	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-078_0.15-0.3	18-08-15	M15-Au14224	469118	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_79 0.4-0.6	31-07-15	515-Au01700	467448	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_79 0-0.15	31-07-15	515-Au01698	467448	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-080 0.2-0.35	04-08-15	515-Au02470	467573	0.2-0.35	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-080 0.4-0.6	04-08-15	515-Au02471	467573	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-081 0.3-0.5	04-08-15	515-Au02473	467573	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-081 0-0.2	04-08-15	515-Au02472	467573	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_082 0.0-0.15	06-08-15	515-Au05868	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_082 0.7-0.9	06-08-15	515-Au05871	468034	0.7-0.9	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_083 0.0-0.2	06-08-15	515-Au05872	468034	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_083 0.5-0.7	06-08-15	515-Au05874	468034	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_084 0.0-0.15	06-08-15	515-Au05875	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_084 0.4-0.6	06-08-15	515-Au05877	468034	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-085 0.3-0.5	11-08-15	515-Au26593	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-085 0-0.2	11-08-15	515-Au26592	470534	0-0.25	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-086 0.2-0.4	11-08-15	515-Au26595	470534	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-086 0-0.2	11-08-15	515-Au26594	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-087 0.3-0.5	11-08-15	515-Au26599	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-087 0-0.15	11-08-15	515-Au26597	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC74	31-08-15	515-Au26708	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA74	31-08-15	133542-5	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS-088_0.0-0.1	18-08-15	M15-Au14225	469118	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-088_0.1-0.3	18-08-15	M15-Au14226	469118	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC25	18-08-15	M15-Au14306	469118	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC25A	18-08-15	132954-3	132954		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS-089_0.0-0.2	19-08-15	515-Au15547	469287	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-090_0.0-0.15	19-08-15	515-Au15549	469287	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
~~QC80~~	~~19-08-15~~	~~515-Au15574~~	~~469287~~	~~0-0.15~~	~~<0.5~~	~~<1~~	~~-~~	~~<0.5~~	~~<0.5~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~<1~~	~~<0.5~~	~~<0.5~~
QC80A	19-08-15	133148-3	133148		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AS-090_0.3-0.5	19-08-15	515-Au15551	469287	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-091_0-0.2	18-08-15	M15-Au14227	469118	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-091_0.3-0.5	18-08-15	M15-Au14228	469118	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_092 0.15-0.3	31-07-15	515-Au01702	467448	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_092 0.6-0.8	31-07-15	515-Au01704	467448	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_092 0-0.15	31-07-15	515-Au01701	467448	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC92	31-07-15	515-Au01714	467448	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC92A	31-07-15	132200-1	132200		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AS_093 0.15-0.3	31-07-15	515-Au01706	467448	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_093 0-0.15	31-07-15	515-Au01705	467448	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-094 0.2-0.3	04-08-15	515-Au02475	467573	0.2-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-094 0.3-0.5	04-08-15	515-Au02476	467573	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-095 0.15-0.25	04-08-15	515-Au02478	467573	0.15-0.25	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-095 0-0.15	04-08-15	515-Au02477	467573	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-096 0.3-0.5	04-08-15	515-Au02482	467573	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS-096 0-0.15	04-08-15	515-Au02480	467573	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_097 0.0-0.15	06-08-15	515-Au05878	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
AS_097 0.2-0.4	06-08-15	515-Au05879	468034	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

				Nitrotoluenes				Explosives in Soil											
				Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.10	0.10		0.10	0.10									0.10	0.10	0.10
NEPC 2013 ESL, ElLs Aged Sediment (Ecological Significance)																			
NEPC 2013 ESL, ElLs Aged Sediment (Urban Residential)																			
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																			
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																			
NEPM 2013 Soil HIL A					15												1.5		10
Site Specific Criteria																			
NEPM 2013 Soil HSL A - Sensitive Setting																			
Field_ID	Date	SampleCode	Lab Number	Depth															
A0_098 0.0-0.15	06-08-15	515-Au05881	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0_098 0.15-0.35	06-08-15	515-Au05882	468034	0.15-0.35	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0-099 0.15-0.3	31-08-15	515-Au26584	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0-099 0-0.15	31-08-15	515-Au26583	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC70	31-08-15	515-Au26704	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA70	31-08-15	133542-1	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A0-100 0.15-0.3	31-08-15	515-Au26590	470534	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0-100 0-0.15	31-08-15	515-Au26589	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0-101 0.4-0.6	31-08-15	515-Au26588	470534	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A0-101 0-0.15	31-08-15	515-Au26586	470534	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-01 0-0.1	12-02-15	515-Fa09298	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-02 0-0.1	12-02-15	515-Fa09300	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-03 0-0.1	12-02-15	515-Fa09302	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-04 0-0.1	12-02-15	515-Fa09304	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-05 0-0.2	12-02-15	515-Fa09306	447301	0-0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-06 0-0.1	12-02-15	515-Fa09308	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-07 0-0.1	12-02-15	515-Fa09310	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-08 0.2-0.4	12-02-15	515-Fa09313	447301	0.2-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-09 0-0.1	12-02-15	515-Fa09315	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-10 0-0.1	12-02-15	515-Fa09317	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-11 0-0.1	12-02-15	515-Fa09319	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-12 0-0.1	12-02-15	515-Fa09321	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	12-02-15	515-Fa09330	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01A	12-02-15	123610-1	123610		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-13 0-0.1	12-02-15	515-Fa09323	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-14 0-0.1	12-02-15	515-Fa09325	447301	0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-15 0-0.3	12-02-15	515-Fa09328	447301	0-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1-016_0-0.2	30-06-15	515-J00345	463565	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-017 0.0-0.1	03-09-15	515-Se05392	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-017 0.3-0.5	03-09-15	515-Se05393	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-018 0.0-0.1	03-09-15	515-Se05394	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-019 0.2-0.4	03-09-15	515-Se05395	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-020 0.0-0.1	03-09-15	515-Se05396	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-020 0.2-0.4	03-09-15	515-Se05397	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-021 0.0-0.1	03-09-15	515-Se05398	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-021 0.2-0.4	03-09-15	515-Se05399	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC96	03-09-15	515-Se05444	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC96A	03-09-15	133730-3	133730		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A1-022 0.0-0.1	03-09-15	515-Se05400	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-022 0.2-0.4	03-09-15	515-Se05401	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-023 0.1-0.3	15-10-15	515-Oc11259	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-023 0-0.1	15-10-15	515-Oc11258	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-024 0.15-0.3	03-09-15	515-Se05403	471226	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-024 0.3-0.5	03-09-15	515-Se05404	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-025 0.0-0.1	03-09-15	515-Se05406	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC95	03-09-15	515-Se05443	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC95A	03-09-15	133730-2	133730		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A1-025 0.2-0.4	03-09-15	515-Se05407	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-026 0.0-0.15	03-09-15	515-Se05408	471226	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-026 0.2-0.4	03-09-15	515-Se05409	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-027 0.0-0.1	03-09-15	515-Se05410	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-027 0.3-0.5	03-09-15	515-Se05411	471226	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-028 0.0-0.2	01-09-15	515-Se01553	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-028 0.3-0.5	01-09-15	515-Se01554	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-029 0.2-0.4	15-10-15	515-Oc11261	476042	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-029 0-0.2	15-10-15	515-Oc11260	476042	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-030 0.5-0.7	15-10-15	515-Oc11263	476042	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-030 0-0.1	15-10-15	515-Oc11262	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-031 0.3-0.5	15-10-15	515-Oc11266	476042	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-031 0-0.15	15-10-15	515-Oc11264	476042	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-032 0.1-0.3	15-10-15	515-Oc11268	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-032 0-0.1	15-10-15	515-Oc11267	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-033 0.0-0.2	03-09-15	515-Se05412	471226	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-033 0.2-0.4	03-09-15	515-Se05413	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-034 0.0-0.1	03-09-15	515-Se05414	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-034 0.2-0.4	03-09-15	515-Se05415	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-035 0.0-0.1	03-09-15	515-Se05416	471226	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-035 0.2-0.4	03-09-15	515-Se05417	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-036 0.0-0.15	03-09-15	515-Se05418	471226	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC94	03-09-15	515-Se05442	471226	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC94A	03-09-15	133730-1	133730		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A1-036 0.2-0.4	03-09-15	515-Se05419	471226	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-038 0.1-0.3	15-10-15	515-Oc11270	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-038 0-0.1	15-10-15	515-Oc11269	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-039 0.0-0.1	02-09-15	515-Se03257	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-039 0.6-0.8	02-09-15	515-Se03258	470968	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-040 0.0-0.1	02-09-15	515-Se03259	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-040 0.5-0.7	02-09-15	515-Se03260	470968	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-041 0.0-0.1	02-09-15	515-Se03261	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-041 0.6-0.8	02-09-15	515-Se03262	470968	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-042 0.0-0.1	02-09-15	515-Se03263	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-042 0.2-0.4	02-09-15	515-Se03264	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-043 0.0-0.2	01-09-15	515-Se01555	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC87	01-09-15	515-Se01657	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC87A	01-09-15	133623-7	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A1-043 0.2-0.4	01-09-15	515-Se01556	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-044 0.0-0.1	01-09-15	515-Se01557	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-044 0.3-0.5	01-09-15	515-Se01558	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-045 0.1-0.3	15-10-15	515-Oc11272	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-045 0-0.1	15-10-15	515-Oc11271	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-046 0.2-0.4	15-10-15	515-Oc11274	476042	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-046 0-0.1	15-10-15	515-Oc11273	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-047 0.1-0.3	15-10-15	515-Oc11276	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-047 0-0.1	15-10-15	515-Oc11275	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-048 0.0-0.1	02-09-15	515-Se03265	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-048 0.2-0.4	02-09-15	515-Se03266	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-048 0.6-0.2	02-09-15	515-Se03267	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-049 0.3-0.5	02-09-15	515-Se03268	470968	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-050 0.0-0.1	02-09-15	515-Se03269	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-050 0.1-0.3	02-09-15	515-Se03270	470968	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-051 0.0-0.1	02-09-15	515-Se03271	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-051 0.1-0.3	02-09-15	515-Se03272	470968	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-052 0.0-0.1	01-09-15	515-Se01559	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-052 0.2-0.4	01-09-15	515-Se01560	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-053 0.1-0.3	15-10-15	515-Oc11278	476042	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
A1-053 0-0.1	15-10-15	515-Oc11277	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC01-15/10	15-10-15	515-Oc11279	476042	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

						Nitrotoluenes					Explosives in Soil										
						Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.10	0.10			0.10									0.10	0.10	0.10
NEPC 2013 ESL, ESLs Aged Sediment (Ecological Significance)																					
NEPC 2013 ESL, ESLs Aged Sediment (Urban Residential)																					
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																					
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																					
NEPM 2013 Soil HIL A							15												1.5		10
Site Specific Criteria																					
NEPM 2013 Soil HSL A - Sensitive Setting																					
Field_ID	Date	SampleCode	Lab Number	Depth																	
QC01A-15/10	15-10-15	135939-1	135939		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-054 0.4-0.6	31-08-15	515-Au26644	470534	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-054 0-0.1	31-08-15	515-Au26643	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-055 0.3-0.5	31-08-15	515-Au26648	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-055 0-0.1	31-08-15	515-Au26647	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-056 0.3-0.5	31-08-15	515-Au26652	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-056 0-0.2	31-08-15	515-Au26651	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-057 0.9-1.1	31-08-15	515-Au26650	470534	0.9-1.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-057 0-0.1	31-08-15	515-Au26649	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC79	31-08-15	515-Au26753	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA79	31-08-15	133542-10	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-058 0.0-0.1	01-09-15	515-Sa01561	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-058 0.1-0.3	01-09-15	515-Sa01562	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-059 0.3-0.5	31-08-15	515-Au26640	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-059 0-0.1	31-08-15	515-Au26639	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-060 0.1-0.3	31-08-15	515-Au26634	470534	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-060 0-0.1	31-08-15	515-Au26633	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-061 0.1-0.3	31-08-15	515-Au26636	470534	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-061 0-0.1	31-08-15	515-Au26635	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-062 0.4-0.6	31-08-15	515-Au26638	470534	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-062 0-0.1	31-08-15	515-Au26637	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-063 0.5-0.7	31-08-15	515-Au26642	470534	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-063 0-0.1	31-08-15	515-Au26641	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-064 0.4-0.6	31-08-15	515-Au26646	470534	0.4-0.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-064 0-0.2	31-08-15	515-Au26645	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-065 0.0-0.15	27-08-15	M15-Au24475	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC58	27-08-15	M15-Au24523	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC58A	27-08-15	133384-4	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-065 0.3-0.5	27-08-15	M15-Au24476	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-066 0.2-0.8	31-08-15	515-Au26623	470534	0.2-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-066 0-0.2	31-08-15	515-Au26622	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-067 0.0-0.15	01-09-15	515-Sa01563	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC86	01-09-15	515-Sa01656	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC86A	01-09-15	133623-6	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-067 0.2-0.4	01-09-15	515-Sa01564	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-068 0.0-0.1	01-09-15	515-Sa01565	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-068 0.1-0.3	01-09-15	515-Sa01566	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-069 0.0-0.2	01-09-15	515-Sa01567	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC85	01-09-15	515-Sa01655	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC85A	01-09-15	133623-5	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-069 0.2-0.4	01-09-15	515-Sa01568	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-070 0.15-0.3	27-08-15	M15-Au24473	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-070 0.6-0.8	27-08-15	M15-Au24474	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-071 0.2-0.4	27-08-15	M15-Au24471	470301	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC59	27-08-15	M15-Au24524	470301	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC59A	27-08-15	133384-6	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-071 1.4-1.6	27-08-15	M15-Au24472	470301	1.4-1.6	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-072 0.0-0.15	27-08-15	M15-Au24469	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC64	27-08-15	M15-Au24529	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC64A	27-08-15	133384-10	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-072 0.8-1.0	27-08-15	M15-Au24470	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-073 0.0-0.15	01-09-15	515-Sa01570	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-073 0.2-0.4	01-09-15	515-Sa01571	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-074 0.0-0.2	01-09-15	515-Sa01572	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-074 0.2-0.4	01-09-15	515-Sa01573	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-075 0.33-0.3	01-09-15	515-Sa01575	470781	0.33-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-075 0.3-0.5	01-09-15	515-Sa01576	470781	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-076 0.3-0.5	27-08-15	M15-Au24467	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC55	27-08-15	M15-Au24520	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC55A	27-08-15	133384-1	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC55A - TRIPLICATE	27-08-15	133384-16	133384		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01-076 1.0-1.2	27-08-15	M15-Au24468	470301	1-1.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-077 0.15-0.3	27-08-15	M15-Au24465	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-077 0.7-0.9	27-08-15	M15-Au24466	470301	0.7-0.9	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-078 0.0-0.15	27-08-15	M15-Au24463	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC60	27-08-15	M15-Au24525	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC60A	27-08-15	133384-6	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-078 1.2-1.4	27-08-15	M15-Au24464	470301	1.2-1.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-079 0.15-0.3	27-08-15	M15-Au24461	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC63	27-08-15	M15-Au24528	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC63A	27-08-15	133384-9	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-079 0.6-0.8	27-08-15	M15-Au24462	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-080 0.0-0.15	27-08-15	M15-Au24459	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-080 0.6-0.8	27-08-15	M15-Au24460	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC65	27-08-15	M15-Au24530	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC65A	27-08-15	133384-11	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-081 0.15-0.3	27-08-15	M15-Au24457	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-081 1.1-1.3	27-08-15	M15-Au24458	470301	1.1-1.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-082 0.0-0.2	02-09-15	515-Sa03273	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-082 0.2-0.4	02-09-15	515-Sa03274	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-083 0.15-0.3	27-08-15	M15-Au24455	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-083 0.6-0.8	27-08-15	M15-Au24456	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-084 0.0-0.15	27-08-15	M15-Au24453	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC62	27-08-15	M15-Au24527	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC62A	27-08-15	133384-8	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-084 0.8-1.0	27-08-15	M15-Au24454	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-085 0.0-0.15	27-08-15	M15-Au24451	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-085 1.0-1.2	27-08-15	M15-Au24452	470301	1-1.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-086 0.0-0.15	27-08-15	M15-Au24449	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-086 0.8-1.0	27-08-15	M15-Au24450	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC67	27-08-15	M15-Au24532	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC67A	27-08-15	133384-13	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-087 0.0-0.15	27-08-15	M15-Au24447	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-087 0.3-0.5	27-08-15	M15-Au24448	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC69	27-08-15	M15-Au24534	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC69A	27-08-15	133384-15	133384		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
01-088 0.2-0.4	31-08-15	515-Au26621	470534	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-088 0-0.2	31-08-15	515-Au26620	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01_089 0.0-0.2	06-08-15	515-Au05913	468034	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01_089 0.2-0.4	06-08-15	515-Au05914	468034	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-090 0.0-0.2	01-09-15	515-Sa01578	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-090 0.2-0.4	01-09-15	515-Sa01579	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-091 0.0-0.15	27-08-15	M15-Au24445	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-091 0.8-1.0	27-08-15	M15-Au24446	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-092 0.0-0.15	27-08-15	M15-Au24443	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-092 0.6-0.8	27-08-15	M15-Au24444	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-093 0.15-0.3	27-08-15	M15-Au24441	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
01-093 0.8-1.0	27-08-15	M15-Au24442	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

Table App C
Project Number 54782
Stage 2c Samples within X series

					Nitrotoluenes					Explosives in Soil											
					Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.10	0.10	-	0.10	0.10	-	-	-	-	-	-	-	-	0.10	0.10	0.10
NEPC 2013 ESL, ESLs Aged Sediment (Ecological Significance)																					
NEPC 2013 ESL, ESLs Aged Sediment (Urban Residential)																					
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																					
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																					
NEPM 2013 Soil HIL A						15												1.5		10	
Site Specific Criteria																					
NEPM 2013 Soil HSL A - Sensitive Setting																					
Field_ID	Date	SampleCode	Lab Number	Depth																	
X1-094 0.3-0.5	27-08-15	M15-Au24439	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-094 1.7-1.9	27-08-15	M15-Au24440	470301	1.7-1.9	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-095 0.15-0.3	27-08-15	M15-Au24427	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-095 1.2-1.4	27-08-15	M15-Au24438	470301	1.2-1.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-096 0.0-0.15	27-08-15	M15-Au24435	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-096 0.8-1.0	27-08-15	M15-Au24436	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-097 0.15-0.3	27-08-15	M15-Au24433	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-097 0.8-1.0	27-08-15	M15-Au24434	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-098 0.0-0.15	01-09-15	S15-Se01580	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-098 0.2-0.4	01-09-15	S15-Se01581	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-099 0.0-0.2	02-09-15	S15-Se03275	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC90	02-09-15	S15-Se03307	470968	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC90A	02-09-15	133709-2	133709		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-099 0.5-0.7	02-09-15	S15-Se03276	470968	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-100 0.0-0.15	01-09-15	S15-Se01582	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-100 0.15-0.3	01-09-15	S15-Se01583	470781	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-101 0.0-0.15	27-08-15	M15-Au24431	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-101 0.8-1.0	27-08-15	M15-Au24432	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-102 0.15-0.3	27-08-15	M15-Au24429	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-102 0.8-1.0	27-08-15	M15-Au24430	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-103 0.3-0.5	27-08-15	M15-Au24427	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-103 1.1-1.3	27-08-15	M15-Au24428	470301	1.1-1.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-104 0.0-0.15	27-08-15	M15-Au24425	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-104 0.3-0.5	27-08-15	M15-Au24426	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-105 0.0-0.2	27-08-15	M15-Au24423	470301	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-105 0.5-0.7	27-08-15	M15-Au24424	470301	0.5-0.7	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-106 0.3-0.5	31-08-15	S15-Au26611	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-106 0-0.2	31-08-15	S15-Au26610	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-107 0.0-0.2	01-09-15	S15-Se01585	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-107 0.2-0.4	01-09-15	S15-Se01586	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC84	01-09-15	S15-Se01654	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC84A	01-09-15	133623-4	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-108 0.0-0.2	01-09-15	S15-Se01587	470781	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-108 0.2-0.4	01-09-15	S15-Se01588	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-109 0.3-0.5	27-08-15	M15-Au24421	470301	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-109 0.7-0.9	27-08-15	M15-Au24422	470301	0.7-0.9	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-110 0.0-0.15	27-08-15	M15-Au24419	470301	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-110 0.6-0.8	27-08-15	M15-Au24420	470301	0.6-0.8	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-111 0.15-0.3	27-08-15	M15-Au24417	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-111 0.8-1.0	27-08-15	M15-Au24418	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-112 0.15-0.3	27-08-15	M15-Au24415	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-112 0.8-1.0	27-08-15	M15-Au24416	470301	0.8-1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-113 0.3-0.5	31-08-15	S15-Au26579	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-113 0-0.1	31-08-15	S15-Au26578	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC72	31-08-15	S15-Au26706	470534	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA72	31-08-15	133542-3	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1_114 0.0-0.15	06-08-15	S15-Au05915	468034	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1_114 0.15-0.3	06-08-15	S15-Au05916	468034	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-115 0.0-0.15	01-09-15	S15-Se01590	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-115 0.2-0.4	01-09-15	S15-Se01591	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-116 0.0-0.1	01-09-15	S15-Se01592	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC83	01-09-15	S15-Se01653	470781	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC83A	01-09-15	133623-3	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-116 0.1-0.3	01-09-15	S15-Se01593	470781	0.1-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-117 0.15-0.3	27-08-15	M15-Au24413	470301	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-117 1.0-1.2	27-08-15	M15-Au24414	470301	1-1.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-118 0.0-0.2	27-08-15	M15-Au24411	470301	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-118 1.0-1.2	27-08-15	M15-Au24412	470301	1-1.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-119 0.3-0.5	31-08-15	S15-Au26662	470534	0.3-0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-119 0-0.2	31-08-15	S15-Au26661	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC71	31-08-15	S15-Au26705	470534	0-0.2	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QCA71	31-08-15	133542-2	133542		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-120 0.0-0.15	01-09-15	S15-Se01594	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC82	01-09-15	S15-Se01652	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC82A	01-09-15	133623-2	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-120 0.2-0.4	01-09-15	S15-Se01595	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-121 0.0-0.15	01-09-15	S15-Se01596	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC81	01-09-15	S15-Se01651	470781	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC81A	01-09-15	133623-1	133623		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-121 0.2-0.4	01-09-15	S15-Se01597	470781	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-122 0.0-0.15	02-09-15	S15-Se03277	470968	0-0.15	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-122 0.15-0.3	02-09-15	S15-Se03278	470968	0.15-0.3	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X1-123 0.0-0.1	02-09-15	S15-Se03280	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC89	02-09-15	S15-Se03306	470968	0-0.1	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC89A	02-09-15	133709-1	133709		<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X1-123 0.2-0.4	02-09-15	S15-Se03281	470968	0.2-0.4	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
Field_ID	**Date**	**SampleCode**	**Lab Number**	**Depth**																						
X0-001_0-0.3			463565	0-0.3	-	-	-	-	-	916	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-002 0.0-0.1	03-09-15	S15-Se05420	471226	0-0.1	-	-	-	-	-	616	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-003_0-0.2			463565	0-0.2	-	-	-	-	-	883	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-004 0.0-0.2	03-09-15	S15-Se05421	471226	0-0.2	-	-	-	-	-	847	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-005_0-0.6			463565	0-0.6	-	-	-	-	-	1130	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-006_0-0.6			463565	0-0.6	-	-	-	-	-	649	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-007 0.0-0.1	01-09-15	S15-Se01600	470781	0-0.1	-	-	-	-	-	860	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-008 0.0-0.6	01-09-15	S15-Se01601	470781	0-0.6	-	-	-	-	-	812	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-009 0.0-0.6	01-09-15	S15-Se01602	470781	0-0.6	-	-	-	-	-	764	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-010 0.0-0.1	01-09-15	S15-Se01603	470781	0-0.1	-	-	-	-	-	956	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-011 0.0-0.1	01-09-15	S15-Se01604	470781	0-0.1	-	-	-	-	-	967	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-012 0.0-0.1	01-09-15	S15-Se01605	470781	0-0.1	-	-	-	-	-	1016	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-013 0.0-0.5	03-09-15	S15-Se05422	471226	0-0.5	-	-	-	-	-	790	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-014 0.0-0.2	03-09-15	S15-Se05423	471226	0-0.2	-	-	-	-	-	868	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-015 0.0-0.1	01-09-15	S15-Se01607	470781	0-0.1	-	-	-	-	-	1019	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-016 0.0-0.1	01-09-15	S15-Se01606	470781	0-0.1	-	-	-	-	-	1077	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-018 0.0-0.1	03-09-15	S15-Se05424	471226	0-0.1	-	-	-	-	-	641	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-019 0.0-0.1	03-09-15	S15-Se05425	471226	0-0.1	-	-	-	-	-	665	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-020 0.0-0.1	01-09-15	S15-Se01608	470781	0-0.1	-	-	-	-	-	944	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-021 0-0.35	15-10-15	S15-Oc11280	476042	0-0.35	-	-	-	-	-	792	0	0	0	0	0	0	0	0	1	2	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-022 0.0-0.1	03-09-15	S15-Se05426	471226	0-0.1	-	-	-	-	-	746	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-023 0.0-0.3	03-09-15	S15-Se05427	471226	0-0.3	-	-	-	-	-	865	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-024 0.0-0.2	03-09-15	S15-Se05428	471226	0-0.2	-	-	-	-	-	827	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X0-025 0.0-0.2	01-09-15	S15-Se01609	470781	0-0.2	-	-	-	-	-	813	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-026 0.0-0.2	01-09-15	S15-Se01610	470781	0-0.2	-	-	-	-	-	882	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-027 0.0-0.1	02-09-15	S15-Se03282	470968	0-0.1	-	-	-	-	-	797	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-028 0.0-0.1	02-09-15	S15-Se03283	470968	0-0.1	-	-	-	-	-	811	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-029 0.0-0.3	01-09-15	S15-Se01611	470781	0-0.3	-	-	-	-	-	739	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-030 0.0-0.15	01-09-15	S15-Se01612	470781	0-0.15	-	-	-	-	-	723	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC88	01-09-15	S15-Se01658	470781	0-0.15	-	-	-	-	-	699	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC88A	01-09-15	133623-8	133623		-	-	-	-	-	809	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X0-031 0.0-0.1	02-09-15	S15-Se03284	470968	0-0.1	-	-	-	-	-	926	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-032 0.0-0.4	02-09-15	S15-Se03285	470968	0-0.4	-	-	-	-	-	886	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-033 0.0-0.2	01-09-15	S15-Se01613	470781	0-0.2	-	-	-	-	-	924	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-034 0.0-0.5	01-09-15	S15-Se01614	470781	0-0.5	-	-	-	-	-	822	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-035 0.0-0.1	02-09-15	S15-Se03286	470968	0-0.1	-	-	-	-	-	707	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-036 0.0-0.3	02-09-15	S15-Se03287	470968	0-0.3	-	-	-	-	-	889	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-037 0.0-0.1	02-09-15	S15-Se03288	470968	0-0.1	-	-	-	-	-	794	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC93	02-09-15	S15-Se03310	470968	0-0.1	-	-	-	-	-	912	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC93A	02-09-15	133709-5	133709		-	-	-	-	-	834	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X0-038 0.0-0.3	01-09-15	S15-Se01615	470781	0-0.3	-	-	-	-	-	937	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-039 0.0-0.15	01-09-15	S15-Se01616	470781	0-0.15	-	-	-	-	-	750	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-040 0-0.2	31-08-15	S15-Au26698	470534	0-0.2	-	-	-	-	-	811	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-041 0-0.5	31-08-15	S15-Au26697	470534	0-0.5	-	-	-	-	-	929	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-042 0.0-0.1	01-09-15	S15-Se01617	470781	0-0.1	-	-	-	-	-	826	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-043 0.0-0.2	01-09-15	S15-Se01618	470781	0-0.2	-	-	-	-	-	1049	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-044 0-0.2	31-08-15	S15-Au26696	470534	0-0.2	-	-	-	-	-	690	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X0-045 0.0-0.2	02-09-15	S15-Se03289	470968	0-0.2	-	-	-	-	-	981	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-046 0.0-0.3	01-09-15	S15-Se01619	470781	0-0.3	-	-	-	-	-	917	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-047 0.0-0.1	01-09-15	S15-Se01620	470781	0-0.1	-	-	-	-	-	757	0	0	0	0	0	0.0041	0.0041	0.0041	-	-	0.0005	No asbestos detected at the reporting limit of 0.001% w/w.*	Chrysotile asbestos detected in the form of loose fibre bundles.	NIL	Organic fibre detected.	NIL
X0-048 0-0.15	31-08-15	S15-Au26683	470534	0-0.15	-	-	-	-	-	819	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-049 0-0.2	31-08-15	S15-Au26679	470534	0-0.2	-	-	-	-	-	953	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-050 0.0-1.0	20-08-15	S15-Au17130	469476	0-1	-	-	-	-	-	939	0	0	0	0	0	0.0012	0.0012	0.0012	-	-	0.0001	No asbestos detected at the reporting limit of 0.001% w/w.*	Amosite asbestos detected in the form of loose fibre bundles.	NIL	Organic fibre detected.	NIL
X0-051 0.0-0.4	20-08-15	S15-Au17131	469476	0-0.4	-	-	-	-	-	758	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-052 0-0.3	31-08-15	S15-Au26678	470534	0-0.3	-	-	-	-	-	816	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-053 0-0.2	31-08-15	S15-Au26682	470534	0-0.2	-	-	-	-	-	880	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-054 0.0-0.2	20-08-15	S15-Au17132	469476	0-0.2	-	-	-	-	-	506	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_055 0.0-0.15	06-08-15	S15-Au05918	468034	0-0.15	-	-	-	-	-	877	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_056 0.0-0.45	06-08-15	S15-Au05919	468034	0-0.45	-	-	-	-	-	841	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-057 0-0.2	31-08-15	S15-Au26684	470534	0-0.2	-	-	-	-	-	754	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-058 0-0.2	31-08-15	S15-Au26674	470534	0-0.2	-	-	-	-	-	1188	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-059 0.0-0.3	20-08-15	S15-Au17133	469476	0-0.3	-	-	-	-	-	703	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-060 0.0-0.15	20-08-15	S15-Au17134	469476	0-0.15	-	-	-	-	-	652	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-061 0.0-0.1	20-08-15	S15-Au17135	469476	0-0.1	-	-	-	-	-	605	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_062 0.0-0.35	06-08-15	S15-Au05920	468034	0-0.35	-	-	-	-	-	742	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_063 0.0-1.0	06-08-15	S15-Au05921	468034	0-1	-	-	-	-	-	727	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-064 0-0.4	31-08-15	S15-Au26685	470534	0-0.4	-	-	-	-	-	946	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC76	31-08-15	S15-Au26710	470534	0-0.4	-	-	-	-	-	1052	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QCA76	31-08-15	133542-7	133542		-	-	-	-	-	947	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X0-065 0-0.4	31-08-15	S15-Au26677	470534	0-0.4	-	-	-	-	-	1260	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-066 0.0-0.4	20-08-15	S15-Au17136	469476	0-0.4	-	-	-	-	-	782	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X0-067 0.0-0.5	20-08-15	S15-Au17137	469476	0-0.5	-	-	-	-	-	938	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-068 0.0-0.2	20-08-15	S15-Au17138	469476	0-0.2	-	-	-	-	-	500	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-069 0.0-1.0	20-08-15	S15-Au17139	469476	0-1	-	-	-	-	-	702	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-070 0-0.15	04-08-15	S15-Au02501	467573	0-0.15	-	-	-	-	-	605	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_071 0.0-0.15	06-08-15	S15-Au05922	468034	0-0.15	-	-	-	-	-	865	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_072 0.0-0.2	06-08-15	S15-Au05923	468034	0-0.2	-	-	-	-	-	844	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-073 0-0.5	31-08-15	S15-Au26673	470534	0-0.5	-	-	-	-	-	837	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-074 0-0.5	31-08-15	S15-Au26675	470534	0-0.5	-	-	-	-	-	1031	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-075 0.0-0.5	20-08-15	S15-Au17140	469476	0-0.5	-	-	-	-	-	811	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-076 0.0-0.3	20-08-15	S15-Au17141	469476	0-0.3	-	-	-	-	-	639	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-077_0.0-0.4	18-08-15	M15-Au14276	469118	0-0.4	-	-	-	-	-	605	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-078_0.0-0.3	18-08-15	M15-Au14277	469118	0-0.3	-	-	-	-	-	696	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_079 0-0.4	31-07-15	S15-Au01721	467448	0-0.4	-	-	-	-	-	1004	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-080 0-0.35	04-08-15	S15-Au02502	467573	0-0.35	-	-	-	-	-	857	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-081 0-0.2	04-08-15	S15-Au02503	467573	0-0.2	-	-	-	-	-	642	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_082 0.0-0.55	06-08-15	S15-Au05924	468034	0-0.55	-	-	-	-	-	685	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_083 0.0-0.4	06-08-15	S15-Au05925	468034	0-0.4	-	-	-	-	-	737	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_084 0.0-0.35	06-08-15	S15-Au05926	468034	0-0.35	-	-	-	-	-	819	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-085 0-0.25	31-08-15	S15-Au26670	470534	0-0.25	-	-	-	-	-	864	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-086 0-0.4	31-08-15	S15-Au26671	470534	0-0.4	-	-	-	-	-	943	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-087 0-0.5	31-08-15	S15-Au26672	470534	0-0.5	-	-	-	-	-	960	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-088_0.0-0.1	18-08-15	M15-Au14278	469118	0-0.1	-	-	-	-	-	543	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-089_0.0-0.2	19-08-15	S15-Au15676	469287	0-0.2	-	-	-	-	-	532	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-090_0.0-0.25	19-08-15	S15-Au15677	469287	0-0.25	-	-	-	-	-	528	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X0-091_0.0-0.5	18-08-15	M15-Au14279	469118	0-0.5	-	-	-	-	-	649	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_092 0-0.5	31-07-15	S15-Au01720	467448	0-0.5	-	-	-	-	-	717	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_093 0-0.3	31-07-15	S15-Au01719	467448	0-0.3	-	-	-	-	-	1127	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-094 0-0.3	04-08-15	S15-Au02504	467573	0-0.3	-	-	-	-	-	1058	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-095 0-0.25	04-08-15	S15-Au02505	467573	0-0.25	-	-	-	-	-	876	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-096 0-0.3	04-08-15	S15-Au02506	467573	0-0.3	-	-	-	-	-	681	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_097 0.0-0.4	06-08-15	S15-Au05927	468034	0-0.4	-	-	-	-	-	780	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0_098 0.0-0.35	06-08-15	S15-Au05928	468034	0-0.35	-	-	-	-	-	849	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-099 0-0.3	31-08-15	S15-Au26667	470534	0-0.3	-	-	-	-	-	923	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X0-100 0-0.3	31-08-15	S15-Au26669	470534	0-0.3	-	-	-	-	-	972	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC73	31-08-15	S15-Au26707	470534	0-0.3	-	-	-	-	-	765	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QCA73	31-08-15	133542-4	133542		-	-	-	-	-	938	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X0-101 0-0.35	31-08-15	S15-Au26668	470534	0-0.35	-	-	-	-	-	970	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-01 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	746	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-02 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	737	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-03 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	576	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-04 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	679	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-05 0-0.2	31-08-24	0-0.2	447301	0-0.2	-	-	-	-	-	568	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-06 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	581	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-07 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	637	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-08 0.2-0.4	31-08-24	2-0.4	447301	2-0.4	-	-	-	-	-	567	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-09 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	587	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-10 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	525	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-11 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	616	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-12 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	788	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC01	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	85	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC01A			123610		-	-	-	-	-	708	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-13 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	627	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-14 0-0.1	31-08-24	0-0.1	447301	0-0.1	-	-	-	-	-	91	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-15 0-0.3	31-08-24	0-0.3	447301	0-0.3	-	-	-	-	-	556	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-016_0-0.2	12-03-69	0-0.2	463565	0-0.2	-	-	-	-	-	610	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-017 0.0-0.1	03-09-15	S15-Se05429	471226	0-0.1	-	-	-	-	-	854	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-019 0.0-0.1	03-09-15	S15-Se05430	471226	0-0.1	-	-	-	-	-	793	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-020 0.0-0.1	03-09-15	S15-Se05431	471226	0-0.1	-	-	-	-	-	771	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-021 0.0-0.1	03-09-15	S15-Se05432	471226	0-0.1	-	-	-	-	-	724	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-022 0.0-0.1	03-09-15	S15-Se05433	471226	0-0.1	-	-	-	-	-	762	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-023 0-0.1	15-10-15	S15-Oc11281	476042	0-0.1	-	-	-	-	-	877	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-024 0.0-0.5	03-09-15	S15-Se05434	471226	0-0.5	-	-	-	-	-	853	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-025 0.0-0.1	03-09-15	S15-Se05435	471226	0-0.1	-	-	-	-	-	851	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC95	03-09-15	S15-Se05443	471226	0-0.1	-	-	-	-	-	767	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC95A	03-09-15	133730-2	133730		-	-	-	-	-	886	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-026 0.0-0.15	03-09-15	S15-Se05436	471226	0-0.15	-	-	-	-	-	861	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-027 0.0-0.1	03-09-15	S15-Se05437	471226	0-0.1	-	-	-	-	-	705	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-028 0.0-0.2	01-09-15	S15-Se01631	470781	0-0.2	-	-	-	-	-	883	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-029 0-0.2	15-10-15	S15-Oc11282	476042	0-0.2	-	-	-	-	-	861	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-030 0-0.1	15-10-15	S15-Oc11283	476042	0-0.1	-	-	-	-	-	819	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-031 0-0.3	15-10-15	S15-Oc11284	476042	0-0.3	-	-	-	-	-	846	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-032 0-0.1	15-10-15	S15-Oc11285	476042	0-0.1	-	-	-	-	-	707	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

Table App C
Job Number 54782
Project Stage 2c X series samples - asbestos

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-033 0.0-0.2	03-09-15	S15-Se05438	471226	0-0.2	-	-	-	-	-	798	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-034 0.0-0.1	03-09-15	S15-Se05439	471226	0-0.1	-	-	-	-	-	730	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-035 0.0-0.1	03-09-15	S15-Se05440	471226	0-0.1	-	-	-	-	-	759	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-036 0.0-0.15	03-09-15	S15-Se05441	471226	0-0.15	-	-	-	-	-	776	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC94	03-09-15	S15-Se05442	471226	0-0.15	-	-	-	-	-	719	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC94A	03-09-15	133730-1	133730		-	-	-	-	-	805	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-038 0-0.1	15-10-15	S15-Oc11286	476042	0-0.1	-	-	-	-	-	810	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-039 0.0-0.1	02-09-15	S15-Se03294	470968	0-0.1	-	-	-	-	-	765	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC91	02-09-15	S15-Se03308	470968	0-0.1	-	-	-	-	-	746	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC91A	02-09-15	133709-3	133709		-	-	-	-	-	664	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-040 0.0-0.1	02-09-15	S15-Se03295	470968	0-0.1	-	-	-	-	-	771	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-041 0.0-0.1	02-09-15	S15-Se03296	470968	0-0.1	-	-	-	-	-	788	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-042 0.0-0.1	02-09-15	S15-Se03297	470968	0-0.1	-	-	-	-	-	854	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-043 0.0-0.2	01-09-15	S15-Se01632	470781	0-0.2	-	-	-	-	-	814	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC87	01-09-15	S15-Se01657	470781	0-0.2	-	-	-	-	-	728	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC87A	01-09-15	133623-7	133623		-	-	-	-	-	703	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-044 0.0-0.1	01-09-15	S15-Se01633	470781	0-0.1	-	-	-	-	-	742	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-045 0-0.1	15-10-15	S15-Oc11287	476042	0-0.1	-	-	-	-	-	774	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-046 0-0.1	15-10-15	S15-Oc11288	476042	0-0.1	-	-	-	-	-	864	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-047 0-0.1	15-10-15	S15-Oc11289	476042	0-0.1	-	-	-	-	-	928	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-048 0.0-0.1	02-09-15	S15-Se03298	470968	0-0.1	-	-	-	-	-	762	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-049 0.0-0.2	02-09-15	S15-Se03299	470968	0-0.2	-	-	-	-	-	838	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-050 0.0-0.1	02-09-15	S15-Se03300	470968	0-0.1	-	-	-	-	-	845	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-051 0.0-0.1	02-09-15	S15-Se03301	470968	0-0.1	-	-	-	-	-	851	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

Table App C
Job Number 54782
Project Stage 2c X series samples - asbestos

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-052 0.0-0.1	01-09-15	S15-Se01634	470781	0-0.1	-	-	-	-	-	705	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-053 0-0.1	15-10-15	S15-Oc11290	476042	0-0.1	-	-	-	-	-	829	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC02-15/10	15-10-15	S15-Oc11291	476042	0-0.1	-	-	-	-	-	914	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC02-15/10	15-10-15		135939		-	-	-	-	-	905	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-054 0-0.1	31-08-15	S15-Au26691	470534	0-0.1	-	-	-	-	-	835	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-055 0-0.1	31-08-15	S15-Au26693	470534	0-0.1	-	-	-	-	-	923	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-056 0-0.2	31-08-15	S15-Au26695	470534	0-0.2	-	-	-	-	-	811	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC80	31-08-15	S15-Au26714	470534	0-0.2	-	-	-	-	-	894	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QCA80	31-08-15	133542-11	133542		-	-	-	-	-	930	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-057 0-0.1	31-08-15	S15-Au26694	470534	0-0.1	-	-	-	-	-	766	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-058 0.0-0.1	01-09-15	S15-Se01635	470781	0-0.1	-	-	-	-	-	711	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-059 0-0.1	31-08-15	S15-Au26689	470534	0-0.1	-	-	-	-	-	902	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-060 0-0.1	31-08-15	S15-Au26686	470534	0-0.1	-	-	-	-	-	774	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-061 0-0.1	31-08-15	S15-Au26687	470534	0-0.1	-	-	-	-	-	818	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-062 0-0.1	31-08-15	S15-Au26688	470534	0-0.1	-	-	-	-	-	789	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-063 0-0.1	31-08-15	S15-Au26690	470534	0-0.1	-	-	-	-	-	872	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-064 0-0.2	31-08-15	S15-Au26692	470534	0-0.2	-	-	-	-	-	763	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-065 0.0-1.0	27-08-15	M15-Au24519	470301	0-1	-	-	-	-	-	812	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-066 0-0.2	31-08-15	S15-Au26681	470534	0-0.2	-	-	-	-	-	1063	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-067 0.0-0.15	01-09-15	S15-Se01636	470781	0-0.15	-	-	-	-	-	880	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC86	01-09-15	S15-Se01656	470781	0-0.15	-	-	-	-	-	806	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC86A	01-09-15	133623-6	133623		-	-	-	-	-	816	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-068 0.0-0.1	01-09-15	S15-Se01637	470781	0-0.1	-	-	-	-	-	801	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-069 0.0-0.2	01-09-15	S15-Se01638	470781	0-0.2	-	-	-	-	-	785	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

Table App C
Job Number 54782
Project Stage 2c X series samples - asbestos

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-070 0.0-0.8	27-08-15	M15-Au24518	470301	0-0.8	-	-	-	-	-	827	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC57	27-08-15	M15-Au24522	470301	0-0.8	-	-	-	-	-	927	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC57A	27-08-15	133384-3	133384		-	-	-	-	-	798	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-071 0.0-1.0	27-08-15	M15-Au24516	470301	0-1	-	-	-	-	-	766	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-071 1.0-1.3	27-08-15	M15-Au24517	470301	1-1.3	-	-	-	-	-	898	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-072 0.0-0.7	27-08-15	M15-Au24515	470301	0-0.7	-	-	-	-	-	903	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-073 0.0-0.15	01-09-15	S15-Se01639	470781	0-0.15	-	-	-	-	-	745	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-074 0.0-0.2	01-09-15	S15-Se01640	470781	0-0.2	-	-	-	-	-	941	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-075 0.0-0.5	01-09-15	S15-Se01641	470781	0-0.5	-	-	-	-	-	728	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-076 0.0-1.0	27-08-15	M15-Au24513	470301	0-1	-	-	-	-	-	749	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-076 1.0-1.2	27-08-15	M15-Au24514	470301	1-1.2	-	-	-	-	-	677	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-077 0.0-1.0	27-08-15	M15-Au24512	470301	0-1	-	-	-	-	-	912	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC56	27-08-15	M15-Au24521	470301	0-1	-	-	-	-	-	783	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC56A	27-08-15	133384-2	133384		-	-	-	-	-	860	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-078 0.0-1.0	27-08-15	M15-Au24511	470301	0-1	-	-	-	-	-	857	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-079 0.0-0.8	27-08-15	M15-Au24510	470301	0-0.8	-	-	-	-	-	854	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-080 0.0-0.8	27-08-15	M15-Au24509	470301	0-0.8	-	-	-	-	-	793	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-081 0.0-1.0	27-08-15	M15-Au24508	470301	0-1	-	-	-	-	-	756	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC68	27-08-15	M15-Au24533	470301	0-1	-	-	-	-	-	762	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC68A	27-08-15	133384-14	133384		-	-	-	-	-	812	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-082 0.0-0.2	02-09-15	S15-Se03302	470968	0-0.2	-	-	-	-	-	852	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-083 0.0-0.8	27-08-15	M15-Au24507	470301	0-0.8	-	-	-	-	-	860	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC61	27-08-15	M15-Au24526	470301	0-0.8	-	-	-	-	-	763	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC61A	27-08-15	133384-7	133384		-	-	-	-	-	749	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL

Table App C
Job Number 54782
Project Stage 2c X series samples - asbestos

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-084 0.0-0.8	27-08-15	M15-Au24506	470301	0-0.8	-	-	-	-	-	847	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-085 0.0-0.9	27-08-15	M15-Au24505	470301	0-0.9	-	-	-	-	-	827	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC66	27-08-15	M15-Au24531	470301	0-0.9	-	-	-	-	-	984	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC66A	27-08-15	133384-12	133384		-	-	-	-	-	941	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-086 0.0-1.0	27-08-15	M15-Au24504	470301	0-1	-	-	-	-	-	791	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-087 0.0-0.9	27-08-15	M15-Au24503	470301	0-0.9	-	-	-	-	-	744	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-088 0-0.2	31-08-15	S15-Au26680	470534	0-0.2	-	-	-	-	-	954	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1_089 0.0-0.2	06-08-15	S15-Au05937	468034	0-0.2	-	-	-	-	-	670	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-090 0.0-0.2	01-09-15	S15-Se01642	470781	0-0.2	-	-	-	-	-	704	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-091 0.0-1.0	27-08-15	M15-Au24501	470301	0-1	-	-	-	-	-	902	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-091 1.0-1.1	27-08-15	M15-Au24502	470301	1-1.1	-	-	-	-	-	940	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-092 0.0-0.8	27-08-15	M15-Au24500	470301	0-0.8	-	-	-	-	-	586	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-093 0.0-1.0	27-08-15	M15-Au24499	470301	0-1	-	-	-	-	-	588	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-094 0.0-1.0	27-08-15	M15-Au24497	470301	0-1	-	-	-	-	-	728	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-094 1.0-1.5	27-08-15	M15-Au24498	470301	1-1.5	-	-	-	-	-	723	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-095 0.0-1.0	27-08-15	M15-Au24495	470301	0-1	-	-	-	-	-	820	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-095 1.0-1.1	27-08-15	M15-Au24496	470301	1-1.1	-	-	-	-	-	824	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-096 0.0-1.0	27-08-15	M15-Au24494	470301	0-1	-	-	-	-	-	820	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-097 0.0-1.0	27-08-15	M15-Au24493	470301	0-1	-	-	-	-	-	532	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-098 0.0-0.15	01-09-15	S15-Se01643	470781	0-0.15	-	-	-	-	-	780	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-099 0.0-0.2	02-09-15	S15-Se03303	470968	0-0.2	-	-	-	-	-	813	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-100 0.0-0.3	01-09-15	S15-Se01644	470781	0-0.3	-	-	-	-	-	859	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-101 0.0-1.0	27-08-15	M15-Au24492	470301	0-1	-	-	-	-	-	585	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-102 0.0-1.0	27-08-15	M15-Au24491	470301	0-1	-	-	-	-	-	611	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
X1-103 0.0-1.0	27-08-15	M15-Au24490	470301	0-1	-	-	-	-	-	802	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-104 0.0-1.0	27-08-15	M15-Au24489	470301	0-1	-	-	-	-	-	657	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-105 0.0-1.0	27-08-15	M15-Au24488	470301	0-1	-	-	-	-	-	536	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-106 0-0.2	31-08-15	S15-Au26676	470534	0-0.2	-	-	-	-	-	908	0	0	0	0	0	0.0016	0.0016	0.0016	-	-	0.0002	No asbestos detected at the reporting limit of 0.001% w/w.*	Chrysotile asbestos detected in the form of loose fibre bundles.	NIL	Organic fibre detected.	NIL
X1-107 0.0-0.2	01-09-15	S15-Se01645	470781	0-0.2	-	-	-	-	-	768	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-108 0.0-0.4	01-09-15	S15-Se01646	470781	0-0.4	-	-	-	-	-	653	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-109 0.0-1.0	27-08-15	M15-Au24486	470301	0-1	-	-	-	-	-	467	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.002% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-109 1.0-1.2	27-08-15	M15-Au24487	470301	1-1.2	-	-	-	-	-	450	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.002% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-110 0.0-1.0	27-08-15	M15-Au24484	470301	0-1	-	-	-	-	-	618	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-110 1.0-1.2	27-08-15	M15-Au24485	470301	1-1.2	-	-	-	-	-	703	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-111 0.0-1.0	27-08-15	M15-Au24482	470301	0-1	-	-	-	-	-	561	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-111 1.0-1.1	27-08-15	M15-Au24483	470301	1-1.1	-	-	-	-	-	614	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-112 0.0-1.0	27-08-15	M15-Au24480	470301	0-1	-	-	-	-	-	567	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-112 1.0-1.2	27-08-15	M15-Au24481	470301	1-1.2	-	-	-	-	-	561	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1_114 0.0-0.3	06-08-15	S15-Au05938	468034	0-0.3	-	-	-	-	-	838	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-115 0.0-0.15	01-09-15	S15-Se01647	470781	0-0.15	-	-	-	-	-	930	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-116 0.0-0.1	01-09-15	S15-Se01648	470781	0-0.1	-	-	-	-	-	931	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-117 0.0-1.0	27-08-15	M15-Au24478	470301	0-1	-	-	-	-	-	673	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-117 1.0-1.2	27-08-15	M15-Au24479	470301	1-1.2	-	-	-	-	-	677	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-118 0.0-1.0	27-08-15	M15-Au24477	470301	0-1	-	-	-	-	-	685	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-119 0-0.2	31-08-15	S15-Au26699	470534	0-0.2	-	-	-	-	-	899	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-120 0.0-0.15	01-09-15	S15-Se01649	470781	0-0.15	-	-	-	-	-	928	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC82	01-09-15	S15-Se01652	470781	0-0.15	-	-	-	-	-	996	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

Table App C
Job Number 54782
Project Stage 2c X series samples - asbestos

					Asbestos - Field					Asbestos												Asbestos - Trace Analysis				
					Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
					L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment
EQL																										
NEPM 2013 Soil HIL A									0.01												0.001					
NEPM 2013 Soil HSL A - Sensitive Setting																										
QC82A	01-09-15	133623-2	133623		-	-	-	-	-	1002	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-121 0.0-0.15	01-09-15	S15-Se01650	470781	0-0.15	-	-	-	-	-	793	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC81	01-09-15	S15-Se01651	470781	0-0.15	-	-	-	-	-	809	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
QC81A	01-09-15	133623-1	133623		-	-	-	-	-	878	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL
X1-122 0.0-0.3	02-09-15	S15-Se03304	470968	0-0.3	-	-	-	-	-	942	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.
X1-123 0.0-0.1	02-09-15	S15-Se03305	470968	0-0.1	-	-	-	-	-	851	0	0	0	0	0	0	0	0	-	-	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.

SP01-01
SP01-02
SP01-03
SP01-04
SP01-05
SP01-06
SP02-25
SP02-24
SP02-26
SP02-23
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SP02-28
SP02-17
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SP02-18
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SP02-21
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SP02-10
SP02-08
SP02-07
SP02-11
SP02-12
SP02-01
SP02-06
SP02-02
SP02-05
SP02-03
SP02-04

Source: Base Image - © Near Map 28-07-2015

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0 5 10 20 m

Scale:1:600

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Original Issue - R01	SE	20-11-2015

Legend:

- CHK001/6 Buildings
- CHK001/6 Building Concrete Footprint
- Stockpile Sample Locations

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Figure 6A: X Series Compound Layout and Stockpile Sample Locations

Client: Maryland Development Company

Project: Central Precinct

Job No: 50374 File Name: 50374_06A

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table App C
Project Number: 54782
Project Name: Stage 2c X series stockpile samples

					Metals & Metalloids								Polycyclic Aromatic Hydrocarbons																							TPHs (NEPC 1999)					TRHs (NEPC 2013)						
					Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.10	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																			10															
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																			170															
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7[#3]																							[#1]						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7[#3]																							[#1]	[#3]	[#3]	[#1]	[#2]	[#1]
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400																		3[#9]		56			300[#10]							280			280	50	50
Site Specific Criteria									230			200							3																							4500	6300				
NEPM 2013 Soil HSL A - Sensitive Setting																															3[#8]													110[#12]		45[#13]
Field_ID	**Date**	**SampleCode**	**Lab Number**	**Depth**																																										
X01SP01_01_0-1	29-06-15	S15-Jn26183	463518	0-1	8.3	<0.4	19	22	15	<0.1	13	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_02_0-1	29-06-15	S15-Jn26184	463518	0-1	5.8	<0.4	20	35	16	<0.1	28	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC01	29-06-15	S15-Jn26273	463518	0-1	5.8	<0.4	16	19	10	<0.1	12	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC01A	29-06-15	130558-1	130558		<4	<0.4	27	38	16	<0.1	42	110	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#5]	<25	<50	<100	<100	-	<50	<100	120	<50	<25	<25
X01SP01_02_1-1.6	29-06-15	S15-Jn26185	463518	1-1.6	3	0.9	27	43	11	<0.1	43	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_03_0-1	29-06-15	S15-Jn26186	463518	0-1	5.2	<0.4	19	41	10	<0.1	34	61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_03_1-1.7	29-06-15	S15-Jn26187	463518	1-1.7	7	<0.4	24	34	15	<0.1	28	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_04_0-1	29-06-15	S15-Jn26188	463518	0-1	4.5	<0.4	19	46	7.8	<0.1	41	63	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_04_1-1.7	29-06-15	S15-Jn26189	463518	1-1.7	5	<0.4	20	34	9.6	<0.1	27	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_05_0-1	29-06-15	S15-Jn26190	463518	0-1	2.9	<0.4	20	34	<5	<0.1	38	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP01_06_0-1	29-06-15	S15-Jn26191	463518	0-1	4.4	<0.4	20	34	11	<0.1	30	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_01_0-1	29-06-15	S15-Jn26192	463518	0-1	4.8	<0.4	24	24	12	<0.1	22	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	72	<50	72	<50	<100	<100	<50	<20	<20
QC02	29-06-15	S15-Jn26274	463518	0-1	6.7	<0.4	22	13	11	<0.1	10	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	250	<50	250	<50	270	<100	<50	<20	<20
QC02A	29-06-15	130558-2	130558		5	<0.4	33	16	18	<0.1	23	55	<0.1	<0.1	<0.1	<0.1	0.08	<0.5	<0.5	-	<0.5	<0.2	<0.1	-	<0.1	<0.1	0.1	<0.1	0.141[#1]	<0.1	<0.1	<0.1	0.1	-	0.28	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25
X01SP02_01_1-2	29-06-15	S15-Jn26193	463518	1-2	5.4	<0.4	21	18	14	<0.1	18	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_02_0-1	29-06-15	S15-Jn26195	463518	0-1	5.4	<0.4	23	12	14	<0.1	14	91	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	130	<50	130	<50	160	<100	<50	<20	<20
X01SP02_02_1-2	29-06-15	S15-Jn26196	463518	1-2	5.7	<0.4	31	15	14	<0.1	20	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	220	<50	220	<50	250	<100	<50	<20	<20
X01SP02_03_0-1	29-06-15	S15-Jn26197	463518	1-1	4.2	<0.4	28	15	9.2	<0.1	20	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_03_1-2	29-06-15	S15-Jn26198	463518	1-2	6.8	<0.4	36	18	12	<0.1	20	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_04_0-1	29-06-15	S15-Jn26199	463518	0-1	5.5	<0.4	27	17	11	<0.1	17	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_04_1-2	29-06-15	S15-Jn26200	463518	1-2	3.2	<0.4	29	34	12	<0.1	37	87	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	0.6	<0.5	0.6	-	<20	<20	<50	52	52	<50	<100	<100	<50	<20	<20
X01SP02_05_0-1	29-06-15	S15-Jn26201	463518	0-1	7.7	<0.4	28	19	14	<0.1	18	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_05_1-2	29-06-15	S15-Jn26202	463518	1-2	5.1	<0.4	26	20	8.1	<0.1	23	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_05_2-2.5	29-06-15	S15-Jn26203	463518	2-2.5	3.6	<0.4	23	30	15	<0.1	32	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_06_0-1	29-06-15	S15-Jn26204	463518	0-1	5.4	<0.4	23	27	11	<0.1	25	55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	64	<50	64	<50	<100	<100	<50	<20	<20
X01SP02_06_1-2	29-06-15	S15-Jn26205	463518	1-2	4.6	<0.4	19	28	10	<0.1	28	56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	140	<50	140	<50	180	<100	<50	<20	<20
X01SP02_07_0-1	29-06-15	S15-Jn26207	463518	0-1	4.3	<0.4	18	30	11	<0.1	25	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	53	<50	53	<50	<100	<100	<50	<20	<20
X01SP02_07_1-2	29-06-15	S15-Jn26208	463518	1-2	6.1	<0.4	24	27	16	<0.1	25	71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	57	120	180	<50	110	<100	<50	<20	<20
X01SP02_07_2-2.5	29-06-15	S15-Jn26209	463518	2-2.5	5.7	<0.4	23	28	8.3	<0.1	30	62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	160	140	300	<50	220	<100	<50	<20	<20
X01SP02_08_0-1	29-06-15	S15-Jn26210	463518	0-1	4.4	<0.4	20	33	9.5	<0.1	33	59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	55	190	250	<50	130	<100	<50	<20	<20
X01SP02_08_1-2	29-06-15	S15-Jn26211	463518	1-2	3.9	<0.4	19	24	11	<0.1	20	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_08_2-2.5	29-06-15	S15-Jn26212	463518	2-2.5	4.1	<0.4	38	26	7.7	<0.1	40	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	53	53	<50	<100	<100	<50	<20	<20
X01SP02_09_0-1	29-06-15	S15-Jn26213	463518	0-1	6.1	<0.4	48	23	9.7	<0.1	35	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_09_1-2	29-06-15	S15-Jn26214	463518	1-2	7	<0.4	30	20	15	<0.1	23	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_09_2-2.5	29-06-15	S15-Jn26215	463518	2-2.5	3.7	<0.4	38	18	7.8	<0.1	30	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_10_0-1	29-06-15	S15-Jn26216	463518	0-1	4.9	<0.4	26	21	13	<0.1	22	52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_10_1-2	29-06-15	S15-Jn26217	463518	1-2	5.2	<0.4	34	20	13	<0.1	25	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_11_0-1	29-06-15	S15-Jn26219	463518	0-1	5.5	<0.4	48	19	9.6	<0.1	32	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	100	<50	100	<50	130	<100	<50	<20	<20
X01SP02_11_1-2	29-06-15	S15-Jn26220	463518	1-2	5	<0.4	22	17	12	<0.1	15	75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_11_2-2.5	29-06-15	S15-Jn26221	463518	2-2.5	5.1	<0.4	46	24	11	<0.1	37	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_12_0-1	29-06-15	S15-Jn26222	463518	0-1	6.3	<0.4	22	18	10	<0.1	12	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_12_1-2	29-06-15	S15-Jn26223	463518	1-2	4.6	<0.4	32	20	6.9	<0.1	27	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_12_2-2.5	29-06-15	S15-Jn26224	463518	2-2.5	8.5	<0.4	28	18	35	<0.1	17	72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_13_0-1	29-06-15	S15-Jn26225	463518	0-1	5.9	<0.4	31	18	10	<0.1	22	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_13_1-2	29-06-15	S15-Jn26226	463518	1-2	5.9	<0.4	28	18	14	<0.1	17	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_13_2-2.5	29-06-15	S15-Jn26227	463518	2-2.5	5.2	<0.4	24	18	13	<0.1	19	66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_14_0-1	29-06-15	S15-Jn26228	463518	0-1	4.9	<0.4	19	25	11	<0.1	13	65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_14_1-2	29-06-15	S15-Jn26229	463518	1-2	6.1	<0.4	27	19	15	<0.1	16	88	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#1]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20

Table App C
Project Number: 54782
Project Name: Stage 2c X series stockpile samples

JBS&G

					Metals & Metalloids								Polycyclic Aromatic Hydrocarbons																								TPHs (NEPC 1999)					TRHs (NEPC 2013)					
					Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(a)pyrene TEQ (WHO)	Benzo(b,j)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Carcinogenic PAHs as B(a)P TPE	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Total)	Total Positive PAHs	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10 - C16 less Naphthalene (F2)	C6-C10 Fraction	C6 - C10 less BTEX (F1)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					2.00	0.40	1.00	1.00	1.00	0.10	1.00	1.00	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50		0.50		0.10	0.50	0.10	0.10	0.10	0.10		0.10	0.10	0.10	0.10	0.50		20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	20.00	20.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					40		140	85	470		50	230																				10															
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					100		410	230	1100		270	770																				170															
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																	0.7[#3]																									25[#1]			25[#1]	125[#2]	125[#1]
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	0.7[#3]																									120[#1]	300[#3]	2800[#3]	120[#1]	180[#2]	180[#1]
NEPM 2013 Soil HIL A					100[#4]	20	100[#5]	6000	300[#6]	40[#7]	400	7400																		3[#9]		56			300[#10]							280			280	50	50
Site Specific Criteria									230			200							3																								4500	6300			
NEPM 2013 Soil HSL A - Sensitive Setting																																3[#8]													110[#12]		45[#13]
Field_ID	**Date**	**SampleCode**	**Lab Number**	**Depth**																																											
X01SP02_14_2-2.5	29-06-15	S15-Jn26230	463518	2-2.5	4.7	<0.4	24	17	11	<0.1	21	61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_15_0-1	29-06-15	S15-Jn26231	463518	0-1	6.5	<0.4	27	19	13	<0.1	21	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_15_1-2	29-06-15	S15-Jn26232	463518	1-2	5.8	<0.4	27	18	12	<0.1	20	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_15_2-2.5	29-06-15	S15-Jn26233	463518	2-2.5	6.2	<0.4	33	18	13	<0.1	25	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_16_0-1	30-06-15	S15-Jn26234	463518	0-1	7.8	<0.4	32	17	14	<0.1	24	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC03	30-06-15	S15-Jn26275	463518	0-1	8.6	<0.4	30	15	19	<0.1	21	64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC03A	30-06-15	130558-3	130558		6	<0.4	27	22	79	<0.1	18	130	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#5]	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25
X01SP02_16_1-2	30-06-15	S15-Jn26235	463518	1-2	6.3	<0.4	41	25	16	<0.1	30	60	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_16_2-2.5	30-06-15	S15-Jn26236	463518	2-2.5	5.9	<0.4	31	18	11	<0.1	24	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_17_0-1	30-06-15	S15-Jn26237	463518	0-1	7.4	<0.4	36	20	16	<0.1	23	64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_17_1-2	30-06-15	S15-Jn26238	463518	1-2	5.3	<0.4	26	18	8.6	<0.1	18	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC04	30-06-15	S15-Jn26276	463518	1-2	6	<0.4	30	15	11	<0.1	24	55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC04A	30-06-15	130558-4	130558		6	<0.4	30	15	17	<0.1	24	53	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#5]	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25
X01SP02_17_2-2.5	30-06-15	S15-Jn26239	463518	2.5-2.5	6.3	<0.4	22	15	11	<0.1	12	47	<0.5	<0.5	<0.5	<0.5	0.5	0.6	0.9	1.2	-	0.6	-	<0.5	<0.5	0.7	<0.5	0.6	<0.5	0.8945[#3]	<0.5	<0.5	<0.5	0.8	3.2	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_18_0-1	30-06-15	S15-Jn26240	463518	0-1	3.6	<0.4	37	18	6.1	<0.1	29	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_18_1-2	30-06-15	S15-Jn26241	463518	1-2	5.3	<0.4	25	16	9.6	<0.1	19	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_18_2-3	30-06-15	S15-Jn26242	463518	2-3	3.5	<0.4	32	14	6.7	<0.1	26	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_19_0-1	30-06-15	S15-Jn26243	463518	0-1	5.4	<0.4	30	19	8.5	<0.1	22	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_19_1-2	30-06-15	S15-Jn26244	463518	1-2	3.5	<0.4	30	15	6.9	<0.1	25	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_19_2-3	30-06-15	S15-Jn26245	463518	2-3	3.7	<0.4	36	16	5.6	<0.1	29	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_20_0-1	30-06-15	S15-Jn26246	463518	0-1	5.8	<0.4	30	18	12	<0.1	22	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_20_1-2	30-06-15	S15-Jn26247	463518	1-2	7.3	<0.4	27	16	14	<0.1	15	79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_20_2-3	30-06-15	S15-Jn26248	463518	2-3	3.1	<0.4	33	11	7.4	<0.1	18	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_21_0-1	30-06-15	S15-Jn26249	463518	0-1	5.6	<0.4	18	17	14	<0.1	11	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_21_1-2	30-06-15	S15-Jn26250	463518	1-2	6.7	<0.4	34	20	19	<0.1	21	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_21_2-3	30-06-15	S15-Jn26251	463518	2-3	7.4	<0.4	29	18	14	<0.1	18	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_22_0-1	30-06-15	S15-Jn26252	463518	0-1	5.4	<0.4	44	23	11	<0.1	37	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_22_1-2	30-06-15	S15-Jn26253	463518	1-2	4.3	<0.4	34	19	8.4	<0.1	27	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_22_2-3	30-06-15	S15-Jn26254	463518	2-3	6.8	<0.4	36	24	11	<0.1	23	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_23_0-1	30-06-15	S15-Jn26255	463518	0-1	4.5	<0.4	45	18	<5	<0.1	39	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_23_1-2	30-06-15	S15-Jn26256	463518	1-2	4.7	0.8	34	16	8.7	<0.1	27	190	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_23_2-3	30-06-15	S15-Jn26257	463518	2-3	4.5	<0.4	33	19	10	<0.1	29	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_24_0-1	30-06-15	S15-Jn26258	463518	0-1	5.4	<0.4	33	15	9.6	<0.1	23	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_24_1-2	30-06-15	S15-Jn26259	463518	1-2	4.6	<0.4	39	17	7.8	<0.1	30	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	120	110	230	<50	220	<100	<50	<20	<20
X01SP02_24_2-3	30-06-15	S15-Jn26260	463518	2-3	4.8	<0.4	32	17	9.4	<0.1	20	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_25_0-1	30-06-15	S15-Jn26261	463518	0-1	4.5	<0.4	26	14	17	<0.1	15	71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC05	30-06-15	S15-Jn26277	463518	0-1	5.6	<0.4	18	11	12	<0.1	6.1	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
QC05A	30-06-15	130558-5	130558		5	<0.4	27	16	17	<0.1	18	54	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.172[#2]	<0.1	<0.1	<0.1	<0.1	-	0[#5]	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25
X01SP02_25_1-2	30-06-15	S15-Jn26262	463518	1-2	6.5	<0.4	36	18	13	<0.1	22	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_26_0-1	30-06-15	S15-Jn26264	463518	0-1	5.9	<0.4	29	16	9.6	<0.1	18	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_26_1-2	30-06-15	S15-Jn26265	463518	1-2	5.8	<0.4	31	17	11	<0.1	24	42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_27_0-1	30-06-15	S15-Jn26267	463518	0-1	4.7	<0.4	37	17	6.9	<0.1	25	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_27_1-2	30-06-15	S15-Jn26268	463518	1-2	3.9	<0.4	21	17	10	<0.1	13	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_28_0-1	30-06-15	S15-Jn26270	463518	0-1	4.3	<0.4	33	20	8.3	<0.1	26	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_28_1-2	30-06-15	S15-Jn26271	463518	1-2	4.7	<0.4	31	17	8	<0.1	28	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
X01SP02_28_2-3	30-06-15	S15-Jn26272	463518	2-3	5.5	<0.4	30	17	9.8	<0.1	22	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#4]	<0.5	<0.5	<0.5	<0.5	<0.5	-	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
Statistical Summary																																															
Number of Results					94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	89	5	89	5	94	89	94	94	94	94	94	94	94	94	94	89	5	94	94	94	94	89	94	94	94	94	94	94
Number of Detects					93	2	94	94	92	0	94	94	0	0	0	0	2	1	89	89	0	1	0	0	0	1	0	2	0	2	0	0	1	2	2	5	0	0	12	6	14	0	9	1	0	0	0
Minimum Concentration					2.9	<0.4	16	11	<5	<0.1	6.1	17	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	1.2	<0.5	<0.5	<0.2	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0.141	<0.1	<0.1	<0.1	<0.1	<0.5	<0	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20
Minimum Detect					2.9	0.8	16	11	5.6	ND	6.1	17	ND	ND	ND	ND	0.08	0.6	0.6	1.2	ND	0.6	ND	ND	ND	0.7	ND	0.1	ND	0.141	ND	ND	0.6	0.1	0.6	0.28	ND	ND	53	52	52	ND	110	120	ND	ND	ND
Maximum Concentration					8.6	0.9	48	46	79	<0.1	43	190	<0.5	<0.5	<0.5	<0.5	0.5	0.6	0.9	1.2	<0.5	0.6	<0.2	<0.5	<0.5	0.7	<0.5	0.6	<0.5	<1.21	<0.5	<0.5	0.6	0.8	3.2	0.28	<25	<50	250	190	300	<50	270	120	<50	<25	<25
Maximum Detect					8.6	0.9	48	46	79	ND	43	190	ND	ND	ND	ND	0.5	0.6	0.9	1.2	ND	0.6	ND	ND	ND	0.7	ND	0.6	ND	0.8945	ND	ND	0.6	0.8	3.2	0.28	ND	ND	250	190	300	ND	270	120	ND	ND	ND
Average Concentration					5.3	0.21	29	21	12	0.05	24	56	0.24	0.24	0.24	0.24	0.24	0.25	0.58	1.2	0.25	0.25	0.1	0.24	0.25	0.24	0.24	0.24	0.24	0.58	0.24	0.24	0.24	0.25	0.29	0.056	10	11	38	32	45	25	63	51	25	10	10
Median Concentration					5.4	0.2	28	18	11	0.05	23	50	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.605	0.25	0.25	0.25	0.25	0.25	0	10	10	25	25	25	25	50	50	25	10	10
Standard Deviation					1.3	0.095	7.1	7.1	8.1	0	7.7	25	0.045	0.045	0.045	0.045	0.056	0.036	0.086	0	0	0.037	0	0.045	0	0.066	0.045	0.057	0.045	0.12	0.045	0.045	0.058	0.072	0.31	0.13	0.56	3.4	39	25	57	0	43	7.2	0	0.56	0.56
Number of Guideline Exceedances					94	0	94	0	0	0	19	29	0	0	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	94	0	0	0	0	89	0	0	0	0	0	0	94	94	0	94	94	94
Number of Guideline Exceedances(Detects Only)					93	0	94	0	0	0	19	29	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	94	0	0	0	0	89	0	0	0	0	0	0	0	9	0	0	0	0

Env Stds Comments

#1:ESLs are of moderate reliability.

#2:ESLs are of moderate reliability. To obtain F1 subtract the sum of BTEX from C6-C10

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing from this Combined Compound.

#2 ESDAT Combined. Some Analytes are missing from this Combined Compound

Table App C
Project Number: 54782
Project Name: Stage 2c X series stockpile samples

					Organochlorine Pesticides																									
					4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan (Total)	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Hexachlorobenzene	Methoxychlor	Toxaphene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.05	0.05		0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)										3																				
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)										180																				
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																														
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																														
NEPM 2013 Soil HIL A							6					240				50				270		10			6			10	300	20
Site Specific Criteria							6																							
NEPM 2013 Soil HSL A - Sensitive Setting																														
Field_ID	Date	SampleCode	Lab Number	Depth																										
X01SP01_01_0-1	29-06-15	S15-Jn26183	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.3	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_02_0-1	29-06-15	S15-Jn26184	463518	0-1	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC01	29-06-15	S15-Jn26273	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC01A	29-06-15	130558-1	130558		<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP01_02_1-1.6	29-06-15	S15-Jn26185	463518	1-1.6	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_03_0-1	29-06-15	S15-Jn26186	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_03_1-1.7	29-06-15	S15-Jn26187	463518	1-1.7	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_04_0-1	29-06-15	S15-Jn26188	463518	0-1	<0.05	<0.05	0.115[#3]	0.09	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_04_1-1.7	29-06-15	S15-Jn26189	463518	1-1.7	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_05_0-1	29-06-15	S15-Jn26190	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP01_06_0-1	29-06-15	S15-Jn26191	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_01_0-1	29-06-15	S15-Jn26192	463518	0-1	<0.05	<0.05	0.165[#3]	0.14	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC02	29-06-15	S15-Jn26274	463518	0-1	<0.05	<0.05	0.095[#3]	0.07	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC02A	29-06-15	130558-2	130558		<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_01_1-2	29-06-15	S15-Jn26193	463518	1-2	<0.05	<0.05	0.195[#3]	0.17	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_02_0-1	29-06-15	S15-Jn26195	463518	0-1	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_02_1-2	29-06-15	S15-Jn26196	463518	1-2	<0.05	<0.05	0.125[#3]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_03_0-1	29-06-15	S15-Jn26197	463518	1-1	<0.05	<0.05	0.275[#3]	0.25	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_03_1-2	29-06-15	S15-Jn26198	463518	1-2	<0.05	0.27	0.6[#3]	0.33	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_04_0-1	29-06-15	S15-Jn26199	463518	0-1	<0.05	<0.05	0.125[#3]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_04_1-2	29-06-15	S15-Jn26200	463518	1-2	<0.05	<0.05	0.595[#3]	0.57	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_05_0-1	29-06-15	S15-Jn26201	463518	0-1	<0.05	<0.05	0.175[#3]	0.15	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_05_1-2	29-06-15	S15-Jn26202	463518	1-2	<0.05	<0.05	0.095[#3]	0.07	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_05_2-2.5	29-06-15	S15-Jn26203	463518	2-2.5	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_06_0-1	29-06-15	S15-Jn26204	463518	0-1	<0.05	0.07	0.29[#3]	0.22	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_06_1-2	29-06-15	S15-Jn26205	463518	1-2	<0.05	<0.05	0.165[#3]	0.14	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_07_0-1	29-06-15	S15-Jn26207	463518	0-1	<0.05	<0.05	0.255[#3]	0.23	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_07_1-2	29-06-15	S15-Jn26208	463518	1-2	<0.05	<0.05	0.205[#3]	0.18	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.2	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_07_2-2.5	29-06-15	S15-Jn26209	463518	2-2.5	<0.05	<0.05	0.295[#3]	0.27	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_08_0-1	29-06-15	S15-Jn26210	463518	0-1	<0.05	<0.05	0.545[#3]	0.52	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_08_1-2	29-06-15	S15-Jn26211	463518	1-2	<0.05	<0.05	0.155[#3]	0.13	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_08_2-2.5	29-06-15	S15-Jn26212	463518	2-2.5	<0.05	0.55	1.11[#3]	0.56	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_09_0-1	29-06-15	S15-Jn26213	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_09_1-2	29-06-15	S15-Jn26214	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_09_2-2.5	29-06-15	S15-Jn26215	463518	2-2.5	<0.05	0.38	0.65[#3]	0.27	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_10_0-1	29-06-15	S15-Jn26216	463518	0-1	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_10_1-2	29-06-15	S15-Jn26217	463518	1-2	<0.05	0.86	1.26[#3]	0.4	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_11_0-1	29-06-15	S15-Jn26219	463518	0-1	<0.05	<0.05	0.075[#3]	0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_11_1-2	29-06-15	S15-Jn26220	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.5	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_11_2-2.5	29-06-15	S15-Jn26221	463518	2-2.5	<0.05	<0.05	0.135[#3]	0.11	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.4	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.19	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_12_0-1	29-06-15	S15-Jn26222	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_12_1-2	29-06-15	S15-Jn26223	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_12_2-2.5	29-06-15	S15-Jn26224	463518	2-2.5	<0.05	0.07	0.25[#3]	0.18	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_13_0-1	29-06-15	S15-Jn26225	463518	0-1	<0.05	<0.05	0.125[#3]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_13_1-2	29-06-15	S15-Jn26226	463518	1-2	<0.05	<0.05	0.115[#3]	0.09	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_13_2-2.5	29-06-15	S15-Jn26227	463518	2-2.5	<0.05	<0.05	0.145[#3]	0.12	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_14_0-1	29-06-15	S15-Jn26228	463518	0-1	<0.05	<0.05	0.125[#3]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_14_1-2	29-06-15	S15-Jn26229	463518	1-2	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1

	BTEX						Polychlorinated Biphenyls							
	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.20	0.10	0.30	0.10		0.10	0.10	0.10	0.10	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil	10	1.5[#3]	10[#3]			10[#3]								
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil	50[#3]	70[#3]	85[#3]			105[#3]								
NEPM 2013 Soil HIL A	0.7	NL	480			110								1[#11]
Site Specific Criteria														
NEPM 2013 Soil HSL A - Sensitive Setting	0.5[#8]	55[#8]				40[#8]								
Field_ID														
X01SP01_01_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_02_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC01	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC01A	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP01_02_1-1.6	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_03_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_03_1-1.7	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_04_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_04_1-1.7	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_05_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_06_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_01_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC02	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC02A	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_01_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_02_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_02_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_03_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_03_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_04_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_04_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_05_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_05_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_05_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_06_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_06_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_07_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_07_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_07_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_08_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_08_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_08_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_09_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_09_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_09_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_10_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_10_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	0.3	0.3
X01SP02_11_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_11_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_11_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_12_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_12_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_12_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_13_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_13_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_13_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_14_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_14_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

	Nitrobenzenes			Nitrotoluenes				Explosives in Soil								Organic		
	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2.4- & 2.6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-135-trinitro-135-triazine (RDX)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.10		0.10	0.10									0.10	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)																		
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)																		
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																		
NEPM 2013 Soil HIL A	15															1.5		10
Site Specific Criteria																		
NEPM 2013 Soil HSL A - Sensitive Setting																		
Field_ID																		
X01SP01_01_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_02_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC01	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC01A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP01_02_1-1.6	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_03_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_03_1-1.7	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_04_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_04_1-1.7	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_05_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP01_06_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_01_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC02	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC02A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_01_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_02_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_02_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_03_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_03_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_04_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_04_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_05_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_05_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_05_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_06_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_06_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_07_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_07_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_07_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_08_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_08_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_08_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_09_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_09_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_09_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_10_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_10_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_11_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_11_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_11_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_12_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_12_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_12_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_13_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_13_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_13_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_14_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_14_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

Table App C
Project Number: 54782
Project Name: Stage 2c X series stockpile samples

JBS&G

Organochlorine Pesticides

Field_ID	Date	SampleCode	Lab Number	Depth	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan (Total)	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Hexachlorobenzene	Methoxychlor	Toxaphene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.05	0.05		0.05	0.05	0.05	0.05		0.05	0.05		0.10	0.05		0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.00
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)										3																				
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)										180																				
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																														
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																														
NEPM 2013 Soil HIL A							6					240				50				270		10			6			10	300	20
Site Specific Criteria							6																							
NEPM 2013 Soil HSL A - Sensitive Setting																														
X01SP02_14_2-2.5	29-06-15	S15-Jn26230	463518	2-2.5	<0.05	0.06	0.17[#3]	0.11	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_15_0-1	29-06-15	S15-Jn26231	463518	0-1	<0.05	<0.05	0.215[#3]	0.19	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_15_1-2	29-06-15	S15-Jn26232	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_15_2-2.5	29-06-15	S15-Jn26233	463518	2-2.5	<0.05	<0.05	0.145[#3]	0.12	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.3	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_16_0-1	30-06-15	S15-Jn26234	463518	0-1	<0.05	<0.05	0.145[#3]	0.12	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC03	30-06-15	S15-Jn26275	463518	0-1	<0.05	<0.05	0.365[#3]	0.34	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC03A	30-06-15	130558-3	130558		<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_16_1-2	30-06-15	S15-Jn26235	463518	1-2	<0.05	0.22	0.52[#3]	0.3	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_16_2-2.5	30-06-15	S15-Jn26236	463518	2-2.5	<0.05	0.25	0.55[#3]	0.3	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_17_0-1	30-06-15	S15-Jn26237	463518	0-1	<0.05	0.07	0.25[#3]	0.18	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_17_1-2	30-06-15	S15-Jn26238	463518	1-2	<0.05	0.06	0.085[#3]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC04	30-06-15	S15-Jn26276	463518	1-2	<0.05	0.1	0.21[#3]	0.11	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC04A	30-06-15	130558-4	130558		<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_17_2-2.5	30-06-15	S15-Jn26239	463518	2.5-2.5	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_18_0-1	30-06-15	S15-Jn26240	463518	0-1	<0.05	0.4	0.7[#3]	0.3	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_18_1-2	30-06-15	S15-Jn26241	463518	1-2	<0.05	0.83	1.37[#3]	0.54	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_18_2-3	30-06-15	S15-Jn26242	463518	2-3	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_19_0-1	30-06-15	S15-Jn26243	463518	0-1	<0.05	<0.05	0.085[#3]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_19_1-2	30-06-15	S15-Jn26244	463518	1-2	<0.05	0.28	0.48[#3]	0.2	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_19_2-3	30-06-15	S15-Jn26245	463518	2-3	<0.05	0.08	0.22[#3]	0.14	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_20_0-1	30-06-15	S15-Jn26246	463518	0-1	<0.05	<0.05	0.215[#3]	0.19	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_20_1-2	30-06-15	S15-Jn26247	463518	1-2	<0.05	0.09	0.22[#3]	0.13	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_20_2-3	30-06-15	S15-Jn26248	463518	2-3	<0.05	0.19	0.36[#3]	0.17	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_21_0-1	30-06-15	S15-Jn26249	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_21_1-2	30-06-15	S15-Jn26250	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_21_2-3	30-06-15	S15-Jn26251	463518	2-3	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_22_0-1	30-06-15	S15-Jn26252	463518	0-1	<0.05	0.08	0.22[#3]	0.14	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_22_1-2	30-06-15	S15-Jn26253	463518	1-2	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.3	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_22_2-3	30-06-15	S15-Jn26254	463518	2-3	<0.05	<0.05	0.105[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	0.2	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_23_0-1	30-06-15	S15-Jn26255	463518	0-1	<0.05	0.3	0.47[#3]	0.17	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_23_1-2	30-06-15	S15-Jn26256	463518	1-2	<0.05	<0.05	0.085[#3]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_23_2-3	30-06-15	S15-Jn26257	463518	2-3	<0.05	<0.05	0.085[#3]	0.06	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_24_0-1	30-06-15	S15-Jn26258	463518	0-1	<0.05	0.17	0.36[#3]	0.19	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_24_1-2	30-06-15	S15-Jn26259	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_24_2-3	30-06-15	S15-Jn26260	463518	2-3	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_25_0-1	30-06-15	S15-Jn26261	463518	0-1	<0.05	0.73	1.3[#3]	0.57	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC05	30-06-15	S15-Jn26277	463518	0-1	<0.05	0.32	0.52[#3]	0.2	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
QC05A	30-06-15	130558-5	130558		<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_25_1-2	30-06-15	S15-Jn26262	463518	1-2	<0.05	0.77	1.13[#3]	0.36	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_26_0-1	30-06-15	S15-Jn26264	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_26_1-2	30-06-15	S15-Jn26265	463518	1-2	<0.05	<0.05	0.125[#3]	0.1	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_27_0-1	30-06-15	S15-Jn26267	463518	0-1	<0.05	0.13	0.21[#3]	0.08	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_27_1-2	30-06-15	S15-Jn26268	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_28_0-1	30-06-15	S15-Jn26270	463518	0-1	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_28_1-2	30-06-15	S15-Jn26271	463518	1-2	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
X01SP02_28_2-3	30-06-15	S15-Jn26272	463518	2-3	<0.05	<0.05	<0.1[#4]	<0.05	<0.05	<0.05	<0.05	<0.15[#2]	<0.05	<0.05	-	<0.1	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1

BTEX and Polychlorinated Biphenyls

Field_ID	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.20	0.10	0.30	0.10		0.10	0.10	0.10	0.10	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)														
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)														
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil	10	1.5[#3]	10[#3]			10[#3]								
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil	50[#3]	70[#3]	85[#3]			105[#3]								
NEPM 2013 Soil HIL A	0.7	NL	480			110								1[#11]
Site Specific Criteria														
NEPM 2013 Soil HSL A - Sensitive Setting	0.5[#8]	55[#8]				40[#8]								
X01SP02_14_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_15_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_15_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_15_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_16_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC03	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC03A	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_16_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_16_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_17_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_17_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC04	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC04A	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_17_2-2.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_18_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_18_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_18_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_19_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_19_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_19_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_20_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_20_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_20_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_21_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_21_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_21_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_22_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_22_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_22_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_23_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_23_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_23_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_24_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_24_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_24_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_25_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC05	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
QC05A	<0.2	<1	<0.5	<2	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
X01SP02_25_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_26_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_26_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_27_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_27_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_28_0-1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_28_1-2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_28_2-3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Nitrobenzenes, Nitrotoluenes, Explosives in Soil and Organic

Field_ID	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2.4- & 2.6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-135-trinitro-135-triazine (RDX)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.10	0.10	0.10	0.10		0.10	0.10									0.10	0.10	0.10
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)																		
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)																		
NEPM 2013 ESL Areas of Ecological Significance, Coarse Soil																		
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																		
NEPM 2013 Soil HIL A	15															1.5		10
Site Specific Criteria																		
NEPM 2013 Soil HSL A - Sensitive Setting																		
X01SP02_14_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_15_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_15_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_15_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_16_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC03	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC03A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_16_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_16_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_17_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_17_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC04	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC04A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_17_2-2.5	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_18_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_18_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_18_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_19_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_19_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_19_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_20_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_20_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_20_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_21_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_21_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_21_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_22_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_22_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_22_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_23_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_23_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_23_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_24_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_24_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_24_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_25_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC05	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
QC05A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
X01SP02_25_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_26_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_26_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_27_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_27_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_28_0-1	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_28_1-2	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5
X01SP02_28_2-3	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-	-	-	-	-	-	<1	<0.5	<0.5

Statistical Summary

Statistic	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	Dieldrin	DDD	DDT	alpha-BHC	DDT+DDE+DDD (Sum of Total)	beta-BHC	delta-BHC	alpha-Chlordane	Chlordane	Endosulfan alpha	gamma-Chlordane	Endosulfan beta	Endosulfan (Total)	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Hexachlorobenzene	Methoxychlor	Toxaphene
Number of Results	94	94	94	94	94	94	94	94	94	94	5	89	94	5	94		94	94	94	89	94	94	94	94	94	89
Number of Detects	0	25	64	63	0	0	0	0	0	0	0	8	0	0	0		0	0	0	0	7	0	0	0	0	0
Minimum Concentration	<0.05	<0.05	0.075	<0.05	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.1	<0.1	<0.05	<0.1	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Minimum Detect	ND	0.06	0.075	0.05	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND		ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND
Maximum Concentration	<0.1	0.86	1.37	0.57	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.05	0.2	<0.1	<0.1	<0.1	<0.1	<1
Maximum Detect	ND	0.86	1.37	0.57	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND		ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND
Average Concentration	0.026	0.098	0.23	0.13	0.026	0.026	0.026	0.079	0.026	0.026	0.05	0.071	0.026	0.05	0.026		0.026	0.026	0.026	0.025	0.034	0.026	0.026	0.026	0.026	0.5
Median Concentration	0.025	0.025	0.12	0.09	0.025	0.025	0.025	0.075	0.025	0.025	0.05	0.05	0.025	0.05	0.025		0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5
Standard Deviation	0.006	0.18	0.29	0.13	0.006	0.006	0.006	0.017	0.006	0.006	0	0.076	0.006	0	0.006		0.006	0.006	0.006	0	0.032	0.006	0.006	0.006	0.006	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	94	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	94	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0

Statistic	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene (Total)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)
Number of Results	94	94	94	94	94	89	94	5	94	94	94	94	94	89
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Minimum Concentration	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	0.3
Maximum Concentration	<0.2	<1	<0.5	<2	<1	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	0.3
Average Concentration	0.053	0.074	0.061	0.15	0.074	0.15	0.05	0.05	0.05	0.05	0.05	0.05	0.053	0.053
Median Concentration	0.05	0.05	0.05	0.1	0.05	0.15	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation	0.011	0.1	0.045	0.2	0.1	0	0	0	0	0	0	0	0.026	0.026
Number of Guideline Exceedances	0	0	0	0	0	89	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Statistic	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	2,6-Dinitrotoluene	4-Amino-2,6-dinitrotoluene	Tetryl	2-Amino-4,6-dinitrotoluene	HMX	2.4- & 2.6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-135-trinitro-135-triazine (RDX)
Number of Results	94	94	94	94	5	94	94	5	5	5	5	5	5	5	5	94	94	94
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<1	<0.5	<0.5	<1	<0.1	<0.5	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.48	0.24	0.24	0.48	0.05	0.24	0.24	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.48	0.24	0.24
Median Concentration	0.5	0.25	0.25	0.5	0.05	0.25	0.25	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.25	0.25
Standard Deviation	0.1	0.045	0.045	0.1	0	0.045	0.045	0	0	0	0	0	0	0	0	0.1	0.045	0.045
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Env Stds Comments

#1:ESLs are of moderate reliability.

#2:ESLs are of moderate reliability. To obtain F1 subtract the sum of BTEX from C6-C10

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing from this Combined Compounc

#2 ESDAT Combined. Some Analytes are missing from this Combined Compound

Table App C
Project Number: 54782
Project Name: Stage 2C X series SP asbestos

	Asbestos - Field					Asbestos										Asbestos - Trace Analysis					
	Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthet+AB4:AB103ic Fibres - Comment
	L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	%w/w	Comment	Comment	Comment	Comment	Comment	Comment
EQL																					
NEPM 2013 Soil HIL A					0.01										0.001						
NEPM 2013 Soil HSL A - Sensitive Setting																					
Field_ID	**Lab Number**	**Depth**																			
X01SP01_01_0-1	463518	0-1	-	-	-	-	-	604	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC01	463518		-	-	-	-	-	505	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC01A	130558		-	-	-	-	-	530	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
X01SP01_02_0-1	463518	0-1	-	-	-	-	-	775	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_02_1-1.6	463518	1-1.6	-	-	-	-	-	623	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_03_0-1	463518	0-1	-	-	-	-	-	881	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_03_1-1.7	463518	1-1.7	-	-	-	-	-	935	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_04_0-1	463518	0-1	-	-	-	-	-	1064	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_04_1-1.7	463518	1.7	-	-	-	-	-	1066	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_05_0-1	463518	0-1	-	-	-	-	-	874	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP01_06_0-1	463518	0-1	-	-	-	-	-	954	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_01_0-1	463518	0-1	-	-	-	-	-	820	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_01_1-2	463518	1-2	-	-	-	-	-	606	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_02_0-1	463518	0-1	-	-	-	-	-	657	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC02	463518		-	-	-	-	-	755	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC02A	130558		-	-	-	-	-	658	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
X01SP02_02_1-2	463518	1-2	-	-	-	-	-	917	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_03_0-1	463518	0-1	-	-	-	-	-	864	0	0	0	0	0	0.0008	0.0008	0.0008	0.0001	No asbestos detected at the reporting limit of 0.001% w/w.*	Chrysotile and amosite asbestos detected in the form of loose fibre bundles.	NIL	Organic fibre detected.	NIL	NIL
X01SP02_03_1-2	463518	1-2	-	-	-	-	-	807	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_04_0-1	463518	0-1	-	-	-	-	-	682	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_04_1-2	463518	1-2	-	-	-	-	-	865	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_05_0-1	463518	0-1	-	-	-	-	-	736	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_05_1-2	463518	1-2	-	-	-	-	-	773	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_05_2-2.5	463518	2-2.5	-	-	-	-	-	936	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_06_0-1	463518	0-1	-	-	-	-	-	790	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_06_1-2	463518	1-2	-	-	-	-	-	800	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL

Table App C
Project Number: 54782
Project Name: Stage 2C X series SP asbestos

	Asbestos - Field					Asbestos										Asbestos - Trace Analysis					
	Approximate Volume of Soil	Approx. Sample Mass #1	Mass ACM	Mass Asbestos in ACM #2	Asbestos from ACM in soil #3	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA #4	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos from FA & AF in soil #5	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthet+AB4:AB103ic Fibres - Comment
	L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	%w/w	Comment	Comment	Comment	Comment	Comment	Comment
EQL																					
NEPM 2013 Soil HIL A					0.01										0.001						
NEPM 2013 Soil HSL A - Sensitive Setting																					
Field_ID	**Lab Number**	**Depth**																			
X01SP02_07_0-1	463518	0-1	-	-	-	-	-	887	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_07_1-2	463518	1-2	-	-	-	-	-	709	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_07_2-2.5	463518	2-2.5	-	-	-	-	-	822	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_08_0-1	463518	0-1	-	-	-	-	-	1003	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	Synthetic mineral fibre detected
X01SP02_08_1-2	463518	1-2	-	-	-	-	-	892	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_08_2-2.5	463518	2-2.5	-	-	-	-	-	911	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_09_0-1	463518	0-1	-	-	-	-	-	850	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_09_1-2	463518	1-2	-	-	-	-	-	902	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_09_2-2.5	463518	2-2.5	-	-	-	-	-	845	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_10_0-1	463518	0-1	-	-	-	-	-	877	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_10_1-2	463518	1-2	-	-	-	-	-	849	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_11_0-1	463518	0-1	-	-	-	-	-	749	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_11_1-2	463518	1-2	-	-	-	-	-	861	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_11_2-2.5	463518	2-2.5	-	-	-	-	-	845	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_12_0-1	463518	0-1	-	-	-	-	-	785	0	0	0	0	0	0.0003	0.0003	0.0003	0.00004	No asbestos detected at the reporting limit of 0.001% w/w.*	Chrysotile asbestos detected in the form of loose fibre bundles.	NIL	Organic fibre detected.	NIL	NIL
X01SP02_12_1-2	463518	1-2	-	-	-	-	-	766	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_12_2-2.5	463518	2-2.5	-	-	-	-	-	684	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_13_0-1	463518	0-1	-	-	-	-	-	861	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	Synthetic mineral fibre detected
X01SP02_13_1-2	463518	1-2	-	-	-	-	-	795	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_13_2-2.5	463518	2-2.5	-	-	-	-	-	790	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_14_0-1	463518	0-1	10	16300	8	1.2	0.007	760	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_14_1-2	463518	1-2	-	-	-	-	-	903	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_14_2-2.5	463518	2-2.5	-	-	-	-	-	821	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_15_0-1	463518	0-1	-	-	-	-	-	789	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_15_1-2	463518	1-2	-	-	-	-	-	761	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_15_2-2.5	463518	2-2.5	-	-	-	-	-	861	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_16_0-1	463518	0-1	-	-	-	-	-	742	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL

Table App C
Project Number: 54782
Project Name: Stage 2C X series SP asbestos

			Asbestos - Field					Asbestos										Asbestos - Trace Analysis					
			Approximate Volume of Soil	Approx. Sample Mass #1	Mass ACM	Mass Asbestos in ACM #2	Asbestos from ACM in soil #3	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA #4	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos from FA & AF in soil #5	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthet+AB4:AB103ic Fibres - Comment
			L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	%w/w	Comment	Comment	Comment	Comment	Comment	Comment
EQL																							
NEPM 2013 Soil HIL A							0.01										0.001						
NEPM 2013 Soil HSL A - Sensitive Setting																							
Field_ID	**Lab Number**	**Depth**																					
QC03	463518		-	-	-	-	-	823	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC03A	130558		-	-	-	-	-	662	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
~~X01SP02_16_1-2~~	~~463518~~	~~1-2~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~892~~	~~0~~	~~0~~	~~0~~	~~0.3224~~	~~0.0645~~	~~0~~	~~0~~	~~0.0645~~	~~0.0072~~	~~No asbestos detected at the reporting limit of 0.001% w/w.*~~	~~NIL~~	~~Chrysotile asbestos detected in weathered bituminous fragment.~~	~~Organic fibre detected.~~	~~NIL~~	~~NIL~~
V01	474920		-	-	-	-	-	527	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V02	474920		-	-	-	-	-	581	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V03	474920		-	-	-	-	-	607	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V04	474920		-	-	-	-	-	594	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V-SP01	474920		-	-	-	-	-	583	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_16_2-2.5	463518	2-2.5	-	-	-	-	-	854	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_17_0-1	463518	0-1	-	-	-	-	-	597	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_17_1-2	463518	1-2	-	-	-	-	-	872	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC04	463518		-	-	-	-	-	774	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC04A	130558		-	-	-	-	-	827	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
X01SP02_17_2-2.5	463518	2-2.5	-	-	-	-	-	861	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_18_0-1	463518	0-1	-	-	-	-	-	940	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_18_1-2	463518	1-2	-	-	-	-	-	826	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_18_2-3	463518	2-3	-	-	-	-	-	772	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_19_0-1	463518	0-1	-	-	-	-	-	760	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_19_1-2	463518	1-2	-	-	-	-	-	756	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_19_2-3	463518	2-3	-	-	-	-	-	775	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_20_0-1	463518	0-1	-	-	-	-	-	982	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_20_1-2	463518	1-2	-	-	-	-	-	828	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_20_2-3	463518	2-3	-	-	-	-	-	60	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_21_0-1	463518	0-1	-	-	-	-	-	916	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_21_1-2	463518	1-2	-	-	-	-	-	795	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_21_2-3	463518	2-3	-	-	-	-	-	691	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL

Table App C
Project Number: 54782
Project Name: Stage 2C X series SP asbestos

	Asbestos - Field					Asbestos										Asbestos - Trace Analysis					
	Approximate Volume of Soil	Approx. Sample Mass #1	Mass ACM	Mass Asbestos in ACM #2	Asbestos from ACM in soil #3	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA #4	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos from FA & AF in soil #5	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthet+AB4:AB103ic Fibres - Comment
	L	g	g	g	%w/w	g	g	g	%w/w	g	g	g	g	g	%w/w	Comment	Comment	Comment	Comment	Comment	Comment
EQL																					
NEPM 2013 Soil HIL A					0.01										0.001						
NEPM 2013 Soil HSL A - Sensitive Setting																					
Field_ID	**Lab Number**	**Depth**																			
X01SP02_22_0-1	463518	0-1	-	-	-	-	-	905	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_22_1-2	463518	1-2	-	-	-	-	-	815	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_22_2-3	463518	2-3	-	-	-	-	-	812	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_23_0-1	463518	0-1	-	-	-	-	-	788	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_23_1-2	463518	1-2	-	-	-	-	-	747	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_23_2-3	463518	2-3	-	-	-	-	-	747	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_24_0-1	463518	0-1	-	-	-	-	-	779	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_24_1-2	463518	1-2	-	-	-	-	-	882	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_24_2-3	463518	2-3	-	-	-	-	-	773	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_25_0-1	463518	0-1	-	-	-	-	-	707	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC05	463518		-	-	-	-	-	670	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC05A	130558		-	-	-	-	-	774	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
X01SP02_25_1-2	463518	1-2	-	-	-	-	-	809	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_26_0-1	463518	0-1	-	-	-	-	-	751	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_26_1-2	463518	1-2	-	-	-	-	-	775	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_27_0-1	463518	0-1	-	-	-	-	-	808	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_27_1-2	463518	1-2	-	-	-	-	-	855	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_28_0-1	463518	0-1	-	-	-	-	-	827	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_28_1-2	463518	1-2	-	-	-	-	-	894	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
X01SP02_28_2-3	463518	2-3	-	-	-	-	-	723	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL

Data Comments

#1 Sample Mass - Based on soil density of 1.63 g/cm3 for fine grained soils
#2 Assumed volume of asbestos in ACM = 15%
#3 ACM Concentration (w/w%) = (Mass ACM (g) / Mass Soil (g)) x 100
#4 Assumed volume of asbestos in FA = 100%
#5 FA Concentration (w/w%) = (Mass FA (g) / Mass Soil (g)) x 100

Source: Base Image - © Near Map 28-07-2015

© 2015 JBS&G

0 15 30 60 m

Scale: 1:1,480

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Original Issue - R01	SE	22-12-2015

Legend:

- CHK001/6 Buildings
- CHK001/6 Building Concrete Footprint
- Delineation Extent
- Delineation Sample Locations
- Sample Locations Requiring Additional Characterisation and Delineation

All delineation sample IDs are proceeded with the original sample ID and depth (ie X2-002-0-0.2-V1)

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Figure 5C: X Series Compound and Delineation Sample Locations

Client: Maryland Development Company

Project: Central Precinct

Job No: 50374 File Name: 50374_05C

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

X02SP02-16	Depth	Concentration
Analyte	(m BGS)	(%w/w)
Chrysoltile Asbestos	10-2.0	0.0072

Source: Base Image - © Near Map 28-07-2015

© 2015 JBS&G

0 5 10 20 m

Scale:1:600

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

- CHK001/6 Buildings
- CHK001/6 Building Concrete Footprint
- Stockpile Sample Locations

Rev	Description	Drn.	Date
A3			
A	Original Issue - R01	SE	20-11-2015

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Figure 6B: Stockpile Sample Locations and Exceedances

Client: Maryland Development Company

Project: Central Precinct

Job No: 50374 File Name: 50374_06B

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table App C
Job Number 54782
Delneation sample results

					Metals & Metalloids		Asbestos - Field					Asbestos												Asbestos - Trace Analysis					
					Lead	Zinc	Approximate Volume of Soil	Approx. Sample Mass [#1]	Mass ACM	Mass Asbestos in ACM [#2]	Asbestos from ACM in soil [#3]	Approx. Sample Mass	Mass ACM	Mass Asbestos in ACM	Asbestos from ACM in soil	Mass FA	Mass Asbestos in FA [#4]	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos fibres	Asbestos Sample Dimensions	Asbestos from FA & AF in soil [#5]	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Respirable Fibres - Comment	Synthet+AB4:AB103ic Fibres - Comment
					mg/kg	mg/kg	L	%	%	%	%w/w	%	%	%	%w/w	%	%	%	%	%	-	Comment	%w/w	Comment	Comment	Comment	Comment	Comment	Comment
EQL					1.00	1.00																							
NEPC 2013 EIL, EILs Aged Sediment (Ecological Significance)					470	230																							
NEPC 2013 EIL, EILs Aged Sediment (Urban Residential)					1100	770																							
NEPM 2013 Soil HIL A											0.01												0.001						
NEPM 2013 Soil HSL A - Sensitive Setting																													
NEPM 2013 Soil HIL A					300[#2]	7400																							
NEPM 2013 Soil HSL A - Sensitive Setting																													
Site Specific Criteria					300	200																							
Field_ID	Sample_Depth_Rar	Sampled_Date-Tim	SampleCode	Lab_Report_Number																									
X0-005 0.5-1.0 V-1	0.5-1	02-12-15	S15-De03526	482031	10	-																							
X0-005 0.5-1.0 V-2	0.5-1	02-12-15	S15-De03527	482031	9.1	-																							
X0-005 0.5-1.0 V-3	0.5-1	02-12-15	S15-De03528	482031	14	-																							
X0-005 0.5-1.0 V-4	0.5-1	02-12-15	S15-De03529	482031	18	-																							
X0-005 0.5-1.0 V-BASE	0.5-1	02-12-15	S15-De03530	482031	13	-																							
X0-020 0-0.2 V-1	0-0.2	02-12-15	S15-De03531	482031	-	15																							
X0-020 0-0.2 V-2	0-0.2	02-12-15	S15-De03532	482031	-	13																							
X0-020 0-0.2 V-3	0-0.2	02-12-15	S15-De03533	482031	-	40																							
X0-020 0-0.2 V-4	0-0.2	02-12-15	S15-De03534	482031	-	13																							
X0-020 0-0.2 V-BASE	0-0.2	02-12-15	S15-De03535	482031	-	48																							
X01SP02_16_0-1	463518	0-1					-	-	-	-	-	742	0	0	0	0	0	0	0	0			0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC03	463518						-	-	-	-	-	823	0	0	0	0	0	0	0	0			0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
QC03A	130558						-	-	-	-	-	662	0	0	0	0	0	0	0	0			0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	NIL	NIL
~~X01SP02_16_1-2~~	~~463518~~	~~1-2~~					~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~892~~	~~0~~	~~0~~	~~0~~	~~0.3224~~	~~0.0645~~	~~0~~	~~0~~	~~0.0645~~			0.0072	~~No asbestos detected at the reporting limit of~~	~~NIL~~	~~Chrysotile asbestos detected in weathered~~	~~Organic fibre detected.~~	~~NIL~~	~~NIL~~
V01	474920						-	-	-	-	-	527	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V02	474920						-	-	-	-	-	581	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V03	474920						-	-	-	-	-	607	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V04	474920						-	-	-	-	-	594	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL
V-SP01	474920						-	-	-	-	-	583	0	0	0	0	0	0	0	0	0	0	0	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected.	No respirable fibres detected.	NIL

Reference: Near Map www.nearmap.com, imagery date 08-04-2018.

Legend:

- Central Precinct Boundary
- Test Pit Location
- Bund Location

JBS&G

Job No: 54158	
Client: Maryland Development Company	
Version: L006	Date 5/09/2018
Drawn By: FH	Checked By: JC
Scale 1:2,500	

0 40 80
metres

Coord. Sys. GDA 1994 MGA Zone 56

Central Precinct Remediation

MUNITION BUND TEST PIT LOCATIONS

FIGURE 2

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table A: Munitions Bund Chemisty Analytical
Project Number: 54158
Project Name: Central Precinct Remediation

			VIC IWRG621 (		Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEX						Polycyclic Aromatic Hydrocarbons																							
			Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Total)	Pyrene	Total Positive PAHs
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.10	0.10	2.00	0.40	1.00	1.00	1.00	0.10	1.00	1.00	20.00	20.00	50.00	50.00	50.00	50.00	100.00	100.00	50.00	50.00	20.00	20.00	0.10	0.10	0.10	0.10	0.20	0.30	0.10	0.10	0.10	0.10	0.05	0.50	0.50	0.50	0.50	0.10	0.50	0.10	0.10		0.10	0.10	0.10	0.10	0.10	0.50	0.10	
NEPC 2013 EIL, EILs Aged Sediment					40		140	85	470		50	230																																		10						
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																			300	2800		120		180	50	70	85			105				0.7																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																																				
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																																				
NEPM 2013 Soil HIL A					100	20	100	6000	300	40	400	7400															160								3	3	3						3						300			
Sample ID	**Date**	**Laboratory Report Number**																																																			
AM-01_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	9	<0.4	15	32	21	<0.1	15	50	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-01_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	6.4	<0.4	17	26	26	<0.1	14	48	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-02_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	10	<0.4	27	14	31	<0.1	12	25	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QC20180808-01	08-Aug-18	611693	<0.1	<0.1	9.2	<0.4	25	13	30	<0.1	11	24	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA20180808-01	08-Aug-18	198249	-	-	6	<0.4	22	12	20	<0.1	8	16	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.172[#1]	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.05
AM-02_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	9.2	<0.4	26	15	26	<0.1	11	24	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-03_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	8.7	<0.4	32	16	42	<0.1	11	37	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-03_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	8.4	<0.4	25	17	25	<0.1	9.9	26	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-04_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-04_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	9.9	<0.4	22	28	23	<0.1	16	41	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-05_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	7.6	<0.4	25	14	23	<0.1	8.7	24	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-05_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	8.4	<0.4	32	13	26	<0.1	9.5	22	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-06_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	7.5	<0.4	26	16	22	<0.1	9.7	25	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-06_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	6.8	<0.4	30	15	19	<0.1	14	25	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-07_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	9.6	<0.4	27	13	35	<0.1	13	29	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-07_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	8.7	<0.4	31	15	35	<0.1	11	27	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-08_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.6	<0.4	22	18	20	<0.1	9.1	26	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-08_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	6	<0.4	17	16	19	<0.1	5.1	15	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-09_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	7.3	<0.4	30	14	20	<0.1	10	23	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-09_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	5.8	<0.4	20	15	17	<0.1	9.7	27	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-10_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	7.9	<0.4	28	12	24	<0.1	8.3	19	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-10_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	10	<0.4	21	12	33	<0.1	7.6	23	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-11_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.7	<0.4	22	15	21	<0.1	9.5	27	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-11_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	7.5	<0.4	28	12	20	<0.1	8.3	19	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
QA20180808-02	08-Aug-18	198249	-	-	4	<0.4	19	10	14	<0.1	6	14	<25	<50	<100	<100	-	<50	<100	<100	<50	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	<0.1	-	<0.1	<0.1	<0.172[#1]	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.05
QC20180808-02	08-Aug-18	611693	<0.1	<0.1	6	<0.4	23	12	20	<0.1	8.5	18	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-12_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	7.1	<0.4	25	12	22	<0.1	8	34	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-12_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	7.3	<0.4	25	12	20	<0.1	8.9	64	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-13_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.2	<0.4	23	11	21	<0.1	7.9	18	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-13_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	6.7	<0.4	24	12	21	<0.1	8.6	18	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-14_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6	<0.4	17	11	17	<0.1	7.2	18	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-14_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	4.5	<0.4	13	9.8	16	<0.1	6.6	15	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-15_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.7	<0.4	22	11	22	<0.1	8.3	17	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-15_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	7.4	<0.4	26	9.7	22	<0.1	8.1	15	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-16_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.3	<0.4	26	11	21	<0.1	9	21	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-16_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	5.7	<0.4	21	10	17	<0.1	8.1	16	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-17_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	5	<0.4	14	13	15	<0.1	7.9	17	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-17_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	4.5	<0.4	13	11	16	<0.1	7.5	16	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-18_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	3	<0.4	10	9.3	14	<0.1	5.6	12	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-18_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	3.1	<0.4	10	9.9	13	<0.1	5.5	12	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-19_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	3.4	<0.4	11	9	16	<0.1	5.9	13	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-19_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	3.9	<0.4	12	9.4	19	<0.1	6.4	14	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-20_0.2-0.3	08-Aug-18	611693	<0.1	<0.1	6.3	<0.4	15	16	15	<0.1	8.7	25	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
AM-20_0.6-0.7	08-Aug-18	611693	<0.1	<0.1	7.6	<0.4	16	19	19	<0.1	11	32	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21[#3]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#3 Organic fibres detected

Table A: Munitions Bund Chemisty Analytical
Project Number: 54158
Project Name: Central Precinct Remediation

			Chlorinated Benzenes	Polychlorinated Biphenyls								Organochlorine Pesticides																								Asbestos									Asbestos	Asbestos - Trace Analysis				
			Hexachlorobenzene	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	Dieldrin	DDD	DDT	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Approx. Sample Mass	Asbestos from ACM in Soil	Asbestos from FA & AF in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Asbestos ID in Soil	ACM - Comment	AF - Comment	FA - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g	%w/w	%w/w	g	g	g	g	g	g	g	g	Comment	Comment	Comment	Comment	Comment	Comment
EQL			0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.05	0.05	0.05		0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	1.00																
NEPC 2013 EIL, EILs Aged Sediment																					3																														
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																					0.01														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																						0.001													
NEPM 2013 Soil HIL A			10								1			6				50				240					10				6			300	20															
Sample ID	**Date**	**Laboratory Report Number**																																																	
AM-01_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	664	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-01_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	526	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-02_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	581	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
QC20180808-01	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	509	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
QA20180808-01	08-Aug-18	198249	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	$<0.2^{\#3}$	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
AM-02_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	504	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-03_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	590	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-03_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	467	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-04_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	472	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-04_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	630	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-05_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	594	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-05_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	545	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-06_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	484	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-06_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	528	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-07_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	570	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-07_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	608	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-08_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	594	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-08_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	445	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-09_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	540	0	0	0	0	0	0	0	0	0	-	1#4	1#4		1#2	1#4
AM-09_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	517	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-10_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	712	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-10_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	627	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-11_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	641	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-11_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	450	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
QA20180808-02	08-Aug-18	198249	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	$<0.2^{\#3}$	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
QC20180808-02	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	475	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-12_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	640	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-12_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	705	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-13_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	649	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-13_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	604	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-14_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	641	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-14_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	596	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-15_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	579	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-15_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	494	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-16_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	567	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-16_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	537	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-17_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	594	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-17_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	643	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-18_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	572	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-18_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	679	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-19_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	519	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-19_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	553	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-20_0.2-0.3	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	530	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4
AM-20_0.6-0.7	08-Aug-18	611693	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<1	634	0	0	0	0	0	0	0	0	0	-	1#4	1#4	1#4	1#2	1#4

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#3 Organic fibres detected

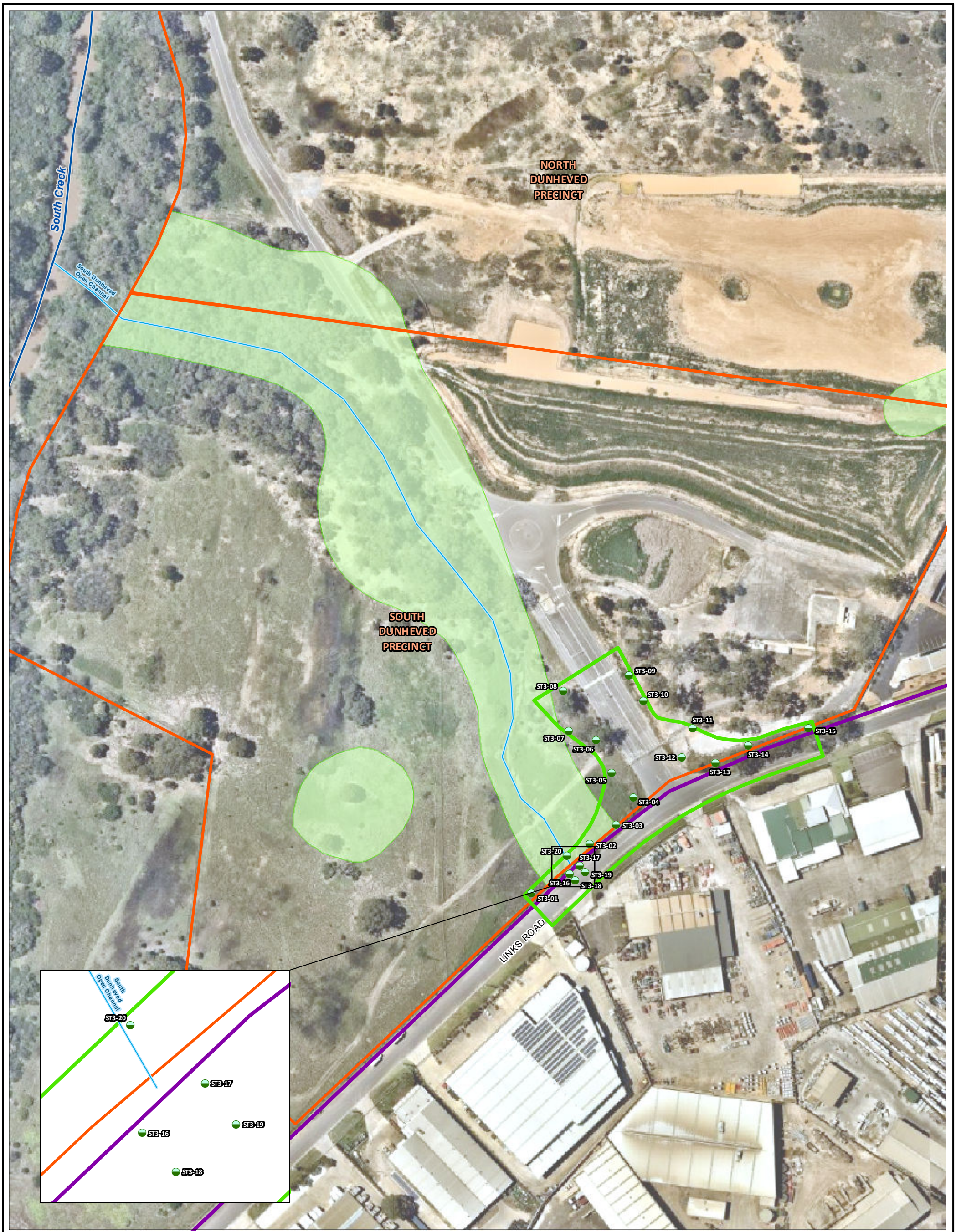
Table A: Munitions Bund Chemisty Analytical
Project Number: 54158
Project Name: Central Precinct Remediation

			PFAS																																
			2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01
NEPC 2013 EIL, EILs Aged Sediment																																			
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL A																																			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																			
NEPM 2013 Soil HIL A																																			
Sample ID	**Date**	**Laboratory Report Number**																																	
AM-01_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-01_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-02_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20180808-01	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
QA20180808-01	08-Aug-18	198249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-02_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-03_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-03_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-04_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-04_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-05_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-05_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-06_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-06_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-07_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-07_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-08_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-08_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-09_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-09_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-10_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-10_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-11_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-11_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA20180808-02	08-Aug-18	198249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20180808-02	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-12_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-12_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-13_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-13_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-14_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-14_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-15_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-15_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-16_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-16_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-17_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-17_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-18_0.2-0.3	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-18_0.6-0.7	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-19_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-19_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-20_0.2-0.3	08-Aug-18	611693	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005
AM-20_0.6-0.7	08-Aug-18	611693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 Organic fibres detected

Stage 3 Data

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 3 Boundary
- Proposed PFAS Remediation Areas
- Creeks
- Channels
- Soil Sample Location - Stage 3

JBS&G

0 20 40
metres

Central Precinct

SOIL SAMPLING LOCATIONS

Job No: 54782		Scale: 1:1,750		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R05 Rev A	Date: 15-Jul-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R05 Rev A\54782_03_Soil_Sampling_Locations.mxd
Time Saved: 13/12/2019 19:12:28

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons													
			Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C6-C10 Fraction	>C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			2	0.4	5	5	5	0.1	5	5	20	20	50	50	50	50	100	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																												
NEPM 2013 EIL - Commercial Industrial (generic)			160		310	85	1800		55	110																		370																
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	1700	3300		170		215	75	165	135			180					1.4											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																											
NEPM 2013 Soil HIL D			3000	900	3600	240000	1500	730	6000	400000																								40	40	40							
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																											
Sample ID	**Sample Date**	**Laboratory Report Number**																																										
ST3-01 0-0.1	7/07/2019	664672	2.9	<0.4	29	48	18	<0.1	22	110	<20	<20	87	220	307	<50	250	250	500	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
ST3-02 0-0.1	7/07/2019	664672	7.8	<0.4	41	59	62	0.2	27	280	<20	<20	<50	86	86	<50	100	<100	100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5
QA20190707_01	7/07/2019	664672	7.3	<0.4	46	50	55	0.2	27	240	<20	<20	<50	50	50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.6	0.7	1	1.3	<0.5	0.5	<0.5	<0.5	<0.5	1	<0.5	0.6
QC20190707-01	7/07/2019	221255	5	<0.4	29	43	38	0.1	23	170	<25	<50	<100	110	-	<50	120	100	220	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<1	<0.1	<0.1	<0.1	0.2	0.3	<0.5	<0.5	<0.5	0.3	0.3	=	0.2	<0.1	0.6	<0.1	0.2
ST3-03 0-0.1	7/07/2019	664672	4.8	<0.4	29	41	32	0.1	20	130	<20	<20	62	96	158	<50	130	<100	130	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.7	1.2	0.6	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
ST3-04 0.8-0.9	7/07/2019	664672	10	<0.4	35	9.5	31	<0.1	6.2	21	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	7.5	<0.4	30	20	23	<0.1	19	56	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
ST3-06 0-0.1	7/07/2019	664672	6.6	<0.4	17	12	26	<0.1	11	32	<20	<20	<50	62	62	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	7/07/2019	664672	19	<0.4	14	18	14	<0.1	8	20	<20	<20	76	66	142	<50	110	<100	110	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	7/07/2019	664672	3.8	<0.4	11	9.2	6.8	<0.1	<5	14	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	4.1	<0.4	18	20	14	<0.1	14	57	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	7/07/2019	664672	8.9	<0.4	17	26	20	<0.1	9.9	68	<20	<20	<50	79	79	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	7/07/2019	664672	3.8	<0.4	15	96	14	<0.1	8.8	76	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	7/07/2019	664672	2.7	<0.4	42	23	22	<0.1	40	49	<20	<20	160	290	450	<50	370	260	630	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.7	0.8	1.1	1.4	<0.5	0.5	<0.5	0.5	<0.5	0.9	<0.5	0.5
ST3-14 0-0.1	7/07/2019	664672	7.1	<0.4	26	40	28	<0.1	13	130	<20	25	96	130	251	<50	180	<100	180	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	1.1	1.3	1.7	2	2.2	1	1.1	0.9	1	<0.5	3	<0.5	1
ST3-15 0-0.1	7/07/2019	664672	7.3	<0.4	33	25	29	<0.1	10	110	<20	<20	130	120	250	<50	220	<100	220	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	0.8	2.8	3.4	5.4	5.4	5.4	3	2.7	2	2.9	0.9	9.5	<0.5	2.2
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

Sample ID	Sample Date	Laboratory Report Number	PAHs (Total)	Phenanthrene	Pyrene	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene
						Organochlorine Pesticides																					
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																											
NEPM 2013 EIL - Commercial Industrial (generic)													640														
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Soil HIL D			4000					45			530				3600					100			50			2500	160
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																											
ST3-01 0-0.1	7/07/2019	664672	1.2	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-02 0-0.1	7/07/2019	664672	2	<0.5	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QA20190707_01	7/07/2019	664672	4.7	0.5	0.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QC20190707-01	7/07/2019	221255	3	0.3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
ST3-03 0-0.1	7/07/2019	664672	4.5	0.8	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	1.3	<0.5	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-13 0-0.15	7/07/2019	664672	4.5	<0.5	0.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-14 0-0.1	7/07/2019	664672	14.9	1.8	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-15 0-0.1	7/07/2019	664672	44.8	6.2	8.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene
	Chlorinated Alkanes																	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																		
NEPM 2013 EIL - Commercial Industrial (generic)																		
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																		
NEPM 2013 Soil HIL D																		
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																		
ST3-01 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-02 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA20190707_01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC20190707-01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	
ST3-03 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0.8-0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-06 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-14 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-15 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-16 0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Chlorinated Alkenes								Solvents	Polychlorinated Biphenyls								PFAS																	
			4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.01	0.005	0.005	0.005	0.005	0.005
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																50							20	
NEPM 2013 EIL - Commercial Industrial (generic)																																							
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																							
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																							
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																							
NEPM 2013 Soil HIL D																			7																				
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																							
Sample ID	**Sample Date**	**Laboratory Report Number**																																					
ST3-01 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-02 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QA20190707_01	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QC20190707-01	7/07/2019	221255	<1	<1	<1	<1	<1	<1	<1	<1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001		<0.005	<0.0001	<0.0001	<0.001	0.0007	<0.001		<0.001	0.0004	<0.001		<0.001	<0.0001			0.0003	
ST3-03 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-13 0-0.15	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-14 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-15 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	0.013	<0.005	0.0094	<0.005
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.094	<0.005
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.089	<0.005
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.013	<0.005

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

												Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Trihalomethanes				: Sulfur Com	Other	EPA VIC - IWRG621			
			Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Carbon disulfide	% Moisture 103oC	Chlorinated Hydrocarbons EPAVic	Other Chlorinated Hydrocarbons EPAVic	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.1	0.1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial							20	20																													
NEPM 2013 EIL - Commercial Industrial (generic)																																					
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																					
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																					
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																					
NEPM 2013 Soil HIL D																											80										
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses							0.01																														
Sample ID	**Sample Date**	**Laboratory Report Number**																																			
ST3-01 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<2	<2
ST3-02 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0081	0.0081	0.0081	0.0081	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	28	<0.5	<0.5	<0.2	<0.2
QA20190707_01	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0074	0.0074	0.0074	0.0074	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	27	<0.5	<0.5	<0.2	<0.2
QC20190707-01	7/07/2019	221255					0.0068	-	-	-	-	-						<1			<1	<1		<1	<1	<1	<1	<0.1	<1	<1	<1							
ST3-03 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0062	0.0062	0.0062	0.0062	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.2	<0.2
ST3-04 0.8-0.9	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-06 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	6.7	<0.5	<0.5	<0.2	<0.2
ST3-08 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5	<0.2	<0.2
ST3-09 0.4-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5	<0.5	<0.2	<0.2
ST3-09 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5	<0.5	<2	<2
ST3-11 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-12 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5	<0.5	<0.2	<0.2
ST3-13 0-0.15	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-14 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-15 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5	<0.5	<0.2	<0.2
ST3-16 0.3-0.5	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.16	0.1694	0.16	0.1694	0.1694	0.1824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.03	0.03	0.03	0.03	0.03	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.061	0.061	0.061	0.061	0.061	0.061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.05	0.0565	0.05	0.0565	0.0565	0.0565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.011	0.011	0.011	0.011	0.011	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.26	0.349	0.275	0.364	0.369	0.369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-
ST320 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.13	0.143	0.13	0.143	0.143	0.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table B - Asbestos in Soil Analytical Results
Project Number - 54782
Project Name - Stage 3 East West Connector Road ESA

			Asbestos Laboratory													Asbestos - Trace Analysis				
			Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																				
NEPM 2013 Soil HIL D				0.05					0.001					0.05	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																				
Field_ID	**Sampled_Date-Tim**	**Lab Report Number**																		
ST3-01 0-0.1	7/07/2019	664672	401	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-02 0-0.1	7/07/2019	664672	403	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QA20190707_01	7/07/2019	664672	339	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QC20190707-01	7/07/2019	09-Oct-2505	423	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-03 0-0.1	7/07/2019	664672	451	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-04 0-0.1	7/07/2019	664672	391	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-05 0-0.1	7/07/2019	664672	435	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-06 0-0.1	7/07/2019	664672	561	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-08 0-0.1	7/07/2019	664672	425	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-09 0-0.1	7/07/2019	664672	515	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-10 0-0.1	7/07/2019	664672	570	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-11 0-0.1	7/07/2019	664672	482	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-12 0-0.1	7/07/2019	664672	633	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-13 0-0.15	7/07/2019	664672	493	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-14 0-0.1	7/07/2019	664672	502	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-15 0-0.1	7/07/2019	664672	281	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

	Explosives in Soil										Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEXN											
	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	Tetryl	4-Amino-2,6-dinitrotoluene	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	GS-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	GS-C10 Fraction	GS-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthrazene	Benz(a)anthracene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.1	0.1	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)											160		850	310	1800		350	770																	370				
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																									1700	3300	170		215	75	165	135			180					
NEPM 2013 Soil HIL D											3000	900	3600	240000	1500	730	6000	400000																						
NEPM 2013 Soil HSL D - Sensitive Setting																											-		250	3	-	-			230	-				
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																								
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																								

Field ID	Date	Report Number																																							
Dunheved South																																									
DHS-28-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	8.5	<0.4	66	21	17	<0.1	6.8	15	<20	<20	<50	56	56	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

Field ID	Date	Report Number	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene
			Polycyclic Aromatic Hydrocarbons															
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.5	0.5	0.5	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																		
NEPM 2013 ESL Commercial and Industrial, Coarse Soil			1.4															
NEPM 2013 Soil HIL D				40	40	40						40				4000		
NEPM 2013 Soil HSL D - Sensitive Setting																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																		
Dunheved South																		
DHS-28-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	0.6	<0.5	<0.5	1.3	<0.5	0.7

Field ID	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	gamma-Chlordane	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Aroclor 1016	Aroclor 1221
	Organochlorine Pesticides																									
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)									640																	
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																										
NEPM 2013 Soil HIL D			45				530				3600					100				50			2500	160		
NEPM 2013 Soil HSL D - Sensitive Setting																										
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																										
Dunheved South																										
DHS-28-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

	Polychlorinated Biphenyls						Chlorinated Benzenes	Nitrobenzenes			Nitrotoluenes				Ionic Balance		
	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Hexachlorobenzene	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	µS/cm	ph Units
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1		0.1	0.1	0.05	10	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																	
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	
NEPM 2013 Soil HIL D						7	80										
NEPM 2013 Soil HSL D - Sensitive Setting																	
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																	
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																	
Field ID	**Date**	**Report Number**															
Dunheved South																	
DHS-28-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App CResults
Job Number: 54782
Job Name: Dunheved Investigation

			Asbestos Field					Asbestos Laboratory													Asbestos - Trace Analysis				
			Approximate Volume of Soil	Approx. Sample Mass[1]	Mass ACM	Mass Asbestos in ACM[2]	Asbestos from ACM in soil[3]	Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			l	g	g	g	%w/w	g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																									
NEPM 2013 Soil HIL D							0.05		0.05					0.001					0.01	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																									
South Dunheved																									
DHS-28-0-0.1	12-Feb-18	S84878	10	16300	0	0	0	735	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Table App C Analytical Results
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

			PFAS																																							
			2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Z-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01			
HEPA (2018) Ecological Indirect exposure - Residential																														0.01	0.01								
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils																0.1														0.009	0.009								
HEPA (2018) Human Health Screening Levels - Public Open Space																10														1	1								
HEPA (2018) Human Health Screening Levels - Commercial/Industrial																100														20	20								
HEPA (2018) Soil Indirect - Commercial and Industrial																														0.14	0.14								
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial																48														60	60								
HEPA (2018) Soil Direct Toxicity - Public Open Space																10														1	1								
Field_ID		**Sampled_Date-Time**																																						
DHS-42 0-0.1	DHS-42 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-

Notes
* It is noted that the SP30 footprint samples included are of the current surface level and following additional scrape up

Surface samples beneath SP30 which were scraped up and relocated to Dunheved, ie not representative of the current SP30 footprint surface

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APPENDIX B

Phase 1 Preliminary Site Assessment East West Connector Road

JBS&G

Minter Ellison

Phase 1 Preliminary Site Assessment
East West Connector Road

Jordan Springs East, NSW

17 April 2019

54782/121318 (Rev 2)

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Minter Ellison

Phase 1 Preliminary Site Assessment
East West Connector Road

Jordan Springs East, NSW

17 April 2019

54782/121318 (Rev 2)
JBS&G

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Areas of Environmental Concern
BCC	Blacktown City Council
Bgs	Below Ground Surface
BTEX	Benzene, toluene, ethylbenzene and Xylenes
CMP	Contamination Management Plan
COPC	Contaminants of Potential Concern
DP	Deposited Plan
Dunheved Link Road	Connects the EWCR with Links Road located to the South of the property
Dunheved Industrial Precinct	Proposed Development area located south of the EWCR
EPA	NSW Environmental Protection Authority
EWCR	East West Connector Road
HHERA	Human Health and Ecological Risk Assessment
JSE	Jordan Springs East (formerly Central Precinct)
NEPC	National Environmental Pretention Measure
OCPs	Organochlorine pesticides
OPPs	Organophosphate pesticides
PAHs	Poly aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PCC	Penrith City Council
PFAS	Poly-fluoroalkyl substances
RAP	Remedial Action Plan
SAQP	Sampling Analysis and Quality Plan
SAS	Site Audit Statement
SEPP 55	State Environmental Planning Policy No. 55
TRH	Total Recoverable Hydrocarbons

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Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd (the client) to conduct a Phase 1 Preliminary Site Investigation (PSI) for the proposed East West Connector Road (EWCR) including the Regional Open Space (ROS) area and the Dunheved Link Road (the site) within the former ADI St Marys property ('the property'). The site is proposed to be developed into a multi lane roadway as necessary infrastructure to the Jordan Springs East Development Site (JSE) and sports fields and parkland within the ROS area.

The EWCR, is planned to comprise a roadway to connect the JSE Development site with the Suburb of Ropes Crossing. The EWCR currently exists as a paved Road from the sites former use as a munitions storage facility and/or as a haul road associated with the development works occurring within the overall development site. The (roadway) site is approximately 3 km in total length and is split into 3 Stages. The ROS area is included with Stage 2 of the EWCR and comprises approximately 25 ha of proposed park land and sports field adjacent area to the JSE development. The location of the site is provided in **Figure 1**, the layout of the site including surrounding areas and the division of stages is provided in **Figure 2**.

The property has undergone various previous environmental investigation works including extensive environmental assessment and remediation works in the mid 1990's which led to a number of site audit statements (SAS) being issued. The SAS's confirmed that the property was suitable for proposed uses with the exception of excluded areas including footprints of original buildings, car parks, roads and stockpiles that were inaccessible when previous works were conducted.

More recently, JBS&G have conducted a number of environmental investigations throughout the site and nearby areas including unexploded ordinance (UXO) clearance, management of pavement removal for historical road and/or building footprints and extensive environmental sampling with associated reporting. This has included a comprehensive PFAS (per and poly-fluoroalkyl substances) investigation (JBS&G 2018a[1]). Given that comprehensive investigation within the property including areas covered by the site has been conducted by JBS&G and appropriate methodologies and documentation have been issued to the satisfaction of an EPA accredited auditor, it is considered that conclusions can be drawn using historical information to determine the suitability of the site for its proposed use.

Based on the environmental assessment as completed previously and collated within this assessment, the following areas of environmental concern (AECs) and associated contaminants of potential concern (COPCs) were identified on the roadway as per **Table E1** following.

Table E1 – AECs and associated COPCs based on review of records and previous reports

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
EWCR	
Fill materials underlying the road	Heavy metals, Poly aromatic hydrocarbons (PAHs), Total Recoverable Hydrocarbons (TRH)/BTEX (Benzene, toluene, ethylbenzene and Xylenes), Organochlorine pesticides (OCPs), Organophosphate pesticides (OPPs), Polychlorinated Biphenyls (PCBs), asbestos and explosives Metallic Debris – may contain explosive ordnance waste
Paved Road asphalt	Heavy metals, PAHs, TRH/BTEX, asbestos and explosives, Coal Tar

[1] *PFAS Assessment at Former ADI St Marys Development Site - St Marys and Llandilo, NSW (Rev B*) JBS&G Australia Pty Ltd. 23 November 2018 (JBS&G 2018a)

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Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Flytipping	Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs and asbestos
Dunheved Link Road	
Historical use of the site for sewage sludge and effluent storage	Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos and PFAS
Impact associated with the Dunheved Open Channel (surface water entering site)	PFAS
Potential impact from offsite sources south of Links Road	Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos and PFAS
ROS	
Flytipping	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Building Footprints	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and explosives**
Fill materials and impact from demolition works, use of the site as a compound	Heavy metals*, PAHs, TPH/BTEX, and asbestos

With the findings summarised in **Table E1** and subject to the limitations in **Section 7,** it is concluded that the site can be made suitable for the proposed use in accordance with clause 7 of SEPP 55 subject to the following actions:

- The EWCR requires further investigation including completion of an SAQP that includes details on required pavement removal, UXO clearance and detailed site assessment including soil sampling and analysis of soils present underlying roadways. The SAQP and subsequent investigations shall require review and endorsement by the Site Auditor[2]. The sampling works can only be undertaken subsequent to the removal of the existing roadway. This same process has been previously completed on a substantial extent of historical roadways / building footprints throughout the remainder of the overall development site. Assessments in lieu of the removal of the roadway have been completed to the extent achievable;
- Formerly inaccessible areas of the ROS including building footprints require UXO clearance and assessment in accordance with the existing JBS&G SAQP for JSE (JBS&G 2017c);
- In addition to findings of works undertaken specific to soils underlying the existing roadway footprint, the previously prepared Remedial Action Plan (JBS&G 2018c) to address PFAS impacts will be required to be implemented for PFAS impacted soils and groundwater identified within the Links road connection in the Dunheved portion of the site. The extent of the required remedial works has been determined by a substantial extent of sampling and analysis completed prior; and
- A Site Audit Statement will be required as specific to the roadway, subject to the completion of the anticipated additional environmental assessment and Validation Reports, to confirm the site as suitable for the proposed use.

[2] It is noted that works advanced from Phase 1 assessments as recommended have already been undertaken. Associated reports can be provided upon request.

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1. Introduction and Background

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd (the client) to conduct a Phase 1 Preliminary Site Investigation (PSI) for the proposed East West Connector Road (EWCR) including the Regional Open Space (ROS) area and the Dunheved Link Road (the site) within the former ADI St Marys property ('the property'). The site is proposed to be developed into a multi lane roadway as necessary infrastructure to the Jordan Springs East Development Site (JSE) and sports fields and parkland within the ROS area.

The EWCR, is planned to comprise a roadway to connect the JSE Development site with the Suburb of Ropes Crossing. The EWCR currently exists as a paved Road from the sites former use as a munitions storage facility, however significant upgrade to the road will be required. The ROS area formerly consisted of ADI buildings, a radar range and bush land. It currently comprises unsealed roads, storage areas for stockpiles, mulch and building materials. The Dunheved Link Road connects the EWCR with Links Road located to the South of the property. The Dunheved Link Road is currently a haul road built for access purposes during earthworks at JSE and will also require upgrades. The site is approximately 3 km in total length and is split into 3 Stages. The location of the site is provided in **Figure 1**, the layout of the site including surrounding areas and the division of stages is provided in **Figure 2**.

The site falls within two LGA zones, Penrith City Council (PCC) and Blacktown City Council (BCC). The council boundary crosses the site at two points, where the EWCR crosses South Creek and in the mid to southern portion of the Dunheved Link Road approximately 270 m north of Links Road.

The property has undergone various previous environmental investigation works including extensive environmental assessment and remediation works in the mid 1990's. Of the works conducted, the Southern Sector West and the Southern Sector East validation reports (ADI 1996) encompassed the areas in which the site falls within. Ultimately, these reports lead to a number of site audit statements (SAS) being prepared and more specifically the site is covered by three previously issued SAS prepared by HLA-Envirosciences (CHK001/1 Kidd 1999a), (CHK001/6 Kidd 1999b) and (CHK001/7 Kidd 1999c). The reports confirm that the property was suitable for proposed uses with the exception of excluded areas including footprints of original buildings, car parks, roads and stockpiles that were inaccessible when previous works were conducted.

Due to the time elapsed since the (historical) site audit statements were issued, noting the requirement for assessment of roads as being excluded from previous SAS (as is the case for the EWCR), assessment of the site for suitability is required. It is also noted that potential impacts regarding PFAS was not assessed for in the earlier works. As such, and prior to a development application being granted for the site, clause 7 of SEPP 55 states '*the consent authority must consider whether the site is suitable or can be made suitable for the proposed development*'.

More recently, JBS&G have conducted a number of environmental investigations throughout the site and nearby areas. These reports have included UXO clearance (where necessary), management of pavement removal for historical road and/or building footprints and environmental sampling with associated reporting. Previous works have occurred under the review of an independent EPA accredited auditor. In addition, a comprehensive PFAS investigation (JBS&G 2018) was also conducted throughout the property, including creeks and tributaries that run through the site and in an area identified as Dunheved which the Dunheved Link road runs through.

Given that comprehensive investigation within the property including areas covered by the site has been conducted by JBS&G and appropriate methodologies and documentation have been issued to the satisfaction of an EPA accredited auditor, it is considered that a sufficient extent of site

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characterisation has been completed to allow conclusions can be drawn using historical information to determine the suitability of the site for its proposed use.

This report has been prepared to address clause 7 of SEPP 55 requirements for contamination assessment to allow the suitability of the site for the proposed commercial/industrial land use to be assessed by the relevant consent authority. The report is further prepared to provide recommendations (if any) on how the site can be made suitable for the proposed use from a contamination investigation.

This report, and previous investigations as completed on the site and relied upon in the preparation of this report, have been developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objective

The objective of the investigation is to characterise potential contamination at the site, to draw conclusions on whether the site can be made suitable from a contamination perspective and to identify any recommendations for remediation required to be implemented with the site development to cause the site to be suitable for the proposed development.

1.3 Scope of Works

To achieve the project objectives, the following scope of works was proposed:

- Desktop review of available local and regional background environmental information, and available historical background information including aerial photographs, state and national heritage information, search of EPA records and groundwater bore information;
- Review of the substantial extent of previous soil and groundwater sampling and analysis works completed with the extent of the proposed roadway, and in proximity of the proposed roadway, to characterise soil and groundwater conditions on the site;
- Development of a CSM to identify potential AECs and associated COPCs;
- A detailed site inspection / walkover; and
- Preparation of this Phase 1 PSI in general accordance with guidelines made or approved by the NSW Environment and Protection Authority (EPA).

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2. Site Condition and Surrounding Environment

2.1 Site Identification

The location of the site is shown in **Figure 1,** the site layout and surrounding areas are shown in **Figure 2**. Details of the site are summarised in **Table 2.1** below.

Table 2.1 Summary Site Details

Lot Numbers	Lot 2 DP 1203565, Lot 2, 5 and 6 DP1203565 and Lot 3 DP 1133301 (BCC). Lot 3000 DP1215087 and Lot 1 DP1132380 (PCC).
Street Address	Jordan Springs East Development Site, access off Links Road St Marys.
Site Area	Approximately 35.4 ha(Stage 1 4.58 ha, Stage 2 30.17 ha and Stage 3 0.67 ha)
Local Government Authority	Penrith City Council and Blacktown City Council
Geographic Coordinates (MGA 56)	33.7325 E 150.750 N
Current Land-use **Proposed Land-use**	Vacant, storage and Roadway Roadway

2.2 Site Description

EWCR

The EWCR comprised a bitumen paved road with no curbing that extended from west to east and from JSE to the current property boundary secured by an electric gate in Ropes Crossing. The road was generally level with some cut and fill undertaken to keep the road flat where natural low points in the landform occurred.

Two bridges were observed at the EWCR, a concrete bridge of approximately 85 m in length crossed South Creek in the eastern portion of Stage 2 and a bridge located in the approximate mid-section of Stage 1 which crossed Ropes Creek and was approximately 25 meters in length.

Verges adjacent to the road comprised mostly of grasses and trees, no fly-tipping was observed within the verges.

ROS

The ROS area comprised of vacant areas and bushland in its southern portion. The northern half of the ROS area comprised of a number of unsealed roads, storage areas for soil and mulch associated with the JSE development. The most northern part and near the EWCR comprised of a former carpark and footprints of former buildings recently demolished. Remaining shipping containers, soil stockpiles and surplus temporary fence panels could be observed within this area.

Dunheved Link Road

The Dunheved Link Road comprised a recently constructed bitumen road with curbing and associated infrastructure. The paved road was observed to be in good condition and is currently used for access purposes. Either side of the road comprised of grass verges. No significant fly-tipping, was observed within the road verges on the Dunheved Link Road.

It is noted that the proposed Dunheved Link Road also includes a temporary bund located in its southern end as shown on **Figure 2**. This portion comprised of vacant grass land of the former ADI site. The eastern portion of the bund is noted to cross the Dunheved Open channel which is characterised by thick shrub and an access path which crosses the channel.

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Links Road/Dunheved Link Road Intersection

The southern portion of the Dunheved Link Road and where Stage 3 is located comprised a paved road intersection with Links Road which extended beyond the property boundary. A steel electric gate was observed at the entry to the property and as the start of the Dunheved Link Road.

Drainage infrastructure underlying the southwestern portion of Stage 3 Links Road was observed and appeared to be flowing out to the north and into an open channel which runs adjacent to the Dunheved Link Road.

2.3 Surrounding Land use

The surrounding land use described below is summary from Kidd 1999 for the Central Precinct development site:

- North – densely vegetated Regional Parklands, south creek meanders through this area.
- East – The Ropes Crossing housing development is located to the east of the site. The proposed Dunheved Industrial precinct is located directly east of the Dunheved Link Road. The St Marys Sewage treatment Plant is located approximately 400 m east of the site.
- South – Regional Parklands including portions of South Creek, the proposed Dunheved Industrial Precinct, Links Road and Commercial/industrial zone associated with Dunheved along links road and Dunheved Circuit are located to the South. Franchises including Toxfree, Gulf oil western among other were located along the southern side of Links Road.
- West – The JSE residential development site is located directly west of the site. Dense vegetation, a small Creek identified as the Dunheved Open Channel and vacant areas formerly part of the ADI site were located to the west the Dunheved Link Road.

2.4 Topography and Hydrology

The EWCR was relatively flat (approximately 25 to 30 m AHD) as it comprises of a sealed roadway which has been developed as relatively level along its length, including areas over waterways and through low lying areas.

The roadway tapers away towards its edges and therefore any surface water that falls onto the road is anticipated to flow towards the nearest road edge.

The Dunheved Link Road was also identified as relatively flat, this area tends to fall towards nearby local channels such as the Dunheved Open Channel. Regional topography and surface water runoff is to the north, north-east.

South Creek and Ropes Creek are the two main waterways that flow in proximity and below small portion of the roadway site. South Creek drains a very large catchment in western Sydney, originating at Narellan, over 30 km to the south. The catchment is a long narrow strip up to 8 km wide with an approximate area of 18,000 ha. The catchment includes residential, agricultural and industrial areas. The creek flows northwards from the development site through mainly agricultural areas before meeting the Hawkesbury River at Windsor, 12 km to the north.

Ropes Creek drains a smaller catchment, originating at Cecil Park, 12 km to the south-west. This catchment is also a long narrow strip up to 4 km wide and with an approximate area of 2400 ha. The catchment also includes residential, agricultural and industrial areas. Part of the creek has been diverted along a concrete drainage channel for about 2 km through the former St Marys Property before flowing into South Creek at its new confluence just to the north of the former St Marys Property boundary and is present in proximity of the proposed roadway.

The St Marys Sewage Treatment Plant (STP) is located south east of the site. ADI (1996b) reported effluent from the STP receives tertiary treatment before being discharged into the old Ropes Creek

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flow channel. This then flows into South Creek at its old confluence in the middle of the former St Marys Property.

An Open Channel is present to the west of the Dunheved Link Road, referred to as the Dunheved Open Channel. The channel passes through the area of retained vegetation to the west of Dunheved and discharges into South Creek. The elevation of the channel within the site is generally 2 to 3 m above the observed depth to groundwater. Surface water flow into the channel is from a stormwater outlet at the southern boundary of the ADI property which is anticipated to discharge stormwater flows from the Links Road industrial estate to the south of the site.

2.5 Geology

Review of the regional geological map (DMR 1997) indicated the site lies within Tertiary Londonderry Clay. The Londonderry Clay is characterised by clay, patches of ferruginized, consolidated sand.

Review of the regional soil map (DLWC 1972) indicated that the site lies within the Berkshire Park soil landscape group.

The typical Berkshire landscape is characterised by weakly pedal orange heavy clays and clayey sands, often mottled with inclusions of ironstone nodules. Large silcrete boulders (up to 20cm) occur in sand/clay matrix. Yellow podzolic soils where drainage conditions are poor, red podzolic soils and chocolate soils on flats and in small drainage lines. Kransnozems are present in unstructured plastic clays and in drainage lines or a crest.

Limitations of the Berkshire landscape group are very high wind erosion hazard if cleared. Gully, sheet and rill erosion on dissected areas. Waterlogging, impermeable subsoils, low fertility hazard.

This area is largely Quaternary age alluvium beds that consist of gravelly sand, sand, clayey sand silty clay, from 1 to 8m in depth. In the northeast, the soil type is the Berkshire Park soil, while the eastern area is the Blacktown soil type – both of these overlie the Bringelly Shale Unit. Noted in the western region were a number of paleochannels of unknown origin.

As reported in ADI (1996a) the former ADI St Marys Property is underlain by shales of Bringelly Shale Unit part of the Liverpool Sub-group and Wianamatta Group of the Triassic epoch. These are overlain by alluvium of Quaternary age. The Bringelly Shale unit consisting mainly of grey hard shales within intervening siltstone forms the bedrock. The top of the shale, up to 5m thick, is highly weathered and very friable in nature. The Quaternary Alluvium comprises predominately buff coloured silt, silty/sandy clays which is often lateritic in nature and mottled with yellow/red ochres and iron nodules. Quaternary Alluvium was deposited mainly in the central lowlands along the flood plains of South Creek and Ropes Creek. Thickness of the alluvium within the development site is likely to range in thickness from approximately 6m to 10m as these are the central lowlands.

2.6 Hydrogeology

A review of information obtained from the NSW Office of Water database (NSW DPI 2018[3]) indicated there are three registered groundwater monitoring wells located to the south east of the site with no feature information available for any of the three wells. No registered groundwater wells fall within the site.

Based on information obtained during groundwater investigation works conducted by JBS&G including JBS&G (2018[4]) the depth to the water table in proximity to the site ranges from 2 to 7 m below ground surface depending upon the geology (quaternary alluvium and high weathered shale). The water table occurs in the sandy to silty clay above the weathered shale and/or shale bedrock.

[3]NSW Department of Primary Industries Website http://allwaterdata.water.nsw.gov.au/water.stm, accessed 23 January 2018 (NSW DPI 2018)

[4] *PFAS Assessment at Former ADI St Marys Development Site – St Marys and Llandilo, NSW (rev B*) JBS&G Australia Pty Ltd November 2018 (JBS&G 2018)

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The groundwater flow pattern of the site follows the general topography of the area (to the north east towards South Creek), however, variation in the flow direction can occur locally based on the ground slope and also by infiltration of seepage water from overlying Open Channels / open drains.

Groundwater in the shallow upper aquifer is fresh to brackish as well as saline (electrical conductivity (EC) 300 to 40 000 µS/cm). Groundwater is more typically present in the saline range in proximity of the proposed roadway. The groundwater pH ranges from 4.5 to 7 indicating slightly acidic conditions, with most locations generally slightly acidic to neutral. Slightly reducing conditions are present in the aquifer.

2.7 Acid Sulphate Soils

Review of the Department of Land and Water Conservation map of Springwood/Riverstone (DLWC 1997[5]) indicated that there no known occurrence of acid sulfate soils in the vicinity of the site.

[5] NSW Department of Land and Water Conservation Edition 2 (DLWC 1997)

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3. Site History

3.1 Aerial Photographs

Historical aerial photographs were obtained from the Department of Lands as shown in **Appendix A**. Summary of aerial photographs obtained of the site is included below:

- **1947** – the site comprised of mostly vacant grass land, no structures or development was apparent. The current Links Road alignment could be observed as a paved road South of the site. South Creek and Ropes Creek could be observed in the image. Surrounding areas to the site were also observed to be vacant, areas associated with former military operations were observed to the south and southeast.
- **1955** – the property appeared to be undergoing earthworks at the time of the image, including areas of the EWCR. Construction of roadways for the future ADI site appeared to be occurring. Additionally, Ropes Creek appeared to comprise of recently excavated soil suggesting construction of the current concrete lined channel. A small building was observed to the south of the site potentially identified as a sewage treatment plant albeit much smaller than the current St Mary's STP.
- **1965** – it is noted that this image does not show the entire length of the site, however it could be interpreted that the current paved road alignment appeared to exist in this image. Development of surrounding areas had occurred whereby an established munitions factory and associated infrastructure was observed.
- **1975** – the EWCR appeared similar to the previous image. The roadway was observed to extended through to the current day Ropes Crossing. Ropes Creek comprised of a concrete lined channel similar to how it appears at present. The admin section of the former ADI site including the Firestation could be observed to the east of the EWCR.

  The Dunheved Link Road appeared to be cleared of vegetation and was undergoing earthworks of some sort. Potential biosolids storage could be observed east of the Dunheved Link Road associated with the St Mary's STP. The St Mary's STP could be observed approximately 300 m east of the site and was observed to be a larger operation than observed in previous aerials, with multiple buildings, tanks and treatment facilities observed.
- **1982** – the EWCR appeared similar to preciously described. The Dunheved Link Road comprised of an unsealed road or access track in its mid section. Storage of biosolids was observed to occur in the mid to southern portion of the Dunheved Link Road. Surrounding areas appeared similar to the previous image, additional facilities of the ADI site including the W series radar range could be observed to the west of the site.
- **1991** – the EWCR appeared similar to that previously described. The Dunheved Links Road appeared to become overgrown with vegetation and use of the site for sewage storage appeared to cease or at least become over grown. Access tracks and other features appeared to be less distinct, assumed to be due to the site becoming less frequently used or occupied.
- Earthworks were observed south of the site and the Dunheved Industrial area, south of Links road appeared to have developed.
- **2002** – the EWCR appeared similar to preciously described. The Dunheved Link Road comprised of bare soil, assumed to be associated with remediation works associated with the excavation of historical biosolids known to occur in the mid 1990's based on historical ADI reports.

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- **2017** – the site appeared similar to the previous image. Surrounding areas to the site were noted to increase in vegetation. It could also be observed that development of a sealed road as the Dunheved Link Road had occurred. Areas to the west of the site (Ropes Crossing) and West (Jordan Springs East) were undergoing development works.
- **2019** – the site appeared similar to the previous description. It is noted that stockpiled soil was observed in the mid portion of Dunheved and east of the Dunheved Link Road comprising of approximately 90,000 m3 of relocated SP30 biosolid materials.

3.2 EPA Records

A search of the NSW EPA's public register under the Protection of the Environment Operations Act 1997 (POEO Act) was under taken (**Appendix B**). The search for the site identified there were:

- No prevention, clean-up or prohibition notices;
- No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

A search was also conducted through the EPA's public contaminated land register and is provided in **Appendix B.** The search did not identify any current or previous records of notices by the EPA, or notification to the EPA under Section 60 of the Contaminated Land Management Act 1997 (CLM Act), in relation to the site or immediately surrounding land.

3.3 Australian and NSW Heritage Register

A search of the Australian Heritage database was undertaken and records are included in **Appendix C.** It is noted that the Western Sydney Shale Woodlands St Marys is located within the general search area, however given the site location is within the historical road, this feature is not considered to be within the site.

A search of the NSW Heritage database was undertaken and records are included in **Appendix C**. The search did not identify the presence of any items of state significance in the vicinity of the site.

It is noted that areas of aboriginal heritage exist within the North Dunheved Precinct. It is understood that this area has undergone recent aboriginal heritage salvage works.

3.4 Integrity Assessment

The information obtained from the historical sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

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4. Previous Reports

4.1 Summary Site History

The site is located within the former St Mary's ADI Munitions facility and consists of a current and historical access road. The former St Mary's ADI munitions facility covered a much larger area (approximately 1535 ha) and was established in 1942 as part of a larger parcel of farmland resumed in 1941 by the Commonwealth for establishment of ammunitions factory to support the war effort (World War II). From 1955-57, a new munitions factory was constructed and a substantial part of the original factory was leased to private industry and became the present Dunheved Industrial Estate.

The St Marys Munitions factory was primarily a filling, or load and pack type, operation where explosives and propellant, manufactured elsewhere, were loaded into shells, bomb and rocket casings and stored in magazines awaiting deployment. Small amounts of some initiator explosives for detonators and fuses were manufactured on the property because they were too sensitive to travel. Some test firing of detonators, fuses and smaller occurred at designated areas as part of the manufacturing quality assurance program. All larger munitions were test fired at Army ranges elsewhere.

ADI conducted a comprehensive historical report on the St Mary's ADI site in the mid 1990's[6] which included a chronological history of site activities and development of buildings and structures. The report did not include detailed information of the site itself, apart from confirming its historical use as an internal paved road. It is noted that historical potential areas of environmental concern nearby or adjacent to the site, include the former administration section which included a fire station east of the site. This area was assessed in the Western Collector Road Detailed Site Investigation (DSI) and the Western Collector Road Extension DSI (JBS&G 2017a[7] and JBS&G 2017b[8]) reports which is discussed in more detail in **Section 4.7**.

In addition, Site 11, a remedial area associated with buried general waste located south of the mid portion of the site was remediated in the mid 1990s and is discussed further in the summary of the Southern Sector West Validation Report (ADI 1996) in **Section 4.2**.

Comprehensive PFAS assessment and subsequent remedial action plan has been conducted by JBS&G from 2017 to present. Associated reports for these works are summarised in **Sections 4.6, 4.8** and **4.9**.

Historical reports have been summarised in sections below to obtain information relating to the site.

[6] ADI Limited – ADI St Mary's Property Historical Report

[7] *Detailed Site Investigation – Western Collector Road, Ropes Crossing, NSW*. 21 September 2017 JBS&G Australia Pty Ltd (Rev 1) JBS&G 2017a

[8] *Detailed Site Investigation – Western Collector Road Extension, Ropes Crossing, NSW*. 13 December 2017 JBS&G Australia Pty Ltd (Rev C) JBS&G 2017b

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4.2 Southern Sector West (ADI 1996)

A portion of the former Southern Sector West falls within the western portion of the site.

Kidd (1999) reported historically, the sector had a variety of uses none of which occurred on the site. Remedial area Site 11 is noted to be located to the south of the site and formerly comprised a soil and gravel quarry area and a tip site for rubble and general factory waste. This underwent extensive investigation works, prior to being excavated and disposed of offsite to a suitably licensed facility. A total of approximately 75,000 m^3 of impacted soils and buried waste was disposed of offsite. Validation samples were collected following the excavation and offsite disposal and samples were found to be within the Environmental Acceptance criteria utilised.

4.3 Southern Sector East (ADI 1996)

The Northern Dunheved Precinct, proposed commercial/industrial site falls within the former Southern Sector East Sector. The portion covered by the Northern Dunheved Precinct includes previously investigated contaminated areas Site 24F and Site 12 (ADI 1996d).

ADI (2016d) reports that Site 12 covered an area of 4.1 ha and was used as a general tip for site materials including buildings rubble and general rubbish between 1955 and 1980. ADI (1996d) observed general solid waste including timber, bricks, concrete slabs, scrap metal, fibro sheeting, asphalt, concrete pipes, asbestos sheeting, galvanised roofing and glass. No evidence was uncovered that the site was used for the destruction or disposal of explosive wastes.

Following the remedial works soil validation samples were collected from the site and analytical concentrations were either within the Safe Environmental Acceptance criteria or within 95% UCLs. The land was then recontoured to the resemble the original topography.

ADI (1996d) reports that from the mid 1980's the St Marys Sewage Treatment Plant (STP) received approval from the St Marys Munitions Filling Factory (the site) to pump treated sludge from its plant onto ADI land. Site 24F was identified as a disused sewage effluent dumping area. The area was boarded by 0.5 to 1 m high earth mounds.

Following investigation works into Site 24F identified that the sewage sludge material was generally outside of the adopted Safe Environmental Acceptance Criteria for Chromium, Copper, zinc and OCPs, isolated occurrences of impacted PCBs and PAHs were also reported.

OCP, PCB and PAH impacted samples were delineated and then excavated and disposed offsite to landfill. The remaining dried sludge material was excavated and stockpiled elsewhere within the St Marys Property.

Following the remedial works soil validation samples were collected from the site and analytical concentrations were either within the Safe Environmental Acceptance criteria or within 95% UCLs.

It is noted that PFAS investigation was not conducted within 24F, given its proximity the St Mary's STP and given that this portion of the site was used to dump disused sewage effluent, it is considered a potential AEC.

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4.4 Groundwater Monitoring Event (JBS&G 2016[9])

JBS&G was engaged to complete a Groundwater Monitoring Event (GME) across Central Precinct Development and associated Regional Park, located at Llandilo, NSW. JBS&G conducted the well installation (12 groundwater monitoring wells) between 8 and 14 January 2016 comprising 12 monitoring wells, with groundwater sampling conducted between 21 and 27 January 2016.

During groundwater sampling, measured depth to water was between 2.7 and 6.8 m from the top of well casing. Corrected water elevation was between 12.04 m and 16.75 m Australian Height Datum (AHD). The inferred groundwater flow direction was to the east and southeast. Groundwater encountered was clear to brown, low to high turbidity, with no sheen or odour observed at all monitoring locations. No aesthetic issues are present within groundwater at the site.

Groundwater samples were analysed for heavy metals, TRHs, BTEX, PAHs (low levels), OCPs, PCBs, VOCs and explosives. All reported concentrations were found within the site adopted criteria with the exception of minor zinc concentrations marginally above the Fresh Water Ecosystems (ANZECC 2000) guidelines, and nickel at MW01 above the fresh water criterion and the Australian Drinking Water (Mar 2015) health criterion, however, groundwater within the vicinity of MW01 was not proposed to be used for potable purposes.

These minor exceedances were not considered to pose an unacceptable risk to the intended uses of the site for the following reasons:

- The zinc and nickel levels are considered typical of urban areas, based on the general consistency in the results across the site, including upgradient locations;
- The highest concentrations at MW01 and MW07 were over 750 m and 250 m respectively from the nearest watercourse (South Creek), with downgradient wells showing similar or lower concentrations than elsewhere; and
- Groundwater was unlikely to be used for potable purposes.

It is noted that concentrations of copper, lead and zinc exceeded ANZECC 2000 Fresh Water Ecosystems, however these concentrations were considered consistent with background levels and therefore were not considered to pose a risk at the site. It is also noted no concentrations were elevated above ANZECC 2000 guidelines for Water Quality and General Water Use (irrigation purposes). Furthermore, groundwater at the site is unlikely to be used as a resource given the proposed residential development.

Based on the findings of the assessment, it was considered that there were no unacceptable risks to likely onsite or offsite receptors from groundwater.

[9] *Groundwater Monitoring Event – Central Precinct, Llandilo, NSW (Rev 0*) JBS&G Australia Pty Ltd 29 June 2016 (JBS&G 2016)

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4.5 Sampling Analysis and Quality Plan (SAQP) (JBS&&G 2017c[10])

The SAQP was developed to document the methods which will be employed to complete the Environmental Site Assessments (ESAs) across the JSE and included the ROS area within Stage 2 of the site.

Based on the Conceptual Site Model (CSM), baseline COPC were identified as heavy metals, PAHs, TRH, OCPs, PCBs, explosives, UXOs and Asbestos.

The ESAs are required across previously inaccessible areas (paved roads, building and stockpile footprints) of the JSE and associated Regional Open Space. A number of buildings within the ROS area associated with the former radar range require ESA assessment

It is understood the inaccessible areas requiring ESA are to be developed together with the surrounding development site for standard residential land use, associated Regional Open Space and the roads for commercial industrial land uses. It was noted some of the auditable areas fall into the regional open space which surrounds the JSE.

4.6 PFAS Human Health and Ecological Risk Assessment (JBS&G 2018b[11])

JBS&G were requested to complete an investigation on PFAS across the adjacent development site and Stockpile 30 (located to the north of the roadway and consisting of biosolids derived material as historically stored in proximity of the Dunheved portion of the roadway).

The results of the investigation identified:

- An elevated level of PFAS in one groundwater monitoring well as located within the western portion of Dunheved in close proximity of the roadway referred to in this assessment;
- PFAS was identified within stockpile 30 and immediately hydrogeological downgradient of stockpile 30;
- The source of the PFAS was likely associated with the historical sewage treatment activities associated with the formation of the stockpiled materials; and
- Concentrations of PFAS reported in stockpile 30 have not been identified to pose a potential health or ecological risk where the materials are reused on site in a commercial/industrial setting.

4.7 Western Collector Road DSI (JBS&G 2017a, JBS&G 2017b)

JBS&G conducted UXO clearance works and environmental investigation works on the Western Collector Road and Western Collector Road extension site in 2017. The Western collector road is located east of the site and is understood to form part of the previously existing road.

The investigation included review of historical reports and information, UXO clearance works following the removal of the road pavement, test pitting and soil sampling of soils and comparison of soil analytical results against NEPC (2013) site suitability criteria to determine the suitability of the site for the proposed use as a road way.

Based on the findings of the investigation:

- No unexploded ordnance items were identified at the site and the site was cleared as free of UXO by the UXO clearance contractor;

[10] *Sampling Analysis and Quality Plan, Central Precinct Llandilo, Maryland Development Company*, November 2015 (Rev 5) JBS&G Australia Pty Ltd (JBS&G 2017a)

[11] *PFAS Human Health and Ecological Risk Assessment – Former S Marys ADI Property Central Precinct, Llandilo, NSW (Rev D*) JBS&G Australia Pty Ltd (JBS&G 2018b)

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- The soil samples collected reported concentrations of heavy metals, TRH, BTEX, OCPs, PCBs and PAHs below the adopted health based criteria (HIL-D);
- No ACM/asbestos was observed within the sample locations or within the samples analysed;
- Based on the groundwater results and targeted soil samples collected adjacent to the fire station, the upgradient Fire Station did not pose a risk to the site with concern to PFAS;
- It was considered that the site is suitable for the proposed roadway with no further assessment, remediation or management of contamination issues; and
- It was recommended that an unexpected find protocol be utilised for future works at the site.

4.8 PFAS Assessment at Former ADI St Marys Development Site (JBS&G 2018a)

JBS&G were engaged by the client to undertake environmental site assessment activities at the Lend Lease St Marys Development Site, as located at St Marys and Llandilo, NSW as restricted to the assessment of per and poly fluoroalkyl substances (PFAS). The site is within the former St Marys ADI site which was used for various munition filling and storage activities up until 1994.

Several stages of historical, assessment and remediation have occurred at the development site. PFAS have been recently identified as an emerging contaminant of concern on a range of historical commercial, industrial and Defence sites. Previous stages of assessment, remediation and validation at the site have not considered PFAS as a potential contaminant.

A desktop review of potential PFAS sources on and in proximity of the site identified potential PFAS contamination associated with: a historical Fire Station present at the east of Ropes Crossing; potential historical fires across the site; receipt, storage and handling / relocation of biosolids from the adjoining Sydney Water Sewage Treatment Plant (STP) in the 1980's and 1990's and potential historical PFAS uses / contamination in proximity of the site. Biosolids historically received at the Dunheved portion of the site were transferred to an area known as Stockpile SP30 as located to the north of Central Precinct in the mid 1990's.

The assessment of PFAS on the site has been undertaken by sampling and analysis of soil, surface water, sediment, groundwater and biota samples undertaken through the latter part of 2017 and 2018. An assessment of quality assurance / quality control has found that the generated data is reliable to characterise levels of PFAS in each of the media assessed.

On the basis of the data set generated, it was found:

- PFAS was identified in historical biosolids as associated with Stockpile SP30, within soils in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and at the south-east of the former extent of biosolids storage within Stockpile SP30. The levels of PFAS measured in soils were not considered to pose a significant health or ecological risk by potential direct exposure pathways as per the current or proposed site use. Though slight exceedances of potentially applicable ecological protection criteria were identified;
- PFAS impact was identified in surface water across the site. Increases in levels of PFOS in surface water were observed in South Creek moving upstream to downstream of the site. Elevated levels of principally sulfonic forms of PFAS (PFOS and PFHxS) were reported throughout the South Dunheved Open Channel in the south-western portion of the Dunheved portion of the site. PFAS was being discharged into the South Dunheved Open Channel from a stormwater pipe discharging from Links Rd adjoining the south of Dunheved. The South Dunheved Open Channel discharges into South Creek;

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- A range of PFAS constituents, generally at levels slightly exceeding detection limits, were present throughout South Creek tributaries on the development site and an Open Channel from the STP. PFOS was identified and found to have bioaccumulated (by comparison to levels measured in surface water), within biota sampled from South Creek and the Open Channel from the STP. Sediment analysis was consistent with surface water findings;
- PFAS was identified in groundwater adjoining and hydrogeologically downgradient of Stockpile SP30, in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site, underlying an area of North Dunheved and adjoining the northern portion of the western boundary to the Sydney Water STP; and
- The highest levels of PFAS impact in groundwater were reported in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and were considered to be consequent of historical migration of PFAS impacted surface water through the South Dunheved Open Channel. It was considered likely that historically substantially higher levels of PFAS had been present in the South Dunheved Open Channel.

It was recommended that site management and/or remediation works are undertaken:

- To prevent the inflow of PFAS impacted stormwater to the site;
- To remove potential direct exposures to biosolids prior to / with development of the site for the proposed site uses and preclude surface water contact to prevent future leaching / migration of PFAS impact within biosolids; and
- Control potential future leaching of PFAS impacted soils / sediments present at near surface depths in proximity of the South Dunheved Open Channel.

A remedial action plan (RAP) was prepared by JBS&G to manage and remediate the PFAS impacted areas identified in the report and as discussed above. The RAP is summarised in **Section 4.9** below, of particular relevance and with respect to the site area being assessed is impacted soils associated with the Dunheved open channel which are located within the vicinity of the Dunheved Links Road as shown on **Figure 3**.

4.9 Remedial Action Plan – Former ADI St Marys Development Site (JBS&G 2018c[12])

JBS&G was engaged by the client to prepare a RAP at the Lend Lease St Marys Dunheved Development Site, as located at St Marys and Llandilo, NSW. The RAP was based on the findings of the site wide PFAS Assessment summarised in **Section 4.8** where it was established that remediation/management of impacted soil would be required within the Dunheved Industrial precinct so that it can be considered suitable for its proposed commercial / industrial land uses. The RAP was prepared in accordance and with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of NEPC (2013), EPA (2017) and SEPP 55 and was specific to the remediation of PFAS impacts only.

The RAP identified the most feasible remedial strategy as containment of impacted soils given the significant filling requirements for the land to meet flood mitigation measures. This strategy would isolate the impacted materials and contain them within a confined area where potential for migration is mitigated. The proposed containment strategy is as follows:

- The materials to be contained shall be maintained to the commercial / industrial land-use area within the Dunheved precinct, as consistent with that area as nominated in the development approval;

[12] *Remedial Action Plan – Former ADI St Marys Development Site St Marys and Llandilo, NSW (Rev C*) JBS&G Australia Pty Ltd 27 November 2018 (JBS&G 2018c)

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- Excavation of impacted soils at the Dunheved Open Channel and relocation of those soils to the containment cell;
- Relocation of SP30 soils, currently temporarily stockpiled in Dunheved, into the containment cell;
- A minimum soil cover thickness of 2 m will be placed over the impacted soils; and
- Impacted soils will be placed a minimum of 2 m above the depth of groundwater.

Following relocation, validation sampling will be conducted within associated excavations and stockpile footprints.

The inflow of contaminated stormwater into the Dunheved Open Channel will be redirected as part of proposed infrastructure works in the area.

In relation to the site area, impacted soils at or adjacent to the Dunheved Open Channel as shown on **Figure 3** will require excavation, containment and validation as per the above listed procedures.

It was considered that subject to the successful implementation of the measures of the RAP the site can be made suitable for the intended land uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

4.10 Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (JBS&G 2018d[13])

JBS&G conducted environmental assessment works across the Dunheved Industrial Precinct comprising of consideration of other potential contaminants other than asbestos throughout 2018. Consideration of PFAS was covered in the PFAS Assessment at the Former ADI St Marys Development site (JBS&G 2018), however consideration of other contaminants was required to satisfy council conditions.

The objective of the investigation is to characterise potential contamination at the site using all non-PFAS data collected over the past 18 months and to use this information to draw conclusions regarding the suitability of the site for the proposed use or make recommendations to enable such conclusions (in lieu of PFAS assessment which has been undertaken separately).

All soil concentrations were identified at concentrations below the adopted health and ecological criteria adopted for the site. Further to this, no significant impact as far as staining, odours or ACM was identified across the site during the various investigations.

It was noted that a single fragment of ACM was identified on the surface at location DHN-50. The fragment was collected and sent to the testing laboratory for confirmatory testing. No additional fragments were identified within the vicinity to DHN-50. As such it is considered that the fragment was isolated and not part of a significant issue which would warrant further investigation or remediation.

Groundwater analytical results were reported at concentrations below the laboratory limit of reporting for the majority of analytes tested. Reported concentrations of heavy metals including arsenic, cadmium, chromium copper, lead, mercury, nickel and zinc are generally considered representative of background concentrations in the area. Given that groundwater is not used as a resource at the site given its brackish to saline properties the identified concentrations are not considered to pose a potential risk.

There is no potential for migration of contamination from the site for the following reasons:

[13] *Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Marys, NSW (Rev A*) JBS&G Australia Pty Ltd 31 December 2018 (JBS&G 2018d)

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- No concentrations of soil or groundwater were identified at concentrations that represent a health or ecological risk; and
- Soil is generally secured with overlying vegetation cover preventing potential wind or surface water migration. Groundwater at the site is slow moving as demonstrated through hydraulic conductivity testing conducted in JBS&G (2018a).

Based on the findings of the investigation the following conclusions were made:

- Soils at the site were not identified to pose an aesthetic risk noting the proposed commercial/industrial use of the site;
- Soil analytical results were reported at concentrations below the adopted criteria; and
- Groundwater analytical results were generally reported at concentrations below the adopted criteria. Elevated concentrations of heavy metals identified were not considered to pose a risk given groundwater is not used as a resource and has limited migration potential;

It was recommended that the CMP (JBS&G 2018e) is implemented throughout future works.

Sample locations in proximity to the site are provided on **Figure 3**, given this report overlaps with the Dunheved Link Road, data is considered to be a good indicator for potential contamination.

4.11 Contamination Management Plan (CMP) – Central Precinct and Dunheved Precinct (JBS&G 2018e[14])

This Contamination Management Plan (CMP) is a revision and update of a previous CMP by URS (2008). This CMP has been updated throughout the time the project has been running and includes the Central precinct (JSE) area as well as the Dunheved Precinct.

The CMP is a condition of all site audit statements (SASs) requiring an appropriate management plan including procedures for the safe handling and disposal of any items of explosive ordnance, shall be in place before development earthworks commences and shall remain in place to cover any excavation on within Central Precinct during its ongoing use.

The objectives of this CMP is to provide an Unexpected Finds Protocol (UFP) with an appropriate framework for identifying and addressing any discovery of chemical contamination, potentially explosive ordnance or any other form of hazard during development prior to subdivision so as to ensure a safe working environment for workers and to avoid unacceptable impact on the natural environment.

Unexpected finds may occur in areas which, although searched extensively, contain remnant materials which were obscured by the local topography, the type of surface cover (e.g. building) or at a depth preventing detection. The Site Auditor considered that, while explosive ordnance may be uncovered during earthworks, it is unlikely that these will present an unacceptable risk provided appropriate procedures for the safe handling and disposal of such material are adopted.

Furthermore, the CMP provides an appropriate framework for an Asbestos Management Plan (AMP) including procedures required for handling and disposing of any identified asbestos containing materials and asbestos impacted soils during the development of the Central Precinct.

The successful implementation of the CMP requires the appropriate briefing and Specific OHS Induction of site workers who may uncover potential chemical contamination (including potential asbestos containing materials) and/or explosive ordnance. It is proposed this briefing will include the review of the CMP and the associated flow chart.

[14] *Contamination Management Plan – Central Precinct and Dunheved Precinct, Llandilo, NSW (Rev 3*) JBS&G Australia Pty Ltd 23 January 2018 (JBS&G 2018e)

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This CMP describes reporting procedures and lines of responsibility, including the contact numbers for relevant experts at the commencement of the development works.

The Property has been remediated, audited and declared suitable for its intended land uses, and remnant contamination, if present, is most likely to be discovered during the development earthworks which occur prior to subdivision. The approaches included in the CMP are intended for use only during the Central Precinct preparation phase of development, during which structures are demolished and disposed of, land levels are altered and redundant infrastructure is removed and new infrastructure is installed. Post-subdivision management plans, if required, would be administered through the relevant local government authority.

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5. Conceptual Site Model

5.1 Potential Areas and Substances of Environmental Concern

Based on the history of the site and based on previous investigations conducted, general areas of environmental concern have been categorised and are present in **Table 5.1**. Within the EWCR, potential areas of impact at the site are associated with fill materials of unknown origin during construction of the road, areas of fly tipped waste on or adjacent to the paved road and potential residual impact from the pavement portion of the road to underlying soils.

Within the Dunheved Link Road, potential areas of impact are associated with historical use of the area for sewage sludge and effluent storage by the nearby St Mary's sewage treatment plant, and potential offsite impact from the nearby commercial/industrial uses in Dunheved, south of Links Road. It is additionally noted that the Dunheved Open channel, identified to be impacted with PFAS runs adjacent to the Dunheved Link Road.

The ROS area was predominantly remediated and signed off in previous site audit statements. Former buildings in the northern portion of the ROS area were excluded in previous SAS and require assessment in accordance with the JBS&G SAQP (2017c). As such, this area is considered of low risk of significant contamination. However, asbestos and or building rubble impact associated with former and recent demolition works and former uses of the ROS as a compound are considered.

Table 5.1. Areas if Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
EWCR	
Fill materials underlying the road	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and explosives** Metallic Debris – may contain explosive ordnance waste
Paved Road asphalt	Heavy metals*, PAHs, TPH/BTEX, asbestos and explosives** Coal Tar
Flytipping	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Dunheved Link Road	
Historical use of the site for sewage sludge and effluent storage	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and PFAS
Impact associated with the Dunheved Open Channel	PFAS
Potential impact from offsite sources south of Links Road	Heavy metals*, PAHs, TPH/BTEX, OCPs,, PCBs, asbestos and PFAS
ROS	
Flytipping	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Building Footprints	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and explosives**
Fill materials and impact from demolition works, use of the site as a compound	Heavy metals*, PAHs, TPH/BTEX, and asbestos

* Heavy metals include As (Arsenic), Cu (Copper), Cr (Chromium), Cd (Cadmium), Ni (Nickel), Pb (Lead), Zn (Zinc) and Hg (Mercury).

** Explosives will include, but not limited to, RDX (research department explosive), TNT (trinitrotoluene), 2,4-DNT (2,4-Dinitrotoluene) and 2,6-DNT (2,6-dinitrotoluene).

5.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Fill material; and
- Natural soils underlying impacted fill materials; and
- Groundwater.

The source of the fill material across road footprints is unknown. Fill material across the site must therefore be considered a potentially contaminated medium. Fill material is anticipated to be limited

to directly beneath roads where road base and other materials are anticipated to be used during road construction. Deeper fill is anticipated in areas where roads cross over creeks and gullies.

Further, fill associated with left behind biosolids from previous use of the Dunheved Portion of the site for biosolids storage, is considered a potential area of concern.

Based on the known former site use for munitions testing and the unknown source of fill materials, vertical migration of contamination from the fill and surface soils into the underlying natural soils may have occurred. Consequently, natural soils underlying impacted fill materials have a moderate potential to be a contaminated media.

Groundwater has been previously investigated and signed off as part of the historical remediation and validation works conducted across the former ADI St Marys Property therefore significant groundwater impacts are not anticipated. In addition, JBS&G conducted a groundwater monitoring assessment (JBS&G 2016 and JBS&G 2018a) in JSE, Dunheved and surrounding areas, no impact was identified.

Impact to groundwater from PFAS has been identified in the comprehensive PFAS investigations conducted. However, noting the proposed use for the site as a road way with no anticipated exposure pathway, the proposed development is not considered to be directly impacted by this issue.

Reference to PFAS impacted soils within and surrounding the Dunheved Open Channel is provided JBS&G (2018a) discussed in **Section 4.7** and are confirmed to extend onto the Dunheved Links Road portion of the site. As such PFAS impacted soils are considered to be present in portions of the site and will require remediation in accordance with the RAP (JBS&G 2018c).

Given the site was not historically located in munitions manufacturing or filling areas and the historical validation data for the development site surrounding the auditable areas does not indicate exceedances of volatile components it is considered unlikely that soil vapour is a contaminated media. However, should any volatile contaminants be detected in soil or groundwater this will be reassessed.

5.3 Potential Exposure Pathways

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site history review and review of previous investigations are generally in a solid form (e.g. heavy metals, asbestos, explosives, ordnance etc). As the site is currently paved there is a low potential for contaminates to have migrated via either windblown dust or surface water.

The potential for contaminants to migrate via groundwater is moderate to low, given the low hydraulic conductivity of groundwater in the region.

Based on the contaminants of concern identified in various media as discussed above and based on the proposed site development activities, potential exposure pathways at the site during and following development works include:

- Potential dermal and oral contact to impacted soils as present at shallow depths and/or accessible by earthworks contractors, however given the concentrations identified in PFAS generally industry standard PPE requirements including gloves, long sleeved clothing and pants, and steel capped boots will mitigate this risk;

Contamination associated with PFAS is considered to be from an offsite source(s). In its present state migration of impacted surface water, which in turn impacts soils and groundwater below, is occurring. In order to mitigate or eliminate the potential for migration, the RAP (JBS&G 2018c) should be implemented within identified impacted areas as shown on **Figure 3**.

5.4 Potential Receptors

Potential receptors of may include:

- Excavation / construction / maintenance workers conducting activities at or in the vicinity of the site, who may potentially be exposed to COPCs through direct contact with impacted soils present within excavations and/or inhalation of dusts / fibres associated with impacted soils;
- Nearby surface water bodies including South Creek and Ropes Creek;
- Ecological receptors located adjacent to the road in NPWS areas; and
- Residential areas following completion of planned development works in Jordan Springs East and Ropes Crossing.

5.5 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPCs as either liquids or gasses.

Man-made preferential pathways may be present at the site, generally associated with fill materials at near surface depths. Fill materials are anticipated to have a higher permeability than the underlying natural soil and/or bedrock.

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6. Conclusions

Based on the environmental assessment as completed previously and collated within this assessment, the following areas of environmental concern (AECs) and associated contaminants of potential concern (COPCs) were identified on the roadway as per **Table 6.1** following.

Table 6.1 – AECs and associated COPCs based on review of records and previous reports

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
EWCR	
Fill materials underlying the road	Heavy metals*, Poly aromatic hydrocarbons (PAHs), Total Recoverable Hydrocarbons (TRH)/BTEX (Benzene, toluene, ethylbenzene and Xylenes), Organochlorine pesticides (OCPs), Organophosphate pesticides (OPPs), Polychlorinated Biphenyls (PCBs), asbestos and explosives** Metallic Debris – may contain explosive ordnance waste
Paved Road asphalt	Heavy metals*, PAHs, TRH/BTEX, asbestos and explosives** Coal Tar
Flytipping	Heavy metals*, PAHs, TRH/BTEX, OCPs, OPPs, PCBs and asbestos
Dunheved Link Road	
Historical use of the site for sewage sludge and effluent storage	Heavy metals*, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos and PFAS
Impact associated with the Dunheved Open Channel (surface water entering site)	PFAS
Potential impact from offsite sources south of Links Road	Heavy metals*, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos and PFAS
ROS	
Flytipping	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Building Footprints	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and explosives**
Fill materials and impact from demolition works, use of the site as a compound	Heavy metals*, PAHs, TPH/BTEX, and asbestos

With the findings summarised in **Table 6.1** and subject to the limitations in **Section 7,** it is concluded that the site can be made suitable for the proposed use in accordance with clause 7 of SEPP 55 subject to the following actions:

- The EWCR requires further investigation including completion of an SAQP that includes details on required pavement removal, UXO clearance and detailed site assessment including soil sampling and analysis of soils present underlying roadways. The SAQP and subsequent investigations shall require review and endorsement by the Site Auditor[15]. The sampling works can only be undertaken subsequent to the removal of the existing roadway. This same process has been previously completed on a substantial extent of historical roadways / building footprints throughout the remainder of the overall development site. Assessments in lieu of the removal of the roadway have been completed to the extent achievable;
- Formerly inaccessible areas of the ROS including building footprints require UXO clearance and assessment in accordance with the existing JBS&G SAQP for JSE (JBS&G 2017c);
- In addition to findings of works undertaken specific to soils underlying the existing roadway footprint, the previously prepared Remedial Action Plan (JBS&G 2018c) to address PFAS impacts will be required to be implemented for PFAS impacted soils and groundwater identified within the Links road connection in the Dunheved portion of the site. The extent

[15] It is noted that works advanced from Phase 1 assessments as recommended have already been undertaken. Associated reports can be provided upon request.

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of the required remedial works has been determined by a substantial extent of sampling and analysis completed prior; and

- A Site Audit Statement will be required as specific to the roadway, subject to the completion of the anticipated additional environmental assessment and Validation Reports, to confirm the site as suitable for the proposed use.

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7. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

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Figures

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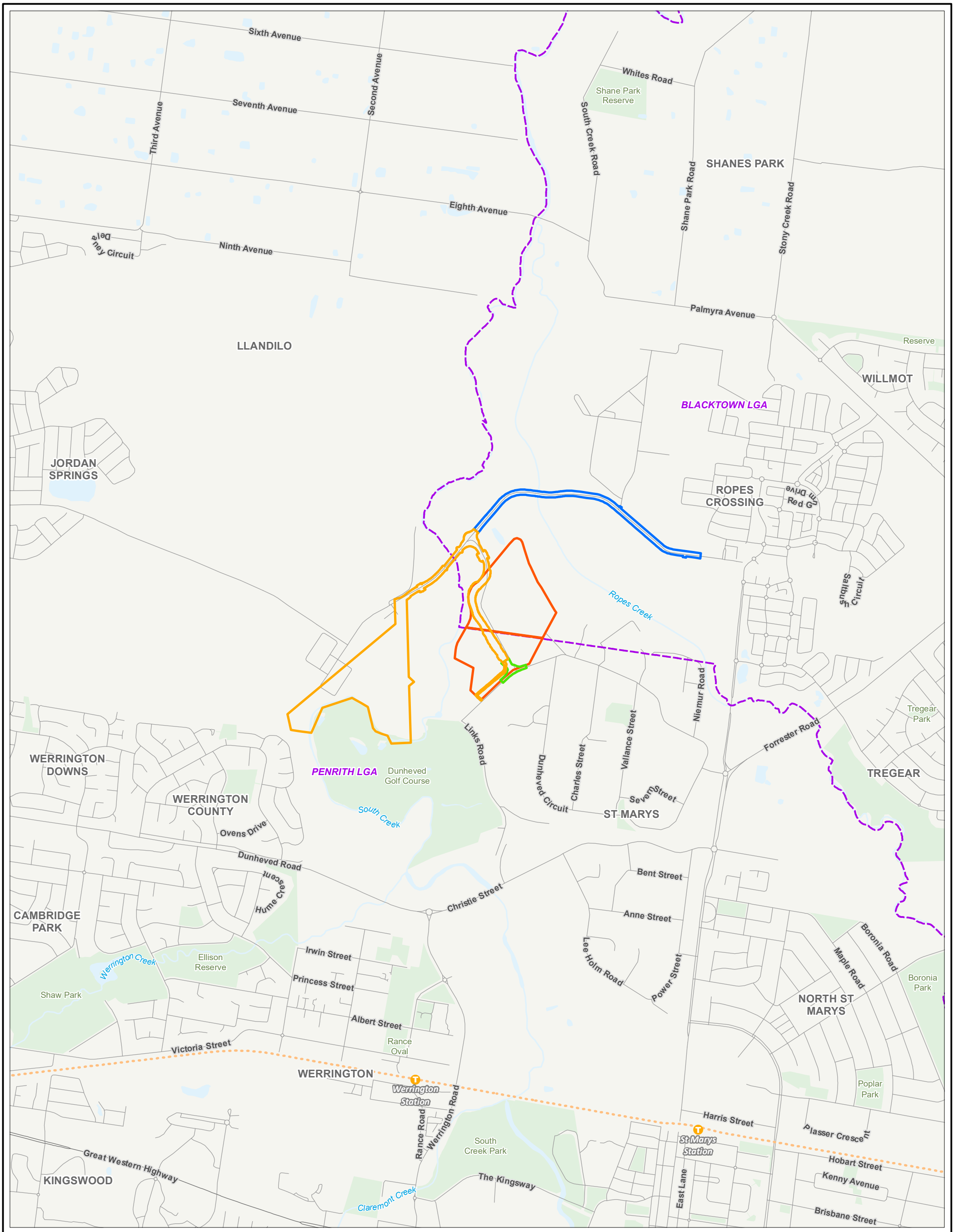


Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct
- LGA boundary
- Parks and reserves
- Waterbody area
- Waterway
- Primary Road
- Local Road
- Train Line
- Train Station

JBS&G

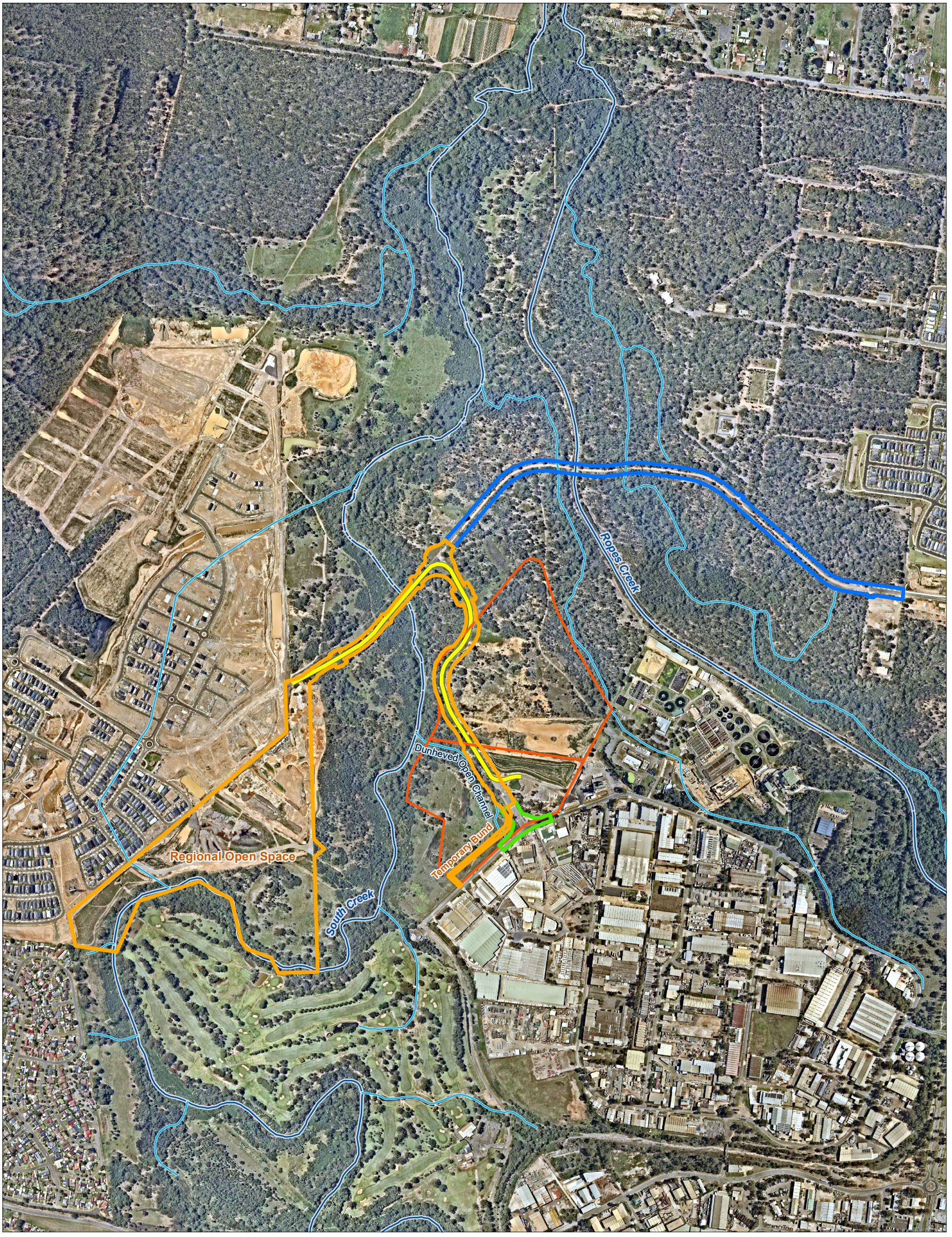
0 270 540 metres

Central Precinct

EAST WEST CONNECTOR ROAD (EWCR) SITE LOCATION

Job No: 54782		Scale: 1:20,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: FH	Checked By: GB	Version: R03 Rev B	Date: 12-Apr-2019	**FIGURE 2**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\54782_01_Site_Location.mxd
Template Version: 20180730



Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Haulage Road
- Creeks
- Channels

JBS&G

0 130 260
metres

Central Precinct

EAST WEST CONNECTOR ROAD (EWCR) SITE LAYOUT

Job No: 54782		Scale: 1:10,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: FH	Checked By: GB	Version: R03 Rev B	Date: 12-Apr-2019	**FIGURE 2**

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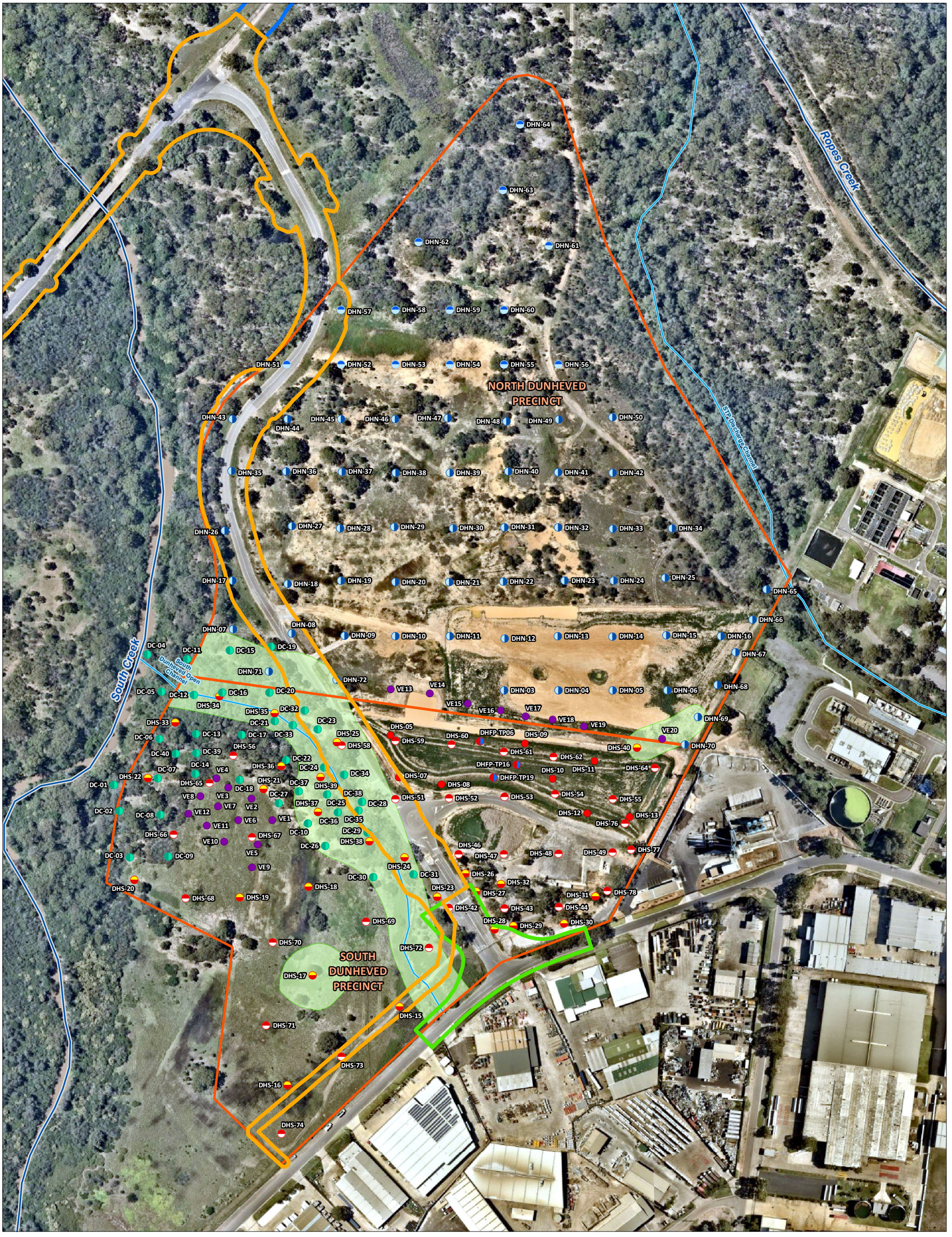
Time and Saved By: 10:07, 20181229

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Creeks
- Channels
- Proposed PFAS Remediation Areas

Soil Sample Location

- Dunheved South - Dec 2017
- Dunheved South - Sep 2017
- Dunheved South - Feb 2018
- Dunheved South - May 2018
- Dunheved North - May 2018
- Material Characterisation Dunheved May 2018
- Adjoining Dunheved South - July 2018
- Dunheved North - Nov 2018

JBS&G

0 40 80 metres

Central Precinct

SOIL SAMPLE LOCATIONS DUNHEVED

Job No: 54782		Scale: 1:3,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: FH	Checked By: GB	Version: R03 Rev B	Date: 12-Apr-2019	**FIGURE 3**

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Appendix A Aerial Photographs

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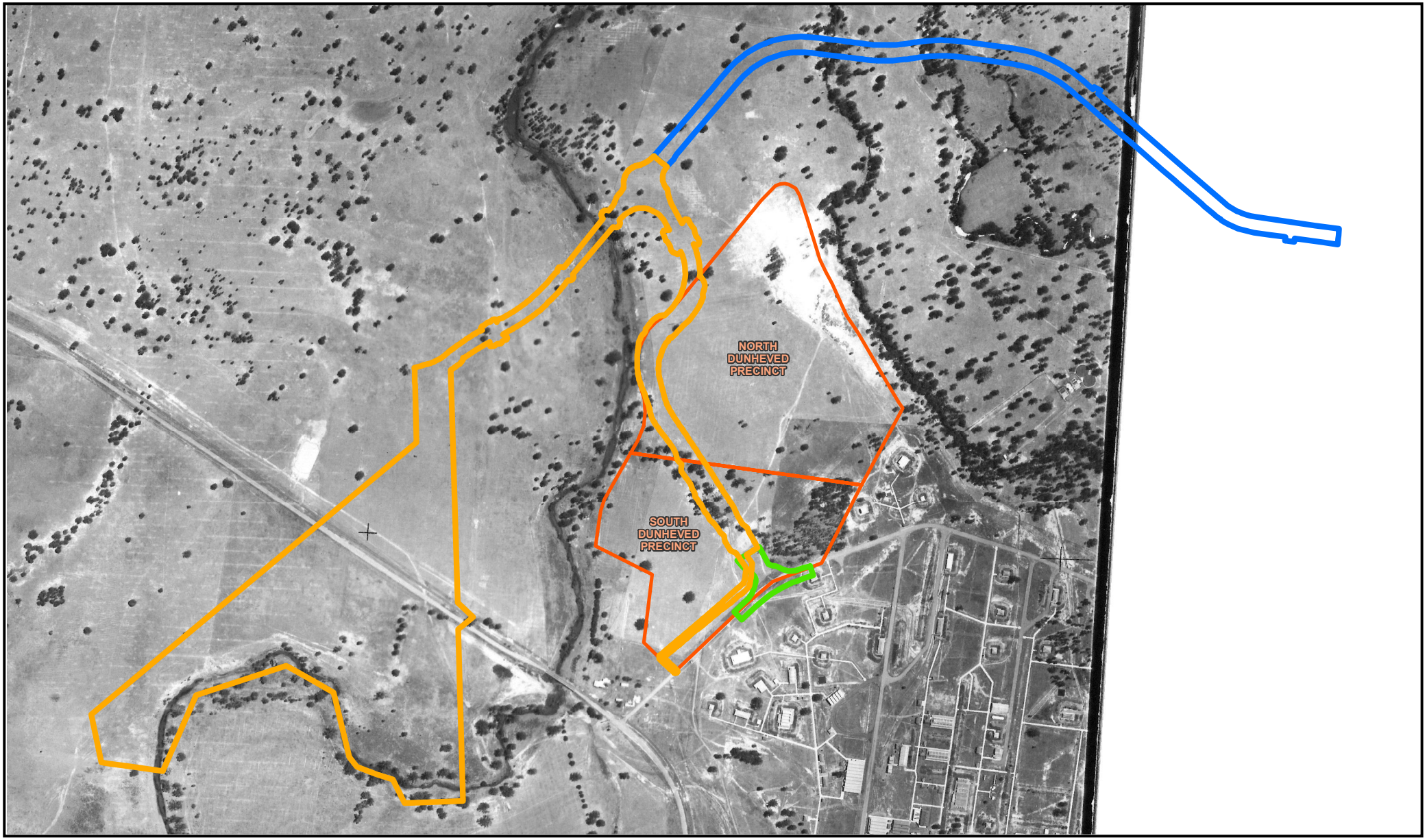

Reference: DFSI Imagery

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0 100 200 400 m

Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:
- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

Rev	Description	Drn.	Date:
A4			
	Original Issue - R01	BC	12-04-2019

J:\54782 Maryland Development Company\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\1947_Aerials.mxd

JBS&G **Figure: Aerial 1947**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1947_Aerials

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Reference: DFSI Imagery

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0 100 200 400 m

Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
	Original Issue - R01	BC	12-04-2019
Rev	Description	Drn.	Date:

Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

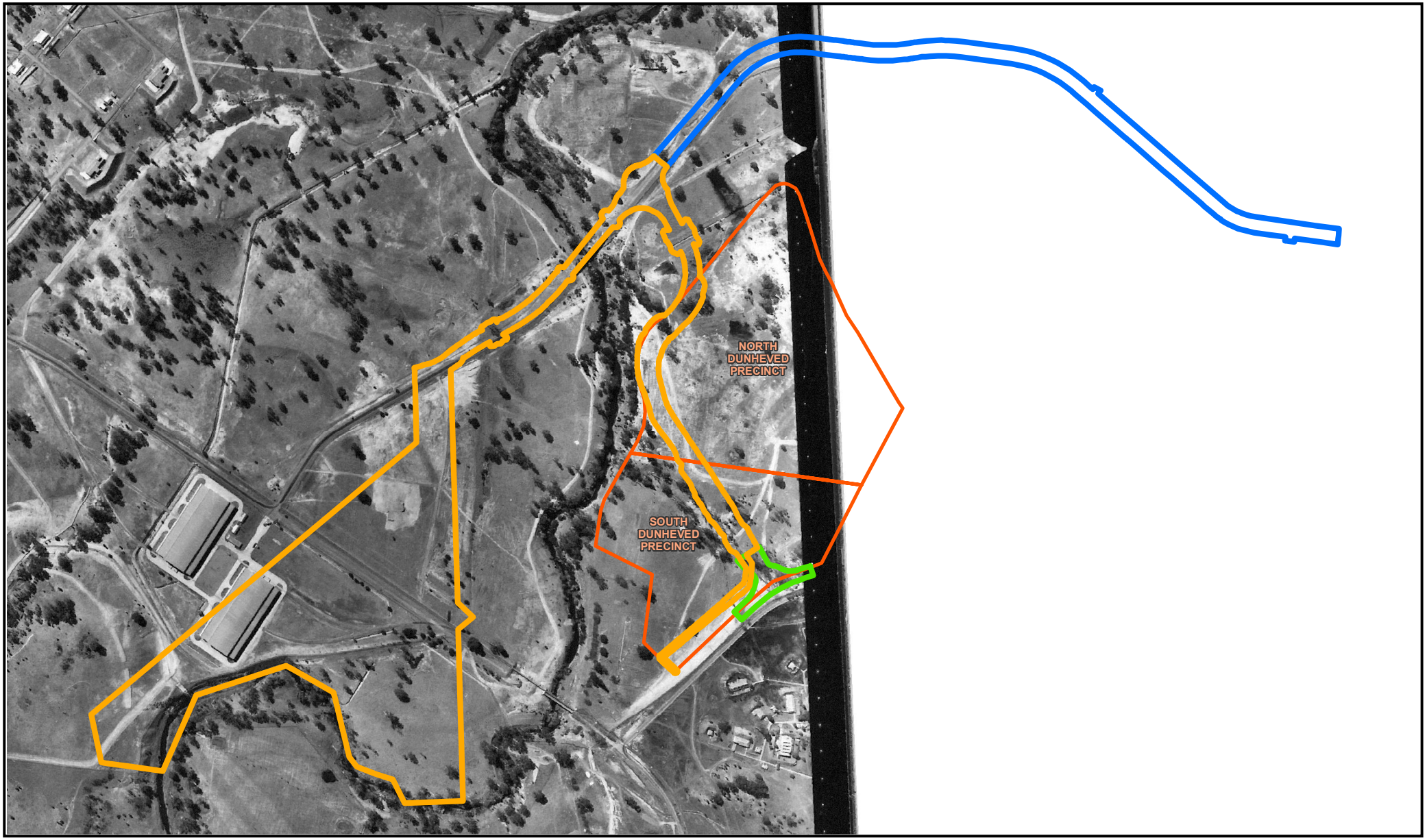
JBS&G **Figure: Aerial 1955**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1955_Aerials

Document Set ID: 6830578
Version: 1, Version Date: 28/08/2019



Reference: DFSI Imagery

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Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
	Original Issue - R01	BC	12-04-2019
Rev	Description	Drn.	Date:

Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

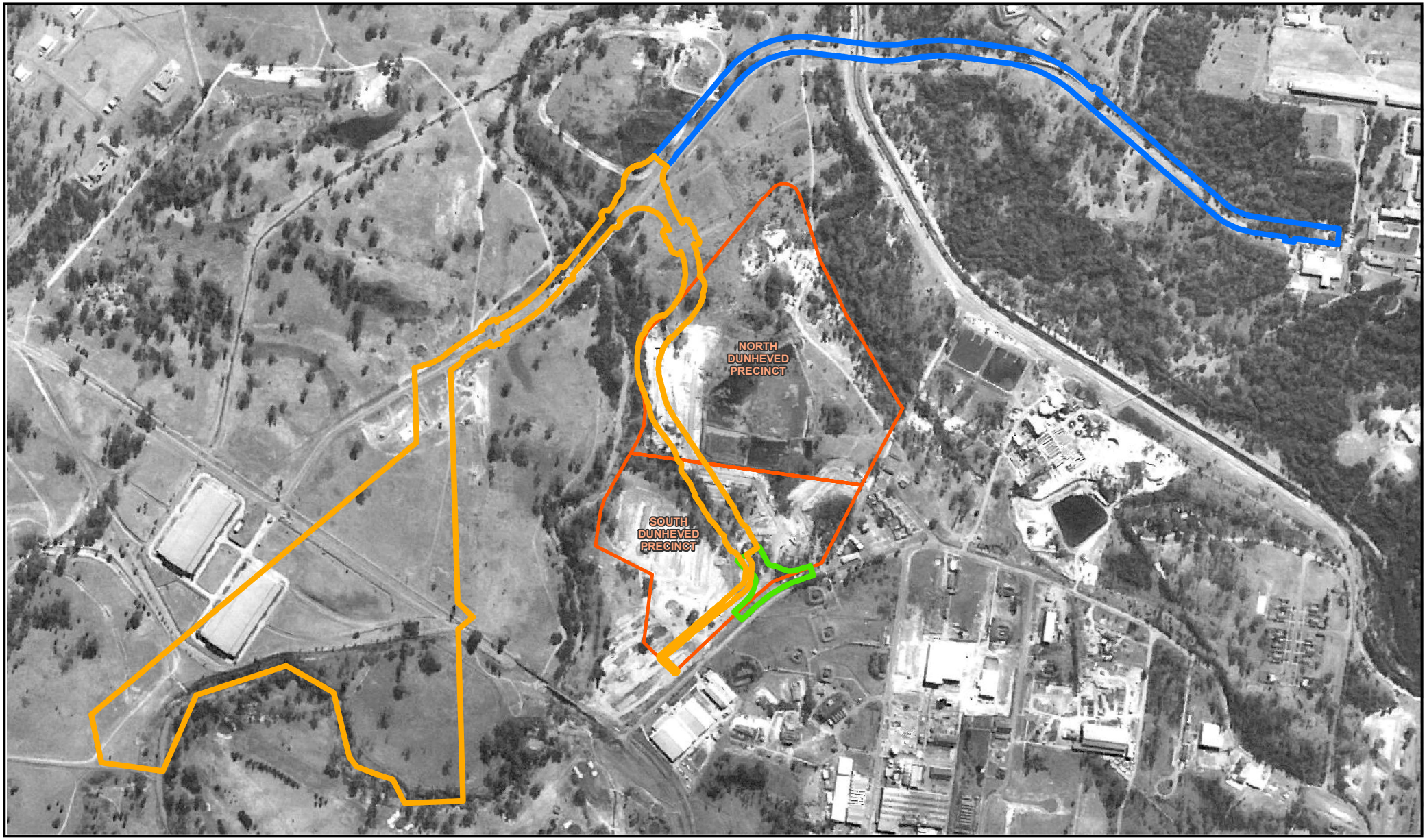
JBS&G **Figure: Aerial 1965**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1965_Aerials

Document Set ID: 6830578
Version: 1, Version Date: 28/08/2019



Reference: DFSI Imagery

© 2019 JBS&G

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Datum: GDA 1994 MGA Zone 56 - AHD

Legend:
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- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

A4			
	Original Issue - R04	FH	12-04-2019
Rev	Description	Drn.	Date:

J:\54782 Maryland Development Company\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\1975_Aerials.mxd

JBS&G **Figure: Aerial 1975**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1975_Aerials

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Reference: DFSI Imagery

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Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:
- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

A4			
	Original Issue - R04	FH	12-04-2019
Rev	Description	Drn.	Date:

J:\Projects\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\1982_Aerials.mxd

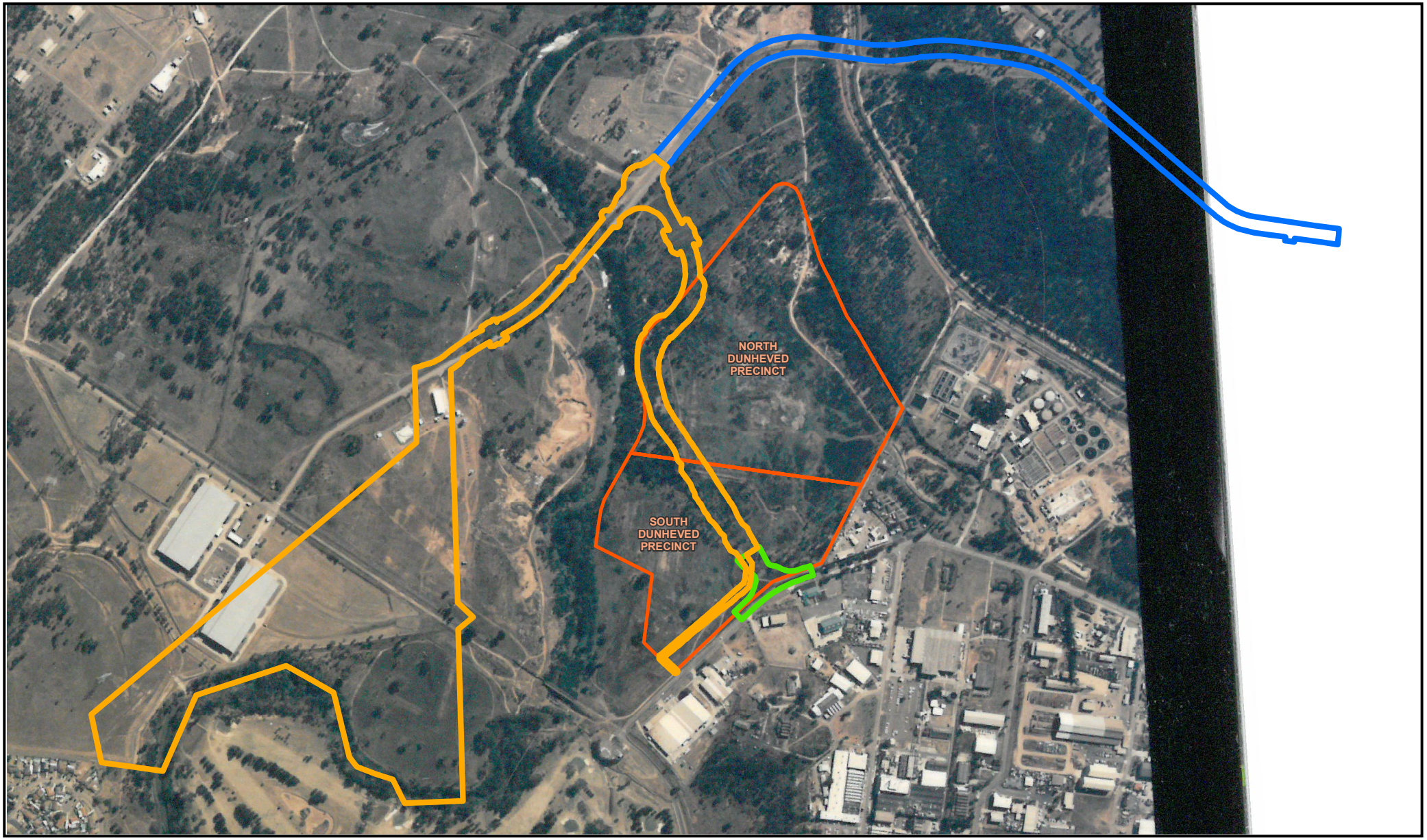
JBS&G **Figure: Aerial 1982**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1982_Aerials

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Reference: DFSI Imagery

© 2019 JBS&G

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Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
	Original Issue - R04	FH	12-04-2019
Rev	Description	Drn.	Date:

G:\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\1991_Aerials.mxd

Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

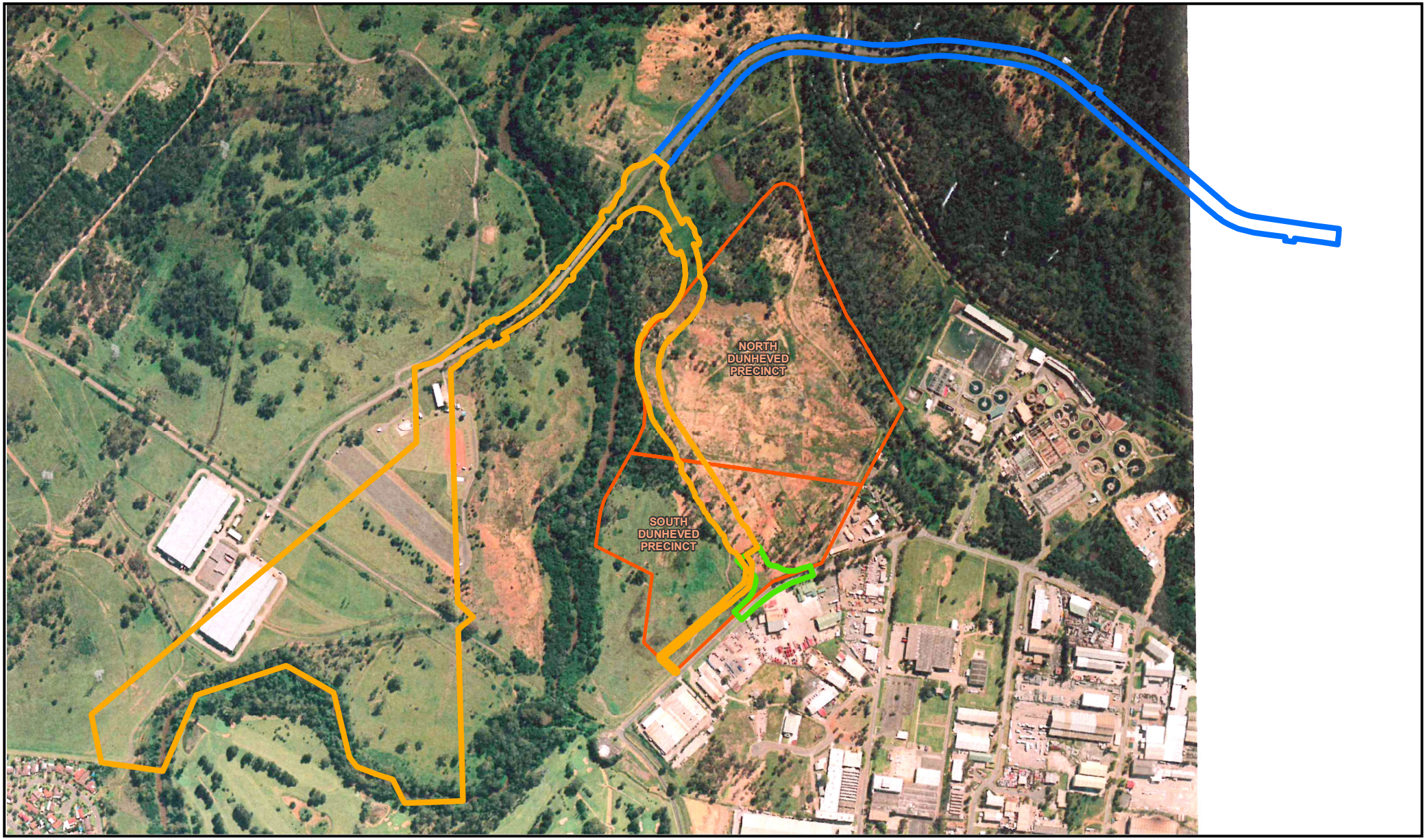
JBS&G **Figure: Aerial 1991**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 1991_Aerials

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Reference: DFSI Imagery

© 2019 JBS&G

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Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
	Original Issue - R04	FH	12-04-2019
Rev	Description	Drn.	Date:

Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

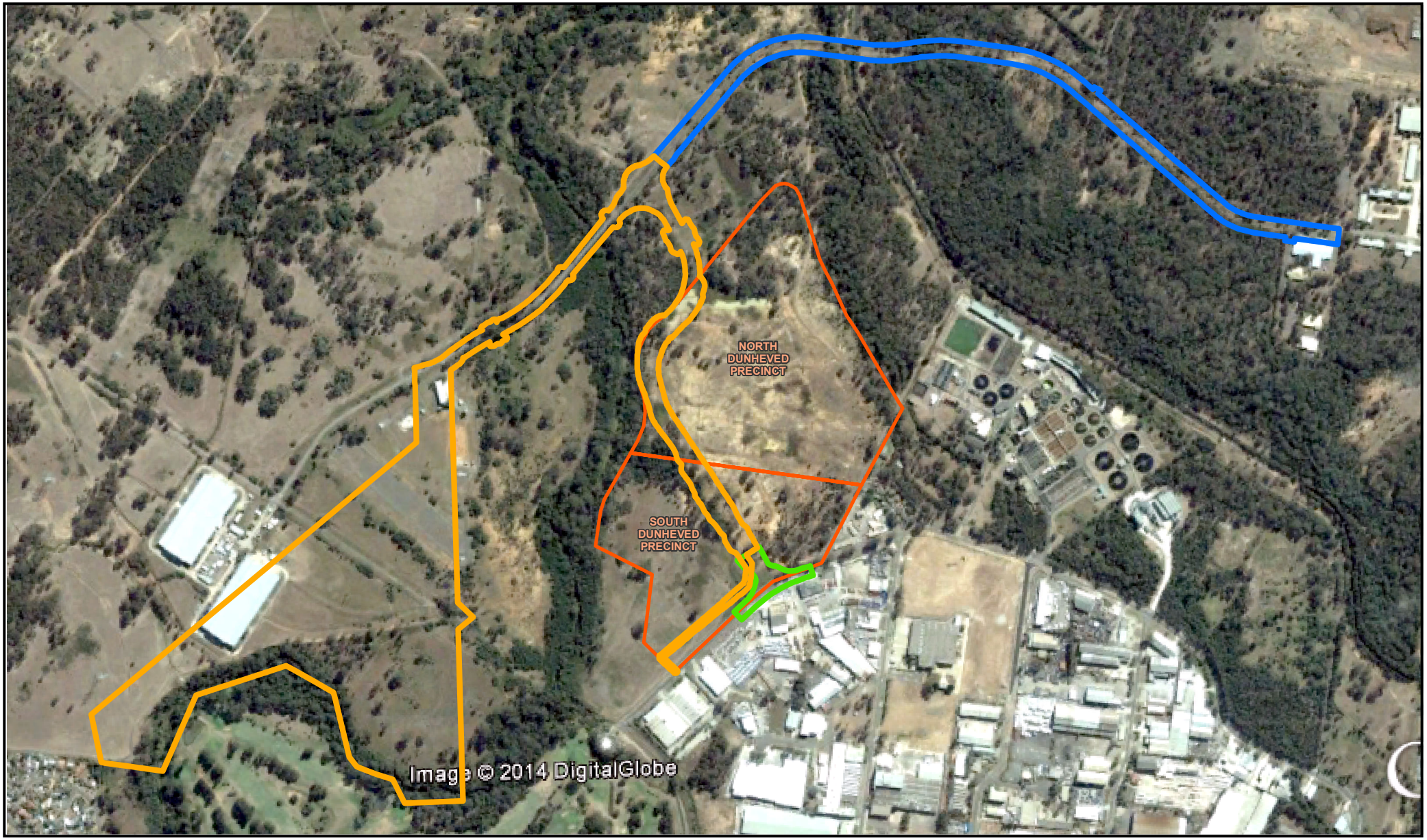
JBS&G **Figure: Aerial 2002**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 2002_Aerials

Document Set ID: 6835578
Version: 1, Version Date: 28/08/2019



Reference: Digital Globe

© 2019 JBS&G

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Scale:1:10,000

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
	Original Issue - R04	FH	12-04-2019
Rev	Description	Drn.	Date:

Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct

JBS&G **Figure: Aerial 2006**

Client: Maryland Development Company

Project: Central Precinct

Job No: 54782 File Name: 2006_Aerials

Document Set ID: 6830578
Version: 1, Version Date: 28/08/2019

Appendix B EPA Records

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Search results

Your search for: **General Search** with the following criteria

Name - ADI St Marys

returned 0 result

Search Again

For business and industry

For local government

Contact us

131 555 (tel:131555)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on (https://au.linkedin.com/company/nsw-environment-protection-authority-epa) (https://twitter.com/NSW_EPA) (https://www.youtube.com/channel/UCS5jrgAEsHicG

Document: Sept5 - 8336578
Version: 1, Version Date: 28/08/2019

List of NSW Contaminated Sites Notified to EPA as of 20 March 2019

Background

A strategy to systematically assess, prioritise and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

For some notifications, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any offsite consequences to the community or environment. Such sites would still need to be cleaned up, but this could be done in conjunction with any subsequent building or redevelopment of the land. These sites may not require intervention under the CLM Act, but could be dealt with through the planning and development consent process.

Where indications are that contamination is significant enough to warrant regulation having regard to the matters in section 12 of the CLM Act, the EPA may apply the regulatory provisions of the CLM Act to have the appropriate person (for example, the responsible polluter and/or landowner) investigate and remediate the site.

Where the EPA reasonably suspects that a pollution incident is occurring (or has occurred) at a premise, the EPA, as the appropriate regulatory authority, may choose to regulate the incident and any resulting contamination under the POEO Act by ordering the occupier or the owner to carry out certain actions.

As such, the sites notified to the EPA and presented in the following table are at various stages of the assessment and/or remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The tables provide an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the responsible landowner.

The following questions and answers may assist those interested in this issue:

Frequently asked questions

What is the difference between the "List of NSW Contaminated Sites Notified to the EPA" and the "Contaminated Land: Record of Notices"?

A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing on this "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

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Why my site appears on the list?

Your site appears on the list because of one or more of the following reasons:

- The site owner and/or the person partly or fully responsible for causing the contamination notified to the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the "polluter" believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that the EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily imply the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.
- The contamination is being managed under a specifically tailored program operated by another agency (for example t
- he Department of Industry and Investment's *Derelict Mines Program*).

I am the owner of a site that appears on the list. What should I do?

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

I am a prospective buyer of a site that appears on the list. What should I do?

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You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon, particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. Alternatively, the EPA may require information via a notice issued under s77 of the *Contaminated Land Management Act 1997* or issue a Preliminary Investigation Order.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being	The EPA has completed an assessment of the contamination and decided

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finalised	that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA as *the appropriate regulatory authority* reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the

(EP&A Act)	*Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the *Contaminated Land Management Act 1997* (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

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Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BERESFIELD	Former Koppers Timber Treatment Site	53 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79902937	151.6358846
BERKELEY VALE	Former Berkeley Vale Service Station	121-123 Lakedge AVENUE	Service Station	Regulation under CLM Act not required	-33.34899186	151.4423109
BERKSHIRE PARK	Shell Coles Express Berkshire Park	746 - 752 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.66508654	150.7990243
BEROWRA	Caltex Berowra Service Station	12-14 Berowra Waters ROAD	Service Station	Regulation under CLM Act not required	-33.6233827	151.1505554
BEROWRA	7-Eleven Berowra Service Station	965-969 Pacific (Cnr Waratah Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62673163	151.1479171
BEROWRA	Shell Coles Express Berowra	955 Pacific (Cnr Yallambee Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62818015	151.1475736
BEROWRA	42 Berowra Waters Road	42 Berowra Waters ROAD	Unclassified	Regulation under CLM Act not required	-33.6203211	151.1482454
BERRIGAN	Caltex Service Station Berrigan	155-165 Chanter STREET	Service Station	Regulation under CLM Act not required	-35.6557616	145.8015557
BERRY	Berry Service Centre - Shell Branded	88 Queen STREET	Service Station	Regulation under CLM Act not required	-34.77571634	150.6961713
BERRY	Shell Berry - Now Oleum branded	75 Queen STREET	Service Station	Regulation being finalised	-34.77500516	150.695167
BEXLEY	7-Eleven Bexley	474 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95160096	151.1252355
BEXLEY	7-Eleven (former Mobil) Service Station Bexley	613 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95539246	151.118447
BILLINUDGEL	CSR Readymix	Mogo PLACE	Other Industry	Regulation under CLM Act not required	-28.50210255	153.5278161
BILLINUDGEL	Billinudgel General Store	2A Wilfred STREET	Service Station	Under assessment	-28.50435	153.52701
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881
BLACKMANS FLAT	Lamberts Gully Mine	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	Land at Reservoir Road	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLACKTOWN	7-Eleven Service Station	60 Walters ROAD	Service Station	Regulation under CLM Act not required	-33.77599783	150.8948926
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.990197	151.11361
BLAKEHURST	The Bay Nursing Home	392-394 Princes HIGHWAY	Service Station	Under assessment	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74627	150.6137669

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SPRINGVALE	Springvale Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.40334736	150.1070462
ST CLAIR	7-Eleven (former Mobil) Service Station	4 Endeavour AVENUE	Service Station	Regulation under CLM Act not required	-33.79430926	150.7885793
ST IVES	7-Eleven (former Mobil) St Ives Service Station	157-159 Mona Vale Road, corner Putarri AVENUE	Service Station	Regulation under CLM Act not required	-33.73265301	151.1563899
ST IVES	Caltex Service Station	452 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.70752272	151.187545
ST IVES	Caltex Service Station	164 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7307595	151.1570462
ST IVES	Caltex Service Station St Ives	363 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7168971	151.1735263
ST IVES	Shell Service Station	179-181 Mona Vale ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73124859	151.1575827
ST LEONARDS	Telstra Data Centre	4A Herbert STREET	Other Petroleum	Under assessment	-33.81873741	151.1914222
ST MARYS	Former Woolworths Service Station	120-128 Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75525115	150.7752897
ST MARYS	7-Eleven (former Mobil) Service Station	2 Christie STREET	Service Station	Regulation under CLM Act not required	-33.74790843	150.7767667
ST MARYS	7-Eleven (former Mobil) Service Station	2 Wilson STREET	Service Station	Regulation under CLM Act not required	-33.77790415	150.771689
ST MARYS	Solveco	38 LINKS ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.738673	150.771554
ST MARYS	Integral Energy Mt Druitt Transmission Substation	69 Kurrajong North ROAD	Other Industry	Regulation under CLM Act not required	-33.76376093	150.7921691
ST MARYS	Caltex St Marys Service Station	Wordoo St Cnr Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75334263	150.7755489
ST MARYS	Chemcolour Industries Ltd	19-25 Anne STREET	Chemical Industry	Under assessment	-33.75027071	150.7725397
ST MARYS	Old Drycleaning location	1-7 Queen STREET	Other Industry	Under assessment	-33.73873	150.771747
ST PETERS	Cooks River Rail Terminal	20 Canal ROAD	Unclassified	Regulation under CLM Act not required	-33.91943986	151.1726689
ST PETERS	Camdenville Park	May STREET	Other Industry	Regulation under CLM Act not required	-33.90911815	151.176951
ST PETERS	Former Tidyburn Facility	53 Barwon Park ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.9130091	151.1809912
ST PETERS	BP Express Service Station	2 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90982281	151.1809936
ST PETERS	Former Industrial Manufacturing Facility (Taubman's Paints)	75 Mary STREET	Other Industry	Regulation under CLM Act not required	-33.91307297	151.1731383
STANMORE	125 Corunna Road	125 Corunna ROAD	Unclassified	Regulation under CLM Act not required	-33.88937382	151.1644589
STRATHFIELD	7-Eleven (former Mobil) Service Station	577 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88736091	151.0743474

Appendix C Heritage Records

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Office of Environment & Heritage

Home > Topics > Heritage places and items > Search for heritage

Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search returned 23 records.

Item name	Address	Suburb	LGA	SHR
Blacktown Native Institution	Richmond Road	Oakhurst	Blacktown	01866
Bungarribee Homestead Complex - Archaeological Site	Doonside Road	Doonside	Blacktown	01428
Clydesdale - House, Barn, Cottage and Farm Landscape	1270 Richmond Road	Marsden Park	Blacktown	00674
Colebee and Nurragingy Land Grant	Richmond Road	Colebee	Blacktown	01877
Dayton House	37-39 Roger Place	Seven Hills	Blacktown	00325
Exeter Farm	2 Knightsbridge Avenue	Glenwood	Blacktown	00205
Former Great Western Road, Prospect	Reservoir Road	Prospect	Blacktown	01911
Government Depot Site (former)	Dunsmore Street	Rooty Hill	Blacktown	00345
Grantham Poultry Research Station (former)	71 Seven Hills Road	Seven Hills	Blacktown	01382
Imperial Hotel	1 Rooty Hill Road North	Rooty Hill	Blacktown	00114
Merriville House & Gardens	Vinegar Hill Road	Kellyville Ridge	Blacktown	00091
Neoblie	Great Western Highway	Mount Druitt	Blacktown	00245
Prospect Post Office (former)	23 Tarlington Place	Prospect	Blacktown	01385

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Prospect Reservoir and surrounding area	Reservoir Road	Prospect	Blacktown	01370
Riverstone Railway Station Group and Residence	Riverstone Parade	Riverstone	Blacktown	01237
Rooty Hill, The	Eastern Road	Rooty Hill	Blacktown	01756
Rouse Hill House and Farm	Windsor Road	Rouse Hill	Blacktown	00002
Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blacktown	00660
St. Andrew's Anglican Church, Hall & Rectory	313 Seven Hills Road North	Seven Hills	Blacktown	00057
St. Bartholomew's Anglican Church (former) & Cemetery	Ponds Road	Prospect	Blacktown	00037
The Manse	23 The Avenue	Mount Druitt	Blacktown	00206
Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)		Prospect	Blacktown	01373
Veteran Hall - House Remains	Great Western Highway	Prospect	Blacktown	01351

Section 3. Items listed by Local Government and State Agencies.

Your search returned 190 records.

Item name	Address	Suburb	LGA	Information source
Administration Building	71 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Alroy	371 Rooty Hill Road North	Plumpton	Blacktown	LGOV
Battle of Vinegar Hill	712-746 Windsor Road	Kellyville	Blacktown	LGOV
Belvedere	116 Rooty Hill Road South	Rooty Hill	Blacktown	LGOV
Bicentennial Museum	81 Garfield Road East	Riverstone	Blacktown	LGOV
Blacktown (Sunnyholt Road No.2) Overbridge	Sunnyholt Road	Blacktown	Blacktown	SGOV
Blacktown Primary School (former)	Flushcombe Road	Blacktown	Blacktown	LGOV
Blacktown Railway Signal Box	George Street	Blacktown	Blacktown	SGOV
Blacktown Railway Station Signals Building	George Street	Blacktown	Blacktown	LGOV

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Brick Cistern	26 Market Street	Riverstone	Blacktown	LGOV
Bridestowe	568 Reservoir Road	Prospect	Blacktown	LGOV
Bungarribee Homestead Complex	Steeltrap Drive	Doonside	Blacktown	LGOV
Bungarribee View Corridor	Steel Trap Drive	Doonside	Blacktown	LGOV
Burns House	74 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Cassola	20 Riverstone Road	Riverstone	Blacktown	LGOV
Church	115 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Clydesdale, Farmers Cottages & Barn	Richmond Road	Marsden Park	Blacktown	LGOV
Colebee and Nurragingy Land Grant	Richmond Road	Blacktown	Blacktown	SGOV
Colebee and Nurrangingy Land Grants	Richmond Road	Marsden Park	Blacktown	LGOV
Colyton Public School	Great Western Highway	Mount Druitt	Blacktown	LGOV
Community Geriatric Cottage	63-7 Railway Street	Mount DRUITT	Blacktown	SGOV
Convent	166 Garfield Road East	Riverstone	Blacktown	LGOV
Crossroads Christian Fellowship Church	104 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Dayton House	37 - 39 Roger Place	Blacktown	Blacktown	LGOV
Doonside Railway Station - Platforms and Station Building	Doonside Crescent	Doonside	Blacktown	LGOV
Doonside Railway Station Group	Doonside Crescent	Doonside	Blacktown	SGOV
Drumtochty	71 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Eastern Creek Bridge	Garfield Road	Riverstone	Blacktown	SGOV
Electricity Substation	426 - 428 Blacktown Road	Prospect	Blacktow	LGOV

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			n	
Electricity Substation	432 Blacktown Road	Prospect	Blacktown	LGOV
Ellalong	6 Lindsay Place	Doonside	Blacktown	LGOV
Exeter Farm Cottage	2 Knightsbridge Avenue	Glenwood	Blacktown	LGOV
Fairholme	18 First Avenue	Seven Hills	Blacktown	LGOV
Fairholme / St Agnes School	24 Evans Road	Rooty Hill	Blacktown	LGOV
Farmhouse	Riverstone Road	Riverstone	Blacktown	GAZ
Feeder Shed and archaeological remnant	71 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Flushcombe Turrets Gates	Lancelot Street	Blacktown	Blacktown	LGOV
Former Great Western Highway Alignment	Tarlington Place to Boiler Close	Prospect / Blacktown	Blacktown	LGOV
Former Minchinbury Winery	Minchin Drive	Minchinbury	Blacktown	LGOV
Former Prospect Post Office	23 Tarlington Place	Prospect	Blacktown	LGOV
Four Oaks	50 - 54 Solander Road	Seven Hills	Blacktown	LGOV
Glenwood	174 Glenwood Park Drive	Glenwood	Blacktown	LGOV
Glenwood Park Dairy	Sunnyholt Road	Parklea	Blacktown	GAZ
Government Depot (Ruins)	Dunsmore Street	Rooty Hill	Blacktown	SGOV
Grantham Poultry Research Station former	71 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Group of Workers' Cottages	23,25,27,29,31,33,37,39,43, 45,47&49 Richards Avenues	Riverstone	Blacktown	LGOV
Hall	Grange Avenue	Marsden Park	Blacktown	LGOV
Headingly	7 Redwood Street	Blacktown	Blacktown	LGOV

Hebe Farm	Bridge Street	Schofields	Blacktown	GAZ
Hebe Farm	14 Bridge Street	Riverstone	Blacktown	LGOV
Hill End	Hill End Road	Doonside	Blacktown	LGOV
House	142 Clifton Street	Marsden Park	Blacktown	LGOV
House	237 Hill End Road	Doonside	Blacktown	LGOV
House	11 Harold Street	Blacktown	Blacktown	LGOV
House	47 Clifton Street	Blacktown	Blacktown	LGOV
House	49 Clifton Street	Blacktown	Blacktown	LGOV
House	2 Erith Street	Blacktown	Blacktown	LGOV
House	5 Sarsfield Street	Blacktown	Blacktown	LGOV
House	4 Wallace Street	Blacktown	Blacktown	LGOV
House	55 Hill End Road	Doonside	Blacktown	LGOV
House	3 Maley Grove	Glenwood	Blacktown	LGOV
House	3 Cavalry Grove	Glenwood	Blacktown	LGOV
House	357 Rooty Hill Road North	Plumpton	Blacktown	LGOV
House	95 Fermoy	Marsden Park	Blacktown	LGOV
House	369 Seven Hills Road	Seven Hills	Blacktown	LGOV
House	193 Rooty Hill Road North	Rooty Hill	Blacktown	LGOV
House	45 Rooty Hill Road South	Rooty Hill	Blacktown	LGOV
House	17 George Street	Riverstone	Blacktow	LGOV

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			n	
House	27 King Street	Riverstone	Blacktown	LGOV
House	25 King Street	Riverstone	Blacktown	LGOV
House	38 Park Street	Riverstone	Blacktown	LGOV
House	122 Regent Street	Riverstone	Blacktown	LGOV
House	7 Richards Avenue	Riverstone	Blacktown	LGOV
House	17 Richards Avenue	Riverstone	Blacktown	LGOV
House	24 Mary Street	Rooty Hill	Blacktown	LGOV
House	20 Perkins Street	Rooty Hill	Blacktown	LGOV
House	169 Garfield Road East	Riverstone	Blacktown	LGOV
House	41 Riverstone Road	Riverstone	Blacktown	LGOV
House	22 West Parade	Riverstone	Blacktown	LGOV
House	21 Church Street	Riverstone	Blacktown	LGOV
House	66 Crown Street	Riverstone	Blacktown	LGOV
House	64 Elizabeth Street	Riverstone	Blacktown	LGOV
House	52 Elizabeth Street	Riverstone	Blacktown	LGOV
House	42 Bourke	Riverstone	Blacktown	LGOV
House	45 Bourke Street	Riverstone	Blacktown	LGOV
House	41 Clifton Street	Blacktown	Blacktown	LGOV
house	45 Devitt Street	Blacktown	Blacktown	LGOV

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House	70 Richmond Road	Blacktown	Blacktown	LGOV
House	29 Old Church Lane	Propspect	Blacktown	LGOV
House	38 Railway Terrace	Riverstone	Blacktown	LGOV
House - "Homeleigh"	2 Sarsfield Street	Blacktown	Blacktown	LGOV
House & Shop	76 -78 Garfield Road East	Riverstone	Blacktown	LGOV
House & Slab Cottage	180 Garfield Road West	Riverstone	Blacktown	LGOV
House and Original School Building	441 Blacktown Road	Prospect	Blacktown	LGOV
Howard Villa	15 Ropes Creek Road	Mount Druitt	Blacktown	LGOV
Imperial Hotel	1 Rooty Hill Road North	Rooty Hill	Blacktown	LGOV
Inter-War House	193-195 Flushcombe Road	Blacktown	Blacktown	LGOV
Leslie View	393 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Liquor Store	331 Rooty Hill Road Nth	Plumpton	Blacktown	LGOV
Lozells	39 Cannery Road	Plumpton	Blacktown	LGOV
Lytton Cottage	29 Lyton Street	Blacktown	Blacktown	LGOV
Malmo	1-3 Luxford Road	Mount Druitt	Blacktown	LGOV
Manse, The	23 The Avenue	Mount Druitt	Blacktown	LGOV
Marayong Reservoir (WS 0066)	Wilson Road	Acacia Gardens	Blacktown	SGOV
Meadows Public School	Fuller Street	Seven Hills	Blacktown	LGOV
Melrose	71 Seven Hills Road South	Seven Hills	Blacktown	LGOV
Merriville	1 Eire Way	Kellyville	Blacktow	LGOV

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			n	
Merriville Rise Park	cnr Glenheath Ave / Cavanagh Way	Kellyville	Blacktown	LGOV
Milestone - Ponds Road and Bartholomews Place	Great Western Highway	Prospect	Blacktown	SGOV
Milestones	Great Western Highway	Prospect, Huntingwood, Minchinbury, Mount Druitt	Blacktown	LGOV
Mount Druitt Hall	85 - 87 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Mount Druitt Waterholes	Great Western Highway	Mount Druitt	Blacktown	LGOV
Native Institution Centre (site)	Rooty Hill Road North	Oakhurst	Blacktown	LGOV
Neoblie	Great Western Highway	Mount Druitt	Blacktown	LGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Manly	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Hunters Hill	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Ku-Ring-Gai	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Blacktown	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Mosman	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Ryde	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	The Hills	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Warringah	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Parramatta	SGOV
Northern Suburbs Ocean Outfall Sewer (NSOOS)	Flushcome Road, Blacktown to Ocean Outfall at North Head	Northern Suburbs Of Sydney	Lane Cove	SGOV
Norwest Community Church	37 Douglas Road	Quakers Hill	Blacktown	LGOV
Nu Welwyn	4 Clarke Street	Riverstone	Blacktown	LGOV

Oaks, The	12 Hanna Place	Oakhurst	Blacktown	LGOV
Old School Building	Garfield Road West	Marsden Park	Blacktown	LGOV
Old Windsor Road and Windsor Road Heritage Precincts	Old Windsor Road & Windsor Road	Multiple	Multiple LGAs	SGOV
Parklea Correctional Centre	66 Sentry Drive	Parklea	Blacktown	SGOV
Parrington Terrace	39 - 41A Garfield Road East	Riverstone	Blacktown	LGOV
Pioneer Memorial Church	Rooty Hill Road South	Rooty Hill	Blacktown	LGOV
Plumpton House School	327 Rooty Hill Road North	Plumpton	Blacktown	LGOV
Police Station	Elizabeth Street	Riverstone	Blacktown	LGOV
Polish Memorial Roman Catholic Church	116 Quakers Road	Marayong	Blacktown	LGOV
Prospect Hill Reservoir (Elevated) (WS 0095)	Prospect Reservoir, off Reservoir Road	Prospect	Blacktown	SGOV
Prospect Post Office (Former)	23 Tarlington Place	Prospect	Blacktown	SGOV
Prospect Reservoir (operational land)	Reservoir Road	Prospect	Fairfield	SGOV
Prospect Reservoir (operational land)	Reservoir Road	Prospect	Blacktown	SGOV
Prospect Reservoir Group	Reservoir Road	Prospect	Blacktown	LGOV
Prospect-Thornleigh Pumping Station (WPS 138)	Reservoir Road	Prospect	Blacktown	SGOV
Railway Station Group	Riverstone Parade	Riverstone	Blacktown	LGOV
Redgate - house and garden	20 Farm Road	Riverstone	Blacktown	LGOV
Riverstone General Cemetery	Garfield Road West	Riverstone	Blacktown	LGOV
Riverstone Police Station	Railway Terrace, Corner Elizabeth Street	Riverstone	Blacktown	SGOV
Riverstone Public School (former)	Garfield Road East	Riverstone	Blacktown	LGOV

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Riverstone Railway Station Group and Residence	Riverstone Parade	Riverstone	Blacktown	SGOV
Rooty Hill Railway Station	Railway Land	Rooty Hill	Blacktown	LGOV
Rooty Hill Railway Station Group	North Parade	Rooty Hill	Blacktown	SGOV
Rosebank	213 Garfield Road East	Riverstone	Blacktown	LGOV
Rosebank	Garfield Road East	Riverstone	Blacktown	GAZ
Rouse Hill House Estate	980 Windsor Road	Rouse Hill	Blacktown	LGOV
Row of Olives	Minchin Drive	Minchinbury	Blacktown	LGOV
Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blacktown	LGOV
Royal Cricketers Arms Inn	385 Reservoir Road	Prospect	Blacktown	SGOV
Ruins of the Government Depot	Dunsmore Street	Rooty Hill	Blacktown	LGOV
Russian Orthodox Church	9a Kempsey Street	Blacktown	Blacktown	LGOV
Rutherglen	50 Sorenson Crescent	Blackett	Blacktown	LGOV
Sandstone Culvert	Livorno Grove Refalo Reserve	Glenwood	Blacktown	LGOV
Sandstone Culvert, approx 200m south of Meurants Lane	Old Windsor Road	Glenwood	Blacktown	SGOV
Schofeilds Public School	Junction Road	Schofeilds	Blacktown	LGOV
School Master's Residence (former)	Great Western Highway	Mount Druitt	Blacktown	LGOV
School of Arts	32 Rooty Hill Road South	Rooty Hill	Blacktown	LGOV
Seven Hills - Grantham Poultry Research Station	71 Seven Hills Road	Seven Hills	Blacktown	SGOV
Seven Hills Flyover	Main West corridor Between Seven Hills and Blacktown Stations	Seven Hills	Blacktown	SGOV
Seven Hills North Public School	301 Seven Hills Road	Seven Hills	Blacktown	LGOV

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Seven Hills Rail Station and Under bridge	Railway Land	Seven Hills	Blacktown	LGOV
Seven Hills Railway Station Group	The Hills Crescent	Seven Hills	Blacktown	SGOV
Shop	4 Garfield Road West	Riverstone	Blacktown	LGOV
Siglingen	112 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Site of Veteran Hall	Reservoir Road	Prospect	Blacktown	LGOV
Slab cottage in grounds of Riverstone High School	Regent Street	Riverstone	Blacktown	LGOV
Southridge	1 Southridge Street	Eastern Creek	Blacktown	LGOV
St Andrews Church, Hall and Rectory (former)	313 Seven Hills Road	Seven Hills	Blacktown	LGOV
St Andrews Uniting Church	62 Garfield Road East	Riverstone	Blacktown	LGOV
St Anthonys Church	14 Bowmans Road	Kings Park	Blacktown	LGOV
St Bartholomews Church & Cemetery	Ponds Road	Prospect	Blacktown	LGOV
St Johns Catholic Church	164 Garfield Road East	Riverstone	Blacktown	LGOV
St Pauls Anglican Church	19 Elizabeth Street	Riverstone	Blacktown	LGOV
St Phillips Church Cemetery	Richmond Road	Marsden Park	Blacktown	LGOV
Station Masters Residence (former)	Riverstone Parade	Riverstone	Blacktown	LGOV
Station Master's Residence (former)	2 Mount Druitt Road	Mount Druitt	Blacktown	LGOV
Terraces	4 West Parade	Riverstone	Blacktown	LGOV
Veteran Hall Archaeological Site	Reservoir Road	Prospect	Blacktown	SGOV
Veteran Hall remains & site	Reservoir Road (1km south of)	Prospect	Blacktown	GAZ

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War Memorial	Riverstone Parade	Riverstone	Blacktown	LGOV
Warrawong	158 Riverstone Road	Riverstone	Blacktown	LGOV
Watts Cottage	2 Watt Street	Rooty Hill	Blacktown	LGOV
Windsor and Old Windsor Roads		Parklea	Blacktown	LGOV
Woodstock	6 Hobson Place	Plumpton	Blacktown	LGOV

There was a total of 213 records matching your search criteria.

Key:
LGA = Local Government Area
GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.
Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

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Office of Environment & Heritage

Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search did not return any matching results.

Section 3. Items listed by Local Government and State Agencies.

Your search returned 36 records.

Item name	Address	Suburb	LGA	Information source
Bennett Wagon	Pioneer Park Great Western Highway	St Marys	Penrith	LGOV
Brick Cottage	31-33 Pages Road	St Marys	Penrith	LGOV
Brick Cottage	18 Princess Mary Street	St Marys	Penrith	LGOV
Brick Cottage	40 Gidley Street	St Marys	Penrith	LGOV
Brick Cottage	100-104 Saddington Street	St Marys	Penrith	LGOV
Brick Cottage	38 Gidley Street	St Marys	Penrith	LGOV
Bronte - Villa	50 Gidley Street	St Marys	Penrith	LGOV
Dunheved Fire Station	50 Christie Street	St Marys	Penrith	LGOV
Explosives Storehouse	146 Dunheved Circuit	St Marys	Penrith	LGOV
Gothic Revival Cottage	24 Princess Mary Street	St Marys	Penrith	LGOV
Margaret Farm- House, Barn &	Pages,Barber,Wilson & Schleicher Sts	St	Penr	LGOV

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Tannery Site		St Marys	Penrith	
Milestone	Fronting 410-422 Great Western Highway(between Marsden Rd & Day St)	St Marys	Penrith	LGOV
Mimosa - Dwelling, Fence & Garden	13 Pages Road	St Marys	Penrith	LGOV
Mimosa Stables (Former)	11 Pages Road	St Marys	Penrith	LGOV
Moore Cottage	8 Sainsbury Street	St Marys	Penrith	LGOV
Mourilyan - (original section) of House	329-333 Great Western Highway	St Marys	Penrith	LGOV
Sawmill Precinct		St Marys	Penrith	LGOV
Shop	373 Great Western Highway	St Marys	Penrith	LGOV
South Creek Bridge (Eastbound)	Great Western Highway	St Marys	Penrith	SGOV
St Mary Magdalene Church, Hall, Cemetery, & Grounds	299-311 Great Western Highway	St Marys	Penrith	LGOV
St Marys Council Chambers (Former)	2-6 Mamre Road	St Marys	Penrith	LGOV
St Marys General Cemetery	175-191 Great Western Highway	St Marys	Penrith	LGOV
St Marys Railway Station	Station Street	St Marys	Penrith	LGOV
St Marys Railway Station Group	Queen Street	St Marys	Penrith	SGOV
St. Mary Magdalene Cemetery				LGOV
St. Marys Public School	2 - 6 Princess Mary Street	St Marys	Penrith	LGOV
St. Marys Railway Station Parcels Office				LGOV
Thompsons Tannery (Former)		St Marys	Penrith	LGOV
Thompsons Tannery Site - Tannery Pits (Former) & Well	94 Saddington Street	St Marys	Penrith	LGOV
Thompsons Tannery Site(former)	Saddington Street	St Marys	Penrith	LGOV
Victoria Park and Memorial	Great Western Highway	St Marys	Penrith	LGOV
Victoria Park War Memorial		St Marys	Penrith	LGOV
Wagon Wheel Hotel	449 Great Western Highway	St Marys	Penrith	LGOV
Weatherboard Cottage	20 Princess Mary Street	St Marys	Penrith	LGOV
Weatherboard Cottage	22 Princess Mary Street	St Marys	Penrith	LGOV
Woolpack Inn (Ruin)	556 Great Western Highway	St Marys	Penrith	LGOV

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There was a total of 36 records matching your search criteria.

Key:
LGA = Local Government Area
GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.
Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

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Heritage
Heritage places
- World Heritage List
- National Heritage List
- Commonwealth Heritage List
- List of Overseas Places of Historic Significance to Australia
- Register of the National Estate
- Nominating a heritage place
- Finalised Priority Assessment Lists

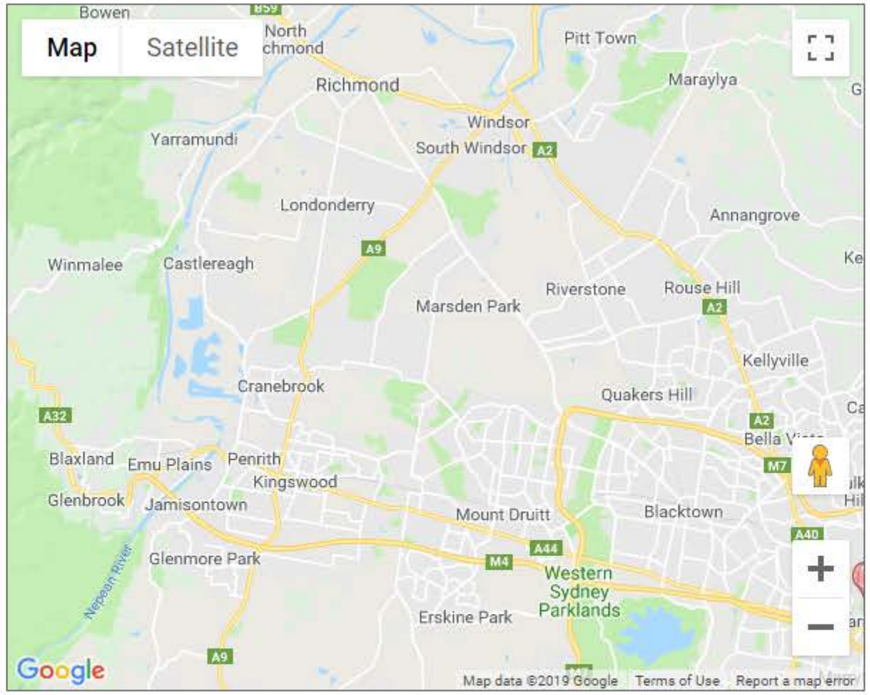
Australia's National Heritage List

The National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation.

Use our interactive map or select from the list below to find out more about a listed place.

Australia's Heritage: National Treasures is a journey around Australia exploring the stories of some of these National Heritage places.

-- Zoom to a National Heritage place on the map --



Customise map view

- Show all places
- NSW
- Vic
- Qld
- SA
- WA
- Tas
- NT
- ACT
- Antarctica
- External Territories

Note: for some places, the names given here may vary from the officially listed place names. For the official National Heritage place names (and numbers of listed places), see the Australian Heritage Database.

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APPENDIX C

Remedial Action Plan Stage 2b and Stage 3: East West Connector Road

JBS&G

Minter Ellison

Remedial Action Plan

Stage 2b and Stage 3 - East West Connector Road
St Marys, NSW

14 August 2019

54782/123642 Rev 0

JBS&G Australia Pty Ltd

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Minter Ellison

Remedial Action Plan

Stage 2b and Stage 3 - East West Connector Road
St Marys, NSW

14 August 2019

54782/123642 Rev 0

JBS&G Australia Pty Ltd

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Appendices

Appendix A Summary of PFAS data held within the EWCR

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ASS	Acid Sulfate Soils
bgs	Below Ground Surface
COC	Contaminants of Concern
Council	Penrith City Council
CSM	Conceptual Site Model
DA	Development application
DP	Deposited Plan
DPI	Department of Primary Industry
DQI	Data Quality Indicator
DQO	Data Quality Objective
EIL	Ecological Investigation Levels
EPA	NSW Environmental Protection Authority
ESA	Environmental Site Assessment
GME	Groundwater Monitoring Event
GPS	Global Positioning Unit
Ha	Hectare
HIL	Health Investigation Levels
HSL	Health Screening Levels
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environmental Plan
LOR	Limit of Reporting
NATA	National Association of Testing Authorities
OEH	Office of Environment and Heritage
PAH	Polycyclic Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness and Sensitivity
PFAS	Per- and Poly-fluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
pH	Potential of Hydrogen
QA/QC	Quality Assurance / Quality Control
RAP	Remedial Action Plan
RCP	Remedial Concept Plan
RPD	Relative Percent Difference
RWPs	Remedial Works Plan
SAS	Site Audit Statement
SAQP	Sampling, Analysis and Quality Plan
SAR	Site Audit Report
SP	Strata Plan
STP	Sewage Treatment Plant
UCL	Upper Confidence Limit

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1. Introduction

1.1 Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd (the client) to prepare a Remedial Action Plan (RAP) for the proposed East West Connector Road (EWCR), including the Regional Open Space (ROS) area and the Dunheved Link Road within the former ADI St Marys property ('the property'). The EWCR is proposed to be developed into a multi lane roadway as necessary infrastructure to the Jordan Springs East Development Site (JSE) and sports fields and parkland within the ROS area.

The EWCR is approximately 3 km in total length, is split into 3 Stages and falls within two LGA zones, Penrith City Council (PCC) and Blacktown City Council (BCC). The council boundary crosses the site at two points, where the EWCR crosses South Creek and in the mid to southern portion of the Dunheved Link Road approximately 270 m north of Links Road. The location of the EWCR is provided in **Figure 1**, the layout of the EWCR including surrounding areas and the division of stages is provided in **Figure 2**.

JBS&G has conducted a number of environmental investigations throughout the former ADI St Marys property and nearby areas to supplement the previous historical assessments. These reports have included UXO clearance (where necessary), management of pavement removal for historical road and/or building footprints and environmental sampling with associated reporting. Investigations and associated reports which fall within the EWCR area included:

- Environmental Site Assessment Stage 1 of the EWCR (JBS&G 2018a[1]);
- Additional Analytes Summary Letter for the Dunheved Industrial Precinct (JBS&G 2018b[2])
- Environmental Site Assessment Stage 2 of the EWCR (JBS&G 2019a[3]);
- Phase 1 Preliminary Site Assessment East West Connector Road – East West Connector Road Jordan Springs East, NSW (Rev 2) 17 April 2019 (JBS&G 2019b[4])
- Environmental Site Assessment Stage 3 of the EWCR (JBS&G 2019c[5]);
- Environmental Site Assessment W Series buildings within Regional Open Space Area (JBS&G 2019d[6]); and

In addition, a comprehensive PFAS investigation (JBS&G 2018c[7]) was also conducted throughout the property, including creeks and tributaries.

The investigations identified areas of PFAS impacted soil located within the proposed EWCR southern portion of Stage 2 (Stage 2b) and within the western portion of Stage 3 (the site). Both

[1] *Environmental Site Assessment and unexploded Ordnance Clearance for Stage 1 of the East West Connector Road – Ropes Crossing to Jordan Springs East, NSW (Rev A*) JBS&G Australia Pty Ltd 10 October 2018 (JBS&G 2018a)

[2] *Additional analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (Rev A*) JBS&G Australia Pty Ltd 31 December 2018 (JBS&G 2018a)

[3] *Environmental Site Assessment and unexploded Ordnance Clearance for Stage 2 of the East West Connector Road – Ropes Crossing to Jordan Springs East, NSW (Rev 0*) JBS&G Australia Pty Ltd 6 February 2019 (JBS&G 2019a)

[4] *Phase 1 Preliminary Site Assessment East West Connector Road – East West Connector Road Jordan Springs East, NSW (Rev 2*) JBS&G Australia Pty Ltd 17 April 2019 (JBS&G 2019b)

[5] *Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road, Links Road St Mary's, NSW (Rev 0)* JBS&G Australia Pty Ltd 14 August 2019 (JBS&G 2019c)

[6] *Environmental Site Assessment – W Series Building Footprints within Regional Open Space Area – Central Precinct, NSW (Rev B*) JBS&G Australia Pty Ltd 19 July 2019 (JBS&G 2019d)

[7] *PFAS Assessment at Former ADI St Mary's Development Site – St Mary's and Llandilo, NSW (Rev B*). JBS&G Australia Pty Ltd November 2018 (JBS&G 2018c)

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locations are within the Dunheved industrial precinct and adjacent to the Dunheved Open Channel. Impacted areas within the EWCR are shown on **Figure 3**.

Based on these findings remediation is required to remove PFAS impact and make the site suitable for the proposed landuse.

It is noted that an existing RAP for PFAS impact within the St Mary's ADI property (JBS&G 2019e[8]) is currently undergoing review with the NSW Environmental Protection Authority (EPA). As such, and in order to allow development to proceed within the EWCR, a conservative approach to remove all potential PFAS impacted soils within the EWCR is proposed. This RAP details the requirements to remove all PFAS impact that falls within the EWCR, and includes relocation of the impacted soils to the temporary PFAS impacted soil stockpile area in Dunheved.

This RAP has been prepared in accordance and with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of NEPC (2013[9]), EPA (2017[10]) and SEPP 55[11] and is specific to the remediation of PFAS impacts only. Further to this, all remediation, validation and sampling activities documented in this RAP shall meet the requirements of the PFAS National Environmental Management Plan (January 2018).

1.2 Objective

The objectives of this RAP are to:

- Characterise and document the known extent of PFAS impact via presentation of a conceptual site model (CSM);
- Develop a remedial strategy to remove all PFAS impacted soil within the EWCR;
- Identify the requirements for validation requirements following site remediation; and
- To confirm that the site is suitable for the proposed land use.

[8] *Remedial Action Plan – Former ADI St Marys Development Site St Marys and Llandilo, NSW (Rev D*) JBS&G Australia Pty Ltd 21 June 2019 (JBS&G 2019e)

[9] *National Environment Protection (Assessment of Site Contamination) Measure, Amendment No 1* (2013). National Environment Protection Council (NEPC 2013)

[10] *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition).* NSW EPA 2017 (EPA 2017)

[11] *Managing Land Contamination – Planning Guidelines SEPP 55 Remediation of Land*. Department of Urban Affairs and Planning. Environment Protection Authority 1998 (SEPP 55)

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2. Site Condition & Surrounding Environment

2.1 Site Identification

The location of the site is shown in **Figure 1,** the site layout and surrounding areas are shown in **Figure 2**. Details of the site are summarised in **Table 2.1** below.

Table 2.1 Summary Site Details

Lot Numbers relating to DAs	Lot 3 DP 1133301 (BCC). Lot 1 DP1132380 (PCC).
Lot Numbers, most recent	Part Lot 3 DP 1133301 (BCC) and Part Lot 1 DP1132380 (PCC).
Street Address	Jordan Springs East Development Site, access off Links Road St Marys.
Site Area	Approximately 4.17 ha (Stage 2b 3.5 ha and Stage 3 0.67 ha)
Local Government Authority	Penrith City Council and Blacktown City Council
Geographic Coordinates (MGA 56)	33.7325 E 150.750 N
Current Land-use **Proposed Land-use**	Vacant, storage and roadway Roadway

2.2 Site Description

Description of the relevant portions of the EWCR (Stage 2b and Stage 3) which form the site area is discussed below.

Dunheved Link Road (Stage 2b)

The Dunheved Link Road comprises a recently constructed bitumen road with curbing and associated infrastructure. The Dunheved Link road or Stage 2b comprises of an approximate 800 m roadway which extends from Links Road to a former paved road to the north and within the ST Mary's ADI property. The paved road was observed to be in good condition and is currently used for access purposes. Either side of the road comprises of grass verges. No significant fly-tipping was observed within the road verges on the Dunheved Link Road.

It is noted that the proposed Dunheved Link Road also includes a temporary bund located in its southern end as shown on **Figure 2**. This portion comprises of vacant grass land of the former ADI property. The eastern portion of the bund is noted to cross the Dunheved Open channel which is characterised by thick shrub and an access path which crosses the channel.

Links Road/Dunheved Link Road Intersection (Stage 3)

The southern portion of the Dunheved Link Road and where Stage 3 is located comprised a paved road intersection with Links Road which extends beyond the property boundary. A steel electric gate was observed at the entry to the property and of the start of the Dunheved Link Road.

Drainage infrastructure underlying the southwestern portion of Stage 3 Links Road was observed and appeared to be flowing to the north and into an open channel which runs adjacent to the Dunheved Link Road.

2.3 Surrounding Land use

The surrounding land use described below based on recent observations during works conducted at the site:

North – Stages 1 and 2a of the EWCR are located north of the site. Densely vegetated Regional Parklands and South Creek are located further to the north.

East – The Ropes Crossing housing development is located to the east of the site. The proposed Dunheved Industrial precinct is located directly east of the Dunheved Link Road. The St Marys Sewage treatment Plant is located approximately 400 m east of the site.

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South –Links Road and Commercial/industrial zone associated with Dunheved along links road and Dunheved Circuit are located to the South. Franchises including Toxfree, Gulf Oil Western among other are located along the southern side of Links Road.

West – The JSE residential development is located directly west of the site. Dense vegetation, a small creek identified as the Dunheved Open Channel and vacant areas formerly part of the ADI site were located to the west the Dunheved Link Road.

2.4 Topography and Hydrology

The EWCR is relatively flat (approximately 25 to 30 m AHD) as it comprises of a sealed roadway which has been developed as relatively level along its length, including areas over waterways and through low lying areas.

The roadway tapers away towards its edges and therefore any surface water that falls onto the road is anticipated to flow towards the nearest road edge.

The Dunheved Link Road is also relatively flat and this area tends to fall towards nearby local channels such as the Dunheved Open Channel. Regional topography and surface water runoff is to the north, north-east.

South Creek and Ropes Creek are the two main waterways that flow in proximity and below small portion of the EWCR. South Creek drains a very large catchment in western Sydney, originating at Narellan, over 30 km to the south. The catchment is a long narrow strip up to 8 km wide with an approximate area of 18,000 ha. The catchment includes residential, agricultural and industrial areas. The creek flows northwards from the property through mainly agricultural areas before meeting the Hawkesbury River at Windsor, 12 km to the north.

Ropes Creek drains a smaller catchment, originating at Cecil Park, 12 km to the south-west. This catchment is also a long narrow strip up to 4 km wide and with an approximate area of 2400 ha. The catchment also includes residential, agricultural and industrial areas. Part of the creek has been diverted along a concrete drainage channel for about 2 km through the former St Marys Property before flowing into South Creek at its new confluence just to the north of the former St Marys Property boundary and is present in proximity of the proposed roadway.

The St Marys Sewage Treatment Plant (STP) is located south east of the site. ADI (1996b) reported effluent from the STP receives tertiary treatment before being discharged into the old Ropes Creek flow channel. This then flows into South Creek at its old confluence in the middle of the former St Marys Property.

An open channel is present to the west of the Dunheved Link Road, referred to as the Dunheved Open Channel. The channel passes through the area of retained vegetation to the west of Dunheved and discharges into South Creek. The elevation of the channel within the site is generally 2 to 3 m above the observed depth to groundwater. Surface water flow into the channel is from a stormwater outlet at the southern boundary of the site which is anticipated to discharge stormwater flows from the Links Road industrial estate to the south of the site.

2.5 Geology

A review of the regional geological map (DMR 1997) indicated the site lies within Tertiary Londonderry Clay. The Londonderry Clay is characterised by clay, patches of ferruginized, consolidated sand.

A review of the regional soil map (DLWC 1972) indicated that the site lies within the Berkshire Park soil landscape group.

The typical Berkshire landscape is characterised by weakly pedal orange heavy clays and clayey sands, often mottled with inclusions of ironstone nodules. Large silcrete boulders (up to 20cm) occur in sand/clay matrix. Yellow podzolic soils where drainage conditions are poor, red podzolic soils and

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chocolate soils on flats and in small drainage lines. Kransnozems are present in unstructured plastic clays and in drainage lines or a crest.

Limitations of the Berkshire landscape group are very high wind erosion hazard if cleared. Gully, sheet and rill erosion on dissected areas. Waterlogging, impermeable subsoils, low fertility hazard.

This area is largely Quaternary age alluvium beds that consist of gravelly sand, sand, clayey sand silty clay, from 1 to 8m in depth. In the northeast, the soil type is the Berkshire Park soil, while the eastern area is the Blacktown soil type – both of these overlie the Bringelly Shale Unit. Noted in the western region were a number of paleochannels of unknown origin.

As reported in ADI (1996a) the former ADI St Marys Property is underlain by shales of Bringelly Shale Unit part of the Liverpool Sub-group and Wianamatta Group of the Triassic epoch. These are overlain by alluvium of Quaternary age. The Bringelly Shale unit consisting mainly of grey hard shales within intervening siltstone forms the bedrock. The top of the shale, up to 5m thick, is highly weathered and very friable in nature. The Quaternary Alluvium comprises predominately buff coloured silt, silty/sandy clays which is often lateritic in nature and mottled with yellow/red ochres and iron nodules. Quaternary Alluvium was deposited mainly in the central lowlands along the flood plains of South Creek and Ropes Creek. Thickness of the alluvium within the development site is likely to range in thickness from approximately 6m to 10m as these are the central lowlands.

2.6 Hydrogeology

A review of information obtained from the NSW Office of Water database (NSW DPI 2018[12]) indicated there are three registered groundwater monitoring wells located to the south east of the EWCR with no feature information available for any of the three wells. No registered groundwater wells fall within the site.

Based on information obtained during groundwater investigation works conducted by JBS&G including JBS&G (2018[13]) the depth to the water table in proximity to the site ranges from 2 to 7 m below ground surface depending upon the geology (quaternary alluvium and high weathered shale). The water table occurs in the sandy to silty clay above the weathered shale and/or shale bedrock. The groundwater flow pattern of the site follows the general topography of the area (to the north east towards South Creek), however, variation in the flow direction can occur locally based on the ground slope and also by infiltration of seepage water from overlying Open Channels / open drains.

Groundwater in the shallow upper aquifer is fresh to brackish / saline (electrical conductivity (EC) 300 to 40 000 µS/cm). Groundwater is more typically present in the saline range in proximity of the proposed roadway. The groundwater pH ranges from 4.5 to 7 indicating slightly acidic conditions, with most locations generally slightly acidic to neutral. Slightly reducing conditions are present in the aquifer.

2.7 Acid Sulphate Soils

Review of the Department of Land and Water Conservation map of Springwood/Riverstone (DLWC 1997[14]) indicated that there no known occurrence of acid sulfate soils in the vicinity of the site.

[12]NSW Department of Primary Industries Website http://allwaterdata.water.nsw.gov.au/water.stm, accessed 23 January 2018 (NSW DPI 2018)

[13] *PFAS Assessment at Former ADI St Marys Development Site – St Marys and Llandilo, NSW (rev B*) JBS&G Australia Pty Ltd November 2018 (JBS&G 2018)

[14] NSW Department of Land and Water Conservation Edition 2 (DLWC 1997)

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3. Historical Summary and Previous Investigations

3.1 Summary Site History

The site is located within the former St Mary's ADI Munitions facility and consists of a current and historical access road. The former St Mary's ADI munitions facility covered a much larger area (approximately 1535 ha) and was established in 1942 as part of a larger parcel of farmland resumed in 1941 by the Commonwealth for establishment of ammunitions factory to support the war effort (World War II). From 1955-57, a new munitions factory was constructed and a substantial part of the original factory was leased to private industry and became the present Dunheved Industrial Estate.

The St Marys Munitions factory was primarily a filling, or load and pack type, operation where explosives and propellant, manufactured elsewhere, were loaded into shells, bomb and rocket casings and stored in magazines awaiting deployment. Small amounts of some initiator explosives for detonators and fuses were manufactured on the property because they were too sensitive to travel. Some test firing of detonators, fuses and smaller occurred at designated areas as part of the manufacturing quality assurance program. All larger munitions were test fired at Army ranges elsewhere.

ADI conducted a comprehensive historical report on the St Mary's ADI property in the mid 1990's[15] which included a chronological history of the property activities and development of buildings and structures. It is noted that historical potential areas of environmental concern nearby or adjacent to the site, include the former administration section which included a fire station east of the site. This area was assessed in the Western Collector Road Detailed Site Investigation (DSI) and the Western Collector Road Extension DSI (JBS&G 2017a[16] and JBS&G 2017b[17]) reports which are discussed in more detail in **Section 3.4**.

Comprehensive PFAS assessment and subsequent remedial action plan has been conducted by JBS&G from 2017 to present. Associated reports for these works are summarised in **Sections 3.5, 3.6** and **3.8**.

Historical reports have been summarised in sections below to obtain information relating to the site.

In addition, a summary of data associated with PFAS impact within the EWCR is provided in **Appendix A**.

3.2 Southern Sector East (ADI 1996)

The Northern Dunheved Precinct, proposed commercial/industrial area falls within the former Southern Sector East area. The portion covered by the Northern Dunheved Precinct includes previously investigated contaminated areas Site 24F and Site 12 (ADI 1996d).

ADI (2016d) reports that Site 12 covered an area of 4.1 ha and was used as a general tip for site materials including buildings rubble and general rubbish between 1955 and 1980. ADI (1996d) observed general solid waste including timber, bricks, concrete slabs, scrap metal, fibro sheeting, asphalt, concrete pipes, asbestos sheeting, galvanised roofing and glass. No evidence was uncovered that the site was used for the destruction or disposal of explosive wastes.

Following the remedial works soil validation samples were collected from the site and analytical concentrations were either within the Safe Environmental Acceptance criteria, the relevant

[15] ADI Limited – ADI St Mary's Property Historical Report

[16] *Detailed Site Investigation – Western Collector Road, Ropes Crossing, NSW*. 21 September 2017 JBS&G Australia Pty Ltd (Rev 1) JBS&G 2017a

[17] *Detailed Site Investigation – Western Collector Road Extension, Ropes Crossing, NSW*. 13 December 2017 JBS&G Australia Pty Ltd (Rev C) JBS&G 2017b

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contamination risk criteria widely used at the time, or within 95% UCLs. The land was then recontoured to the resemble the original topography.

ADI (1996d) reports that from the mid 1980's the St Marys Sewage Treatment Plant (STP) received approval from the St Marys Munitions Filling Factory (the property) to pump treated sludge from its plant onto ADI land. Site 24F was identified as a disused sewage effluent dumping area. The area was boarded by 0.5 to 1 m high earth mounds.

Following investigation works into Site 24F, it was identified that the sewage sludge material was generally outside of the adopted Safe Environmental Acceptance Criteria for chromium, copper, zinc and OCPs, isolated occurrences of impacted PCBs and PAHs were also reported.

OCP, PCB and PAH impacted samples were delineated and then excavated and disposed offsite to landfill. The remaining dried sludge material was excavated and stockpiled elsewhere within the St Marys Property.

Following the remedial works soil validation samples were collected and analytical concentrations were either within the Safe Environmental Acceptance criteria or within 95% UCLs.

It is noted that PFAS investigation was not conducted within 24F, and were assessed subsequently as summarised in **Sections 3.5**, **3.6** and **3.8**.

3.3 Groundwater Monitoring Event (JBS&G 2016[18])

JBS&G was engaged to complete a Groundwater Monitoring Event (GME) across Central Precinct Development and associated Regional Park, located at Llandilo, NSW. JBS&G conducted the well installation (12 groundwater monitoring wells) between 8 and 14 January 2016 comprising 12 monitoring wells, with groundwater sampling conducted between 21 and 27 January 2016.

During groundwater sampling, measured depth to water was between 2.7 and 6.8 m from the top of well casing. Corrected water elevation was between 12.04 m and 16.75 m Australian Height Datum (AHD). The inferred groundwater flow direction was to the east and southeast. Groundwater encountered was clear to brown, low to high turbidity, with no sheen or odour observed at all monitoring locations. No aesthetic issues are present within groundwater at the site.

Groundwater samples were analysed for heavy metals, TRHs, BTEX, PAHs (low levels), OCPs, PCBs, VOCs and explosives. All reported concentrations were found within the site adopted Fresh Water Ecosystems (ANZECC 2000) 95% protection levels criteria with the exception of minor zinc concentrations marginally above the Fresh Water Ecosystems (ANZECC 2000) guidelines, and nickel at MW01 above the fresh water criterion and the Australian Drinking Water (Mar 2015) health criterion, however, groundwater within the vicinity of MW01 was not proposed to be used for potable purposes.

These minor exceedances were not considered to pose an unacceptable risk to the intended uses of the site for the following reasons:

- The zinc and nickel levels are considered typical of urban areas, based on the general consistency in the results across the site, including upgradient locations;
- The highest concentrations at MW01 and MW07 were over 750 m and 250 m respectively from the nearest watercourse (South Creek), with downgradient wells showing similar or lower concentrations than elsewhere; and
- Groundwater was unlikely to be used for potable purposes.

It is noted that concentrations of copper, lead and zinc exceeded ANZECC 2000 Fresh Water Ecosystems, however these concentrations were considered consistent with background levels and

[18] *Groundwater Monitoring Event – Central Precinct, Llandilo, NSW (Rev 0*) JBS&G Australia Pty Ltd 29 June 2016 (JBS&G 2016)

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therefore were not considered to pose a risk at the site. It is also noted no concentrations were elevated above ANZECC 2000 guidelines for Water Quality and General Water Use (irrigation purposes). Furthermore, groundwater at the site is unlikely to be used as a resource given the proposed residential development.

Based on the findings of the assessment, it was considered that there were no unacceptable risks to likely onsite or offsite receptors from groundwater.

3.4 Western Collector Road DSI (JBS&G 2017a, JBS&G 2017b)

JBS&G conducted UXO clearance works and environmental investigation works on the Western Collector Road and Western Collector Road extension site in 2017. The Western Collector Road is located east of the site and is understood to form part of the previously existing road.

The investigation included review of historical reports and information, UXO clearance works following the removal of the road pavement, test pitting and soil sampling of soils and comparison of soil analytical results against NEPC (2013) site suitability criteria to determine the suitability of the site for the proposed use as a road way.

Based on the findings of the investigation:

- No unexploded ordnance items were identified at the site and the site was cleared as free of UXO by the UXO clearance contractor;
- The soil samples collected reported concentrations of heavy metals, TRH, BTEX, OCPs, PCBs and PAHs below the adopted health based criteria (HIL-D);
- No ACM/asbestos was observed within the sample locations or within the samples analysed;
- Based on the groundwater results and targeted soil samples collected adjacent to the fire station, the upgradient Fire Station did not pose a risk to the site in relation to PFAS;
- It was considered that the site is suitable for the proposed roadway with no further assessment, remediation or management of contamination issues; and
- It was recommended that an unexpected find protocol be utilised for future works at the site.

3.5 PFAS Human Health and Ecological Risk Assessment (JBS&G 2018b[19])

JBS&G were initially requested to complete an investigation on PFAS across the adjacent development site and Stockpile 30 (located to the north of the roadway and consisting of biosolids derived material as historically stored in proximity of the Dunheved portion of the roadway).

The results of the investigation identified:

- An elevated level of PFAS in one groundwater monitoring well as located within the western portion of Dunheved in close proximity of the roadway referred to in this assessment;
- PFAS was identified within Stockpile SP30 and immediately hydrogeological downgradient of Stockpile SP30;
- The source of the PFAS was likely associated with the historical sewage treatment activities associated with the formation of the stockpiled materials; and

[19] *PFAS Human Health and Ecological Risk Assessment – Former S Marys ADI Property Central Precinct, Llandilo, NSW (Rev D*) JBS&G Australia Pty Ltd (JBS&G 2018b)

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- Concentrations of PFAS reported in Stockpile SP30 have not been identified to pose a potential health or ecological risk where the materials are reused on site in a commercial/industrial setting.

3.6 PFAS Assessment at Former ADI St Marys Development Site (JBS&G 2018a)

JBS&G were engaged by the client to undertake environmental site assessment activities at the Lend Lease St Marys Development Site, as located at St Marys and Llandilo, NSW as restricted to the assessment of per and poly fluoroalkyl substances (PFAS). The site is within the former St Marys ADI site which was used for various munition filling and storage activities up until 1994.

Several stages of historical, assessment and remediation have occurred at the development site. PFAS have been recently identified as an emerging contaminant of concern on a range of historical commercial, industrial and Defence sites. Previous stages of assessment, remediation and validation at the site had not considered PFAS as a potential contaminant.

A desktop review of potential PFAS sources on and in proximity of the site identified potential PFAS contamination associated with: a historical Fire Station present at the east of Ropes Crossing; potential historical fires across the site; receipt, storage and handling / relocation of biosolids from the adjoining Sydney Water Sewage Treatment Plant (STP) in the 1980's and 1990's and potential historical PFAS uses / contamination in proximity of the site. Biosolids historically received at the Dunheved portion of the site were transferred to an area known as Stockpile SP30 as located to the north of Central Precinct in the mid 1990's.

The assessment of PFAS on the site was undertaken by sampling and analysis of soil, surface water, sediment, groundwater and biota samples undertaken through the latter part of 2017 and 2018.

On the basis of the data set generated, it was found:

- PFAS was identified in historical biosolids as associated with Stockpile SP30, within soils in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and at the south-east of the former extent of biosolids storage within Stockpile SP30. The levels of PFAS measured in soils were not considered to pose a significant health or ecological risk by potential direct exposure pathways as per the current or proposed site use. Though slight exceedances of potentially applicable ecological protection criteria were identified;
- PFAS impact was identified in surface water across the site. Increases in levels of PFOS in surface water were observed in South Creek moving upstream to downstream of the site. Elevated levels of principally sulfonic forms of PFAS (PFOS and PFHxS) were reported throughout the South Dunheved Open Channel in the south-western portion of the Dunheved portion of the site. PFAS was being discharged into the South Dunheved Open Channel from a stormwater pipe discharging from Links Rd adjoining the south of Dunheved. The South Dunheved Open Channel discharges into South Creek;
- A range of PFAS constituents, generally at levels slightly exceeding detection limits, were present throughout South Creek tributaries on the development site and an Open Channel from the STP. PFOS was identified and found to have bioaccumulated (by comparison to levels measured in surface water), within biota sampled from South Creek and the Open Channel from the STP. Sediment analysis was consistent with surface water findings;
- PFAS was identified in groundwater adjoining and hydrogeologically downgradient of Stockpile SP30, in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site, underlying an area of North Dunheved and adjoining the northern portion of the western boundary to the Sydney Water STP; and

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- The highest levels of PFAS impact in groundwater were reported in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and were considered to be consequent of historical migration of PFAS impacted surface water through the South Dunheved Open Channel. It was considered likely that historically substantially higher levels of PFAS had been present in the South Dunheved Open Channel.

It was recommended that site management and/or remediation works are undertaken:

- To prevent the inflow of PFAS impacted stormwater to the site, via diversion or management of the source;
- To remove potential direct exposures to biosolids prior to / with development of the site for the proposed site uses and preclude surface water contact to prevent future leaching / migration of PFAS impact within biosolids; and
- Control potential future leaching of PFAS impacted soils / sediments present at near surface depths in proximity of the South Dunheved Open Channel.

A remedial action plan (RAP) was prepared by JBS&G to manage and remediate the PFAS impacted areas identified in the report and as discussed above. The RAP is summarised in **Section 3.8** below, of particular relevance and with respect to the site area being assessed is impacted soils associated with the Dunheved open channel which are located within the vicinity of the Dunheved Links Road as shown on **Figure 3**.

3.7 Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (JBS&G 2018d[20])

JBS&G conducted environmental assessment works across the Dunheved Industrial Precinct comprising of consideration of other potential contaminants other than asbestos throughout 2018. Consideration of PFAS was addressed in the PFAS Assessment at the Former ADI St Marys Development site (JBS&G 2018), however consideration of other contaminants was required to satisfy council conditions.

The objective of the investigation was to characterise potential contamination at the site using all non-PFAS data collected over the preceding 18 months and to use this information to draw conclusions regarding the suitability of the site for the proposed use or make recommendations to enable such conclusions (in lieu of PFAS assessment which had been undertaken separately).

All soil concentrations were identified at concentrations below the adopted health and ecological criteria adopted for the site. Further to this, no significant impact as far as staining, odours or ACM was identified across the site during the various investigations.

It was noted that a single fragment of ACM was identified on the surface at location DHN-50. The fragment was collected and sent to the testing laboratory for confirmatory testing. No additional fragments were identified within the vicinity to DHN-50. As such it is considered that the fragment was isolated and not part of a significant issue which would warrant further investigation or remediation.

Groundwater analytical results were reported at concentrations below the laboratory limit of reporting for the majority of analytes tested. Reported concentrations of heavy metals including arsenic, cadmium, chromium copper, lead, mercury, nickel and zinc are generally considered representative of background concentrations in the area. Given that groundwater is not used as a

[20] *Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Marys, NSW (Rev A*) JBS&G Australia Pty Ltd 31 December 2018 (JBS&G 2018d)

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resource at the site (brackish to saline), the identified concentrations were not considered to pose a potential risk.

There was considered no potential for migration of contamination from the site for the following reasons:

- No concentrations of soil or groundwater were identified at concentrations that represent a health or ecological risk; and
- Soil is generally secured with overlying vegetation cover preventing potential wind or surface water migration. Groundwater at the site is slow moving as demonstrated through hydraulic conductivity testing conducted in JBS&G (2018a).

Based on the findings of the investigation the following conclusions were made:

- Soils at the site were not identified to pose an aesthetic risk noting the proposed commercial/industrial use of the site;
- Soil analytical results were reported at concentrations below the adopted criteria; and
- Groundwater analytical results were generally reported at concentrations below the adopted criteria. Elevated concentrations of heavy metals identified were not considered to pose a risk given groundwater is not used as a resource and has limited migration potential.

It was recommended that the CMP (JBS&G 2019f) is implemented throughout future works.

3.8 Remedial Action Plan – Former ADI St Marys Development Site (JBS&G 2019e)

JBS&G was engaged by the client to prepare a RAP at the Lend Lease St Marys Dunheved Development Site, as located at St Marys and Llandilo, NSW. The RAP was based on the findings of the site wide PFAS Assessment summarised in **Section 3.6** where it was established that remediation/management of impacted soil would be required within the Dunheved Industrial precinct so that it can be considered suitable for its proposed commercial / industrial land uses. The RAP was prepared in accordance and with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of NEPC (2013), EPA (2017) and SEPP 55 and was specific to the remediation of PFAS impacts only.

The RAP identified the most feasible remedial strategy as relocation of impacted soils above the groundwater table and below imported material. Note, significant filling is required to meet flood mitigation measures. This strategy would isolate the impacted materials and contain them within a confined area where potential for migration is mitigated. The proposed strategy is as follows:

- The impacted materials shall be maintained in the commercial / industrial land-use area within the Dunheved precinct, as consistent with that area as nominated in the development approval;
- Excavation of impacted soils at the Dunheved Open Channel and relocation of those soils to the designated area;
- Relocation of SP30 soils, currently temporarily stockpiled in Dunheved, into the designated area;
- A minimum soil cover thickness of 2 m to be placed over the impacted soils; and
- Impacted soils to be placed a minimum of 2 m above the depth of groundwater.

Following relocation, validation sampling is to be conducted within associated excavations and stockpile footprints.

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The inflow of contaminated stormwater into the Dunheved Open Channel is to be redirected as part of proposed infrastructure works in the area.

In relation to the site area, impacted soils at or adjacent to the Dunheved Open Channel as shown on **Figure 3** will require excavation, containment and validation as per the above listed procedures.

It was considered that subject to the successful implementation of the measures of the RAP the site can be made suitable for the intended land uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

The remedial strategy proposed here is currently under review by the EPA and has not yet been endorsed. It is anticipated that the impacted soils proposed to be relocated to the PFAS impacted soils stockpile area during implementation of this RAP will be subject to the remedial strategy summarised above.

3.9 Phase 2 Environmental Site Assessment – Stage 3 of the East West Connector Road, St Marys, NSW (JBS&G 2019g[21])

JBS&G was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd (the client) to conduct a Phase 2 Environmental Site Assessment (ESA) for the proposed Stage 3 East West Connector Road (EWCR) (the site) within the former ADI St Marys property ('the property') and Links Road St Mary's, NSW.

Works included a detailed site inspection and comprehensive intrusive soil sampling throughout the site conducted on 7th July 2019. The surface of the site was observed to comprise sealed asphalt paved road with road base igneous gravel with grass road verges either side of the road. The site was generally flat with a slight embankment noted on the northern road verge of the eastern portion of Links Road. Stormwater infrastructure was observed underlying the western part of the site. The infrastructure comprised an approximate 2 m wide rectangular culvert with an outlet to the Dunheved Open Channel.

No staining, odours or asbestos containing materials were observed during the site inspection. Minor rubbish such as plastic wrappers were observed adjacent to Links Road but no significant fly tipping was observed.

All concentrations of heavy metals, TRH, BTEX, PAHs, VOCs, OCPs/PCBs, and asbestos were reported at below the site adopted health based criteria. No ACM was observed in the sample locations or within samples submitted for laboratory analysis either.

Based on the soil PFAS analytical results, it was identified that PFAS impact was present within locations ST3-01, ST3-02, ST3-03, ST3-16, ST3-17, ST3-18 and ST3-20. The locations of identified impact were within close proximity to the Dunheved Open Channel and as such the source of impact is considered to be directly associated with it.

Based on the findings of this investigation, the following conclusions were made:

- No potential risk to human health or ecological health are present associated with potential contaminants of concern, heavy metals, TRH/BTEX, PAHs, OCPs/PCBs, VOCs or asbestos;
- PFAS impact to soils adjacent to the Dunheved Open Channel were identified;
- No aesthetic risks were identified at the site;
- Preparation of a Remedial Action Plan (RAP) for the Stage 3 portion of the site to address PFAS impacted soils. The RAP can simply require the excavation and relocation of the

[21] *Phase 2 Environmental Site Assessment – Stage 3 of the East West Connector Road, St Marys, NSW (Rev 0*) JBS&G Australia Pty Ltd 14 August 2019 (JBS&G 2019g)

PFAS affected soils to the existing stockpile of PFAS affected soils currently held within the Dunheved portion of the St Marys development site; and

- Surplus soils and/or demolition materials as generated by future road construction works should be managed consistent with a Contamination Management Plan (CMP as specific to the roadworks project.

It is recommended that the following actions are undertaken:

- Preparation of an RAP specific to the PFAS impacted areas identified within Stage 3 of the EWCR; and
- Preparation of a CMP to address all stages of the EWCR and include management requirements associated with material tracking, pavement removal, unexpected finds and imported fill.

3.10 Additional Targeted Assessment of Dunheved Portion (Stage 2b) of Stage 2 East West Connector Road (JBS&G 2019h[22])

JBS&G was engaged by the client to conduct and additional targeted PFAS assessment along the Stage 2b EWCR portion and adjacent to the Dunheved Open Channel. The investigation was conducted to obtain characterisation regarding the extent of PFAS impacted soils within the Stage 2b corridor.

Works included additional sampling at seven locations and analysis of 14 soils samples for PFAS along the western boundary of the south-eastern portion of the Stage 2b portion of the east-west connector road for the purposes of further advising the potential extent of PFAS impacted soils within Stage 2 of the EWCR.

Based on the results of the investigation, the following conclusions were made:

- A significant source of PFAS impact was previously identified to the west of the south-eastern portion of the Stage 2 corridor associated with an off-site inflow of PFAS impacted surface water. This impact has been identified to extend into the EWCR boundary and requires remediation as per this RAP;
- Gross levels or widespread indicators of PFAS impact were not identified during the additional targeted investigation as undertaken to determine if the source to the west had substantially affected the corridor; and
- Localised PFAS impact has been previously identified at sample location DHN-72 (JBS&G 2018a) as more than likely consequent of the historical storage and handling of PFAS affected biosolids to the east of the Stage 2b corridor. This is the highest level of PFAS impact within the Stage 2b corridor and should be considered as an appropriate starting point for interim management works that are otherwise being documented in this RAP developed for the roadworks.

It is noted that since this letter was prepared an approach to excavating all detectable levels of PFAS has been agreed upon. The approach varies slightly from commencing with DHN-72 as a starting point and excavating outwards as proposed in the Targeted Stage 2b letter.

[22] *Additional Targeted Assessment of Dunheved Portion (Stage 2b) of Stage 2 East West Connector Road (Rev 0*) JBS&G Australia Pty Ltd 14 August 2019 (JBS&G 2019h)

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3.11 Contamination Management Plan (CMP) – Stages 1 to 3 of the EWCR (JBS&G 2019f[23])

A CMP was developed for the EWCR to provide a framework for the implementation management requirements prior to and during development works including, unexpected finds protocol, characterisation of stockpiles, management of pavement materials, procedures for asbestos containing materials (ACM) and unexploded ordnance (UXO) if encountered, materials tracking procedures and requirements for imported fill if brought onto the site.

The CMP should be implemented for all works within the proposed EWCR including during remedial works conducted in accordance with this RAP for Stages 2b and 3.

[23] *Contamination Management Plan – Stages 1 to 3 of the EWCR, St Marys, NSW (Rev 0*) JBS&G Australia Pty Ltd 14 August (JBS&G 2019f)

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4. Conceptual Site Model

National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (NEPC 2013) identifies a conceptual site model (CSM) as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments.

NEPC (2013) identified the essential elements of a CSM as including:

- Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination;
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air);
- Human and ecological receptors;
- Potential and complete exposure pathways; and
- Any potential preferential pathways for vapour migrations (if potential for vapours identified)

Each of these elements is discussed in the following sections

4.1 Contaminants of Potential Concern

The Stage 2b portion of the site is noted to have been assessed, validated and confirmed suitable in an existing SAS issued in 1999, noting that the current road within Stage 2b was built after the SAS was issued. Further works to identify potential data gaps associated within Stage 2b and Stage 3 beneath the paved road is included in **Section 5.4**.

PFAS are present in soils and groundwater, however given the depth of groundwater and noting the proposed development of PFAS impacted areas of the site as a roadway, groundwater proposed to be addressed under this RAP. It is noted that groundwater impacts will be addressed on a broader site scale (JBS&G 2019e).

4.2 Source of Contamination

Sources of significant PFAS contamination have been identified as:

- PFAS impacted surface water flowing into the South Dunheved Open Channel present in the south-western portion of South Dunheved through a stormwater pipe entering the southern boundary of the Dunheved from Links Rd. Inferring the location of the stormwater pipe, it would be assumed that there is an off-site source of PFAS in the St Marys / Links Rd industrial estate. PFAS impact here is substantially present as sulfonic forms of PFAS, with PFOS the predominant component. It was considered likely that historical levels of PFAS discharging into the site here were higher than those which have been recently measured; and
- To a lesser extent PFAS impacted biosolids as historically spread across Dunheved, transferred to the Stockpile SP30, and now relocated back to Dunheved. PFAS impact related within the biosolids occurs as a mixture of sulfonic and carboxylic forms of PFAS and is restricted to the biosolids material and an area at the south-eastern extent of the former storage of the biosolids at Stockpile SP30;

4.3 Potential Exposure Pathways

The exposure pathways considered to be potentially complete for the site include:

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- Potential dermal and oral contact to impacted soils as present at shallow depths and/or accessible by future service excavations; and/or
- Potential inhalation of impacted dust generated from site soil by future site occupants and visitors; and/or
- Potential contaminant uptake by vegetation at the site; and/or
- Potential dermal and oral contact of impacted surface waters at South Creek and the South Dunheved Open Channel (and Detention Basin while present); and/or
- Potential contaminant uptake by biota within South Creek.

As the PFAS compounds are non-volatile, inhalation of vapours is not considered a potential pathway.

4.4 Receptors

The site is currently under developed with human receptors currently restricted to Construction Workers and trespassers. A range of ecological receptors are potentially exposed to PFAS including terrestrial flora and fauna. Flora and fauna within or near South Creek are potentially exposed to PFAS from surface water and groundwater at the site.

Following the redevelopment of the site, site workers have the potential to be exposed to soil, however this is likely to be limited. In addition, the potential exposure of flora and fauna would also decrease following site development.

4.5 Exposure Pathways

PFAS constituents are non-volatile and potential human exposure pathways are inhalation of dusts / particulates, oral and dermal exposure. If PFAS soils are accessible at the site surface, then site users will potentially be exposed to PFAS.

No beneficial use of the groundwater occurs at the site, nor is it considered to be realised in the future due to the salinity of the groundwater and the general low yield. On this basis, there is no potential direct exposure pathways to PFAS impacted groundwater.

It is noted that impacted groundwater has potential to discharge into South Creek where potential direct human exposure pathways could occur. The removal of impacted soils from Stages 2b and 3 of the EWCR, in addition to groundwater management requirements as per the broader scale RAP (JBS&G 2019e), will address this potential issue.

There are no surface water bodies at the site, the Dunheved Open Chanel is noted to be located adjacent to Stage 2b and Stage 3, and shall be addressed in the broader scale RAP (JBS&G 2019e).

Potential direct exposure of flora and fauna will occur where impacted materials are retained at the site surface, or otherwise within the root growing zone (generally considered to be up to 2 m as per NEPC 2013).

Direct exposure of water flora and fauna will occur to PFAS impacted surface water. The concentration of PFOS in South Creek exceeds the 99% ecological protection level, and bioaccumulation within biota has been confirmed consistent with ranges reported in ITRC (2018). The 99% ecological protection level is instructed to be used where bioaccumulation processes occur.

Similarly discharge of impacted groundwater to surface water bodies will complete ecological exposure pathways. Concentrations of PFAS constituents in groundwater exceed 95% and 99% ecological protection levels. However, likely fluxes of groundwater based PFAS constituents to South Creek were considered to be insignificant in comparison to the flux of PFAS constituents from the discharge of impacted surface water to South Creek from the South Dunheved Open Channel.

5. Remedial Action Plan

5.1 Remedial Goal

PFAS impacted soils are present within the proposed Stage 2b and Stage 3 portions of the EWCR development. In order to enable development within those area the impacted areas require remediation to an acceptable level whereby PFAS impact at the site and/or potential migration of PFAS impact to surrounding areas is prevented.

The goal for the remediation and/or ongoing management of PFAS impacted materials within the Dunheved Site is to:

- Prevent potential direct contact of human and ecological populations within the site to impacted soils retained / present at the site;
- Prevent potential phyto-toxicity effects of flora contact to impacted soils (where applicable);
- Remove potential ongoing sources of environmental contamination (i.e. unexpected finds, if encountered); and
- Mitigate direct contact to underlying groundwater affected by PFAS.

Currently the site is under interim management as per the procedures of the PFAS Management Plan for Central Precinct and Dunheved Developments as prepared by JBS&G (2018e[24]). It is further suggested that this management plan is implemented during remediation works along with the CMP (JBS&G 2019f).

5.2 Preferred Remediation/Management Method

The preferred hierarchy of options for remediation (clean up) and/or management adopted by NSW EPA has been established within the NEPC (2013) Assessment of Site Contamination Policy Framework as follows:

- On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level; and
- Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site; or

If the above options are not practicable:

- Consolidation and isolation of the soil on site with a properly designed barrier; and
- Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill; or
- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

With EPA currently reviewing assessment results and proposed remedial strategies, it is proposed that impacted soils are removed from the Stage 2b and Stage 3 EWCR site and placed within the designated PFAS impacted soils stockpiling area to undergo remediation at a later stage and following EPA endorsement of remedial strategies.

[24] *PFAS Management Plan, Central Precinct and Dunheved Developments, St Marys NSW (Rev A*) JBS&G Australia Pty Ltd 14 March 2018 (JBS&G 2018e)

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A conservative approach any detectable levels of PFOS, PFOA and PFHxS which are currently accounted for in criteria provided by National PFAS Environmental Management Plan (HEPA 2019) above the laboratory limits of reporting (0.005 mg/kg) will be identified as impacted for the purpose of this remedial activity.

It is noted that the proposed primary laboratory (Eurofins MGT) limit of reporting for PFOS, PFOA and PFHxS is 0.005 mg/kg.

5.3 Extent of Remediation/Management

PFAS impacted soils have been identified within the proposed Stage 2b and Stage 3 portions of the EWCR development. Approximate areas of PFAS impacted soils is shown on **Figure 3**.

The depth of PFAS extent varies throughout the area of impact, however, an average depth of 1.0 m below surface level is anticipated to be impacted. Where impact is identified to extend further, the impact will be chased out.

For the purpose of the proposed roadway development, groundwater is not considered to pose a potential risk as no direct exposure pathways are anticipated.

No surface water bodies exist within the impacted areas of the site.

5.4 Data Gap Assessment

Prior to commencement of remedial works, additional PFAS and asbestos assessment targeting directly beneath the current pavement within Stage 2b and Stage 3 is required. In addition to PFAS and asbestos assessment, sampling and analysis for other potential contaminants of concern including heavy metals, TRH/BTEX, PAHs and OCPs/PCBs will also be conducted for additional characterisation and to support the existing data set. The data gap assessment will incorporate characterisation requirements included in the CMP (JBS&G 2019f) such as fill and asbestos quantification assessment and reuse of bituminous pavements.

The assessment will comprise an additional 52 locations placed on an approximately 20 m grid within Stage 2b and Stage 3, with particular focus beneath current paved roads. The approximate proposed sampling grid is provided in **Figure 4**. Fifty-two sampling locations is considered to be appropriate for characterising an area of this size, noting the EPA sampling design guidelines recommends a minimum of 52 samples for a site of 4.5 hectares. The combined area of Stage 2b and 3 is approximately 4.17 ha.

Works are recommended to take place following pavement removal so that an excavator can be used to conduct testpits and obtain appropriate volume for asbestos quantification to occur. Soil sampling locations will be extended to at least 0.5 m into natural underlying soils or prior refusal.

Samples will be collected directly from the excavator bucket and placed into laboratory supplied sample jars. Sample jars will be transferred directly to a chilled esky prior to transport to the analysing laboratory under chain of custody protocols. Selected samples consisting of at least 1 sample per location will be analysed for a range of analytes including Heavy Metals, TRH/BTEX, PAHs, OCPs/PCBs, PFAS and asbestos for comparison to relevant NEPC (2013) landuse criteria and the adopted PFAS criteria as per **Section 7.5**. Soil sampling procedures as per **Section 7.3** shall also be adopted to ensure appropriate handling when sampling for PFAS.

Asbestos assessment requirements including inspection of 10L soil for asbestos quantification will be conducted at each sampling location. The 10L bulk sample shall be collected from each location and sieved through a 7 mm sieve or raked through if sieving is not possible due to clayey soils. The oversize through the sieve shall be inspected for the presence of asbestos containing materials (ACM). A volume of 500 ml of the undersize materials shall be sub-sampled for asbestos analysis asbestos.

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Based on history of the site noting validation of historical area 24f (storage of sewage sludge) including a site audit statement (SAS) covering the Stage 2b area (noting the current road was constructed recently and after issue of the 1999 SAS) and based on more recent works including PFAS Assessment at Former ADI St Marys Development Site (JBS&G 2018a) and Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (JBS&G 2018d) assessment for nutrients and bacteria are not considered necessary within the Dunheved portion of Stage 2b.

Prior to proceeding with remedial works, a data gap assessment report will be prepared by JBS&G and provided to the auditor for endorsement.

It is noted that assessment of groundwater will not be provided with the Data Gap Assessment, a summary of groundwater conditions and groundwater management requirements is included in the RAP for the broader St Marys ADI site (JBS&G 2019e).

5.5 PFAS Impacted Soils

The requirements for the management of the PFAS impacted soils within Stage 2b and Stage 3 corridor are summarised following:

- Implementation of environmental controls to manage the direct inflow of surface water from the stormwater culvert located in the western portion of Stage 3;
- Excavation of identified PFAS impact to the extents identified on **Figure 3**. Where PFAS impacted areas extent to the Stage 2b and Stage 3 boundaries, soils are to be excavated up to 1 m beyond the boundary with the wall battered as a 45 degree slope. Excavation at the Stage 3 southern boundary shall not extend beyond the boundary as the property to the south is understood not to be part of the broader development site;
- Excavation of PFAS impacted soils shall occur to a typical depth of 1.0 m below ground level, or below the level of the culvert, over the inferred extent of PFAS impact as shown on **Figure 3**;
- Sampling of the extent of the excavation shall be undertaken on the walls and base on a 5 m grid in the Stage 3 area, and a 10 m grid in the Stage 2b area following the initial stages of excavation works to determine if any PFAS impacted soils remain. Soil samples will be collected at site boundaries to identify whether PFAS impact within excavation walls or batters will require management;
- Additional stages of soils excavation works shall occur until PFAS impacted soils are removed to levels below laboratory reporting limits. Smaller excavations to chase deeper extents of PFAS affected soils shall be sampled on a 5 m grid, with at least one sample per each wall and a sample at the base of the excavation. Additional excavation will not extend further than 1 m beyond the Stage 2b and Stage 3 boundaries or beyond the southern Stage 3 boundary as shown on **Figure 3**; and
- Excavated soils shall be transferred directly to the controlled temporary stockpile locations within Dunheved identified as the PFAS impacted soils stockpile area and shown on **Figure 3**. PFAS impacted soils will require to be retained at this location consistent with the interim management approach currently being undertaken in consultation with the NSW EPA.

5.6 Material Tracking

Material tracking of the relocation of PFAS impacted soils will need to be recorded in accordance with **Section 6**.

5.7 Validation

Validation of the remedial works will be conducted to demonstrate the remediation criteria have been achieved. Details of the validation program are provided in **Section 7**.

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6. Material Tracking Plan

As discussed in the Remedial Plan in **Section 5**, impacted materials will require relocation from the EWCR to the PFAS impacted soils stockpile within the Dunheved Industrial Precinct. A Materials Compliance Management System (MCM) shall be developed for the reuse of materials on the site. It shall include two primary elements:

- Materials Management Guideline (material qualities); and
- Materials Tracking Plan (quantity/movement/location).

The MCMs also includes the following specific details:

- Definition of responsibilities, including the early works Principal Contractor(s), other contractor(s) e.g. Remediation Consultant (JBS&G) and the Site Auditor;
- Procedures for confirming material quality, summarising existing analytical (in-situ) data, additional analytical (ex-situ) data, additional observations to satisfy other acceptance criteria and alignment of any environmental data to enable beneficial re-use of the material at the point of placement;
- Procedures for recording where the materials have been placed (lateral & vertical limits) and inspections during placement;
- Identification of hold points where materials are proposed to be temporarily stockpiled;
- Procedures for recording the quantity of placed materials;
- Material Tracking Records;
- Standard forms/documentation;
- Non-conformances/Unexpected Finds; and
- QA/QC.

The MCMs may also need to include or make reference to additional material placement requirements to meet design elements such as those relating to subsurface drainage or compatibility with service corridors, and engineering properties of materials to be placed, which are outside the scope of this RAP.

Any material tracking provisions require to further be consistent with the CMP (JBS&G 2019f).

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7. Validation Plan

7.1 Overview

Validation data is required to be collected to verify the effectiveness of the remedial works and document the final site conditions as being suitable for the proposed future use(s).

The following sections establish the data quality objectives (DQOs) to be adopted during validation of the site remediation works.

7.2 State the Problem

The site, which has historically used by the Department of Defence for various uses, is proposed to be redeveloped for a roadway consistent with commercial / industrial land use exposure pathways. PFAS contaminated soils have been identified in in-situ soils which require removal/management to allow for the proposed development to proceed.

The level of impact is generally associated with a broader scale issue, however in order to proceed with the EWCR development removal of PFAS impacted soils that are located within the proposed Stage 2b and Stage 3 EWCR is required.

7.2.1 Identify the Decision

The following decisions are required to be addressed during validation:

- Have all PFAS impacted soils been excavated and relocated to the PFAS impacted soils stockpile area?
- Does soil analytical sampling confirm soils within the EWCR are free of detectable levels of PFAS following excavation and relocation?
- Does material tracking documentation confirm relocation of PFAS impacted soils as per the material tracking procedures in this RAP?

7.2.2 Identify Inputs to the Decision?

Inputs to the decisions are:

- Development plans;
- Field observations in relation to inspection of all excavation bases, walls and stockpiles for odours, sheen, discolouration, and other indicators of potential contamination;
- Soil validation analysis data collected from stockpiles and the base and walls of remedial excavations;
- Materials tracking records as per Section 6 and the CMP (JBS&G 2019f);
- Survey data as to the extent and thickness of physical separation arrangements and extent of environmentally impacted materials; and
- Data quality indicators as assessed by quality assurance/quality control (QA/QC).

7.2.3 Define the Study Boundaries

The study boundaries of the site are as follows:

- The lateral extent of the works relevant to this RAP as presented in **Figure 3**; and
- The vertical extent of the works is initially anticipated to be approximately 1 m below surface level and to a depth below the culvert in Stage 3 which is approximately 1.5 m below the surface. Where impact is identified below 1.0 m, the vertical extent will be extended.

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7.2.4 Develop a Decision Rule

Decision rules are provided following for each of the environmental issues anticipated on the Site.

1. Have all PFAS impacted soils been excavated and relocated to the PFAS impacted soils stockpile area?
    - Impacted area as shown on **Figure 3** need to be excavated and relocated to the PFAS impacted stockpile area. Further to this, the process needs to be confirmed by the supervision of an environmental consultant as well as material tracking documentation. Additionally, confirmation that the extent of impacted soils has been reached following excavation is required as per point 2 below.
2. Does soil analytical sampling confirm soils within Stage 2b and Stage 3 of the EWCR are free of detectable levels of PFAS following excavation?
    - Soil validation samples are required to be collected from the walls and base of the excavation as per the designated frequency provided in **Section 5.5**.
    - All remaining in situ soils need to be supported by validation samples, with PFAS concentrations reported as below the primary laboratory limit of reporting (0.005 mg/kg) for PFOS, PFOA and PFHxS.
3. Does material tracking documentation confirm relocation of PFAS impacted soils as per the material tracking procedures in this RAP?
    - Material tracking records are required to be kept in accordance with the procedure provided in **Section 6** and the CMP (JB&G 2019f) to confirm the relocation of all PFAS impacted soils.

7.2.5 Specify Limits of Decision Error

This step is to define, in statistical terms, the decision-makers acceptable error rates based on the consequences of making an incorrect decision. Two types of decision error are defined in AS4482.1-2005 'Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds':

(a) Deciding that the site is acceptable when it actually is not; and

(b) Deciding that the site is unacceptable when it is.

AS4482.1-2005 nominates setting limits of 5% probability of (a) type errors and 20% probability of (b) type errors. These limits are in general accordance with suggested limits as outlined in US EPA (July 1994) 'Using the Data Quality Objectives Process in Risk Assessment'.

Data sets as formed by the application of the decision rules require assessment using the following relationship as provided in AS4482.1-1995 as based on the adopted limits of decision error to assess the number of sample locations required to make a decision:

$n = 6.2\ \sigma^2 / (Cs - \mu)^2$

where: n – number of samples needed

6.2 – factor derived from probability errors (a) and (b)

σ – estimated standard deviation of contaminants concentration in sampling area

Cs – acceptable limit (mg/kg)

μ – estimated average concentration in sample area (mg/kg)

This relationship will be required to be applied for each constituent in each data set to assess that a sufficient number of samples are available to meet the limits on decision error. Separate data sets

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shall be required to be prepared based on the data sets generated for the assessment of the soils data to the adopted assessment criteria.

Data sets prepared for surface water are unlikely to be suitable to assess to the nominated limits on decision error, and instead a qualitative assessment shall be undertaken with the preparation of these data sets.

7.2.6 Optimising the Design for Obtaining Data

A validation sampling design has been prepared on the basis of the media assessed and the validation criteria established. The following sampling is proposed as specific to each media and as per **Section 5.5**:

- Collection of soil samples from the walls and bases of excavations at a spacing of;
    - 1 per 5 m for walls and 1 per 25 m^2 for bases for excavations within Stage 3; and
    - 1 per 10 m for walls and 1 per 100 m^2 for bases for excavations within Stage 2b;

The difference in validation sampling ratios between Stage 2b and Stage 3 is because the impact in Stage 3 involves a smaller area and as such a greater sampling density is considered appropriate to adequately characterise the area.

Observations only as taken by a competent person will be required to inform other aspects of the site validation (i.e. prevention of inflow of contaminated stormwater from off-site, appropriate placement of contained materials).

7.3 Sampling Methodology

Validation samples require to be collected of soils to assess that sufficient impacted materials have been excavated and contained within the site.

7.3.1 Soil Sampling

The soil sampling method shall be determined by the Field Scientist as consistent with the observations of the site sub-surface and appropriate to generate representative samples.

Where sample locations are placed by boreholes, undisturbed samples, as collected by push tube is preferred where able to be effectively implemented. Otherwise samples may be recovered from solid flight augers, hand tools or via test pitting. Re-usable equipment shall require to be decontaminated between sampling locations.

7.3.2 Soil Sample Containers

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination shall be noted on field reporting sheets/field logs.

Soil samples collected for validation purposes will require PFAS appropriate 250mL HDPE jars supplied by the laboratory. Sample labelling shall use of a ball-point pen.

The sample labels shall record sample identification number and date and time of sampling. Sample containers shall be transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form shall be completed and forwarded with the samples to the testing laboratory, containing the following information:

- Sample identification;
- Signature of sampler;
- Date of collection;
- Type of sample;

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- Number and type of container;
- Inclusive dates of possession; and
- Signature of receiver.

7.4 Quality Assurance/Quality Control

The pre-determined Data Quality Indicators (DQIs) established for the project are discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCCS parameters), and are shown in **Table 7.1**.

- Precision - measures the reproducibility of measurements under a given set of conditions. The precision of the data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD)[25] of duplicate samples.
- Accuracy - measures the bias in a measurement system. The accuracy of the laboratory data that is generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- Representativeness –expresses the degree which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- Comparability - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- Completeness – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- Sensitivity – is the ability for laboratory methods to reliably measure and detect concentrations is the analytical process.

[25] $RPD(\%) = \frac{|C_o - C_d|}{C_o + C_d} \times 200$

Where C0 is the analyte concentration of the original sample. Cd is the analyte concentration of the duplicate sample

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Table 7.1: Summary of Quality Assurance / Quality Control Program

Data Quality Objective	Frequency	Data Quality Indicator
Precision		
Blind duplicates	>1 / 20 samples	<50% RPD[1]
Split duplicates	>1 / 20 samples	<50% RPD[1]
Trip blank	1 / media / day	<LOR
Rinsate blank	1 / media / day	<LOR
Accuracy		
Surrogate spikes	All organic samples	70-130%[2]
Matrix spikes	1 per lab batch or >1 per 20 samples	70-130%[2]
Laboratory control samples	1 per lab batch or >1 per 20 samples	70-130%[2]
Representativeness		
Sampling appropriate for media and analytes		-
Laboratory blanks	1 per lab batch	<LOR
Samples extracted and analysed within holding times.	-	Soils: 7 days for VOCs/pH, 14 days for all other analytes.
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All samples
Standard analytical methods used for all analyses	All Samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples
Limits of reporting appropriate and consistent	All Samples	All samples
Completeness		
Soil description and COCs completed and appropriate	All Samples	- All samples
Appropriate documentation	All Samples	- All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Satisfactory laboratory detection limits to identify PFAS impact	All samples	All samples

[1] If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

7.5 Validation Criteria

Validation sampling is required to demonstrate that the remedial works have been effective in removing PFAS impact from the site, including the potential for migration. Demonstration that sufficient soils have been excavated and consolidated to not pose a potential future health or ecological risk to site users or potentially sensitive receptors in proximity.

Noting the current requirement for EPA endorsement regarding remediation of PFAS, a conservative approach has been adopted to allow development within the EWCR prior to endorsement. A validation criteria of below the primary laboratory limit of reporting (Eurofins MGT Pty Ltd) of 0.005 mg/kg for PFOS, PFOA and PFHxS shall be adopted.

The soil criteria is below the current national human health based and ecological guidance values (NEMP 2018) and the proposed draft values, and the criteria is considered sufficiently conservative for the proposed land use (roadway) prior to site specific criteria being agreed with the NSW EPA. Noting, as a roadway and footpath, potential habitat to support sensitive ecology and terrestrial biota will be limited.

Should soil impact be identified to be close to groundwater depth, potential leaching of PFAS from soil (albeit validation soil concentration is <LOR) will be assessed.

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7.6 Reporting

7.6.1 Data Gap Assessment Reporting

Prior to remediation and validation works, a data gap assessment report is required to be prepared and endorsed by the site auditor, detailing assessment of data gaps as per the procedure identified in **Section 5.4**.

7.6.2 Validation Reporting

A validation report shall be prepared at the completion of the remediation works. It is anticipated that the validation report will include:

- Details of the remediation works conducted;
- Information demonstrating that the objectives of the RAP have been achieved;
- Demonstration of compliance with appropriate regulations and guidelines;
- Details on the source and classification of any imported materials;
- Any variations to the strategy undertaken during the implementation of the remedial works;
- Details of any environmental incidents that may have occurred during the remediation works and the actions undertaken in response to the incidents;
- A summary of any waste disposal activities and volumes of waste removed from the site including volumes for excavation and offsite disposal; and
- Provide a comment on the suitability of the site for the proposed use and requirements for any ongoing monitoring / management.

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8. Contingency Plan

Given the remedial approach consists of removing all PFAS impacted soils the risk for contingencies associated with PFAS is considered low.

Potential for non PFAS contamination to be encountered during works is acknowledged and the unexpected finds protocol as presented in **Section 8.1** below is to be adopted during the works. In addition, the requirements of the CMP (JBSG 2019f) shall be implemented to support the works.

The Contingency Plan is required to be part of the Principal Contractors Remediation Environmental Management Plan (REMP), as described in **Section 9**, and part of the Work Health and Safety Plan (WHSP), as also described in **Section 9**.

8.1 Unexpected Finds

While considered unlikely, the possibility exists for hazards that have not been identified to date to be present at the site and discovered during redevelopment works. Examples of hazards which may be present and which may be discovered are generally detectable through visual or olfactory means, for example:

- The presence of significant aggregates of friable asbestos materials (visible);
- Excessive quantities of Construction/Demolition Waste (visible);
- Hydrocarbon impacted materials (visible/odorous);
- Drums or USTs (visible); and
- Oily Ash and/or oily slag contaminated soils/fill materials (visible/odorous).

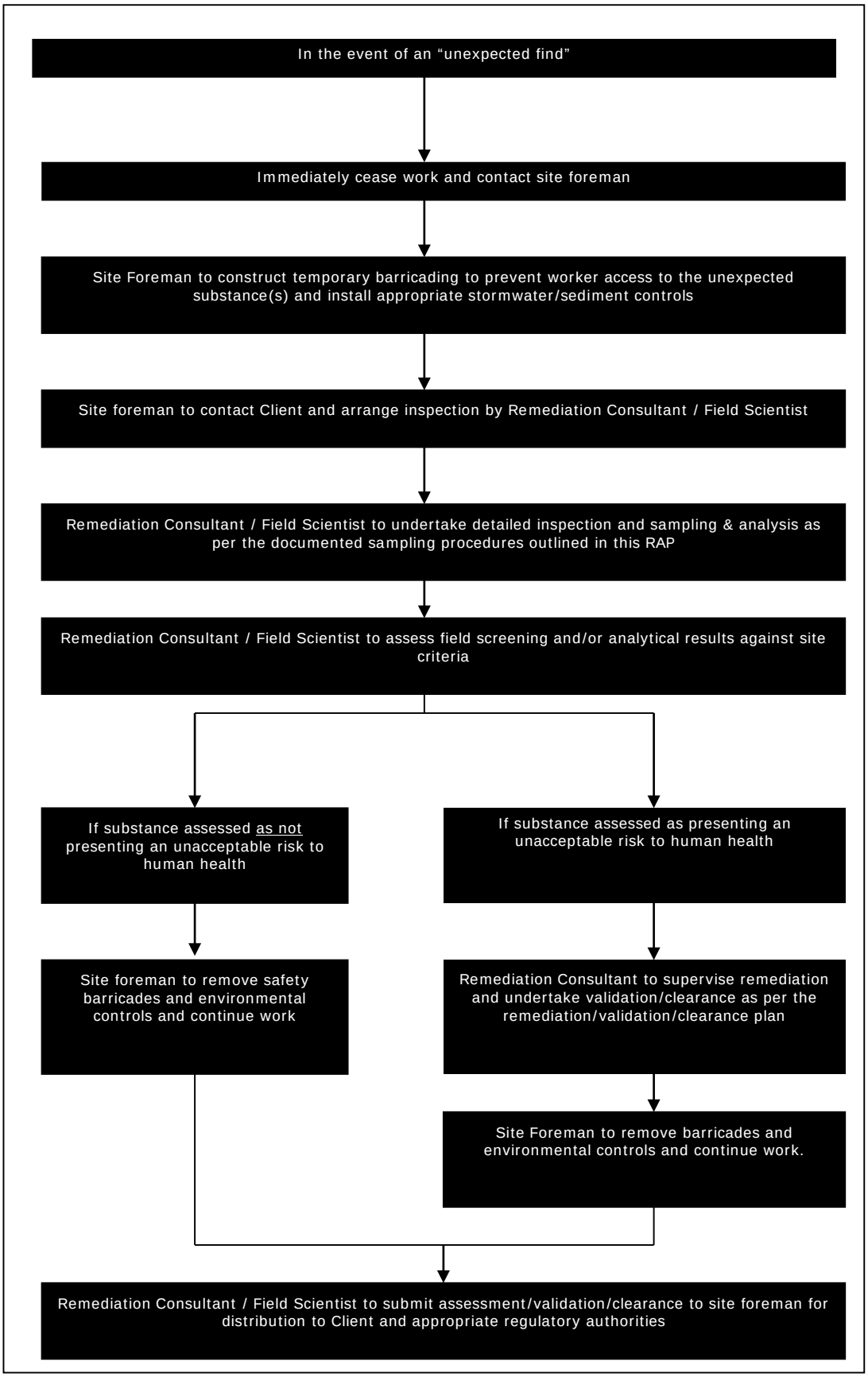
As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances (or any other unexpected potentially hazardous substance) be identified, the procedure summarised in **Table 8.1** is to be followed.

In addition, each unexpected find will be notified to the appointed site auditor in a timely manner.

An enlarged version of the unexpected finds protocol, suitable for use on site, should be posted in the Site Office and referred to during the Site Specific Induction by the Remediation Contractor.

The sampling strategy for each “unexpected find” shall be designed by a suitably qualified environmental consultant. The strategy will, however, be aimed at determining the nature of the substance – that is, is it hazardous and, if so, is it at concentrations which pose an unacceptable risk to human health or the environment.

Table 8.1 Unexpected Finds Protocol



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8.2 Contingency Scenarios

8.2.1 Remedial Strategy Failure

In the event the proposed remediation works do not meet the validation criteria, or if the selected remedial strategy is not able to proceed, the following actions will be considered to ensure firstly the safety and health of people and the environment and secondly that the overall project objectives are achieved.

1. Continued controlled excavation until validation is achieved.
2. Reassessment of remedial and validation options.

Auditor to be notified and provided with details of any proposed contingency actions prior to implementation.

8.2.2 Complaints

Due to the nature of the activities and type of contaminants potentially at the site there is a potential for complaints to be received from members of the public relating to environmental emissions including:

1. Noise and vibration arising from excavation; and
2. Dust emissions arising from excavation, material handling and placement.

Monitoring of all environmental emissions shall be undertaken during the works and appropriate actions taken to further control emissions following receipt of a complaint. Such additional controls may include the following actions:

1. Disturbance of soils during meteorologically favourable periods only; and/or
2. Covering or wetting down soils which are generating dust.

8.2.3 Severe Weather

Weather will be monitored on a daily basis via checking an internet based weather service provider. Should severe weather be forecast works will stop until safe to re-commence. All site management controls will be implemented to the extent practicable prior to any severe weather events.

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9. Regulatory and Planning Requirements

9.1 Environmental Planning and Assessment Act 1997 (EP&A Act 1997)

The potential extent of remediation works has been assessed under the provisions of *Statement Environmental Planning Policy 55 – Remediation of Land* (SEPP 55) for 'Category 1' remediation works, for which development consent is required under the *Environmental Planning and Assessment Act 1997.*

- The remediation works are considered not to be identified as designated development within the provisions of EP&A Regulation (2000), Schedule 3, Section 15, relating to contaminated soil treatment works due to the following:
  - The remediation works will not treat or store contaminated soil not originating from the site on which development is proposed to be carried out and are located within areas identified in Section 15(a) of the Schedule; or
  - The remediation works will not treat more than 1,000 m^3 per year of contaminated soil not originating from the site on which the development is located; or
  - The remediation works will not treat contaminated soil originating exclusively from the site on which the development is located and:
    - incinerate more than 1,000 m^3 per year of contaminated soil; or
    - treat otherwise than by incineration and store more than 30,000 m^3 of contaminated soil; or
    - disturb more than an aggregate area of 3 hectares of contaminated soil.
- The site is considered not to be located on land declared to be a critical habitat.
- The remediation works are considered unlikely to have a significant effect on a critical habitat or a threatened species, population or ecological community.
- The remediation works are considered not to be development for which another state environmental planning policy or a regional environmental plan requires development consent. As discussed below in **Section 9.6**, the site is covered by the Sydney Regional Environmental Plan (SREP) No 30 – St Marys. However, in relation to contaminated land and remediation the SREP 30 simply states in Section 29 the development is to have regard to soil constraints to ensure that the risk of adverse environmental and economic impacts is minimised.
- The remediation works will not be carried out in an area or zone for which any classifications outlined in SEPP 55 – Reg 9(e) apply under an environmental planning instrument.
- The remediation works is not anticipated to be carried out on any land in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Western Lands Commissioner). Notwithstanding, Penrith Council development control plan (2014)-contaminated land notes that Council consent is required for all remediation of all contaminated land within the Penrith Local Government Area. This requirement is prescribed by Sydney Regional Environmental Plan No 20 Hawkesbury-Nepean River (No 2 – 1997) Part 3 Clause 11, subclause (4).

9.2 Protection of the Environment Operations Act 1997 (POEO Act)

The potential extent of remediation works has been assessed against provisions of Protection of the Environment Operation Act 1997, Section 5, Clause 15, relating to contaminated soil treatment.

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The remediation works is considered not to be identified as a 'scheduled activity' due to the following:

- The remediation works will not treat more than 1,000 m^3 per year of contaminated soil received from off site.
- The remediation is anticipated to treat contaminated soil originating exclusively on site, however:
  - will not include incineration more than 1,000 m^3 per year of contaminated soil; or
  - will not treat (otherwise than by incineration) and store more than 30,000 m^3 of contaminated soil; or
  - will not disturb more than an aggregate area of 3 hectares of contaminated soil.

As such, the proposed soil remediation works are not required to be licensed under POEO Act (1997).

9.3 Water Management Act 2000

Dewatering is not expected to be required as part of remediation works. As such, a dewatering and re-injection approval will not to be required from the NSW Office of Water (NOW) for any proposed site remediation works.

Controlled activities under the definition of the Water Management Act 2000 is not anticipated. If a controlled activity is required, the relevant Water Management Act 2000 approvals will be required.

9.4 Protection of the Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site will not require to be licensed. Section 48 of the Reg. requires that wastes be stored in an environmentally safe manner. It is also stipulated that vehicles used to transport waste must be covered when loaded.

Provision is provided in the Regulation and EPA (2014a) guidelines for the NSW EPA to approve the immobilisation of contaminants in waste (if required).

9.5 Waste Classification Guidelines (EPA 2014)

All wastes generated and proposed to be disposed off-site shall be assessed, classified and managed in accordance with this guideline. Where wastes require immobilisation prior to off-site disposal (to reduce waste classifications) an immobilisation approval shall be sought in accordance with Part 2 of this guideline.

9.6 Sydney Regional Environmental Plan (SREP) No 30-St Marys

The EWCR is covered by this planning instrument which aims to

- Support the St Marys Environmental Planning Strategy, 2000 of the Department of Urban Affairs and Planning by providing a framework for the sustainable development and management of the land to which this plan applies, and
- Rezone certain land for urban and employment-generating development, and
- Rezone land for conservation purposes and conserve the significant heritage values of the land to which this plan applies, and
- Ensure that urban development on the land achieves desirable environmental, social and economic outcomes, and
- Provide opportunities for recreation facilities that meet the needs of the regional and local community, and

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- Ensure that development of the land to which this plan applies is integrated with established surrounding areas.

In relation to contaminated land and remediation the SREP 30 simply states in Section 29 the development is to have regard to soil constraints to ensure that the risk of adverse environmental and economic impacts is minimised.

9.7 St Marys Environmental Planning Strategy (EPS) 2000

This document describes the approach to be taken in managing development and conservation on the former ADI St Marys property. The EPS identifies the following:

- The aims for the future use and management of the property;
- Specific performance objectives;
- Actions to be undertaken by local and state governments;
- Development controls; and
- The obligations of developers.

The EPS stipulates a development application must be lodged with the relevant council (Penrith City Council) for all development which requires consent except when exempt and complying provisions apply.

Section 12 details the requirements in managing any remaining contamination on the site as follows:

- The existence of a Site Audit Statement must be noted on any planning certificates issued by a council under section 149(2) of the Environmental Planning and Assessment Act 1979. The vendor of a property must give a planning certificate to any potential purchaser.
- The SREP requires that precinct plans include proposals for, and information on, management of remnant contamination risk.
- The plan of management will include a contamination management plan to identify procedures for the safe handling and disposal of any items of ordnance that may be found during earthworks.
- Each precinct plan will include a contamination management plan to identify procedures for the safe handling and disposal of any items of ordnance that may be found during earthworks.
- Soils under existing buildings, car parks, and roads shall be tested for ordnance or chemical contamination when these facilities are removed; site audits for these areas will also be required.
- On removal of all or part of the existing stockpiles, soils under existing stockpiles will be tested for ordnance and chemical contamination. The testing should follow similar methods and levels of quality assurance as other parts of the site. Appropriate remediation and validation should be performed and the work reviewed by an independent auditor.
- In granting approval for any development involving excavation, the council will advise the applicant of the appropriate contact within the Commonwealth Government for identification and disposal of any ordnance-related items which are uncovered during the development.

9.8 Penrith City Council Consent Conditions

It is noted that PCC consent conditions are currently being finalised for the site. Aspects of the draft DA conditions for Stage 2 (DA18_221) and Stage 3 (DA18_381) relating to contamination assessment and remediation works is provided below.

- Prior to commencement an SAQP, CMP, site assessment reports and RAPs are to be provided to PCC along with interim advice by the site auditor;
- Implementation of the RAP followed by a validation report and site audit report is required to confirm the land is suitable for the proposed used;
- An appropriately qualified person shall supervise all filling and material placement works and carryout an independent review of all documentation relation to placement of fill at the site for submission to Council. All documentation is to;
    - be prepared by an appropriately qualified person with consideration of all relevant guidelines, standards, planning instruments and legislation (e.g. EPA, NEPM, ANZECC, NH&MRC),
    - clearly state the legal property description of the fill material source site and the total amount of fill tested,
    - provide details of the volume of fill material to be used in the filling operations,
    - provide a classification of the material in accordance with the EPA's "Waste Classification Guidelines" 2014,
    - determine whether the fill material is suitable for its intended purpose and land use and whether the fill material will or will not pose.
- A Site Audit Statement and associated Site Audit Report must be submitted to Council on completion of the filling works that are the subject of this Development Application. The site must be suitable for its intended land use and shall not pose any unacceptable risk to human health or the environment.
- The development shall be carried out in accordance with the procedures set out in the CMP referred to in Schedule 1 of this Consent and the conditions and procedures set out in the Site Audit Statements relating to the site.
- Only clean and unpolluted water is to be discharged into Council's stormwater drainage system. Liquid wastes suitable for discharge to the sewer mains are to be discharged in accordance with Sydney Water requirements.

  If sewer mains are not available, or if Sydney Water will not allow disposal to the sewer then a licensed waste contractor is to remove the liquid waste from the premises to an appropriate waste facility.

  The waste contractor and waste facility are to hold the relevant licenses issued by the EPA.
- The stormwater drainage system shall not be altered or new lines directed into the system without the prior approval of Council.
- Prior to the issue of the Construction Certificate, a Construction Environmental Management Plan (CEMP) is to be prepared by a suitably experienced / qualified person and submitted to and approved by Council. If Council is not the certifying authority, a copy of Council's approval is to be provided to the Principal Certifying Authority.

9.9 Blacktown City Council Consent Conditions

It is noted that the northern portion of Stage 2b falls within the Blacktown city Council LGA, draft BCC consent conditions for Stage 2 relevant to contamination works are included below.

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- The recommendations provided in the Contamination Management Plan (prepared by JBS&G, ref. 43352/61064 rev. 3 dated 24 January 2018) shall be implemented during construction. JBS&G note that a more recent and site Specific CMP (JBS&G 2019f) has since been prepared.
- The recommendations provided in Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road, prepared by JBS&G Australia Pty Ltd, report no. 54782/123128 (Rev A), dated 15 July 2019, must be carried out, including specific advice for the management of existing and proposed stockpiled PFAS impacted soils.
- An appropriately qualified environmental consultant must be engaged to supervise all aspects of site remediation and validation.
- The applicant is to ensure that validation for the entire subject site can be prepared by a suitably qualified environmental consultant in accordance with Council's Contamination Land Policy.
- The applicant is to ensure that the site has been satisfactorily secured so as to prevent any unauthorised dumping of illegal fill/waste building materials (i.e. non-V.E.N.M soils) from entering onto the development site.
- Appropriate dust suppression measures are to be incorporated into the site works process, so as to ensure that adjoining properties in the local vicinity are not negatively impacted upon by dust generated from the development site.
- Any fill material imported to the site shall be certified at the source by a suitably qualified consultant as VENM fill material, non-slightly saline and non-aggressive to concrete or steel. If the importation of fill is undertaken under a specific EPA exemption, relevant details of the EPA exemption shall be forwarded to Council prior to the importation of fill to the site.
- Should Council receive any complaints regarding non-compliance with any of the above matters or other such operational type matters, then Council will have no alternative but to fully investigate the complaint and pursue an appropriate course of action.
- Only clean fill shall be deposited/imported on site in accordance with Council's Works Specification - Civil (Current Version). Note: dry builder's waste i.e. bricks plaster and timber industrial waste or putrescible materials are not to be deposited on site. Validation of the imported fill material will be required by a suitably qualified registered engineer. Imported fill shall be verified as Virgin Excavated Natural Material (VENM).
- A final site contamination Validation Report confirming the suitability of the site for the proposed road is to be endorsed by Council. The Validation Report shall be prepared by a consultant engaged under the terms of Council's Contaminated Lands Policy.
- A Site Audit Statement is to be obtained from a NSW Environment Protection Authority accredited Site Auditor. The Site Audit Statement must confirm that the site has been remediated in accordance with the approved Remediation Action Plan and that the site is suitable for the proposed use.
- Conditions on the Site Audit Statement shall form part of the consent. Where the Site Audit Statement is subject to conditions that require ongoing review by the Site Auditor or Blacktown City Council, these must be delivered in an ongoing Environmental Management Plan reviewed and approved by Blacktown City Council prior to the issue of a Site Audit Statement.

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9.10 SafeWork NSW and NSW WHS Regulations

During remedial works compliance with relevant SafeWork NSW Codes of practice and the NSW Work Health and Safety Regulation (WHS 2017) will be required. Reference to these documents relevant to the works required should be included in the Remediation Environmental Development Plan to be developed as per **Section 10.1**.

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10. Other Remediation Documents

10.1 Environmental Management

10.1.1 Preparation of a Remediation Environmental Management Plan

Prior to commencement of remediation works on the Site, a REMP shall be prepared by the Principal Contractor, which documents the environmental monitoring and management measures required to be implemented during the remediation and construction related activities associated with the development of the Site. The Remediation Contractor is required to have the REMP reviewed and endorsed as acceptable by the Environmental Consultant and/or the Site Auditor prior to the commencement of remediation works.

The REMP shall address each of the nominated items in **Section 10.1.2** and shall include the Contingency Plan, referred to in **Section 8**, earlier.

10.1.2 Required Elements/Procedures

An assessment of the proposed activities and the associated elements required to be incorporated into the REMP is provided in **Table 10.1**. The REMP is required to address each of the required elements and procedures in full detail and to include detailed monitoring processes and procedures, corrective actions and reporting requirements.

Table 10.1 Required Elements of the REMP

Element	Specific Minimum Requirements to be included in REMP
1. Dust and Airborne Hazard Control	Provisions for dust control based on monitoring results In accordance with DA conditions
2. Flora and Fauna	As appropriate
3. Heritage/Archaeological	In accordance with relevant heritage/archaeological studies
4. Visual Impacts	Visual monitoring at site boundary Specific colour requirements for various controls/measures, including PPE
5. Emergency Response	As appropriate Procedures required for spill incident response including material storage breach
6. Noise Control	Hours of operation, in accordance with the consent conditions Monday 7am to 6pm Saturday 7am (8am if noisy works) to 1pm No works Sunday or Public Holidays Boundary monitoring at commencement of work site activities with potential for environmental noise emissions Procedures for control and management of noise emissions, as appropriate (e.g., restricted hours) All works must be carried out in accordance with the approved Demolition, Excavation and Construction Management Plan.
7. Traffic	Controls on vehicle movements on public roads Controls on transport of tar impacted materials Compliance with DA requirements including loads covering and vehicle cleaning requirements
8. Protection of Adjoining Structures	As appropriate (where relevant)
9. Odour Control	If identified, procedures for addressing elevated odour monitoring results, including, but not limited to: reduction in earthworks activities within odorous material areas during adverse meteorological conditions or application of odour masking solutions at the odour source or between identified source(s) and receptor(s).
10. Handling of Contaminated Soil and Groundwater	Soil and water management (stockpiling, site access, excavation pump out, reinstatement). No wastewaters, chemicals or other substances harmful to the environment shall be permitted to discharge to Council's stormwater system. Only clean unpolluted water is permitted to discharge into the stormwater system
11. Soil Storage/Placement Areas	Soil and water management (stockpiling, site access, excavation pump out, reinstatement) Bunding Heavy vehicle/personnel decontamination Interim storage requirements for materials requiring later treatment

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Element	Specific Minimum Requirements to be included in REMP
	Site drainage requirements, incorporating clean/dirty areas and modifications to existing surface water and drainage controls beneath retained pavements Monitoring as required
12. Sediment Control	Bunding Collection/treatment/handling impacted sediments Compliance with the DA conditions
13. Operation of Site Office	As appropriate
14. Decontamination of Heavy Equipment	As appropriate
15. Environmental Monitoring	As appropriate
16. Environmental Criteria	Soil criteria as sourced from RAP
17. Material Classification	As detailed in this RAP Materials tracking, including QA/QC inspection and sampling
18. Community Relations Plan	Prepare project specific communication protocols, incorporating nomination of specific contact persons & details and requirements for communications/response register
19. Incident Reporting	As appropriate, including standard form/checklist
20. Security and Signage	Secure site perimeter Site boundary signage
21. EMP Review	As appropriate
22. Training	As appropriate
23. Contact Details	Company/personnel details, including names/phone numbers for: - Principal Contractor - Site Auditor - Remediation Consultant - Remediation Contractor - OH&S Compliance - Environmental Compliance

10.1.3 Certification

Prior to commencement of remediation works on the site, the Principal Contractor is required to have the REMP endorsed as acceptable by the Environmental Consultant and site auditor appointed to validate the works.

A copy of the REMP and the endorsement to the satisfaction of Environmental Consultant are required prior to commencement of remediation works on the site.

10.1.4 Hours of Site Operation/Duration of Works

Remediation works shall be completed in accordance with the permissible hours of work and noise as nominated:

- Construction works, or subdivision works that are carried out in accordance with an approved consent that involve the use of heavy vehicles, heavy machinery and other equipment likely to cause offence to adjoining properties, shall be restricted to the following hours in accordance with the NSW Environmental Protection Authority Noise Control Guidelines:
    - Mondays to Fridays, 7am to 6pm
    - Saturdays, 7 am to 1pm (if inaudible on neighbouring residential premises), otherwise 8am to 1pm
    - No works permitted on Sundays and Public Holidays

The appointed Remediation Contractor will be required to include a proposed schedule of remediation works within the REMP submitted for endorsement as discussed above.

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10.2 Health and Safety

10.2.1 Work Health and Safety Management Plan

A WHSP shall be prepared by the Principal Contractor prior to commencement of remediation works on the site. The Plan shall contain procedures and requirements that are to be implemented as a minimum during the works, in addition to the Contingency Plan, referred to in **Section 8**.

The objectives of the WHSP are:

- To apply standard procedures that minimises risks resulting from the works;
- To ensure all employees are provided with appropriate training, equipment and support to consistently perform their duties in a safe manner; and
- To have procedures to protect other site workers and the general public.

These objectives will be achieved by:

- Assignment of responsibilities;
- An evaluation of hazards;
- Establishment of personal protection standards, mandatory safety practices and procedures;
- Monitoring of potential hazards and implementation of corrective measures; and
- Provision for contingencies that may arise while operations are being conducted at the site.

10.2.2 Additional Site-Specific Elements/Procedures

In addition to the normal construction-related matters, the WHSP shall address the following site-specific specific hazards associated with the works relating to the management of contaminated soil and groundwater:

- Accidental release of PFAS contaminated soils and/or water
- Contact with contaminated soil (incl. dust), groundwater and vapours, including requirements for specific Personal Protective Equipment (PPE); and
- Heat/cold stress.

10.2.3 Additional Consideration of Chemical Contaminants

As a precautionary measure, the WHSP should include the requirement for the plan to be revised in the event of an unexpected find of contaminated material during remediation and/or construction.

When working with contaminated materials in general, care needs to be taken to ensure that the contamination is not introduced to the worker via ingestion, inhalation or absorption. The WHSP must detail the PPE and decontamination requirements to be followed to control the risks posed by potential exposure to chemical contaminants at the site.

11. Conclusions and Recommendations

11.1 Conclusions

Overall, it is considered that the proposed actions outlined in this RAP conform to the requirements of the NSW Site Auditor Guidelines (EPA 2017) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures described in this RAP and the recommendations below, it is concluded that the site can be made suitable for the intended land use.

11.2 Recommendations

It is recommended that the processes outlined in this RAP be implemented, and that the following documentation be developed and implemented to ensure the risks and impacts during remediation works are controlled in an appropriate manner:

- The appropriate regulatory and licence information as discussed in **Section 9** are obtained prior to commencement of remedial works.
- A Remediation Environmental Management Plan (REMP), to document the monitoring and management measures required to control the environmental impacts of the works and ensure the validation protocols are being addressed; and
- A Work Health and Safety Management Plan (WHSP) to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.

The REMP and WHSP will require to be cognisant of the potential occurrence and storage/handling of PFAS contaminated soils on the site.

Upon completion of the works on the site, a Validation Report shall be prepared.

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12. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

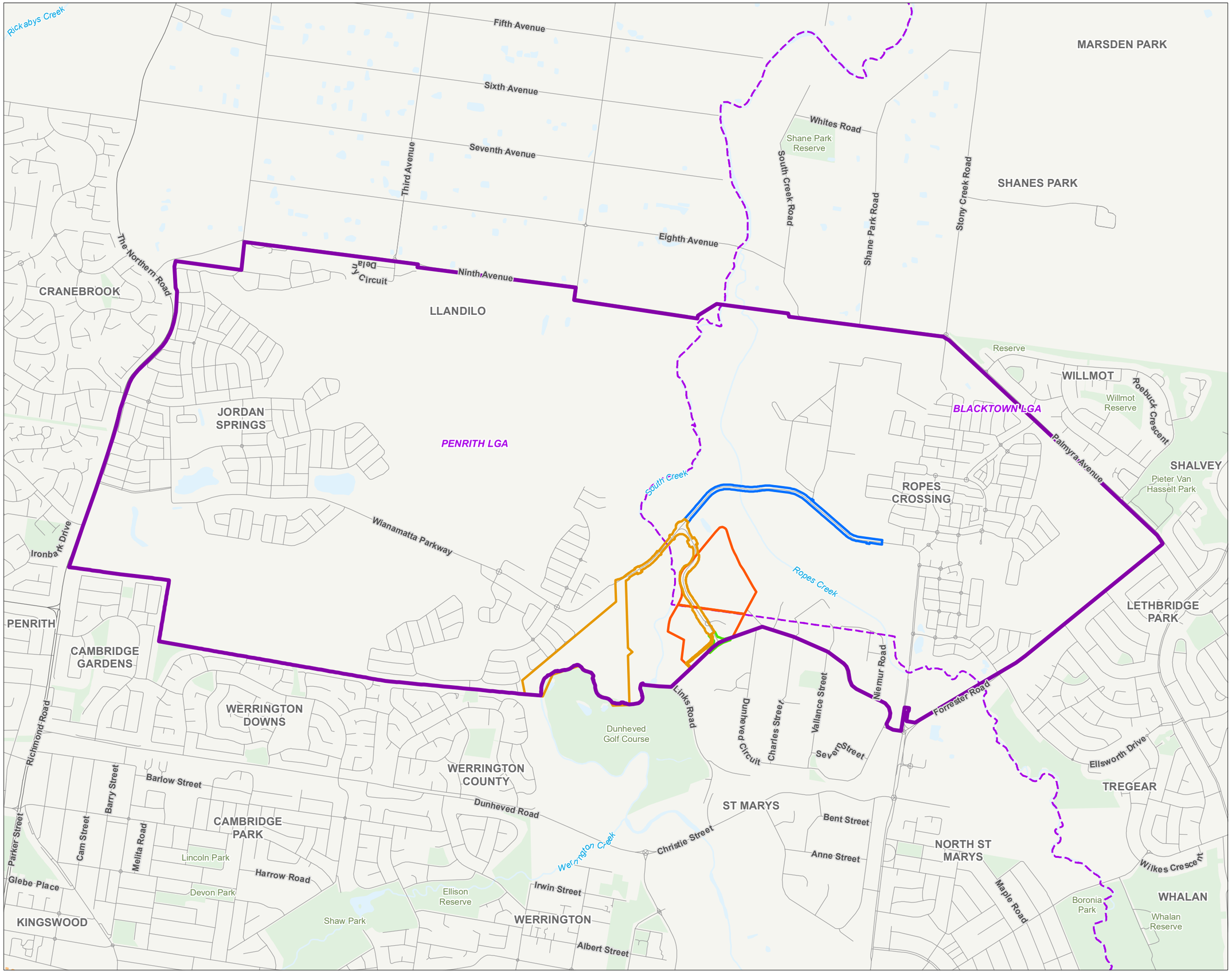
Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Figures

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

Development Stages

- Stage 1 Boundary
- Stage 2A Boundary
- Stage 2B Boundary
- Stage 2C Boundary
- Stage 3 Boundary
- LGA boundary
- Waterbody area
- Waterway
- Parks and reserves

JBS&G

Job No: 54782	
Client: Minter Ellison	
Version: R08 Rev0	Date: 14-Aug-2019
Drawn By: AS	Checked By: GB

Scale 1:23,500

0 250 500
metres

Coord. Sys. GDA 1994 MGA Zone 56

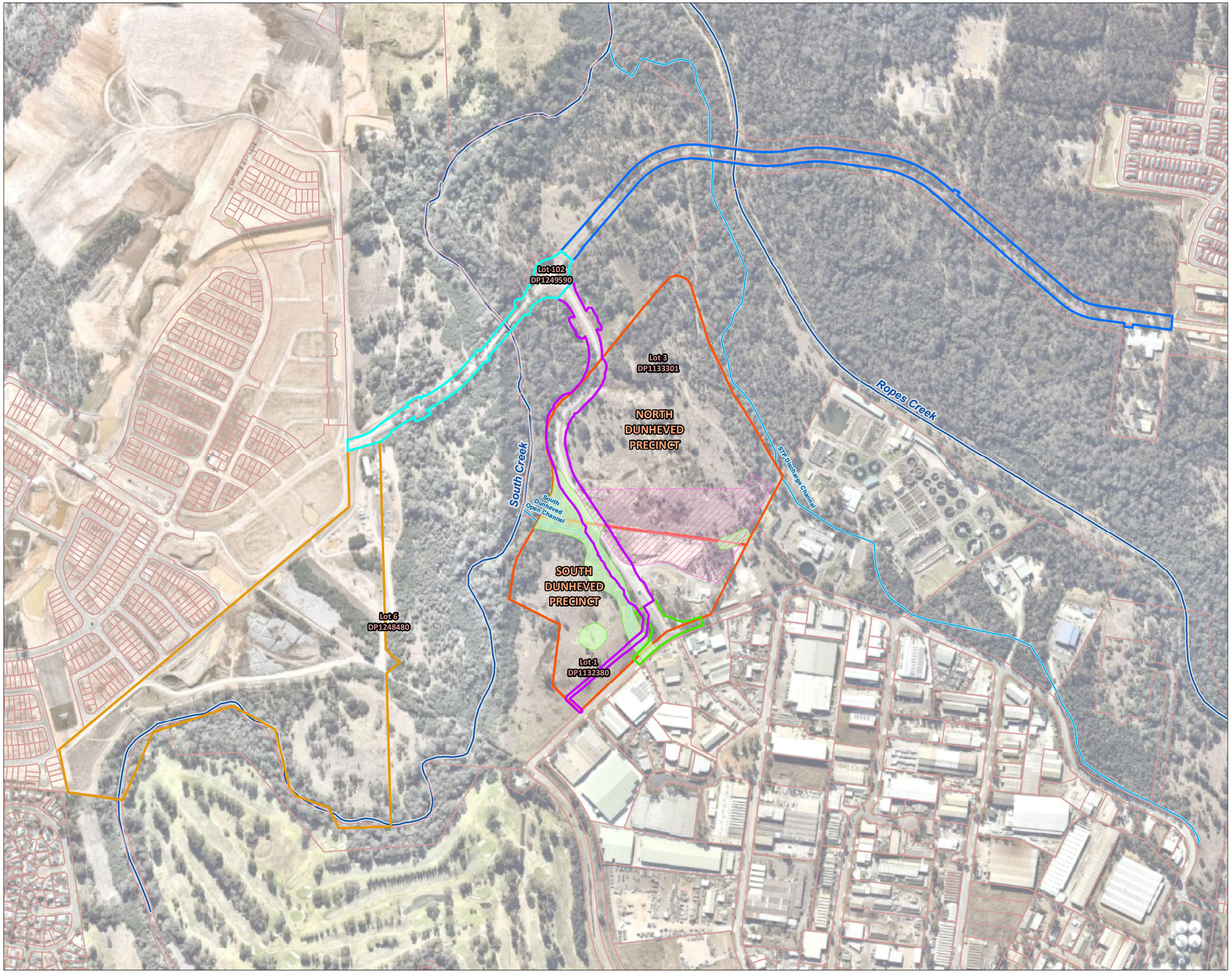
Central Precinct

SITE LOCATION

FIGURE 1

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R08 Rev A\54782_01_SiteLocation.mxd

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Current PFAS Impacted Temporary Soil Stockpile
- Proposed PFAS Remediation Areas

Development Stages

- Stage 1 Boundary
- Stage 2A Boundary
- Stage 2B Boundary
- Stage 2C Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Cadastral Boundary
- Creeks
- Channels

JBS&G

Job No: 54782	
Client: Minter Ellison	
Version: R08 RevA	Date: 07-Aug-2019
Drawn By: AS	Checked By: GB

Scale 1:7,600

0 75 150
metres

Coord. Sys. GDA 1994 MGA Zone 56

East West Connector Road

DEVELOPMENT STAGES AND REMEDIATION AREAS

FIGURE 2

File Name: J:\Sydney\Projects\Company Data\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R08 Rev A\54782_02_DevelopmentStagesAndRemediationAreas.mxd
Aerial Photo: www.nearmap.com - Imagery 2017

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

NORTH DUNHEVED PRECINCT

SOUTH DUNHEVED PRECINCT

Lot 102 DP1249590

Lot 3 DP1133301

Lot 6 DP1248480

Lot 1 DP1132380

South Dunheved Open Channel

South Creek

STP Discharge Channel

Legend:

- Area of PFAS impacted soils Proposed for excavationand relocation to stockpile area
- Current PFAS Impacted Temporary Soil Stockpile

Development Stages

- Stage 1 Boundary
- Stage 2A Boundary
- Stage 2B Boundary
- Stage 2C Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Cadastral Boundary
- Creeks
- Channels

JBS&G

Job No: 54782	
Client: Minter Ellison	
Version: R08 RevA	Date: 07-Aug-2019
Drawn By: AS	Checked By: GB

Scale 1:2,500

0 25 50
metres

Coord. Sys. GDA 1994 MGA Zone 56

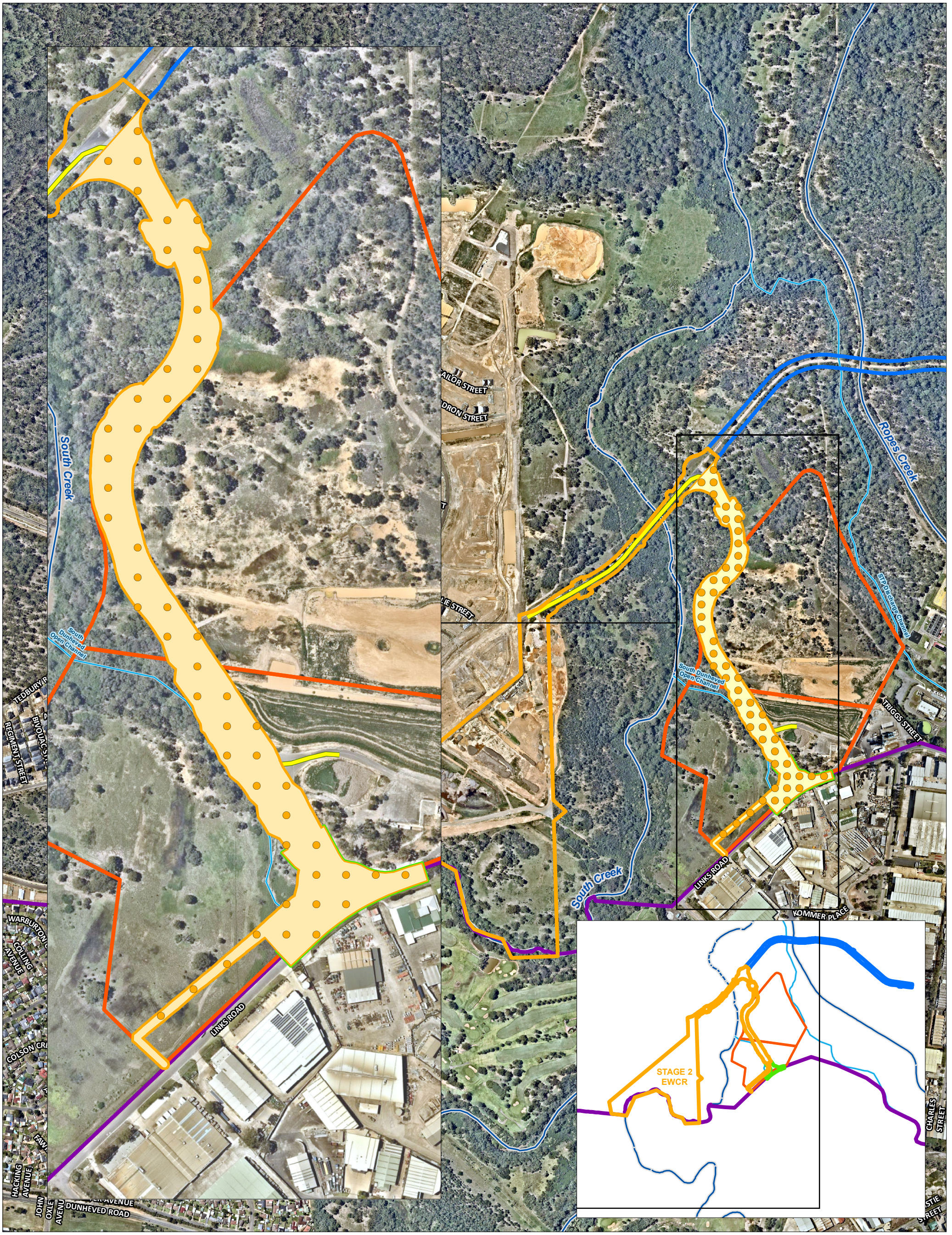
East West Connector Road

REMEDIATION AREAS AND PFAS IMPACTED STOCKPILE AREA

FIGURE 3

File Name: N:\Projects\54782\54782 Jordan Springs PFAS Assessment\GIS\Maps\R08 Rev A\54782_03_RemediationAreasandPFASImpactedStockpileArea.mxd
Aerial Photo: Nearmap 2019 - Imagery 2017

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct

East West Connector Road Site

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Haulage Road
- Channels
- Creeks
- Stage 2b and 3 Area of Fill and Asbestos Quantifiaction

JBS&G

0 120 240
metres

Job No: 54782 | Scale: 1:8,500

Client: Minter Ellison | Coord. Sys. GDA 1994 MGA Zone 56

Drawn By: RF | Checked By: GB | Version: R08 Rev 0 | Date: 14-Aug-2019

Central Precinct

STAGE 2B AND STAGE 3 DATA GAP ASSESSMENT LOCATIONS

FIGURE 4

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R08 Rev 0\54782_08_Stage2b_3_Fill_AsbestosQuantificationSamples.mxd
Created on: 14/08/2019 by: 20181229

Appendix A Summary of Data

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Stage 2b Data

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

South Creek

South Dunheved Open Channel

ST2-01

ST2-02

ST2-03

ST2-04

ST2-06

ST2-07

ST2-08

NORTH DUNHEVED PRECINCT

SOUTH DUNHEVED PRECINCT

LINKS ROAD

Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 2 Boundary
- Proposed PFAS Remediation Areas
- Creeks
- Channels
- Soil Sample Location - Stage 2

JBS&G

0 20 40
metres

Central Precinct

SOIL SAMPLING LOCATIONS

Job No: 54782		Scale: 1:1,750		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: L20 Rev 0	Date: 15-Jul-2019	**FIGURE 1**

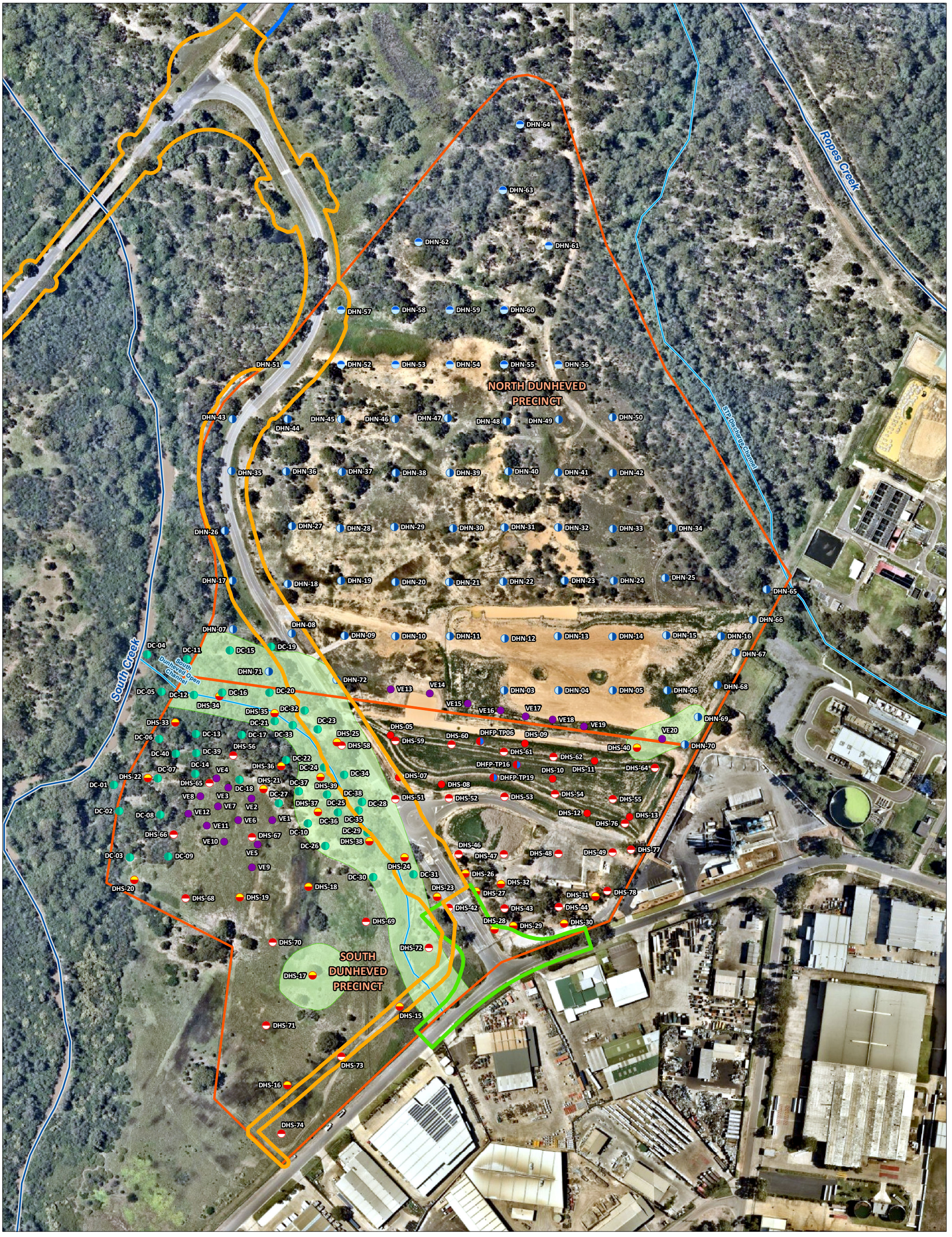
File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\L20 Rev 0\54782_01_Soil_Sampling_Locations.mxd
Data Source: Aerial Imagery 20191228 © Department of Finance, Services & Innovation 2017

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table A - Stage 2 Assessment
Project Number: 54782
Project Name: Stage 2 - Jordan Springs PFAS Assessment

			PFAS																																		Other
			2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoroundecanoic acid (PFUnA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorododecanoic acid (PFDoA)	Perfluorooctane sulfonamide (FOSA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorotridecanoic acid (PFTrDA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorononanoic acid (PFNA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroundecanoic acid (PFUnA)	Perfluorododecanoic acid (PFDoA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)	% Moisture 103oC
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL			0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1
NEMP 2018 PFAS Human Health Screening Values - Industrial/Commercial																				50									20							20	20				
NEPM 2018 PFAS Ecological Indirect Exposure - Industrial/Commercial																																			0.01					
Sample ID	**Sample Date**	**Laboratory Report Number**																																					
ST201 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	19
ST201 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	11
QA20190707-02	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
QC20190707-02	7/07/2019	221253	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0005	0.0006	-	-	-	-
ST202 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	13
ST202 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
ST203 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	9.5
ST203 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	18
ST204 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0088[#1]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0088	<0.005	0.0088	<0.01	<0.05	15
ST204 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	14
ST206 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	9.9
ST206 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	19
ST207 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	13
ST207 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	11
ST208 0.8-1.0	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	15
ST208 0-0.1	7/07/2019	664671	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	17

Data Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.



Legend:

- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- Dunheved Precinct
- Creeks
- Channels
- Proposed PFAS Remediation Areas

Soil Sample Location

- Dunheved South - Dec 2017
- Dunheved South - Sep 2017
- Dunheved South - Feb 2018
- Dunheved South - May 2018
- Dunheved North - May 2018
- Material Characterisation Dunheved May 2018
- Adjoining Dunheved South - July 2018
- Dunheved North - Nov 2018

JBS&G

0 40 80 metres

Central Precinct

SOIL SAMPLE LOCATIONS DUNHEVED

Job No: 54782		Scale: 1:3,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: FH	Checked By: GB	Version: R03 Rev B	Date: 12-Apr-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R04 Rev A\54782_03_Sample_locations.mxd
Template Version: 20191228

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table App C PFAS Analytical Results for Stage 2b EWCR
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

			PFAS																																				
			2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEPA (2018) Ecological Indirect exposure - Residential																															0.01	0.01								
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils																0.1															0.009	0.009								
HEPA (2018) Human Health Screening Levels - Public Open Space																10															1	1								
HEPA (2018) Human Health Screening Levels - Commercial/Industrial																100															20	20								
HEPA (2018) Soil Indirect - Commercial and Industrial																															0.14	0.14								
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial																48															60	60								
HEPA (2018) Soil Direct Toxicity - Public Open Space																10															1	1								
Field_ID		**Sampled_Date-Time**																																						
Dunheved North																																								
DHN-17 0-0.1	DHN-17 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0097	0.0097	<0.05	<0.01	0.0097	0.0097	-	-	-
DHN-26_0-0.1	DHN-26_0-0.1	07-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-35 0-0.1	DHN-35 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-43 0-0.1	DHN-43 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-51 0-0.1	DHN-51 0-0.1	10-09-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-57 0-0.1	DHN-57 0-0.1	10-09-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	0.013	0.013	0.013	0.013	0.013	-	-	-
DHN-72 0.3-0.5	DHN-72 0.3-0.5	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0077	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	0.017	<0.05	0.0247	0.0247	0.0247	-	-	-
DHN-72 0-0.1	DHN-72 0-0.1	08-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.005	0.28	0.2887	0.2997	0.2997	0.291	0.2997	-	-	-
DHN-72_0-0.1	DHN-72_0-0.1	07-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHN-8 0-0.1	DHN-8 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
Dunheved South																																								
DHS-07		13-12-17	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.05	<0.005	-	-	-	-	-
DHS-15-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	<0.005	<0.005	0.0052	<0.05	<0.01	-	-	-	-	-
DHS-23-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-24-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
QA2010212-02		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
QC20180212-02		12-02-18	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0002	-	-	-	-	-	-	-	-	-	-	-	0.0006	-	0.0005	0.0011	-	-	-	-	-	-	-
DHS-25-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-26-0-0.1		12-02-18	-	<0.005	<0.01	<0.005	-	<0.005	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	-	-	-	-	-
DHS-51-5.2-5.3	DHS-51-5.2-5.3	01-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHS-58 0-0.1	DHS-58 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DHS-73 0-0.1	DHS-73 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
Adjoining Dunheved South																																								
DC-19 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.015	<0.05	0.015	0.015	0.015	-	-	-
QA20180703-02	DC-19 0.0-0.1	03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018	0.018	<0.05	0.018	0.018	0.018	-	-	-
QC20180703-02	QC20180703-02	03-07-18	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	0.0023	-	0.015	0.0173	0.018	-	-	-	-	-	-
DC-19 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	<0.005	<0.005	0.0052	<0.05	<0.01	<0.005	0.0052	-	-	-
DC-23 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	<0.005	0.13	0.1399	0.1456	0.1456	0.1357	0.1456	-	-	-
DC-23 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.029	0.029	<0.05	0.029	0.029	0.029	-	-	-
DC-23 0.6-0.8	DC-23 0.6-0.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 1.4-1.6	DC-23 1.4-1.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 2.4-2.6	DC-23 2.4-2.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 3.4-3.6	DC-23 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0093	0.0093	<0.05	<0.01	0.0093	0.0093			
DC-23 4.6-4.8	DC-23 4.6-4.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0069	0.0069	<0.05	<0.01	0.0069	0.0069			
DC-23 5.6-5.8	DC-23 5.6-5.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-23 6.3-6.5	DC-23 6.3-6.5	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-28 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	0.11	0.11	0.11	0.11	0.11	-	-	-
DC-29 0.0-0.1		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0073	0.0073	<0.05	<0.01	0.0073	0.0073	-	-	-
DC-31 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-
DC-32 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0057	<0.05	<0.01	0.0057	0.0057	-	-	-
DC-34 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.027	0.027	<0.05	0.027	0.027	0.027	-	-	-
DC-34 0.3-0.4		02-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.025	<0.005	0.28	0.305	0.305	0.305	0.28	0.305	-	-	-
DC-34 0.6-0.8	DC-34 0.6-0.8	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.13	0.13	0.13	0.13	0.13	0.13			
DC-34 1.4-1.6	DC-34 1.4-1.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.051	0.051	0.051	0.051	0.051	0.051			
DC-34 2.4-2.6	DC-34 2.4-2.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.035	0.035	<0.05	0.035	0.035	0.035			
DC-34 3.4-3.6	DC-34 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
QA20180802-02	DC-34 3.4-3.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.015	<0.05	0.015	0.015	0.015			
QC20180802-02		02-08-18	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	0.0002	0.0006	-	-	-	-	-	-	-	-	-	-	0.0018	-	0.0057	0.0075	-	-	-	-	-	-	-
DC-34 4.4-4.6	DC-34 4.4-4.6	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-34 5.0-5.2	DC-34 5.0-5.2	02-08-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005			
DC-35 0.0-0.1		03-07-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.034	0.034	<0.05	0.034	0.034	0.034	-	-	-
QA/QC																																								

Table App C PFAS Analytical Results for Stage 2b EWCR
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

	PFAS																																		
	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
	mg/kg	EQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01			
HEPA (2018) Ecological Indirect exposure - Residential																													0.01	0.01							
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils														0.1															0.009	0.009							
HEPA (2018) Human Health Screening Levels - Public Open Space														10															1	1							
HEPA (2018) Human Health Screening Levels - Commercial/Industrial														100															20	20							
HEPA (2018) Soil Indirect - Commercial and Industrial																													0.14	0.14							
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial														48															60	60							
HEPA (2018) Soil Direct Toxicity - Public Open Space														10															1	1							
Field_ID		**Sampled_Date-Time**																																			
TRIP BLANK	596738	02-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597159	04-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597366	07-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597594	08-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	597692	09-05-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	605971	03-07-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TRIP BLANK	610490	02-08-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	-	-	-
TB	621017	03-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			
TB	624659	25-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			
TB	624659	25-10-18	<0.05	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01			

Notes
* It is noted that the SP30 footprint samples included are of the current surface level and following additional scrape up

Surface samples beneath SP30 which were scraped up and relocated to Dunheved, ie not representative of the current SP30 footprint surface

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

			Explosives in Soil										Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN											
			PETN	Nitroglycerine	4 &2 -AM-DNT(Isomeric Mixture)	Tetryl	4-Amino-2,6-dinitrotoluene	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	C6-C10 Fraction	C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthrazene	Benz(a)anthracene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL										0.1	0.1	0.1	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)													160		850	310	1800		350	770																370				
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																										1700	3300	170		215	75	165	135			180					
NEPM 2013 Soil HIL D													3000	900	3600	240000	1500	730	6000	400000																							
NEPM 2013 Soil HSL D - Sensitive Setting																												-		250	3	-	-			230	-				
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																											
Field ID	**Date**	**Report Number**																																									
Dunheved South																																											
DHS-07	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	7.3	<0.4	23	19	17	<0.1	13	29	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	13-Dec-17	182018	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	6	<0.4	17	15	13	<0.1	8	21	<25	<50	<100	<100	-	<50	<100	<100	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DHS-15-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	2.9	<0.4	130	44	11	<0.1	120	67	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-23-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	5.7	<0.4	20	8.5	14	<0.1	5.4	10	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-24-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	8.5	<0.4	28	13	17	<0.1	6.2	18	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	32	9.8	21	<0.1	8.6	21	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
Dunheved North																																											
DHN-8 0-0.1	04-May-18	597159	-	-	-	-	-	-	-	-	-	-	5.1	<0.4	19	15	19	0.1	6.7	22	<20	<20	<50	59	59	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-26_0.4-0.5	07-May-18	597366	-	-	-	-	-	-	-	-	-	-	9.5	<0.4	26	17	24	<0.1	18	39	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	4.3	<0.4	20	13	14	<0.1	9.3	26	<20	<20	<50	<50	<50	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5

Data Comments

#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

JBS&G

			Polycyclic Aromatic Hydrocarbons															
Field ID	Date	Report Number	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.5	0.5	0.5	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																		
NEPM 2013 ESL Commercial and Industrial, Coarse Soil			1.4															
NEPM 2013 Soil HIL D				40	40	40						40				4000		
NEPM 2013 Soil HSL D - Sensitive Setting																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																		
Dunheved South																		
DHS-07	13-Dec-17	577258	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	13-Dec-17	182018	<0.05	<0.5	<0.5	<0.5	-	<0.1	-	<0.1	<0.1	<0.172#1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1
DHS-15-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-23-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-24-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dunheved North																		
DHN-8 0-0.1	04-May-18	597159	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-26_0.4-0.5	07-May-18	597366	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

	Organochlorine Pesticides																									
Field ID	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	gamma-Chlordane	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene	Aroclor 1016	Aroclor 1221
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)									640																	
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																										
NEPM 2013 Soil HIL D			45				530				3600					100				50			2500	160		
NEPM 2013 Soil HSL D - Sensitive Setting																										
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																										
Dunheved South																										
DHS-07	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
QA20171212-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC20171212-01	<0.1	<0.1	<0.2#7	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
DHS-15-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-23-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-24-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHS-25-0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
Dunheved North																										
DHN-8 0-0.1	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.2	<1	<0.5	<0.1
DHN-26_0.4-0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1
DHN-35 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.1	<0.1

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table A - Soil Analytical Results
Project Number: 54020
Project Name: Dunheved Investigation

	Polychlorinated Biphenyls						Chlorinated Benzenes	Nitrobenzenes			Nitrotoluenes				Ionic Balance		
	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Hexachlorobenzene	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	µS/cm	ph Units
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1		0.1	0.1	0.05	10	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																	
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	
NEPM 2013 Soil HIL D						7	80										
NEPM 2013 Soil HSL D - Sensitive Setting																	
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																	
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																	
Field ID	**Date**	**Report Number**															
Dunheved South																	
DHS-07	13-Dec-17	577258	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1	<0.5	<0.5	<1	-	<0.5	<0.5	17	64	5.2
QA20171212-01	13-Dec-17	577258	-	-	-	-	-	-	-	<1	<0.5	<0.5	<1	-	<0.5	<0.5	-	-	-
QC20171212-01	13-Dec-17	182018	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-
DHS-15-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-23-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-24-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHS-25-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHS-26-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	9.4	64	8.1
Dunheved North																			
DHN-8 0-0.1	04-May-18	597159	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-
DHN-26_0.4-0.5	07-May-18	597366	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-
DHN-35 0-0.1	08-May-18	597594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHN-71 0.4-0.5	08-May-18	597594	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-	-

Data Comments

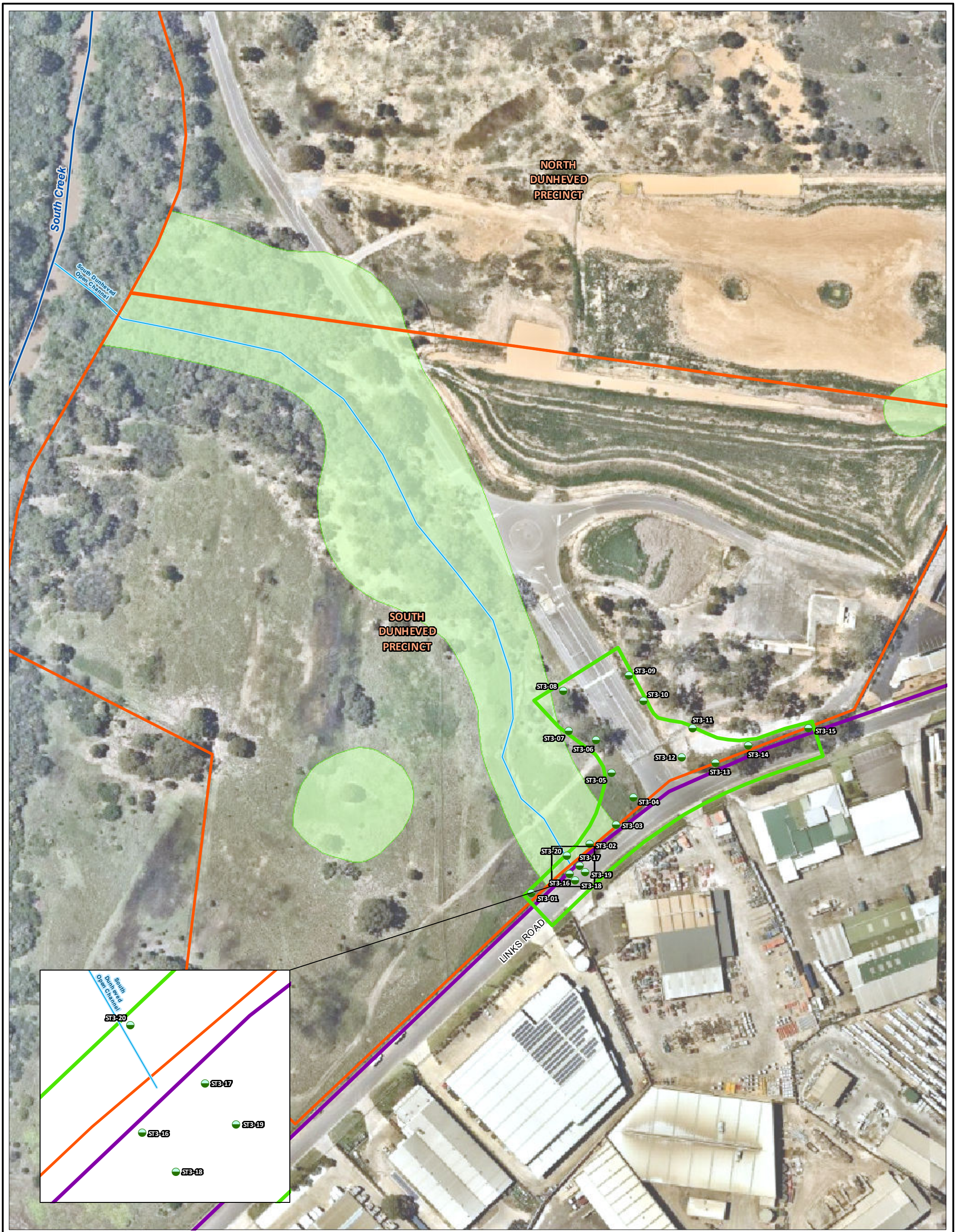
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table B: Asbestos in Soil Results
Job Number: 54020
Job Name: Dunheved Investigation

			Asbestos Field					Asbestos Laboratory													Asbestos - Trace Analysis				
			Approximate Volume of Soil	Approx. Sample Mass#1	Mass ACM	Mass Asbestos in ACM#2	Asbestos from ACM in soil#3	Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			L	g	g	g	%w/w	g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																									
NEPM 2013 Soil HIL D							0.05		0.05					0.001					0.01	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																									
South Dunheved																									
DHS-07	13-Dec-17	577258	10	16300	0	0	0	643	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QA20171212-01	13-Dec-17	577258	10	16300	0	0	0	669	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QC20171212-01	13-Dec-17	182018	10	16300	0	0	0	583	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-15-0-0.1	12-Feb-18	584878	10	16300	0	0	0	1114	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-23-0-0.1	12-Feb-18	584878	10	16300	0	0	0	755	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-24-0-0.1	12-Feb-18	584878	10	16300	0	0	0	735	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-25-0-0.1	12-Feb-18	584878	10	16300	0	0	0	902	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHS-26-0-0.1	12-Feb-18	584878	10	16300	0	0	0	711	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
North Dunheved																									
DHN-8 0-0.1	04-May-18	597159	10	16300	0	0	0	459	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-26_0.4-0.5	07-May-18	597366	10	16300	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-35 0-0.1	08-May-18	597594	10	16300	0	0	0	-	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
DHN-71 0.4-0.5	08-May-18	597594	10	16300	0	0	0	498	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Stage 3 Data

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 3 Boundary
- Proposed PFAS Remediation Areas
- Creeks
- Channels
- Soil Sample Location - Stage 3

JBS&G

0 20 40 metres

Central Precinct

SOIL SAMPLING LOCATIONS

Job No: 54782		Scale: 1:1,750		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R05 Rev A	Date: 15-Jul-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R05 Rev A\54782_03_Soil_Sampling_Locations.mxd
Last Saved On: 28 August 2019 19:12:28

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons													
			Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C6-C10 Fraction	>C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			2	0.4	5	5	5	0.1	5	5	20	20	50	50	50	50	100	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																												
NEPM 2013 EIL - Commercial Industrial (generic)			160		310	85	1800		55	110																		370																
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	1700	3300		170		215	75	165	135			180					1.4											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																											
NEPM 2013 Soil HIL D			3000	900	3600	240000	1500	730	6000	400000																								40	40	40							
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																											
Sample ID	**Sample Date**	**Laboratory Report Number**																																										
ST3-01 0-0.1	7/07/2019	664672	2.9	<0.4	29	48	18	<0.1	22	110	<20	<20	87	220	307	<50	250	250	500	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
ST3-02 0-0.1	7/07/2019	664672	7.8	<0.4	41	59	62	0.2	27	280	<20	<20	<50	86	86	<50	100	<100	100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5
QA20190707_01	7/07/2019	664672	7.3	<0.4	46	50	55	0.2	27	240	<20	<20	<50	50	50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.6	0.7	1	1.3	<0.5	0.5	<0.5	<0.5	<0.5	1	<0.5	0.6
QC20190707-01	7/07/2019	221255	5	<0.4	29	43	38	0.1	23	170	<25	<50	<100	110	-	<50	120	100	220	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<1	<0.1	<0.1	<0.1	0.2	0.3	<0.5	<0.5	<0.5	0.3	0.3	=	0.2	<0.1	0.6	<0.1	0.2
ST3-03 0-0.1	7/07/2019	664672	4.8	<0.4	29	41	32	0.1	20	130	<20	<20	62	96	158	<50	130	<100	130	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.7	1.2	0.6	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
ST3-04 0.8-0.9	7/07/2019	664672	10	<0.4	35	9.5	31	<0.1	6.2	21	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	7.5	<0.4	30	20	23	<0.1	19	56	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
ST3-06 0-0.1	7/07/2019	664672	6.6	<0.4	17	12	26	<0.1	11	32	<20	<20	<50	62	62	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	7/07/2019	664672	19	<0.4	14	18	14	<0.1	8	20	<20	<20	76	66	142	<50	110	<100	110	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	7/07/2019	664672	3.8	<0.4	11	9.2	6.8	<0.1	<5	14	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	4.1	<0.4	18	20	14	<0.1	14	57	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	7/07/2019	664672	8.9	<0.4	17	26	20	<0.1	9.9	68	<20	<20	<50	79	79	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	7/07/2019	664672	3.8	<0.4	15	96	14	<0.1	8.8	76	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	7/07/2019	664672	2.7	<0.4	42	23	22	<0.1	40	49	<20	<20	160	290	450	<50	370	260	630	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.7	0.8	1.1	1.4	<0.5	0.5	<0.5	0.5	<0.5	0.9	<0.5	0.5
ST3-14 0-0.1	7/07/2019	664672	7.1	<0.4	26	40	28	<0.1	13	130	<20	25	96	130	251	<50	180	<100	180	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	1.1	1.3	1.7	2	2.2	1	1.1	0.9	1	<0.5	3	<0.5	1
ST3-15 0-0.1	7/07/2019	664672	7.3	<0.4	33	25	29	<0.1	10	110	<20	<20	130	120	250	<50	220	<100	220	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	0.8	2.8	3.4	5.4	5.4	5.4	3	2.7	2	2.9	0.9	9.5	<0.5	2.2
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

Sample ID	Sample Date	Laboratory Report Number	PAHs (Total)	Phenanthrene	Pyrene	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene
						Organochlorine Pesticides																					
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																											
NEPM 2013 EIL - Commercial Industrial (generic)													640														
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Soil HIL D			4000					45			530				3600					100			50			2500	160
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																											
ST3-01 0-0.1	7/07/2019	664672	1.2	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-02 0-0.1	7/07/2019	664672	2	<0.5	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QA20190707_01	7/07/2019	664672	4.7	0.5	0.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QC20190707-01	7/07/2019	221255	3	0.3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
ST3-03 0-0.1	7/07/2019	664672	4.5	0.8	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	1.3	<0.5	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-13 0-0.15	7/07/2019	664672	4.5	<0.5	0.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-14 0-0.1	7/07/2019	664672	14.9	1.8	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-15 0-0.1	7/07/2019	664672	44.8	6.2	8.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene
	Chlorinated Alkanes																	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																		
NEPM 2013 EIL - Commercial Industrial (generic)																		
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																		
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																		
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																		
NEPM 2013 Soil HIL D																		
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																		
ST3-01 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-02 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA20190707_01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC20190707-01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	
ST3-03 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0.8-0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-06 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-14 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-15 0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-16 0.3-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Chlorinated Alkenes								Solvents	Polychlorinated Biphenyls								PFAS																	
			4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.01	0.005	0.005	0.005	0.005	0.005
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																							50						20	
NEPM 2013 EIL - Commercial Industrial (generic)																																														
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																													
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																													
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																													
NEPM 2013 Soil HIL D																			7																								
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																													
ST3-01 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-02 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QA20190707_01	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QC20190707-01	7/07/2019	221255	<1	<1	<1	<1	<1	<1	<1	<1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001		<0.005	<0.0001	<0.0001	<0.001	0.0007	<0.001		<0.001	0.0004	<0.001		<0.001	<0.0001			0.0003	
ST3-03 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-13 0-0.15	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-14 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-15 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	0.013	<0.005	0.0094	<0.005
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	0.094	<0.005
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	0.089	<0.005
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	0.013	<0.005

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

												Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Trihalomethanes				: Sulfur Com	Other	EPA VIC - IWRG621			
			Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Carbon disulfide	% Moisture 103oC	Chlorinated Hydrocarbons EPAVic	Other Chlorinated Hydrocarbons EPAVic	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.1	0.1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial							20	20																													
NEPM 2013 EIL - Commercial Industrial (generic)																																					
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																					
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																					
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																					
NEPM 2013 Soil HIL D																											80										
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses							0.01																														
Sample ID	**Sample Date**	**Laboratory Report Number**																																			
ST3-01 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<2	<2
ST3-02 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0081	0.0081	0.0081	0.0081	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	28	<0.5	<0.5	<0.2	<0.2
QA20190707_01	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0074	0.0074	0.0074	0.0074	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	27	<0.5	<0.5	<0.2	<0.2
QC20190707-01	7/07/2019	221255					0.0068	-	-	-	-	-						<1			<1	<1		<1	<1	<1	<1	<0.1	<1	<1	<1							
ST3-03 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0062	0.0062	0.0062	0.0062	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.2	<0.2
ST3-04 0.8-0.9	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-06 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	6.7	<0.5	<0.5	<0.2	<0.2
ST3-08 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5	<0.2	<0.2
ST3-09 0.4-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5	<0.5	<0.2	<0.2
ST3-09 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5	<0.5	<2	<2
ST3-11 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-12 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5	<0.5	<0.2	<0.2
ST3-13 0-0.15	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-14 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-15 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5	<0.5	<0.2	<0.2
ST3-16 0.3-0.5	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.16	0.1694	0.16	0.1694	0.1694	0.1824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.03	0.03	0.03	0.03	0.03	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.061	0.061	0.061	0.061	0.061	0.061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.05	0.0565	0.05	0.0565	0.0565	0.0565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.011	0.011	0.011	0.011	0.011	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.26	0.349	0.275	0.364	0.369	0.369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-
ST320 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.13	0.143	0.13	0.143	0.143	0.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table B - Asbestos in Soil Analytical Results
Project Number - 54782
Project Name - Stage 3 East West Connector Road ESA

			Asbestos Laboratory													Asbestos - Trace Analysis				
			Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																				
NEPM 2013 Soil HIL D				0.05					0.001					0.05	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																				
Field_ID	**Sampled_Date-Tim**	**Lab Report Number**																		
ST3-01 0-0.1	7/07/2019	664672	401	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-02 0-0.1	7/07/2019	664672	403	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QA20190707_01	7/07/2019	664672	339	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QC20190707-01	7/07/2019	09-Oct-2505	423	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-03 0-0.1	7/07/2019	664672	451	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-04 0-0.1	7/07/2019	664672	391	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-05 0-0.1	7/07/2019	664672	435	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-06 0-0.1	7/07/2019	664672	561	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-08 0-0.1	7/07/2019	664672	425	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-09 0-0.1	7/07/2019	664672	515	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-10 0-0.1	7/07/2019	664672	570	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-11 0-0.1	7/07/2019	664672	482	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-12 0-0.1	7/07/2019	664672	633	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-13 0-0.15	7/07/2019	664672	493	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-14 0-0.1	7/07/2019	664672	502	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-15 0-0.1	7/07/2019	664672	281	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

	Explosives in Soil										Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)						BTEXN											
	PETN	Nitroglycerine	4-&2-AM-DNT(Isomeric Mixture)	Tetryl	4-Amino-2,6-dinitrotoluene	2-Amino-4,6-dinitrotoluene	HMX	2,4- & 2,6-Dinitrotoluene	4-Nitrotoluene (4-NT)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	GS-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C16 less Naphthalene (F2)	GS-C10 Fraction	GS-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthrazene	Benz(a)anthracene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								0.1	0.1	0.1	2	0.4	1	1	1	0.1	1	1	20	20	50	50	50	50	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)											160		850	310	1800		350	770																	370				
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																									1700	3300	170		215	75	165	135			180					
NEPM 2013 Soil HIL D											3000	900	3600	240000	1500	730	6000	400000																						
NEPM 2013 Soil HSL D - Sensitive Setting																											-		250	3	-	-			230	-				
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																								
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																								
Field ID	**Date**	**Report Number**																																							
Dunheved South																																								
DHS-28-0-0.1	12-Feb-18	584878	-	-	-	-	-	-	-	-	-	8.5	<0.4	66	21	17	<0.1	6.8	15	<20	<20	<50	56	56	<50	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

JBS&G

Polycyclic Aromatic Hydrocarbons

	Field ID	Date	Report Number	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs as B(a)P TEQ	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Total)	Phenanthrene	Pyrene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.5	0.5	0.5	0.5	0.1	0.5	0.1	0.1		0.1	0.1	0.1	0.5	0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																			
NEPM 2013 ESL Commercial and Industrial, Coarse Soil				1.4															
NEPM 2013 Soil HIL D					40	40	40						40				4000		
NEPM 2013 Soil HSL D - Sensitive Setting																			
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																			
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																			
Dunheved South																			
	DHS-28-0-0.1	12-Feb-18	584878	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1.21#7	0.6	<0.5	<0.5	1.3	<0.5	0.7

Organochlorine Pesticides

	Field ID	Date	Report Number	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	gamma-Chlordane	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05		0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.05	0.05	1
NEPM 2013 EIL - Commercial Industrial (Site Specific)												640															
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																											
NEPM 2013 Soil HIL D						45				530				3600					100				50			2500	160
NEPM 2013 Soil HSL D - Sensitive Setting																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
Dunheved South																											
	DHS-28-0-0.1	12-Feb-18	584878	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<1

	Field ID	Date	Report Number	Aroclor 1016	Aroclor 1221
				mg/kg	mg/kg
EQL				0.1	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)					
NEPM 2013 ESL Commercial and Industrial, Coarse Soil					
NEPM 2013 Soil HIL D					
NEPM 2013 Soil HSL D - Sensitive Setting					
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D					
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL					
Dunheved South					
	DHS-28-0-0.1	12-Feb-18	584878	<0.1	<0.1

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App C
Project Number: 54782
Project Name: Dunheved Investigation

	Polychlorinated Biphenyls						Chlorinated Benzenes	Nitrobenzenes			Nitrotoluenes				Ionic Balance		
	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Hexachlorobenzene	1,3,5-trinitrobenzene	1,3-dinitrobenzene	Nitrobenzene	2,4,6-trinitrotoluene	2,4-dinitrotoluene	2-nitrotoluene	3-nitrotoluene	Cation Exchange Capacity	EC 1:5 soil:water	pH 1:5 soil:water
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	µS/cm	ph Units
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1		0.1	0.1	0.05	10	0.1
NEPM 2013 EIL - Commercial Industrial (Site Specific)																	
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	
NEPM 2013 Soil HIL D						7	80										
NEPM 2013 Soil HSL D - Sensitive Setting																	
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																	
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																	
Field ID	**Date**	**Report Number**															
Dunheved South																	
DHS-28-0-0.1	12-Feb-18	584878	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-	-	-	-	-	-	-

Data Comments
#1 ESDAT Combined. Some Analytes are missing from this Combined Compound.
#2 ESDAT Combined with Non-Detect Multiplier of 0.5.
#5 Chrysotile asbestos detected.
#6 Organic fibres detected.
#7 ESDAT Combined.
#8 50x35x3

Table App CResults
Job Number: 54782
Job Name: Dunheved Investigation

			Asbestos Field					Asbestos Laboratory													Asbestos - Trace Analysis				
			Approximate Volume of Soil	Approx. Sample Mass[1]	Mass ACM	Mass Asbestos in ACM[2]	Asbestos from ACM in soil[3]	Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			l	g	g	g	%w/w	g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																									
NEPM 2013 Soil HIL D							0.05		0.05					0.001					0.01	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																									
South Dunheved																									
DHS-28-0-0.1	12-Feb-18	S84878	10	16300	0	0	0	735	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Table App C Analytical Results
Job number - 54782
Job Name - PFAS Assessment former St Mary's ADI Site

			PFAS																																							
			2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of PFASs (n=28)	Sum of WA DER PFAS (n=10)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Z-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	N-ethyl-perfluorooctanesulfonamidoacetic-acid	N-methyl-perfluorooctanesulfonamidoacetic_acid
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01			
HEPA (2018) Ecological Indirect exposure - Residential																														0.01	0.01								
HEPA (2018) Human Health Screening Levels - Residential with Garden accessible Soils																0.1														0.009	0.009								
HEPA (2018) Human Health Screening Levels - Public Open Space																10														1	1								
HEPA (2018) Human Health Screening Levels - Commercial/Industrial																100														20	20								
HEPA (2018) Soil Indirect - Commercial and Industrial																														0.14	0.14								
OEH/NSW Health (2017) Soil Direct Toxicity - Commercial and Industrial																48														60	60								
HEPA (2018) Soil Direct Toxicity - Public Open Space																10														1	1								
Field_ID		**Sampled_Date-Time**																																						
DHS-42 0-0.1	DHS-42 0-0.1	04-05-18	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.01	<0.005	<0.005	-	-	-

Notes
* It is noted that the SP30 footprint samples included are of the current surface level and following additional scrape up

Surface samples beneath SP30 which were scraped up and relocated to Dunheved, ie not representative of the current SP30 footprint surface

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APPENDIX D

Phase 2 Environmental Site Assessment Stage 3

JBS&G

Minter Ellison

Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road

Links Road, St Mary's, NSW

14 August 2019

54782/123128 (Rev 0)

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Minter Ellison
Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road

Links Road, St Mary's NSW

14 August 2019

54782/123128 (Rev 0)
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Appendix F – Borehole logs and Calibration

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Areas of Environmental Concern
B(a)P	Benzo(a)pyrene
Bgs	Below Ground Surface
COPC	Contaminants of Potential Concern
DP	Deposited Plan
EPA	NSW Environmental Protection Authority
ESA	Environmental Site Assessment
HHERA	Human Health and Ecological Risk Assessment
NEPC	National Environmental Pretention Measure
OCPs	Organochlorine pesticides
PAHs	Polyaromatic Hydrocarbons
PCBs	Polychlorinated biphenyls
PFAS	Poly-fluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
SAQP	Sampling Analysis and Quality Plan
VOCs	Volatile Organic Compounds

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Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd (the client) to conduct a Phase 2 Environmental Site Assessment (ESA) for the proposed Stage 3 East West Connector Road (EWCR) (the site) within the former ADI St Marys property ('the property') and Links Road St Mary's, NSW. The site is proposed to be developed into a multi lane roadway as necessary infrastructure to the Central Precinct Development Site (Central Precinct).

The EWCR, is planned to comprise a series of roadways to connect the Central Precinct Development site with the Suburb of Ropes Crossing to the east and St Marys to the south. The Development is split into 3 stages, which includes Stage 3 (the site) located within Links Road St Mary's and consists of a proposed intersection to connect Links Road with a new collector Road which leads into the former St Marys ADI property and the upcoming developments within. Of the area which forms the site, the northern portion falls within the ADI St Mary's property and where various comprehensive environmental investigation works have occurred over the years, while the southern portion and along the Links Road alignment is not known to have been investigated previously. The location of the site is provided in **Figure 1**, the layout of the site including surrounding areas is provided in **Figure 2**.

The former ADI St Marys property has undergone various previous environmental investigation works including extensive environmental assessment and remediation works in the mid 1990's which led to a number of site audit statements (SAS) being issued. The SAS's confirmed that the property was suitable for proposed uses with the exception of excluded areas including footprints of original buildings, car parks, roads and stockpiles that were inaccessible when previous works were conducted.

More recently, JBS&G have conducted a number of environmental investigations throughout the former ADI ST Marys property including unexploded ordinance (UXO) clearance, management of pavement removal for historical road and/or building footprints and extensive environmental sampling with associated reporting. This has included a comprehensive PFAS (per and poly-fluoroalkyl substances) investigation (JBS&G 2018a[1]).

Existing investigation works within the property identified PFAS impacted surface water and surrounding soils associated with an Open Channel in proximity of the Stage 3 roadway site associated with a stormwater pipe that discharges onto the property. This feature is referred to as the Dunheved Open Channel.

Based on the environmental assessment as completed previously and collated within this assessment, the following areas of environmental concern (AECs) and associated contaminants of potential concern (COPCs) were identified on the roadway as per **Table E1** following.

[1] *PFAS Assessment at Former ADI St Marys Development Site - St Marys and Llandilo, NSW (Rev B*) JBS&G Australia Pty Ltd. 23 November 2018 (JBS&G 2018a)

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Table E1 – AECs and associated COPCs based on review of records and previous reports

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill materials underlying the road	Heavy metals, PAHs, TPH/BTEX, OCPs, VOCs, PCBs, asbestos
Paved Road asphalt	Heavy metals, PAHs, TPH/BTEX, asbestos and Coal Tar
Flytipping	Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Historical use of the site for sewage sludge and effluent storage	Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and PFAS
Impact associated with the Dunheved Open Channel	PFAS
Potential impact from offsite sources south of Links Road	Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs, VOCs asbestos and PFAS

JBS&G conducted a detailed site inspection and comprehensive intrusive soil sampling throughout the site on 7th July 2019. The surface of the site was observed to comprise sealed asphalt paved road with road base igneous gravel with grass road verges either side of the road. The site was generally flat with a slight embankment noted on the northern road verge of the eastern portion of Links Road. Stormwater infrastructure was observed underlying the western part of the site. The infrastructure comprised an approximate 2 m wide rectangular culvert with an outlet to the Dunheved Open Channel.

No staining, odours or asbestos containing materials were observed during the site inspection. Minor rubbish such as plastic wrappers were observed adjacent to Links Road but no significant fly tipping was observed.

All concentrations of heavy metals, TRH, BTEX, PAHs, VOCs, OCPs/PCBs, and asbestos were reported at below the site adopted health based criteria. No ACM was observed in the sample locations or within samples submitted for laboratory analysis either.

Concentrations of Copper and Zinc were noted to exceeded conservative ecological investigation levels. However, for the proposed use of the site, as a roadway, the minor concentrations are not considered to pose a potential ecological risk. Low level concentrations of PAHs and TRH were detected as associated with bituminous materials adjacent to the road were also reported but are not considered to pose a risk.

Based on the soil PFAS analytical results it was identified that PFAS impact was present within locations ST3-01, ST3-02, ST3-03, ST3-16, ST3-17, ST3-18 and ST3-20. Of these identified areas it is further noted that concentrations exceeded the adopted criteria identified in the Remedial Action Plan (RAP) for the Dunheved area (JBS&G 2019a[2]) included ST3-16 0.3-0.5, ST3-16 0.8-1.0, ST3-17 0-0.1, ST3-17 1.0-1.2, ST3-20 0.2-0.3 and ST3-20 0-0.1. As shown in **Figure 3**, the locations of identified impact are within close proximity to the Dunheved Open channel and as such the source of impact is considered to be directly associated with it. It would require to be assumed that all soils in proximity of the Open Channel and the stormwater culvert are affected by PFAS and will require remediation.

Based on the findings of this investigation and subject to the limitations in **Section 12**, the following conclusions are made:

- No potential risk to human health or ecological health are present associated with potential contaminants of concern, heavy metals, TRH/BTEX, PAHs, OCPs/PCBs, VOCs or asbestos;
- PFAS impact to soils adjacent to the Dunheved Open Channel were identified;
- No aesthetic risks were identified at the site;
- Preparation of a Remedial Action Plan (RAP) for the Stage 3 portion of the site to address PFAS impacted soils. The RAP can simply require the excavation and relocation of the

[2] *Remedial Action Plan – Former ADI St Marys Development Site St Marys and Llandilo, NSW (Rev D*) JBS&G Australia Pty Ltd 21 June 2019 (JBS&G 2019a)

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PFAS affected soils to the existing stockpile of PFAS affected soils currently held within the Dunheved portion of the St Marys development site; and

- Surplus soils and/or demolition materials as generated by future road construction works should be managed consistent with a Contamination Management Plan (CMP) as specific to the roadworks project.

It is recommended that the following actions are undertaken:

- Preparation of a RAP specific to the PFAS impacted areas identified within Stage 3 of the EWCR; and
- Preparation of a CMP to address all stages of the EWCR and include management requirements associated with material tracking, pavement removal, unexpected finds and imported fill.

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1. Introduction and Background

1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Minter Ellison on behalf of Maryland Development Company Pty Ltd and St Mary's Land Ltd to conduct a Phase 2 ESA for the proposed Stage 3 East West Connector Road (the site) within the former ADI St Marys property ('the property') and Links Road St Mary's, NSW. The site is proposed to be developed into a multi lane roadway as necessary infrastructure to the Central Precinct Development site.

Stage 3 of the EWCR (the site) is located partly within Links Road St Mary's and consists of a proposed intersection to connect Links Road with a new collector Road which leads into the former St Marys ADI property and the upcoming developments within. Of the area which forms the site, the northern portion falls within the ADI St Mary's property and where various comprehensive environmental investigation works have occurred over the years, while the southern portion and along the Links Road alignment is not known to have been investigated previously. The site falls within Penrith City Council (PCC) local government area. The location of the site is provided in **Figure 1**, the layout of the site including surrounding areas is provided in **Figure 2**.

Previous environmental investigation works conducted within the site area which falls within the St Marys ADI property includes the Southern Sector East validation reports (ADI 1996). Ultimately, this report and others lead to a number of site audit statements (SAS) being prepared and more specifically the site (portion within former ADI St Marys) is covered by three previously issued SAS prepared by HLA-Envirosciences (CHK001/1 Kidd 1999a), (CHK001/6 Kidd 1999b) and (CHK001/7 Kidd 1999c). The reports confirm that the property was suitable for proposed uses with the exception of excluded areas including footprints of original buildings, car parks, roads and stockpiles that were inaccessible when previous works were conducted.

Due to the time elapsed since the (historical) site audit statements were issued, noting the requirement for assessment of roads as being excluded from previous SAS (as is the case for the EWCR), assessment of the site for suitability (from a contamination perspective) is required. It is also noted that potential impacts regarding PFAS was not assessed for in the earlier works. As such, and prior to a development application being granted for the site, clause 7 of SEPP 55 states '*the consent authority must consider whether the site is suitable or can be made suitable for the proposed development*'. Further to this, draft conditions issued by PCC for the site requested completion of a contamination assessment by a qualified person and in accordance with relevant NSW EPA Guidelines and State Planning polices (SEPP 55).

More recently, JBS&G have conducted a number of environmental investigations throughout the former ADI St Marys site and nearby areas. These reports have included UXO clearance (where necessary), management of pavement removal for historical road and/or building footprints and environmental sampling with associated reporting. Previous works have occurred under the review of an independent EPA accredited auditor. In addition, a comprehensive PFAS investigation (JBS&G 2018) was also conducted throughout the property, including creeks and tributaries that run through the site and in an area identified as Dunheved which the Dunheved Link road runs through.

This report has been prepared to address clause 7 of SEPP 55 requirements for contamination assessment to allow the suitability of the site for the proposed commercial/industrial land use to be assessed by the relevant consent authority. The report is further prepared to provide recommendations (if any) on how the site can be made suitable for the proposed use from a contamination investigation.

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This report, and previous investigations as completed on the site and relied upon in the preparation of this report, have been developed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objective

The objective of this investigation is to characterise potential contamination at the site as outlined in the Penrith City Council (PCC, Council) consent conditions; to draw conclusions on whether the site can be made suitable from a contamination perspective; and to identify any recommendations for management requirements to be implemented with the site development to cause the site to be suitable (from a contamination perspective) for the proposed development.

1.3 Scope of Works

To achieve the project objectives, the following scope of works was proposed:

- Desktop review of available local and regional background environmental information, and available historical background information including aerial photographs, state and national heritage information, search of EPA records and groundwater bore information;
- Review of the substantial extent of previous soil and groundwater sampling and analysis works completed with the extent of the proposed roadway, and in proximity of the proposed roadway, to characterise soil and groundwater conditions on the site;
- Development of a CSM to identify potential AECs and associated COPCs;
- A detailed site inspection, and soil sampling by JBS&G field scientist;
- Targeted sampling in proximity to the Dunheved Open Channel and associated stormwater culvert underlying Links Rd and known to be a source of PFAS contamination;
- Laboratory analysis for the contaminants of potential concern; and
- Preparation of this Phase 2 ESA in general accordance with guidelines made or approved by the NSW Environment and Protection Authority (EPA) and including conclusions as to the suitability of the site for the proposed use.

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2. Site Condition and Surrounding Environment

2.1 Site Identification

The location of the site is shown in **Figure 1,** the site layout and surrounding areas are shown in **Figure 2**. Details of the site are summarised in **Table 2.1** below.

Table 2.1 Summary Site Details

Lot Numbers	Part Lot 1 DP1132380 (PCC).
Street Address	75 Links Road St Marys.
Site Area	Approximately 0.67 ha
Local Government Authority	Penrith City Council
Geographic Coordinates (MGA 56)	33.7397 E 150.765 N
Current Land-use	Roadway, entrance gate and haul road to Central Precinct Development site
Proposed Land-use	Roadway

2.2 Site Description

The site comprised a paved road intersection with Links Road which extended beyond the property boundary. A steel electric gate was observed at the entry to the property and as the start of the Dunheved Link Road which extends off Links Road to the north.

Drainage infrastructure underlying the southwestern portion of the site within Links Road was observed and appeared to be flowing out to the north and into an open channel which runs northward and into South Creek. This open channel is referred to as the 'Dunheved Open Channel'.

The surface of the site generally comprised sealed asphalt paved road with road base igneous gravel and grass road verges either side of the road. The site was generally flat with a slight embankment noted on the northern road verge of the eastern portion of Links Road. Stormwater infrastructure was observed underlying the western part of the site. The infrastructure comprised an approximate 2 m wide rectangular culvert with an outlet to the Dunheved Open Channel.

No staining, odours or asbestos containing materials were observed during the site inspection. Minor rubbish such as plastic wrappers were observed adjacent to Links Road but no significant fly tipping was observed.

Photographs of the site during the works including recovered soil cores is provided in the Photolog in **Appendix A**.

2.3 Surrounding Land use

The surrounding land use described below is summary from Kidd 1999 for the Central Precinct development site:

- North – densely vegetated Regional Parklands, south creek meanders through this area.
- East – The Ropes Crossing housing development is located to the east of the site. The proposed Dunheved Industrial precinct is located directly east of the Dunheved Link Road. The St Marys Sewage treatment Plant is located approximately 400 m east of the site.
- South – Regional Parklands including portions of South Creek, the proposed Dunheved Industrial Precinct, Links Road and Commercial/industrial zone associated with Dunheved along links road and Dunheved Circuit are located to the South. Franchises including Toxfree, Gulf Oil Western among other were located along the southern side of Links Road.

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- West – The JSE residential development site is located directly west of the site. Dense vegetation, a small Creek identified as the Dunheved Open Channel and vacant areas formerly part of the ADI site were located to the west the Dunheved Link Road.

2.4 Topography and Hydrology

The site was identified as relatively flat, this area tends to fall towards nearby local channels such as the Dunheved Open Channel. Regional topography and surface water runoff is to the north, north-east.

South Creek and Ropes Creek are the two main waterways that flow in proximity and below small portion of the roadway site. South Creek drains a very large catchment in western Sydney, originating at Narellan, over 30 km to the south. The catchment is a long narrow strip up to 8 km wide with an approximate area of 18,000 ha. The catchment includes residential, agricultural and industrial areas. The creek flows northwards from the development site through mainly agricultural areas before meeting the Hawkesbury River at Windsor, 12 km to the north.

Ropes Creek drains a smaller catchment, originating at Cecil Park, 12 km to the south-west. This catchment is also a long narrow strip up to 4 km wide and with an approximate area of 2400 ha. The catchment also includes residential, agricultural and industrial areas. Part of the creek has been diverted along a concrete drainage channel for about 2 km through the former St Marys Property before flowing into South Creek at its new confluence just to the north of the former St Marys Property boundary and is present in proximity of the proposed roadway.

The St Marys Sewage Treatment Plant (STP) is located east of the site. ADI (1996b) reported effluent from the STP receives tertiary treatment before being discharged into the old Ropes Creek flow channel. This then flows into South Creek at its old confluence in the middle of the former St Marys Property.

An Open Channel is present underlying the western portion of the site, referred to as the Dunheved Open Channel. The channel passes underneath Links Road within a stormwater culvert and into an area of retained vegetation to the west of Dunheved and discharges into South Creek. The elevation of the channel within the site is generally 2 to 3 m above the observed depth to groundwater. Surface water flow into the channel is from a stormwater outlet at the southern boundary of the ADI property which is anticipated to discharge stormwater flows from the Links Road industrial estate to the south of the site.

2.5 Geology

Review of the regional geological map (DMR 1997) indicated the site lies within Tertiary Londonderry Clay. The Londonderry Clay is characterised by clay, patches of ferruginized, consolidated sand.

Review of the regional soil map (DLWC 1972) indicated that the site lies within the Berkshire Park soil landscape group.

The typical Berkshire landscape is characterised by weakly pedal orange heavy clays and clayey sands, often mottled with inclusions of ironstone nodules. Large silcrete boulders (up to 20cm) occur in sand/clay matrix. Yellow podzolic soils where drainage conditions are poor, red podzolic soils and chocolate soils on flats and in small drainage lines. Kransnozems are present in unstructured plastic clays and in drainage lines or a crest.

Limitations of the Berkshire landscape group are very high wind erosion hazard if cleared. Gully, sheet and rill erosion on dissected areas. Waterlogging, impermeable subsoils, low fertility hazard.

This area is largely Quaternary age alluvium beds that consist of gravelly sand, sand, clayey sand silty clay, from 1 to 8m in depth. In the northeast, the soil type is the Berkshire Park soil, while the eastern area is the Blacktown soil type – both of these overlie the Bringelly Shale Unit. Noted in the western region were a number of paleochannels of unknown origin.

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As reported in ADI (1996a) the former ADI St Marys Property is underlain by shales of Bringelly Shale Unit part of the Liverpool Sub-group and Wianamatta Group of the Triassic epoch. These are overlain by alluvium of Quaternary age. The Bringelly Shale unit consisting mainly of grey hard shales within intervening siltstone forms the bedrock. The top of the shale, up to 5m thick, is highly weathered and very friable in nature. The Quaternary Alluvium comprises predominately buff coloured silt, silty/sandy clays which is often lateritic in nature and mottled with yellow/red ochres and iron nodules. Quaternary Alluvium was deposited mainly in the central lowlands along the flood plains of South Creek and Ropes Creek. Thickness of the alluvium within the development site is likely to range in thickness from approximately 6m to 10m as these are the central lowlands.

2.6 Hydrogeology

A review of information obtained from the NSW Office of Water database (NSW DPI 2018[3]) indicated there are three registered groundwater monitoring wells located to the south east of the site with no feature information available for any of the three wells. No registered groundwater wells fall within the site.

Based on information obtained during groundwater investigation works conducted by JBS&G including JBS&G (2018[4]) the depth to the water table in proximity to the site ranges from 2 to 7 m below ground surface depending upon the geology (quaternary alluvium and high weathered shale). The water table occurs in the sandy to silty clay above the weathered shale and/or shale bedrock. The groundwater flow pattern of the site follows the general topography of the area (to the north east towards South Creek), however, variation in the flow direction can occur locally based on the ground slope and also by infiltration of seepage water from overlying Open Channels / open drains.

Groundwater in the shallow upper aquifer is fresh to brackish as well as saline (electrical conductivity (EC) 300 to 40 000 µS/cm). Groundwater is more typically present in the saline range in proximity of the proposed roadway. The groundwater pH ranges from 4.5 to 7 indicating slightly acidic conditions, with most locations generally slightly acidic to neutral. Slightly reducing conditions are present in the aquifer.

2.7 Acid Sulphate Soils

Review of the Department of Land and Water Conservation map of Springwood/Riverstone (DLWC 1997[5]) indicated that there no known occurrence of acid sulfate soils in the vicinity of the site.

[3]NSW Department of Primary Industries Website http://allwaterdata.water.nsw.gov.au/water.stm, accessed 23 January 2018 (NSW DPI 2018)

[4] *PFAS Assessment at Former ADI St Marys Development Site – St Marys and Llandilo, NSW (rev B*) JBS&G Australia Pty Ltd November 2018 (JBS&G 2018)

[5] NSW Department of Land and Water Conservation Edition 2 (DLWC 1997)

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3. Site History

3.1 Aerial Photographs

Historical aerial photographs were obtained from the Department of Lands as shown in **Appendix B**. Summary of aerial photographs obtained of the site is included below:

- **1947** – the site comprised of mostly vacant grass land, no structures or development was apparent. The current Links Road alignment could be observed as a paved road. Access trails which extended from links road and into the ADI site could be observed. Other than this site areas appeared to consist of grass and trees. South Creek and Ropes Creek could be observed in the image. Surrounding areas to the site were also observed to be vacant, areas associated with former military operations were observed to the south and southeast.
- **1955** – the site appeared similar to the previous image. Surrounding areas, particularly the ADI site appeared to be undergoing earthworks at the time of the image, including areas of the EWCR. Additionally, Ropes Creek appeared to comprise of recently excavated soil suggesting construction of the current concrete lined channel. A small building was observed to the south of the site potentially identified as a sewage treatment plant albeit much smaller than the current St Mary's STP.
- **1965** – it is noted that this image does not show the entire length of the site, however it appeared that earthworks has been conducted in the western portion of the site as changed surface conditions were apparent.

  Development of surrounding areas had occurred whereby an established munitions factory and associated infrastructure was observed.
- **1975** – the Links Road portion of the site remained relatively unchanged. Earthworks within the ADI site and encompassing the northern area of the site was being undertaken.

  Surrounding areas appeared to be cleared of vegetation and was undergoing earthworks. Potential biosolids storage could be observed in the current Dunheved area associated with the St Mary's STP. The St Mary's STP could be observed approximately 300 m east of the site and was observed to be a larger operation than observed in previous aerials, with multiple buildings, tanks and treatment facilities observed.
- **1982** – the Links Road portion of the site remained relatively unchanged. The northern area of the site appeared to have regrown vegetation including a cover of trees.

  Surrounding area were observed to include storage of biosolids within the mid to southern portion of Dunheved. Additional facilities of the ADI site including the W series radar range could be observed to the west of the site.
- **1991** – the site appeared similar to the previous image with no major changes able to be identified.

  Surrounding areas were observed to include earthworks being conducted south of the site, the Dunheved Industrial area, south of Links road appeared to have developed.
- **2002** – the Links Road alignment appeared similar to preciously described. The northern portion of the site and areas north of the site comprised of bare soil, assumed to be associated with remediation works associated with the excavation of historical biosolids known to occur in the mid 1990's based on historical ADI reports.
- **2005** – the site appeared similar to the previous image. Surrounding areas to the site were noted to increase in vegetation, including regrown of bare areas observed in the previous

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aerial. Areas to the west of the site (Ropes Crossing) and West (Jordan Springs East) were undergoing development works.

- **2009** – The site and surrounding area appeared similar to the previous image.
- **2019** – the Dunheved Link road had been constructed and appeared to comprise a paved road extending through the northern part of the site. Minor earthworks and a site compound could be observed within Dunheved and north-east of the site.
- **2019** – the site appeared similar to the previous description. The Dunheved Link Road had been constructed which intersected with Links Road. It is noted that stockpiled soil was observed in the mid portion of Dunheved and north of the site comprising of approximately 90,000 m3 of relocated SP30 biosolid materials.

3.2 EPA Records

A search of the NSW EPA's public register under the Protection of the Environment Operations Act 1997 (POEO Act) was under taken (**Appendix C**). The search for the site identified there were:

- No prevention, clean-up or prohibition notices;
- No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

A search was also conducted through the EPA's public contaminated land register and is provided in **Appendix C.** The search did not identify any current or previous records of notices by the EPA, or notification to the EPA under Section 60 of the Contaminated Land Management Act 1997 (CLM Act), in relation to the site or immediately surrounding land. It is noted that a Solvco site located at 38 Links Road had been notified to the EPA. The site is located approximately 400 m east of the site.

It is noted that PFAS impact as present in the Dunheved portion of the St Marys site and in proximity of the Stage 3 site was recently reported to the NSW EPA under s.60 of the *Contaminated Lands Management Act 1997* (CLM Act).

3.3 Australian and NSW Heritage Register

A search of the Australian Heritage database was undertaken and records are included in **Appendix D.** It is noted that the Western Sydney Shale Woodlands St Marys is located within the general search area, however given the site location is within the historical road, this feature is not considered to be within the site.

A search of the NSW Heritage database was undertaken and records are included in **Appendix D**. The search did not identify the presence of any items of state significance in the vicinity of the site.

3.4 Integrity Assessment

The information obtained from the historical sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

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4. Previous Reports

4.1 Summary Site History

The northern portion of the site is located within the former St Mary's ADI Munitions facility, it is understood that the ADI site also covered the Links Road portion of the site for a period of time prior to the mid 1950s. The former St Mary's ADI munitions facility covered a much larger area (approximately 1535 ha) and was established in 1942 as part of a larger parcel of farmland resumed in 1941 by the Commonwealth for establishment of ammunitions factory to support the war effort (World War II). From 1955-57, a new munitions factory was constructed and a substantial part of the original factory was leased to private industry and became the present Dunheved Industrial Estate.

The St Marys Munitions factory was primarily a filling, or load and pack type, operation where explosives and propellant, manufactured elsewhere, were loaded into shells, bomb and rocket casings and stored in magazines awaiting deployment. Small amounts of some initiator explosives for detonators and fuses were manufactured on the property because they were too sensitive to travel. Some test firing of detonators, fuses and smaller occurred at designated areas as part of the manufacturing quality assurance program. All larger munitions were test fired at Army ranges elsewhere.

ADI conducted a comprehensive historical report on the St Mary's ADI site in the mid 1990's[6] which included a chronological history of site activities and development of buildings and structures. Additionally widespread remedial works and associated validation reports were conducted on the majority of the property in the 1990's.

Based on the historical reporting with respect to the site, no significant features such as buildings were noted to have existed previously within the site area, however it is understood that remedial works associated with removal and relocation of biosolids within the Dunheved areas and which potentially includes the northern portion of the site occurred.

As described previously, the Links Road alignment portion of the site has operated as a access road outside of the former military operations since the mid 1950s.

More recently, JBS&G have conducted comprehensive environmental contamination works within the ADI site, including comprehensive PFAS assessment and subsequent remedial action plan. Associated reports for these works are summarised in **Sections 4.3, 4.4** and **4.5**.

Historical reports have been summarised in sections below to obtain information relating to the site.

4.2 Southern Sector East (ADI 1996)

The northern portion of the site falls within the former Southern Sector East Sector. This portion includes previously investigated contaminated areas Site 24F and Site 12 (ADI 1996d).

ADI (1996d) reports that Site 12 covered an area of 4.1 ha and was used as a general tip for site materials including buildings rubble and general rubbish between 1955 and 1980. ADI (1996d) observed general solid waste including timber, bricks, concrete slabs, scrap metal, fibro sheeting, asphalt, concrete pipes, asbestos sheeting, galvanised roofing and glass. No evidence was uncovered that the site was used for the destruction or disposal of explosive wastes.

Following the remedial works soil validation samples were collected from the site and analytical concentrations were either within the Safe Environmental Acceptance criteria or within 95% UCLs. The land was then recontoured to the resemble the original topography.

[6] ADI Limited – ADI St Mary's Property Historical Report

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ADI (1996d) reports that from the mid 1980's the St Marys Sewage Treatment Plant (STP) received approval from the St Marys Munitions Filling Factory (the site) to pump treated sludge from its plant onto ADI land. Site 24F was identified as a disused sewage effluent dumping area. The area was boarded by 0.5 to 1 m high earth mounds.

Following investigation works into Site 24F identified that the sewage sludge material was generally outside of the adopted Safe Environmental Acceptance Criteria for Chromium, Copper, Zinc and OCPs, isolated occurrences of impacted PCBs and PAHs were also reported.

OCP, PCB and PAH impacted samples were delineated and then excavated and disposed offsite to landfill. The remaining dried sludge material was excavated and stockpiled elsewhere within the St Marys Property.

Following the remedial works soil validation samples were collected from the site and analytical concentrations were either within the Safe Environmental Acceptance criteria or within 95% UCLs.

It is noted that PFAS investigation was not conducted within 24F, given its proximity the St Mary's STP and given that this portion of the site was used to dump disused sewage effluent, it is considered a potential AEC.

4.3 PFAS Assessment at Former ADI St Marys Development Site (JBS&G 2018a)

JBS&G were engaged by the client to undertake environmental site assessment activities at the Lend Lease St Marys Development Site, as located at St Marys and Llandilo, NSW as restricted to the assessment of per and poly fluoroalkyl substances (PFAS). The site is within the former St Marys ADI site which was used for various munition filling and storage activities up until 1994.

Several stages of historical, assessment and remediation have occurred at the development site. PFAS have been recently identified as an emerging contaminant of concern on a range of historical commercial, industrial and Defence sites. Previous stages of assessment, remediation and validation at the site have not considered PFAS as a potential contaminant.

A desktop review of potential PFAS sources on and in proximity of the site identified potential PFAS contamination associated with: a historical Fire Station present at the east of Ropes Crossing; potential historical fires across the site; receipt, storage and handling / relocation of biosolids from the adjoining Sydney Water Sewage Treatment Plant (STP) in the 1980's and 1990's and potential historical PFAS uses / contamination in proximity of the site. Biosolids historically received at the Dunheved portion of the site were transferred to an area known as Stockpile SP30 as located to the north of Central Precinct in the mid 1990's.

The assessment of PFAS on the site has been undertaken by sampling and analysis of soil, surface water, sediment, groundwater and biota samples undertaken through the latter part of 2017 and 2018. An assessment of quality assurance / quality control has found that the generated data is reliable to characterise levels of PFAS in each of the media assessed.

On the basis of the data set generated, it was found:

- PFAS was identified in historical biosolids as associated with Stockpile SP30, within soils in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and at the south-east of the former extent of biosolids storage within Stockpile SP30. The levels of PFAS measured in soils were not considered to pose a significant health or ecological risk by potential direct exposure pathways as per the current or proposed site use. Though slight exceedances of potentially applicable ecological protection criteria were identified;
- PFAS impact was identified in surface water across the site. Increases in levels of PFOS in surface water were observed in South Creek moving upstream to downstream of the site. Elevated levels of principally sulfonic forms of PFAS (PFOS and PFHxS) were reported

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throughout the South Dunheved Open Channel in the south-western portion of the Dunheved portion of the site. PFAS was being discharged into the South Dunheved Open Channel from a stormwater pipe discharging from Links Rd adjoining the south of Dunheved. The South Dunheved Open Channel discharges into South Creek;

- A range of PFAS constituents, generally at levels slightly exceeding detection limits, were present throughout South Creek tributaries on the development site and an Open Channel from the STP. PFOS was identified and found to have bioaccumulated (by comparison to levels measured in surface water), within biota sampled from South Creek and the Open Channel from the STP. Sediment analysis was consistent with surface water findings;
- PFAS was identified in groundwater adjoining and hydrogeologically downgradient of Stockpile SP30, in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site, underlying an area of North Dunheved and adjoining the northern portion of the western boundary to the Sydney Water STP; and
- The highest levels of PFAS impact in groundwater were reported in proximity of the South Dunheved Open Channel passing though the south-western portion of the Dunheved portion of the site and were considered to be consequent of historical migration of PFAS impacted surface water through the South Dunheved Open Channel. It was considered likely that historically substantially higher levels of PFAS had been present in the South Dunheved Open Channel.

It was recommended that site management and/or remediation works are undertaken:

- To prevent the inflow of PFAS impacted stormwater to the site;
- To remove potential direct exposures to biosolids prior to / with development of the site for the proposed site uses and preclude surface water contact to prevent future leaching / migration of PFAS impact within biosolids; and
- Control potential future leaching of PFAS impacted soils / sediments present at near surface depths in proximity of the South Dunheved Open Channel.

A remedial action plan (RAP) was prepared by JBS&G to manage and remediate the PFAS impacted areas identified in the report and as discussed above. The RAP is summarised in **Section 4.9** below, of particular relevance and with respect to the site area being assessed is impacted soils associated with the Dunheved open channel which are located within the vicinity of the Dunheved Links Road as shown on **Figure 3**.

4.4 Remedial Action Plan – Former ADI St Marys Development Site (JBS&G 2019a)

JBS&G was engaged by the client to prepare a RAP at the Lend Lease St Marys Dunheved Development Site, as located at St Marys and Llandilo, NSW. The RAP was based on the findings of the site wide PFAS Assessment summarised in **Section 4.3** where it was established that remediation/management of impacted soil would be required within the Dunheved Industrial precinct so that it can be considered suitable for its proposed commercial / industrial land uses. The RAP was prepared in accordance and with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of NEPC (2013), EPA (2017) and SEPP 55 and was specific to the remediation of PFAS impacts only.

The RAP identified the most feasible remedial strategy as containment of impacted soils given the significant filling requirements for the land to meet flood mitigation measures. This strategy would isolate the impacted materials and contain them within a confined area where potential for migration is mitigated. The proposed containment strategy is as follows:

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- The materials to be contained shall be maintained to the commercial / industrial land-use area within the Dunheved precinct, as consistent with that area as nominated in the development approval;
- Excavation of impacted soils at the Dunheved Open Channel and relocation of those soils to the containment cell;
- Relocation of SP30 soils, currently temporarily stockpiled in Dunheved, into the containment cell;
- A minimum soil cover thickness of 2 m will be placed over the impacted soils; and
- Impacted soils will be placed a minimum of 2 m above the depth of groundwater.

Following relocation, validation sampling will be conducted within associated excavations and stockpile footprints.

In relation to the site area, impacted soils at or adjacent to the Dunheved Open Channel as shown on **Figure 3** will require excavation, containment and validation as per the above listed procedures.

It was considered that subject to the successful implementation of the measures of the RAP the site can be made suitable for the intended land uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

4.5 Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (JBS&G 2018b[7])

JBS&G conducted environmental assessment works across the Dunheved Industrial Precinct comprising of consideration of other potential contaminants other than asbestos throughout 2018. Consideration of PFAS was covered in the PFAS Assessment at the Former ADI St Marys Development site (JBS&G 2018), however consideration of other contaminants was required to satisfy council conditions.

The objective of the investigation is to characterise potential contamination at the site using all non-PFAS data collected over the past 18 months and to use this information to draw conclusions regarding the suitability of the site for the proposed use or make recommendations to enable such conclusions (in lieu of PFAS assessment which has been undertaken separately).

All soil concentrations were identified at concentrations below the adopted health and ecological criteria adopted for the site. Further to this, no significant impact as far as staining, odours or ACM was identified across the site during the various investigations.

It was noted that a single fragment of ACM was identified on the surface at location DHN-50. The fragment was collected and sent to the testing laboratory for confirmatory testing. No additional fragments were identified within the vicinity to DHN-50. As such it is considered that the fragment was isolated and not part of a significant issue which would warrant further investigation or remediation.

Groundwater analytical results were reported at concentrations below the laboratory limit of reporting for the majority of analytes tested. Reported concentrations of heavy metals including arsenic, cadmium, chromium copper, lead, mercury, nickel and zinc are generally considered representative of background concentrations in the area. Given that groundwater is not used as a resource at the site given its brackish to saline properties the identified concentrations are not considered to pose a potential risk.

There is no potential for migration of contamination from the site for the following reasons:

[7] *Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Marys, NSW (Rev A*) JBS&G Australia Pty Ltd 31 December 2018 (JBS&G 2018b)

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- No concentrations of soil or groundwater were identified at concentrations that represent a health or ecological risk; and
- Soil is generally secured with overlying vegetation cover preventing potential wind or surface water migration. Groundwater at the site is slow moving as demonstrated through hydraulic conductivity testing conducted in JBS&G (2018a).

Based on the findings of the investigation the following conclusions were made:

- Soils at the site were not identified to pose an aesthetic risk noting the proposed commercial/industrial use of the site;
- Soil analytical results were reported at concentrations below the adopted criteria; and
- Groundwater analytical results were generally reported at concentrations below the adopted criteria. Elevated concentrations of heavy metals identified were not considered to pose a risk given groundwater is not used as a resource and has limited migration potential;

It was recommended that the CMP (JBS&G 2018b) is implemented throughout future works.

Sample locations in proximity to the site are provided on **Figure 3**, given this report overlaps with the Dunheved Link Road, data is considered to be a good indicator for potential contamination.

4.6 Contamination Management Plan (CMP) – Central Precinct and Dunheved Precinct (JBS&G 2018c[8])

This Contamination Management Plan (CMP) is a revision and update of a previous CMP by URS (2008). This CMP has been updated throughout the time the project has been running and includes the Central Precinct (JSE) area as well as the Dunheved Precinct.

The CMP is a condition of all site audit statements (SASs) requiring an appropriate management plan including procedures for the safe handling and disposal of any items of explosive ordnance, shall be in place before development earthworks commences and shall remain in place to cover any excavation on within Central Precinct during its ongoing use.

The objectives of this CMP is to provide an Unexpected Finds Protocol (UFP) with an appropriate framework for identifying and addressing any discovery of chemical contamination, potentially explosive ordnance or any other form of hazard during development prior to subdivision so as to ensure a safe working environment for workers and to avoid unacceptable impact on the natural environment.

Unexpected finds may occur in areas which, although searched extensively, contain remnant materials which were obscured by the local topography, the type of surface cover (e.g. building) or at a depth preventing detection. The Site Auditor considered that, while explosive ordnance may be uncovered during earthworks, it is unlikely that these will present an unacceptable risk provided appropriate procedures for the safe handling and disposal of such material are adopted.

Furthermore, the CMP provides an appropriate framework for an Asbestos Management Plan (AMP) including procedures required for handling and disposing of any identified asbestos containing materials and asbestos impacted soils during the development of the Central Precinct.

The successful implementation of the CMP requires the appropriate briefing and Specific OHS Induction of site workers who may uncover potential chemical contamination (including potential asbestos containing materials) and/or explosive ordnance. It is proposed this briefing will include the review of the CMP and the associated flow chart.

[8] *Contamination Management Plan – Central Precinct and Dunheved Precinct, Llandilo, NSW (Rev 3*) JBS&G Australia Pty Ltd 23 January 2018 (JBS&G 2018c)

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This CMP describes reporting procedures and lines of responsibility, including the contact numbers for relevant experts at the commencement of the development works.

The Property has been remediated, audited and declared suitable for its intended land uses, and remnant contamination, if present, is most likely to be discovered during the development earthworks which occur prior to subdivision. The approaches included in the CMP are intended for use only during the Central Precinct preparation phase of development, during which structures are demolished and disposed of, land levels are altered and redundant infrastructure is removed and new infrastructure is installed. Post-subdivision management plans, if required, would be administered through the relevant local government authority.

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5. Conceptual Site Model

5.1 Potential Areas and Substances of Environmental Concern

Based on the history of the site and based on previous investigations conducted, general areas of environmental concern have been categorised and are present in **Table 5.1**. Within the site, potential areas of impact are associated with fill materials of unknown origin during construction of the road, areas of fly tipped waste on or adjacent to the paved road, potential residual impact from the pavement portion of the road to underlying soils, impact from the commercial/industrial landuses to the south and potential impact associated with the Dunheved Open Channel which runs beneath the western portion of the site.

Table 5.1. Areas if Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill materials underlying the road	Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and
Paved Road asphalt	Heavy metals*, PAHs, TPH/BTEX, asbestos and Coal Tar
Flytipping	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs and asbestos
Historical use of the site for sewage sludge and effluent storage	Heavy metals*, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and PFAS
Impact associated with the Dunheved Open Channel	PFAS
Potential impact from offsite sources south of Links Road	Heavy metals*, PAHs, TPH/BTEX, OCPs,, PCBs, asbestos and PFAS

* Heavy metals include As (Arsenic), Cu (Copper), Cr (Chromium), Cd (Cadmium), Ni (Nickel), Pb (Lead), Zn (Zinc) and Hg (Mercury).

5.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Fill material; and
- Natural soils underlying impacted fill materials; and
- Groundwater.

The source of the fill material across road footprints is unknown. Fill material across the site must therefore be considered a potentially contaminated medium. Fill material is anticipated to be limited to directly beneath roads where road base and other materials are anticipated to be used during road construction.

Based on the unknown source of fill materials, vertical migration of contamination from the fill and surface soils into the underlying natural soils may have occurred. Consequently, natural soils underlying impacted fill materials have a moderate potential to be a contaminated media.

Groundwater has been previously investigated and signed off as part of the historical remediation and validation works conducted across the former ADI St Marys Property therefore significant groundwater impacts are not anticipated. In addition, JBS&G conducted a groundwater monitoring assessment (JBS&G 2018a and JBS&G 2018b) in Central Precinct, Dunheved and surrounding areas with no impact identified.

Impact to groundwater from PFAS has been identified in the comprehensive PFAS investigations conducted. However, noting the proposed use for the site as a roadway with no anticipated exposure pathway, the proposed development is not considered to be directly impacted by this issue. Notwithstanding protection of groundwater may require consideration where PFAS impacted soils are detected.

Reference to PFAS impacted soils within and surrounding the Dunheved Open Channel is provided JBS&G (2018a) discussed in **Section 4.3** and are confirmed to extend onto the Dunheved Links Road

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portion of the site. As such PFAS impacted soils are considered a potential contaminant of concern in areas adjacent to the channel.

Given the site was not historically located in munitions manufacturing or filling areas and the historical validation data for the development site surrounding the auditable areas does not indicate exceedances of volatile components it is considered unlikely that soil vapour is a contaminated media. However, should any volatile contaminants be detected in soil or groundwater this will be reassessed.

5.3 Potential Exposure Pathways

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site history review and review of previous investigations are generally in a solid form (e.g. heavy metals, asbestos, explosives, ordnance etc). As the site is currently paved there is a low potential for contaminates to have migrated via either windblown dust or surface water.

The potential for contaminants to migrate via groundwater is moderate to low, given the low hydraulic conductivity of groundwater in the region.

Based on the contaminants of concern identified in various media as discussed above and based on the proposed site development activities, potential exposure pathways at the site during and following development works include:

- Potential dermal and oral contact to impacted soils as present at shallow depths and/or accessible by earthworks contractors, however given the concentrations identified in PFAS generally industry standard PPE requirements including gloves, long sleeved clothing and pants, and steel capped boots will mitigate this risk;

Contamination associated with PFAS is considered to be from an offsite source(s). However, potential exists for migration of impacted surface water, including potential to impact nearby soils and groundwater.

5.4 Potential Receptors

Potential receptors of may include:

- Excavation / construction / maintenance workers conducting activities at or in the vicinity of the site, who may potentially be exposed to COPCs through direct contact with impacted soils present within excavations and/or inhalation of dusts / fibres associated with impacted soils;
- Nearby surface water bodies including South Creek and Ropes Creek;
- Ecological receptors located adjacent to the road in NPWS areas; and
- Residential areas following completion of planned development works in Jordan Springs East and Ropes Crossing.

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5.5 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPCs as either liquids or gasses.

Man-made preferential pathways may be present at the site, generally associated with fill materials at near surface depths. Fill materials are anticipated to have a higher permeability than the underlying natural soil and/or bedrock.

JBS&G (2018) has previously identified that stormwater culvert underlying Links Rd and at the west of the Stage 3 portion of the roadway site to be a preferential pathway for migration of PFAS impact as sourced from off-site

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6. Sampling and Analysis Plan

6.1 Data Quality Objectives

Data quality objectives (DQOs) are statements that define the confidence required in conclusions drawn for data produced for a project, and which must be set to realistically define and measure the quality of data needed.

Data quality objectives (DQOs) were developed for the investigation, as discussed in the following sections.

6.1.1 State the Problem

Prior to PCC consent conditions becoming operational for Stage 3 of the East-West Connector Road, completion of a contamination assessment by a qualified person and in accordance with relevant NSW EPA Guidelines and State Planning polices (SEPP 55) is required.

Potential contamination issues such as historical use of the site as a roadway, various commercial/industrial land uses south of the site and the presence of the Dunheved Open Channel running through the site form the requirement for the detailed contamination assessment. Based on the detailed assessment works and associated information and data, conclusions on suitability of the site for the proposed land use will be drawn including provisions of any recommendations required to make the site suitable.

6.1.2 Identify the Decision

Based on the decision-making process for assessing urban redevelopment sites detailed in EPA (2017), modified to meet the specific project objectives, the following decisions must be made:

- Are there any unacceptable risks to likely future onsite receptors from impacted soils during development?
- Are PFAS impacted soils present at the site associated with the Dunheved Open Channel?
- Are there any aesthetic concerns in fill soils present at the site?
- Is there any evidence of, or potential for, migration of contaminants off-site?
- Is a site specific risk assessment required?
- Is a site management strategy required?

6.1.3 Identify Inputs to the Decision

Inputs to the decisions are:

- Review of historical records;
- Historical site aerials showing detail to any activities occurring on site;
- Environmental data as collected by sampling and analysis and site observations made during this investigation;
- Assessment criteria to be achieved on the site as based on the intended landuse and project objectives, as defined by assessment criteria nominated in **Section 7**; and
- Confirmation that data generated by sampling and analysis are of an acceptable quality to allow reliable comparison to assessment criteria as undertaken by assessment of quality assurance / quality control (QA/QC) as per the data quality indicators (DQIs) established in **Section 6.1.6**.

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6.1.4 Define the Study Boundaries

The study boundaries are limited to Stage 3 of the EWCR as shown on **Figure 2**.

The vertical extent of the investigation was up to 1.2 m below the ground surface and generally 0.5 m into natural soils.

Due to the project objectives, seasonality will not be assessed as part of this investigation. Data will therefore be representative of the timing and duration of the current investigation.

6.1.5 Develop a Decision Rule

Laboratory analytical data will be assessed against EPA endorsed criteria as identified in **Section 7**.

The decision rules adopted to answer the decisions identified in **Section 6.1.2** are summarised in **Table 6.1**.

Table 6.1 Summary of Decision Rules

Decision Required to be made	Decision Rule
1. Are there any unacceptable risks to likely future onsite receptors from impacted soils during development?	The nature and extent of soil impacts will be assessed, and soil analytical data will be compared against EPA endorsed criteria. Statistical analyses of the data in accordance with relevant guidance documents will be undertaken, if appropriate, to facilitate the decisions. The following statistical criteria will be adopted with respect to soils: Either: the reported concentrations are all below the site criteria; Or: the average site concentration for each analyte must be below the adopted site criterion; no single analyte concentration exceeds 250% of the adopted site criterion; and the standard deviation of the results must be less than 50% of the site criteria. And: the 95% upper confidence limit (UCL[9]) of the average concentration for each analyte must be below the adopted site criterion. If the statistical criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is No. Otherwise, the decision is Yes.
2. Are PFAS impacted soils present at the site associated with the Dunheved Open Channel?	Based on PFAS in soil concentrations, has the Dunheved Open Channel resulted in impact of soils at the site at concentrations that present a potential ecological and/or health risk? If PFAS in soil results exceed the adopted criteria, the answer is yes, otherwise the answer is no.
3. Are there any aesthetics issues in fill soils at the site?	If there are any unacceptable odours, anthropogenic materials or staining the answer to the decision is Yes. Otherwise, the answer to the decision is No.
4. Is there any evidence of, or potential for, migration of contaminants off-site?	Are contaminants present within natural soils at concentrations exceeding EPA endorsed criteria? If yes, and the constituents are further found to be leachable by an assessment of physical properties the answer to the decision is Yes. Otherwise, the answer to the decision is No and a specific assessment of groundwater will be further required to advise the response to the decision.
5. Is a site specific Risk Assessment required?	A Qualitative Risk Assessment has been undertaken for the development site however, if concentrations of TPH/BTEX, PAH, OCPs and explosives are detected above the LOR, a Quantitative Site Specific Risk Assessment will be required.
6. Is a site management strategy required?	Is the answer to any of the above decisions Yes? If yes, a site management strategy will be required to be developed. If no, a site management strategy is not required.

Statistical analyses of the data will be undertaken, if required, in accordance with relevant guidance documents. The following statistical criteria shall be adopted:

- The upper 95% confidence limit on the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy or material types) must be below the adopted criterion;

[9] Sampling Design Guidelines (NSW EPA, 1995).

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- No single analyte concentration shall exceed 250% of the adopted criterion; and
- The standard deviation of the results must be less than 50% of the criterion.

6.1.6 Specify Limits of Decision Error

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

Specific limits for this project have been adopted in accordance with the appropriate guidance from the NSW EPA, NEPC (2013), appropriate indicators of data quality (DQIs used to assess QA/QC) and standard JBS&G's procedures for field sampling and handling.

To assess the usability of the data prior to making decisions, the data will be assessed against pre-determined Data Quality Indicators (DQIs) for completeness, comparability, representativeness, precision and accuracy. The acceptable limit on decision error is 95% compliance with DQIs.

The pre-determined Data Quality Indicators (DQIs) established for the project are discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCC parameters), and are shown in **Table 6.2**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** –expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.

If any of the DQIs are not met, further assessment will be necessary to determine whether the non-conformance will significantly affect the usefulness of the data. Corrective actions may include requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data.

Table 6.2 Summary of Quality Assurance / Quality Control Program

Data Quality Objective	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory)	1 / 20 samples	<50% RPD1
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD1
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes		-
Samples extracted and analysed within holding times.	-	organics (14 days), inorganics (6 months)
Trip spike (for volatiles)	1 per sampling event when sampling for volatile or semi-volatile COPC	70-130% recovery
Trip blank	1 per sampling event for ambient air sampling	<LOR
Rinsate	1 per sampling event where reusable sampling equipment used	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All samples
Standard analytical methods used for all analyses	All Samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples
Limits of reporting appropriate and consistent	All Samples	All samples
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples
Appropriate documentation	All Samples	All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
Data from critical samples is considered valid	-	Critical samples valid

1. Relative per cent difference

6.1.7 Optimise the Design for Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in EPA (1995[10]), including judgemental, random, systematic and stratified sampling patterns. Random sampling is not appropriate based on the areas of environmental concern identified in previous investigation and the site inspection.

A systematic sampling investigation has been developed for this investigation as consistent with the guidance in EPA (1995) sampling design guidelines. The site is understood to be approximately 6,000 m^2 which requires 15 sampling locations in accordance with EPA (1995).

Additional to the 15 systematic sampling locations an additional 5 locations were conducted along the alignment of the Dunheved Open Channel to investigate known contamination from previous reporting.

[10] *Sampling Design Guidelines.* NSW EPA. September 1995. (EPA 1995)

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6.2 Sampling Plan

6.2.1 Soil Investigation

Fifteen systematic soil sampling locations were conducted throughout the site, mostly on road verges adjacent to the active roadway (ST3-01 to ST3-15). An additional five sampling locations (ST3-16 to ST3-20) were conducted along the Dunheved Open Channel. Soil sampling works were conducted on 7 July 2019 with provision of a drill rig to provide undisturbed push tube samples. Soil sampling locations are provided on **Figure 3**.

Soil samples were generally collected at the surface 0-0.1 m, and from the underlying natural soil which was generally identified at a depth between 0.1 and 0.4 m below ground surface (bgs). Where deeper fill was identified additional sampling was collected within the fill stratum. Soil sampling locations were extended to a maximum depth of 1.2 m, which was generally at least 0.5 m into natural materials. It is noted that extension into natural soils at locations ST3-16 to ST3-20 was not achieved due to deeper fill. However, the objective of these sample locations was to investigate soils surrounding the Dunheved open channel which was achieved. Further, risk of service strikes noting sands identified in ST3-19 prevented further intrusion.

Where physical evidence of gross contamination was identified during the works, sampling locations were extended to vertically delineate contamination. During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted. All borehole locations were recorded with a hand held trimble GPS.

Collected samples were immediately transferred to laboratory supplied sample jars. The sample jars were then transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory.

Samples were analysed as per **Table 6.3** below,

6.3 Duplicate and Triplicate Sample Preparation

Duplicate and triplicate samples were obtained during the field works. The collected samples were divided laterally into three samples with minimal disturbance to reduce the potential for loss of volatiles and placed in three clean glass jars and sample bags as appropriate. Each sample was then labelled with a primary, duplicate or triplicate sample identification before being placed in the same chilled esky for laboratory transport.

6.4 Laboratory Analysis

JBS&G contracted Eurofins MGT as the primary laboratory and Envirolab Services as the secondary laboratory, both laboratories are NATA accredited for the required analyses. In addition, the laboratories were required to meet JBS&G's internal Quality Assurance requirements. The analytical schedule completed is provided in **Table 6.3** below.

Table 6.3 – Proposed Sampling and Analytical Program

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Stage 3 Soil systematic location	15 boreholes	Heavy metals[1] (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 14 samples PAH – 14 samples TPH/BTEX – 14 samples OCPs/PCBs – 14 samples VOCs – 14 samples PFAS – 14 samples Asbestos – 14 samples (500 ml samples + visual)
Stage 3 soil targeted to the Dunheved Open Channel	5 boreholes	PFAS – 10 samples

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7. Assessment Criteria

7.1 Regulatory Technical Guidelines

The investigation was undertaken with consideration to aspects of the following guidelines and technical documents, as relevant:

- Contaminated Sites: Sampling Design Guidelines, NSW EPA, 1995 (EPA 1995);
- Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, NSW OEH, 2011 (OEH 2011);
- National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), National Environment Protection Council, 2013 (NEPC 2013);
- *Contaminated Land Management – Guidelines for the NSW Site Auditor Scheme (3rd Edition)* October 2017 NSW EPA 2017; and

7.2 Soil Criteria

Based on the proposed land use (Road), concentrations of contaminants in the soil were compared against published levels for commercial/industrial landuse as presented in **Table 7.1**, sourced from the following:

- Health based Investigation Levels (HILs) for commercial/industrial – NEPC 2013, HIL-D;

Commercial/industrial criteria is most appropriate for use of land for roads.

Soils were also assessed against conservative ecological criteria also sourced from NEPC 2013, including ecological investigation levels for commercial/industrial and ecological screening levels (ESLs) for commercial industrial. Adopted ecological criteria is provided on **Table 7.2**.

Where required, results were statistically assessed in accordance with the method summarised in **Table 7.1**.

The results of asbestos observations and analysis was assessed in general accordance with NEPC (2013) and WA DOH (2009) guidance.

Table 7.1 Health Based Soil Investigation Criteria (all units in mg/kg)

	Limit of Reporting	Laboratory Method	Health Investigation/ Screening Levels Commercial/Industrial D
METALS			
Arsenic	2.0	ICP-AES (USEPA 200.7)	3000
Cadmium	0.4	ICP-AES (USEPA 200.7)	900
Chromium	5.0	ICP-AES (USEPA 200.7)	3600[1]
Chromium (VI)	1.0	Alkali leach colorimetric (APHA3500-Cr/USEAP3060A)	-
Copper	5	ICP-AES (USEPA 200.7)	240,000
Nickel	5.0	ICP-AES (USEPA 200.7)	6000
Lead	5.0	ICP-AES (USEPA 200.7)	1500
Zinc	5.0	ICP-AES (USEPA 200.7)	400 000
Mercury (inorganic)	0.05	Cold Vapour ASS (USEPA 7471A)	730[2]
POLYCYCLIC AROMATIC HYDROCARBONS			
Carcinogenic PAHs (as B(a)P TPE)[3]	0.028	GCMS (USEPA8270)	40
Naphthalene	0.1	GCMS (USEPA8270)	NL[6]
Total PAHs[4]	0.4	GCMS (USEPA8270)	4000
BTEX			

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	Limit of Reporting	Laboratory Method	Health Investigation/ Screening Levels Commercial/Industrial D
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	4[6]
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	NL[6]
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	NL[6]
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	NL[6]
TOTAL RECOVERABLE HYDROCARBONS			
F1 C_6-C_{10}	10	TPH Purge Trap-GCMS (USEPA8260)	310[6,]
F2 >C_{10}-C_{16}	50	TPH Purge Trap-GCMS (USEPA8260)	NL[6]
F3 >C_{16}-C_{34}	100	Purge Trap-GCFID (USEPA8000)	NL[6]
F4 >C_{34}-C_{40}	100	Purge Trap-GCFID (USEPA8000)	NL[6]
ORGANOCHLORINE PESTICIDES			
DDT + DDD + DDE	0.3	GCECD (USEPA8140,8080)	3600
Aldrin + Dieldrin	0.2	GCECD (USEPA8140,8080)	45
Chlordane	0.1	GCECD (USEPA8140,8080)	530
Endosulfan	0.3	GCECD (USEPA8140,8080)	2000
Endrin	0.1	GCECD (USEPA8140,8080)	100
Heptachlor	0.1	GCECD (USEPA8140,8080)	50
HCB	0.1	GCECD (USEPA8140,8080)	80
Methoxychlor	0.1	GCECD (USEPA8140,8080)	2500
PHENOLS			
Phenol	5	Distillation-Colorimetric (APHA 5530)	40 000
PCBs			
Total PCBs	0.7	GCECD (USEPA8140,8080)	7
Asbestos			
Asbestos (<0.1 m bgs)	0.1 g/kg	PLM / Dispersion Staining	No asbestos capable of being detected via the investigation, which comprises both visual identification and sample analysis by a NATA accredited laboratory
Asbestos FA/AF (>0.1 m bgs)	0.1 g/kg	PLM / Dispersion Staining	0.001%
Bonded ACM (>0.1 m)	0.1 g/kg	PLM / Dispersion Staining	0.05%
Asbestos Fibres	0.1 g/kg	PLM / Dispersion Staining	No respirable asbestos fibres of being detected via sample analysis by a NATA accredited laboratory

Notes:

1. Guideline values presented are for Chromium (VI) in absence of total Chromium values. Where total Chromium results are elevated, samples will be analysed for Chromium (VI).
2. Guideline values are for inorganic mercury. Where elevated mercury concentrations are encountered and/or site information suggests the potential presence of elemental mercury and/or methyl mercury, consideration of applicability would be needed.
3. Carcinogenic PAHs calculated as per Benzo(a)pyrene Toxicity Equivalent Factor requirements presented in NEPC 2013
4. Total PAHs calculated as per requirements presented in NEPC 2013.
6. Soil Health Screening Levels for Vapour Intrusion: Clay Soils. Values presented are those for 0 to <1 m bgs for commercial/industrial land use. Reference should be made to results tables for further detail of levels at greater depths.
7. US Army Medical Bioengineering Research and Development Laboratory for the Corn Husker Army Ammunition Plan, Rosenblah, 1986.

NL: Non-limiting.

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Table 7.2 Ecological Based Soil Investigation Criteria and Screening Levels (all units in mg/kg)

	Limit of Reporting	Laboratory Method	ESLs Commercial/Industrial	ESLs Areas of Ecological Significance	EILs (Aged) Commercial/Industrial	SQGs (Aged)[3] Areas of Ecological Significance
METALS						
Arsenic	4.0	ICP-AES (USEPA 200.7)	-	-	160	40
Cadmium	0.4	ICP-AES (USEPA 200.7)	-	-	-	-
Chromium	1.0	ICP-AES (USEPA 200.7)	-	-	310	140
Chromium (VI)	1.0	Alkali leach colorimetric (APHA3500-Cr/USEAP3060A)	-	-	-	-
Copper	1.0	ICP-AES (USEPA 200.7)	-	-	85	85
Nickel	1.0	ICP-AES (USEPA 200.7)	-	-	55	50
Lead	1.0	ICP-AES (USEPA 200.7)	-	-	1800	470
Zinc	1.0	ICP-AES (USEPA 200.7)	-	-	110	230
Mercury (inorganic)	0.1	Cold Vapour ASS (USEPA 7471A)	-	-	-	-
POLYCYCLIC AROMATIC HYDROCARBONS						
Benzo(a)pyrene	0.5	GCMS (USEPA8270)	1.4	0.7	-	-
Naphthalene	0.1	GCMS (USEPA8270)	-		370	10
BTEX						
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	75	10	-	-
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	135	10	-	-
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	165	1.5	-	-
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	180	10	-	-
TOTAL RECOVERABLE HYDROCARBONS						
F1 C_6-C_{10}	10	TPH Purge Trap-GCMS (USEPA8260)	215[1]	125[1]	-	-
F2 >C_{10}-C_{16}	50	TPH Purge Trap-GCMS (USEPA8260)	170[2]	25[2]	-	-
F3 >C_{16}-C_{34}	100	Purge Trap-GCFID (USEPA8000)	1700	Insufficient data to derive value	-	-
F4 >C_{34}-C_{40}	100	Purge Trap-GCFID (USEPA8000)	3300	Insufficient data to derive value	-	-
ORGANOCHLORINE PESTICIDES						
DDT	0.1	GCECD (USEPA8140,8080)	-	-	640	3

Notes:
Values for F1 C_6-C_9 are obtained by subtracting BTEX (Sum) from laboratory result for C_6-C_9 TRH.
Values for F2 >C_{10}-C_{16} are obtained by subtracting naphthalene from laboratory result for >C_{10}-C_{16} TRH.

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7.3 PFAS Criteria

The previous RAP (JBS&G 2019a) derived a PFOS in soil criterion as protective of potential health and ecological impacts for the area of PFAS impacted soils adjoining and within the Stage 3 site as 0.033 mg/kg. This same criterion has been adopted to assess PFAS / PFOS impacts assessed by this investigation.

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8. Quality Assurance/Quality Control

8.1 QA/QC Results

The QA/QC results for soil samples collected at the site are summarised in **Table 8.1** and discussed in **Section 8.2** below. Detailed QA/QC results are included in **Appendix E**. Laboratory reports are included in **Appendix F**.

Table 8.1 Summary of Quality Assurance / Quality Control Program

Data Quality Indicator	Frequency	Results	DQI met?
Precision			
Soil Blind duplicates (intra laboratory)	>1 / 14 samples	0-81 % RPD (soil chemical analysis) The primary and duplicate samples analyzing asbestos were in agreement. Intra laboratory samples were analysed at a rate greater than 1 in 20 samples	Partial[1] Yes Yes
Soil Blind triplicates (inter laboratory)	>1 / 14 samples	0-82% RPD (soil chemical analysis) The primary and duplicate samples analyzing asbestos were in agreement. Intra laboratory samples were analysed at a rate greater than 1 in 20 samples	Partial[1] Yes Yes
Laboratory Duplicates	>1/lab batch	0-80 % RPD	Partial[1]
Accuracy			
Surrogate spikes	All organic Analysis	32 – 198 % Recovery	Partial[1]
Laboratory Control Samples	>1/lab batch	57-147 % Recovery	Partial[1]
Matrix spikes	>1/lab batch	60-147 % Recovery	Partial[1]
Representativeness			
Sampling appropriate for media and analytes	All media/Analytes	All sampling conducted in accordance with JBS&G procedures	Yes
Laboratory blanks	>1/lab batch	<LOR	Yes
Samples extracted and analysed within holding times.	N/A	All samples were extracted and analysed within holding times.	Yes
Trip spikes	1/lab batch	97-100 % Recovery	Yes
Trip blanks	1/lab batch plus 1 PFAS trip blank	<LOR	Yes
Rinsate blank	1/sampling event	<LOR	Yes
Comparability			
Standard operating procedures used for sample collection & handling	All samples	Field staff used same standard operating procedures throughout works	Yes
Standard analytical methods used	All samples	Standard analytical methods used as listed in **Table 7.1**.	Yes
Consistent field conditions, sampling staff and laboratory analysis	All samples	Sampling was conducted by the same field staff members using standard operating procedures in the same conditions throughout the works. The laboratory remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	All samples	Limits of reporting were consistent and appropriate.	Yes
Completeness			
Soil description & COCs completed	All samples	All bore logs and COCs were completed appropriately.	Yes
Appropriate documentation	All samples	All appropriate field documentation is included in the Appendices.	Yes
Satisfactory frequency/result for QA/QC samples	All samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples is considered valid	All samples	Data from critical samples is considered valid.	Yes
Sensitivity			
Analytical methods and limits of recovery appropriate for media	All samples	Appropriate laboratory analysis methods and detection limits were considered to	Yes

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Data Quality Indicator	Frequency	Results	DQI met?
and the adopted site assessment criteria		have been achieved during the field and laboratory phases of the investigation	

8.2 QA/QC Discussion

8.2.1 Precision

Blind (intra-laboratory) Duplicates

Soil field blind (intra-laboratory) duplicates were analysed at a rate of 1 per 14 primary samples which meets the required 1/20 DQI frequency. It is noted that more than 20 samples were analysed for PFAS, however given only one laboratory batch including analysis of 14 samples for the majority of analytes, the completed frequency is considered sufficient.

Field blind duplicates had relative percentage differences (RPDs) generally within the acceptable range of less than 50% with the following exceptions:

- TPH (C_{29}-C_{36} and C_{10}-C_{36} fractions) between duplicate pairs ST3-02 0-0.1 and QA20190707-01 with RPDs of 53%;
- Benzo(a)pyrene TEQ (medium) between duplicate pairs ST3-02 0-0.1 and QA20190707-01 with an RPD of 50%; and
- PAH (Total) between duplicate pairs ST3-02 0-0.1 and QA20190707-01 with an RPD of 81%.

The high RPDs are attributed to the heterogeneity of the material analysed and the likely inclusions of bituminous material and igneous gravels associated with the paved road. Additionally, several analysis were reported near the laboratory LOR resulting in elevated RPDs even though results are similar. Therefore, the exceeding RPD values are believed to be insignificant in the context of the investigation. Detailed RPD analysis are provided in **Attachment E**

Split (inter-laboratory) Duplicates

Soil split (inter-laboratory) duplicates were analysed at a rate of 1 per 14 primary samples which meets the required 1/20 DQI frequency (for split duplicates). It is noted that more than 20 samples were analysed for PFAS, however given only one laboratory batch including analysis of 14 samples for the majority of analytes, the completed frequency is considered sufficient.

All split duplicates had relative percentage differences (RPDs) within the acceptable range of less than 50% with the following exceptions:

- Heavy metals (mercury) between duplicate pairs ST3-02 0-0.1 and QC20190707-01 with an RPD of 67%;
- TPH (C_{10}-C_{40} fraction) between duplicate pairs ST3-02 0-0.1 and QC20190707-01 with an RPD of 75%; and
- Benzo(a)pyrene TEQ (upper) between duplicate pairs ST3-02 0-0.1 and QC20190707-01 with an RPD of 82%;

The high RPDs are attributed to the heterogeneity of the material analysed and the likely inclusions of bituminous material and igneous gravels. Additionally, several analyses were reported near the laboratory LOR resulting in elevated RPDs even though results are similar. Therefore, the exceeding RPD values are believed to be insignificant in the context of the investigation. Detailed RPD analysis are provided in **Appendix E**.

Laboratory duplicates

Laboratory duplicates analysed all had RPDs within the acceptable range of less than 50% with the following exception.

- Heavy metals (lead) between lab duplicate of ST3-01 0-0.1 with an RPD of 80%;

As per the blind and split duplicates, the high RPD is attributed to the heterogeneity of the material analysed.

8.2.2 Accuracy

Surrogate spikes

Surrogate spike recoveries were reported between 32% and 198%. Although some recoveries were outside the JBS&G acceptable criteria mostly for PFAS (NATA acceptable range of 50 to 150%). The surrogates reported outside of the ranges, or surrogates with matrix interference, are not considered to affect the accuracy of the results as other quality control results were within the acceptable criteria. Given the majority of the surrogate spikes were of acceptable quality these results are not considered to affect the validity of the results reported.

Laboratory Control Samples

Laboratory control samples were conducted for each laboratory batch submitted and were reported between 57-147%. These were within JBS&G's acceptance criteria or 70-130% with the exception below.

Laboratory control samples reported outside of the JBS&G acceptable criteria were all for PFAS constituents and were within the NATA accredited ranges for PFAS of 50-150%.

Matrix Spikes

Matrix spike samples were conducted for each laboratory batch submitted and were reported between 60-147%. These were within JBS&G's acceptance criteria of 70-130% with the exception below.

Matrix spikes reported outside of the JBS&G acceptable criteria were all for PFAS constituents and were within the NATA accredited ranges for PFAS of 50-150%.

8.2.3 Representativeness

Sampling appropriate for media and analytes

The sampling methods were considered appropriate for soil media and the analytes targeted.

Laboratory Blanks

At least one laboratory blank was analysed for each analyte with each batch of samples. All levels of analytes in laboratory blanks were below detection limits.

Trip Spikes

Trip spike recoveries were between 97-100% and were all within the acceptable range.

Trip blanks

A trip blank was provided with each batch of samples. All levels of analytes in the trip blanks were below detection limits.

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Rinsate Samples

A single rinsate was collected for a hand auger sample collected adjacent to the Dunheved open channel (ST3-20) analyte concentrations for PFAS were reported at below the laboratory detection limits.

Disposable sampling equipment such as disposable nitrile gloves were worn and samples were obtained using a disposable pushtube core resulting in undisturbed samples.

Holding times

All analyses have been extracted within holding times.

8.2.4 Comparability

Common and consistent JBS&G Field Personnel were used to collect samples throughout the project. Field works have been undertaken in accordance with JBS&G field operating procedures. All required field forms and sampling logs have been appropriately completed by sampling personnel.

8.2.5 Completeness

Documentation

All documentation was completed to the required standard. Chain of custody forms are provided with laboratory documentation included in **Appendix G**.

Frequency for QA/QC Samples

The frequency of QA/QC samples is considered to be sufficient and meets the project DQI's.

8.2.6 Soil QA/QC Conclusions

The results of the field and laboratory QA/QC program indicates that the data obtained from this investigation generally met the predetermined DQIs or, where the DQIs were exceeded, did not indicate systematic sampling or analytical errors. As such the data is considered to be of adequate quality to be relied on for the purposes of assessing the environmental condition at the site.

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9. Results

9.1 Field Observations

JBS&G conducted a detailed site investigation and soil sampling at the site on the 7th of July 2019. The soil sampling locations are provided on **Figure 3**. Test pit borelogs summary are provided in **Appendix G**. Photographs of the site and recovered soil cores is provided in **Appendix A**.

Fill material generally comprised of light brown to orange, silty clay to gravelly clay soil with inclusions of, igneous gravels, sandstone gravels, bitumen and rootlets. Layering of asphalt or igneous gravel was observed beneath the surface at locations ST3-01, ST3-03 and ST3-18. These findings are considered to be associated with road infrastructure including underlying services. The inclusions are not considered to be present in such quantities as to pose an aesthetic issue especially considering the proposed redevelopment of the site into a roadway. No visible ACM, odours or staining were noted.

Natural soils were encountered at depths ranging from 0.1 m to 1.2 m bgs at the site and generally comprised of firm to stiff orange/brown to red mottled clay of medium plasticity.

9.2 Analytical Results

Soil summary analytical results are provided in **Table A** and **Table B**. Detailed laboratory reports and chain of custody documentation is provided in **Appendix F**.

9.2.1 Heavy Metals

Concentrations of heavy metals were reported below the adopted health-based criteria (HIL D) for all samples analysed.

Concentrations of heavy metals were also reported below the adopted ecological-based criteria (EILs) for all samples analysed with the following exceptions:

- Copper at location ST3-12 0-0.1 (96 mg/kg); and
- Zinc at locations ST3-01 0-0.1, ST3-02 0-0.1, ST3-03 0-0.1, ST3-14 0-0.1 and ST3-15 0-0.1 (ranging in concentration between 110 mg/kg to 280 mg/kg).

The identified exceedances are based on the very most conservative (NEPC 2013) concentrations, given the proposed used of the site as a roadway and noting the conservative criteria adopted the minor exceedances reported are not considered to represent an ecological risk.

9.2.2 BTEX

Concentrations of BTEX were reported below the laboratory LORs and the adopted health and ecological based criteria (HIL D) in all samples analysed.

9.2.3 Total Recoverable Hydrocarbons

Concentrations of TRH were reported below the adopted health and ecological based criteria (HIL D) in all samples analysed.

Minor detected levels of TRH were reported in samples ST3-01, ST3-03, ST3-08, ST3-13, ST3-14 and ST3-15. The reported concentrations are considered to be associated with the road pavement at the site including within verges. The levels identified do not represent an ecological or health risk.

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9.2.4 PAHs

Concentrations of PAHs were reported below the adopted health and ecological based criteria (HIL D) in all samples analysed.

Concentrations of PAHs were reported below the adopted ecological based criteria in all samples analysed with the following exceptions:

- Benzo(a)pyrene within location ST3-15 0-0.1 with a reported concentration of 3.4 mg/kg;

Additionally, it was noted that minor B(a)P concentrations were also identified at ST3-14 0-0.1, ST3-13 0-0.1, ST3-03 0-0.1 and QA20190707-01.

The reported concentrations are associated with bituminous fragments within and adjacent the paved road and are not considered to represent an ecological or health risk.

9.2.5 OCPs and PCBs

Concentrations of OCPs and PCBs were reported below the laboratory limits of reporting and below the adopted ecological and health-based criteria (HIL D) for all samples analysed.

9.2.6 VOCs

Concentrations of VOCs were reported below the laboratory limits of reporting and below the adopted ecological and health-based criteria (HIL D) for all samples analysed.

9.2.7 PFAS

Concentrations of PFAS were reported below the laboratory LORs for all samples analysed with the following exceptions:

- PFOS identified within ST3-02 0-0.1 (0.0081 mg/kg), ST3-03 0-0.1 (0.0062 mg/kg), ST3-16 0.3-0.5 (0.16 mg/kg), ST3-16 0.8-1.0 (0.03 mg/kg), ST3-17 0-0.1 (0.061 mg/kg), ST3-17 1.0-1.2 (0.0565 mg/kg) , ST3-18 1.0-1.1 (0.011 mg/kg), ST3-20 0.2-0.3 (0.349 mg/kg) and ST3-20 0-0.1 (0.143 mg/kg); and
- Minor detections of PFHxS and PFOA were also detected within ST3-16 0.3-0.5, ST3-17 1.0-1.2 and ST3-20 0.2-0.3 and ST3-20 0-0.1.

Of the concentrations identified, concentrations at locations ST3-16 0.3-0.5 (0.16 mg/kg), ST3-16 0.8-1.0 (0.03 mg/kg), ST3-17 0-0.1 (0.061 mg/kg), ST3-17 1.0-1.2 (0.0565 mg/kg) ST3-20 0.2-0.3 (0.349 mg/kg) and ST3-20 0-0.1 (0.143 mg/kg) were in exceedance of the ecological criteria derived in the RAP (JBS&G 2019a).

9.2.8 Asbestos

No visible ACM was observed within any of the boreholes conducted or on the surface at the site.

No AF/FA or respirable asbestos fibres were detected in samples submitted for laboratory analysis. Soil asbestos analytical results are summarised in **Table B**.

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10. Site Characterisation

10.1 Are there any unacceptable risks to likely future onsite receptors from impacted soils (non-PFAS) during development?

All concentrations of heavy metals, TRH, BTEX, PAHs, VOCs, OCPs/PCBs, and asbestos were reported at concentrations below the site adopted health based criteria. No ACM was observed in the sample locations or within samples submitted for laboratory analysis either.

Concentrations of Copper and Zinc exceeded conservative ecological investigation levels. However, for the proposed use of the site, as a roadway, the minor concentrations are not considered relevant. Further to this, the exceedances identified are misleading as the lowest NEPC (2013) ecological value was used for comparison purposes in this assessment. Additionally, remnant concentrations of PAHs and TRH associated with bituminous materials adjacent to the road were reported but are not considered to pose a risk.

Based on the analytical results of the investigation and the discussion above, there are no unacceptable risks associated with impacted soils (non-PFAS) at the site.

10.2 Are PFAS impacted soils present at the site associated with the Dunheved Open Channel?

Analysis of PFAS in soil was conducted throughout soil sampling locations at the site and included targeting sampling adjacent to the Dunheved Open channel and associated culvert.

Based on the soil PFAS analytical results detectable levels of PFAS with in locations ST3-01, ST3-02, ST3-03, ST3-16, ST3-17, ST3-18 and ST3-20 was identified. Of these identified locations, it is further noted that concentrations which exceed the adopted criteria identified in the RAP (JBS&G 2019a) included ST3-16 0.3-0.5, ST3-16 0.8-1.0, ST3-17 0-0.1, ST3-17 1.0-1.2, ST3-20 0.2-0.3 and ST3-20 0-0.1. As shown in **Figure 3**, the locations of identified impact are within close proximity to the Dunheved Open Channel and as such the source of impact is considered to be directly associated with it.

Based on soil analytical results, PFAS impacted soil is present associated with soils adjacent to the Dunheved Open Channel.

10.3 Are there any aesthetic concerns in fill soils present at the site?

No staining, odours or ACM were observed on the surface of the site or within the borehole locations conducted. Minor anthropogenic inclusions, including bituminous fragments adjacent to the road were identified and were also considered to be the cause of minor elevated concentrations of PAHs and TRHs.

These minor inclusions are not considered to pose an aesthetic issue given the proposed future use of the site as a road. However, when/if pavements are removed as part of future development works, appropriate management of these materials will be required.

10.4 Is there any evidence of, or potential for, migration of contaminants off-site?

Generally, there is no potential for migration of contaminants from the site for the following reasons:

- All soil concentrations were within the commercial/industrial health based criteria adopted;
- PFAS impact associated with the Dunheved Open Channel is considered to be from an offsite source; and
- Historical groundwater assessment did not identify any impact to groundwater.

Management of PFAS impact will be required.

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10.5 Is a site specific risk assessment required?

Based on the outcomes of the investigation a site specific risk assessment is not required at the site.

10.6 Is a site management strategy required?

Based on the discussion of the decision-making process above the site is free of gross contamination that would prevent it from being suitable for the proposed use. Identified impact associated with PFAS in proximity to the Dunheved Open Channel will require relocation to the existing PFAS affected soils stockpile held within the Dunheved portion of the St Marys development site.

In order to facilitate this work a RAP need to be developed to detail requirements for excavation of the PFAS impacted soils and relocation to the existing stockpile of PFAS affected soils and biosolids on the Dunheved site.

Management of potential impacted materials associated with pavement removal, unexpected finds and imported fill will require implementation in the form of a specific CMP.

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11. Conclusions and Recommendations

11.1 Conclusions

Based on the findings of this investigation and subject to the limitations in **Section 12**, the following conclusions are made:

- No potential risk to human health or ecological health are present associated with potential contaminants of concern, heavy metals, TRH/BTEX, PAHs, OCPs/PCBs, VOCs or asbestos;
- PFAS impact to soils adjacent to the Dunheved Open Channel were identified;
- No aesthetic risks were identified at the site;
- Preparation of a RAP for the Stage 3 portion of the site be developed to address PFAS impacted soils. The RAP can simply require the excavation and relocation of the PFAS affected soils to the existing stockpile of PFAS affected soils currently held within the Dunheved portion of the St Marys development site; and
- Surplus soils and/or demolition materials as generated by future road construction works should be managed consistent with a CMP as specific to the roadworks project.

11.2 Recommendations

It is recommended that the following actions are undertaken:

- Preparation of a RAP specific to the PFAS impacted areas identified within Stage 3 of the EWCR; and
- Preparation of a CMP to address all stages of the EWCR and include management requirements associated with material tracking, pavement removal, unexpected finds and imported fill.

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12. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

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Figures

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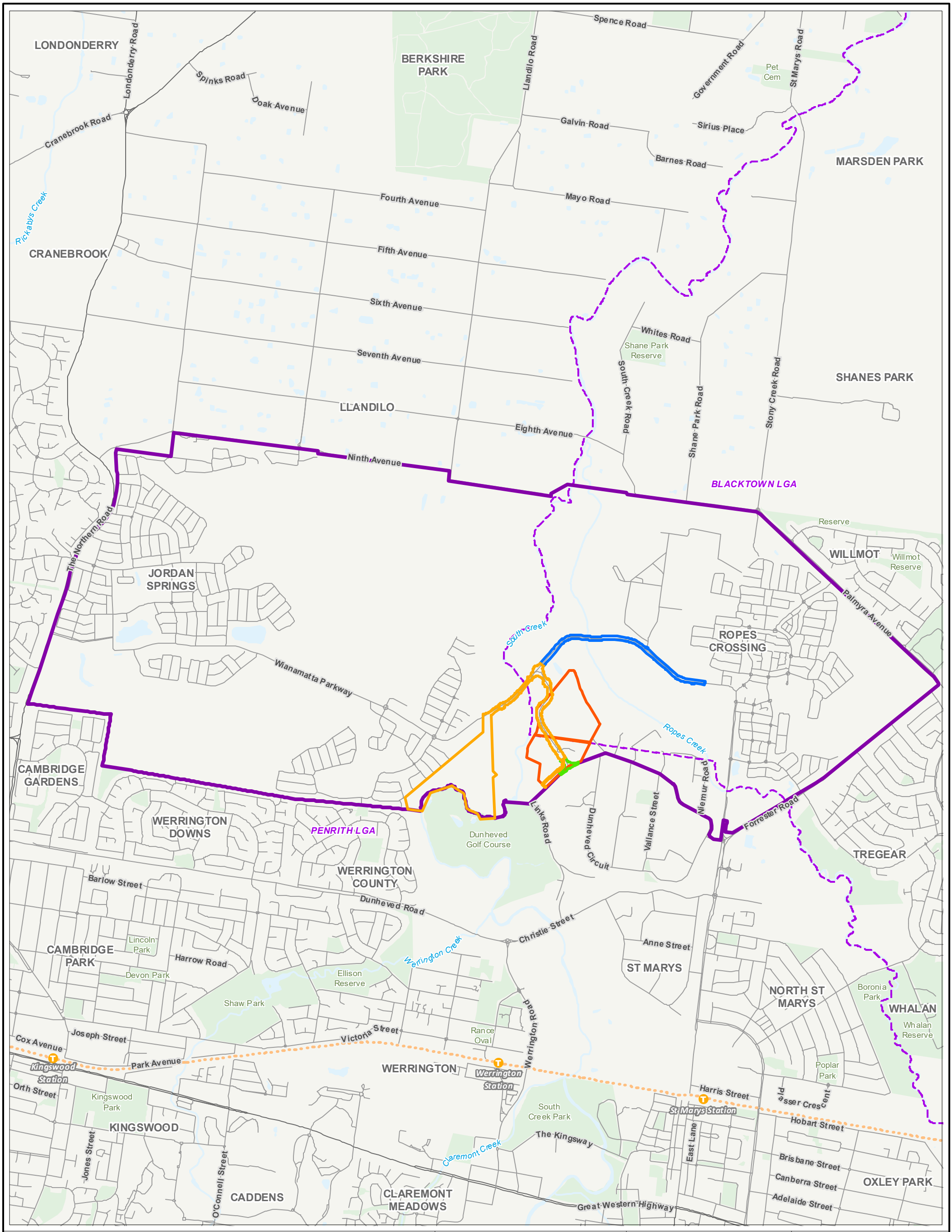


Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 1 Boundary
- Stage 2 Boundary
- Stage 3 Boundary
- LGA boundary
- Parks and reserves
- Waterbody area
- Waterway
- Primary Road
- Local Road
- Train Line
- Train Station

JBS&G

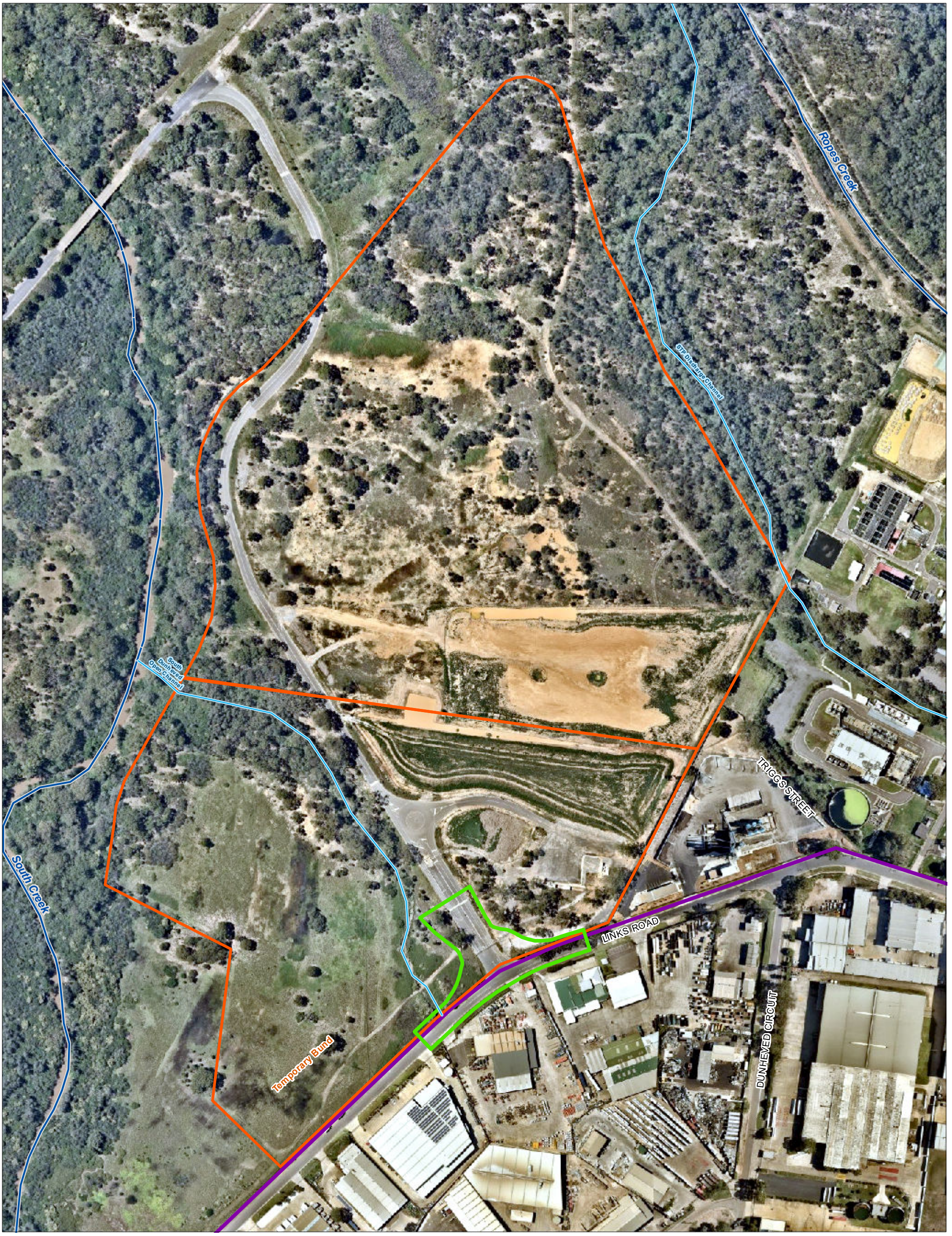
0 375 750 metres

Central Precinct

SITE LOCATION

Job No: 54782		Scale: 1:27,500		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R05 Rev A	Date: 15-Jul-2019	**FIGURE 1**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R05 Rev A\54782_01_Site_Location.mxd
Time Saved: 10:39:30 AM Date Saved: 30/07/2018



Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 3 Boundary
- Channels
- Creeks

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0 40 80
metres

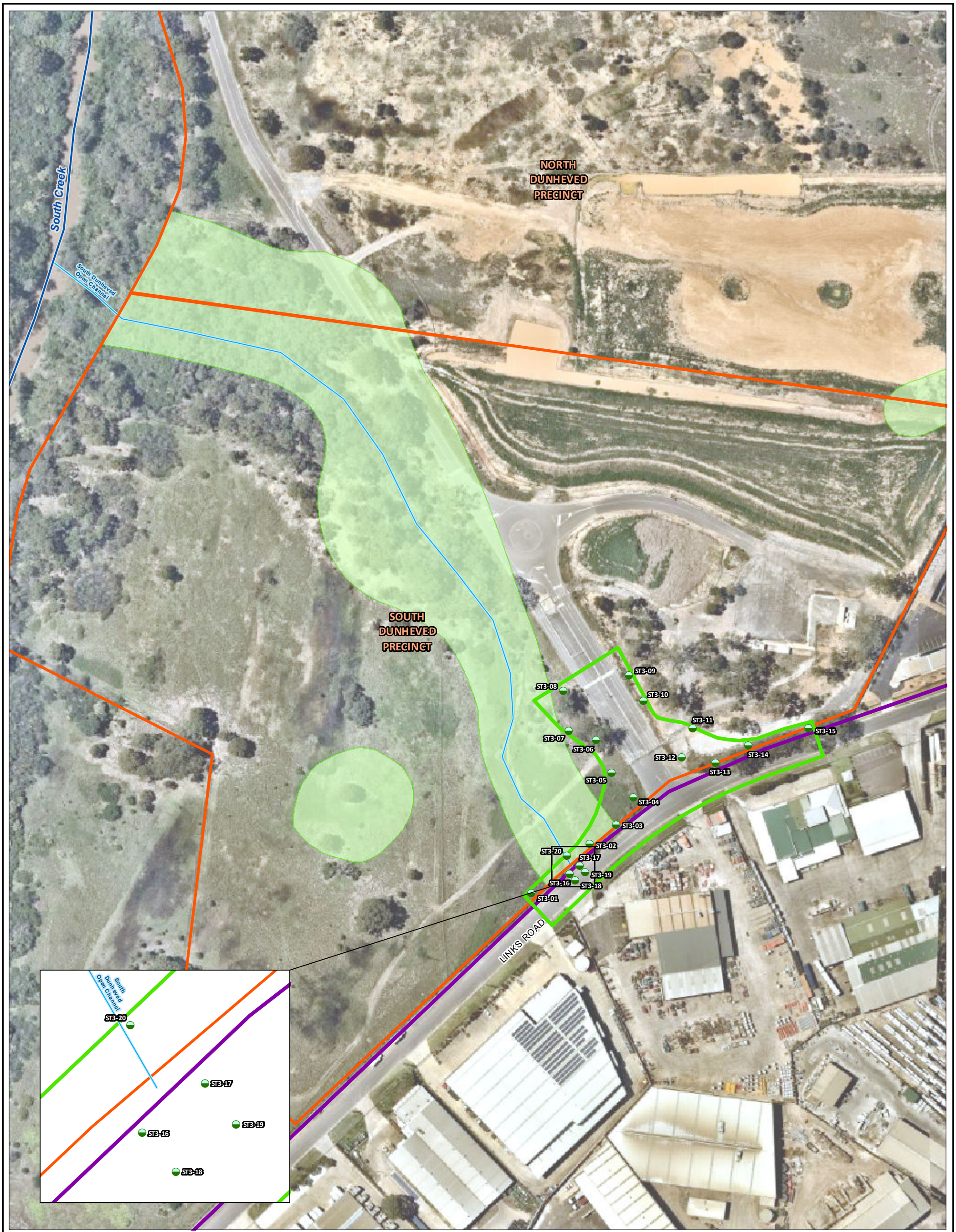
Central Precinct

SITE LAYOUT

Job No: 54782		Scale: 1:3,000		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R05 Rev A	Date: 15-Jul-2019	**FIGURE 2**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R05 Rev A\54782_02_Site_Layout.mxd
Time Saved: 29/12/2018 18:12:29

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Legend:

- Former ADI St Marys Property
- Dunheved Precinct
- Stage 3 Boundary
- Proposed PFAS Remediation Areas
- Creeks
- Channels
- Soil Sample Location - Stage 3

JBS&G

0 20 40
metres

Central Precinct

SOIL SAMPLING LOCATIONS

Job No: 54782		Scale: 1:1,750		
Client: Minter Ellison		Coord. Sys. GDA 1994 MGA Zone 56		
Drawn By: RF	Checked By: GB	Version: R05 Rev A	Date: 15-Jul-2019	**FIGURE 3**

File Name: N:\Projects\Minter Ellison\54782 Jordan Springs PFAS Assessment\GIS\Maps\R05 Rev A\54782_03_Soil_Sampling_Locations.mxd
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Document Set ID: 8830578
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Tables

Document Set ID: 8830578
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Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEXN							Polycyclic Aromatic Hydrocarbons													
			Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	>C10-C16 less Naphthalene (F2)	>C6-C10 Fraction	>C6-C10 less BTEX (F1)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene (Total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b,j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			2	0.4	5	5	5	0.1	5	5	20	20	50	50	50	50	100	100	100	50	20	20	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																												
NEPM 2013 EIL - Commercial Industrial (generic)			160		310	85	1800		55	110																		370																
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																	1700	3300		170		215	75	165	135			180					1.4											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																											
NEPM 2013 Soil HIL D			3000	900	3600	240000	1500	730	6000	400000																								40	40	40							
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																											
Sample ID	**Sample Date**	**Laboratory Report Number**																																										
ST3-01 0-0.1	7/07/2019	664672	2.9	<0.4	29	48	18	<0.1	22	110	<20	<20	87	220	307	<50	250	250	500	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
ST3-02 0-0.1	7/07/2019	664672	7.8	<0.4	41	59	62	0.2	27	280	<20	<20	<50	86	86	<50	100	<100	100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5
QA20190707_01	7/07/2019	664672	7.3	<0.4	46	50	55	0.2	27	240	<20	<20	<50	50	50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.6	0.7	1	1.3	<0.5	0.5	<0.5	<0.5	<0.5	1	<0.5	0.6
QC20190707-01	7/07/2019	221255	5	<0.4	29	43	38	0.1	23	170	<25	<50	<100	110	-	<50	120	100	220	<50	<25	<25	<0.2	<1	<0.5	<1	<2	<3	<1	<0.1	<0.1	<0.1	0.2	0.3	<0.5	<0.5	<0.5	0.3	0.3	=	0.2	<0.1	0.6	<0.1	0.2
ST3-03 0-0.1	7/07/2019	664672	4.8	<0.4	29	41	32	0.1	20	130	<20	<20	62	96	158	<50	130	<100	130	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.7	1.2	0.6	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
ST3-04 0.8-0.9	7/07/2019	664672	10	<0.4	35	9.5	31	<0.1	6.2	21	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	7.5	<0.4	30	20	23	<0.1	19	56	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
ST3-06 0-0.1	7/07/2019	664672	6.6	<0.4	17	12	26	<0.1	11	32	<20	<20	<50	62	62	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	7/07/2019	664672	19	<0.4	14	18	14	<0.1	8	20	<20	<20	76	66	142	<50	110	<100	110	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	7/07/2019	664672	3.8	<0.4	11	9.2	6.8	<0.1	<5	14	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	4.1	<0.4	18	20	14	<0.1	14	57	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	7/07/2019	664672	8.9	<0.4	17	26	20	<0.1	9.9	68	<20	<20	<50	79	79	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	7/07/2019	664672	3.8	<0.4	15	96	14	<0.1	8.8	76	<20	<20	<50	<50	<50	<50	<100	<100	<100	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	7/07/2019	664672	2.7	<0.4	42	23	22	<0.1	40	49	<20	<20	160	290	450	<50	370	260	630	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	0.6	0.7	0.8	1.1	1.4	<0.5	0.5	<0.5	0.5	<0.5	0.9	<0.5	0.5
ST3-14 0-0.1	7/07/2019	664672	7.1	<0.4	26	40	28	<0.1	13	130	<20	25	96	130	251	<50	180	<100	180	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	<0.5	1.1	1.3	1.7	2	2.2	1	1.1	0.9	1	<0.5	3	<0.5	1
ST3-15 0-0.1	7/07/2019	664672	7.3	<0.4	33	25	29	<0.1	10	110	<20	<20	130	120	250	<50	220	<100	220	<50	<20	<20	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	<0.5	<0.5	0.8	2.8	3.4	5.4	5.4	5.4	3	2.7	2	2.9	0.9	9.5	<0.5	2.2
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

JBS&G

						Organochlorine Pesticides																					
			PAHs (Total)	Phenanthrene	Pyrene	4,4-DDE	Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	beta-BHC	Chlordane	DDD	DDT	Dieldrin	DDT+DDE+DDD (Sum of Total)	delta-BHC	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																											
NEPM 2013 EIL - Commercial Industrial (generic)													640														
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Soil HIL D			4000					45			530				3600					100			50			2500	160
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																											
Sample ID	**Sample Date**	**Laboratory Report Number**																									
ST3-01 0-0.1	7/07/2019	664672	1.2	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-02 0-0.1	7/07/2019	664672	2	<0.5	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QA20190707_01	7/07/2019	664672	4.7	0.5	0.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
QC20190707-01	7/07/2019	221255	3	0.3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
ST3-03 0-0.1	7/07/2019	664672	4.5	0.8	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	1.3	<0.5	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<10
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-13 0-0.15	7/07/2019	664672	4.5	<0.5	0.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-14 0-0.1	7/07/2019	664672	14.9	1.8	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-15 0-0.1	7/07/2019	664672	44.8	6.2	8.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<1
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			Chlorinated Alkanes																	
			1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																				
NEPM 2013 EIL - Commercial Industrial (generic)																				
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																				
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																				
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																				
NEPM 2013 Soil HIL D																				
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																				
Sample ID	**Sample Date**	**Laboratory Report Number**																		
ST3-01 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-02 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA20190707_01	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC20190707-01	7/07/2019	221255	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	
ST3-03 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-13 0-0.15	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-14 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-15 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

			Chlorinated Alkenes								Solvents	Polychlorinated Biphenyls								PFAS																	
			4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	2-Propanone (Acetone)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)	1H,1H,2H,2H-perfluorododecanesulfonic acid	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	Perfluoropentanoic acid (PFPeA)	N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	Perfluorooctanoic acid (PFOA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	Perfluorononanoic acid (PFNA)	N-methyl-perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorooctanesulfonamide (FOSA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorodecanesulfonic acid (PFDS)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.005	0.01	0.005	0.005	0.005	0.005	0.005
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial																																			50						20	
NEPM 2013 EIL - Commercial Industrial (generic)																																										
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																										
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																										
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																										
NEPM 2013 Soil HIL D																			7																						
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses																																										
Sample ID	**Sample Date**	**Laboratory Report Number**																																								
ST3-01 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-02 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QA20190707_01	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
QC20190707-01	7/07/2019	221255	<1	<1	<1	<1	<1	<1	<1	<1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001		<0.005	<0.0001	<0.0001	<0.001	0.0007	<0.001		<0.001	0.0004	<0.001		<0.001	<0.0001			0.0003	
ST3-03 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0.8-0.9	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-06 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-08 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-09 0.4-0.5	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-09 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-10 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-11 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-12 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-13 0-0.15	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-14 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-15 0-0.1	7/07/2019	664672	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-16 0.3-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	0.013	<0.005	0.0094	<0.005
ST3-16 0.8-1.0	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-17 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-17 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.094	<0.005
ST3-18 0.3-0.4	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-18 1.0-1.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST3-19 0.5-0.7	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST319 1.0-1.2	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
ST320 0.2-0.3	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.01	<0.005	<0.01	<0.005	<0.005	0.089	<0.005
ST320 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	0.013	<0.005

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table A - Soil Analytical Results
Project Number: 54782
Project Name: Stage 3 East West Connecto Road ESA

												Monocyclic Aromatic Hydrocarbons					Miscellaneous Hydrocarbons						Chlorinated Benzenes					Trihalomethanes				: Sulfur Com	Other	EPA VIC - IWRG621			
			Perfluoroundecanoic acid (PFUnA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorooctanesulfonic acid (PFOS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DER PFAS (n=10)	Sum of PFASs (n=28)	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	Bromobenzene	Isopropylbenzene	Styrene	1,2-dibromoethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Bromomethane	Dibromomethane	Iodomethane	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	Hexachlorobenzene	Bromodichloromethane	Chloroform	Dibromochloromethane	Tribromomethane	Carbon disulfide	% Moisture 103oC	Chlorinated Hydrocarbons EPAVic	Other Chlorinated Hydrocarbons EPAVic	Organochlorine Pesticides EPAVic	Other Organochlorine Pesticides EPAVic
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.1	0.1
NEMP 2019 PFAS Human Health Screening Values - Industrial/Commercial							20	20																													
NEPM 2013 EIL - Commercial Industrial (generic)																																					
NEPM 2013 ESL Commercial and Industrial, Coarse Soil																																					
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Commercial/Industrial - HSL D																																					
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																					
NEPM 2013 Soil HIL D																											80										
HEPA 2019 PFAS Ecological Indirect Exposure - All landuses							0.01																														
Sample ID	**Sample Date**	**Laboratory Report Number**																																			
ST3-01 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<2	<2
ST3-02 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0081	0.0081	0.0081	0.0081	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	28	<0.5	<0.5	<0.2	<0.2
QA20190707_01	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0074	0.0074	0.0074	0.0074	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	27	<0.5	<0.5	<0.2	<0.2
QC20190707-01	7/07/2019	221255					0.0068	-	-	-	-	-						<1			<1	<1		<1	<1	<1	<1	<0.1	<1	<1	<1							
ST3-03 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.0062	0.0062	0.0062	0.0062	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.2	<0.2
ST3-04 0.8-0.9	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-04 0-0.1	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ST3-05 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-06 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	6.7	<0.5	<0.5	<0.2	<0.2
ST3-08 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5	<0.2	<0.2
ST3-09 0.4-0.5	7/07/2019	664672	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5	<0.5	<0.2	<0.2
ST3-09 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
ST3-10 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5	<0.5	<2	<2
ST3-11 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.2	<0.2
ST3-12 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5	<0.5	<0.2	<0.2
ST3-13 0-0.15	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-14 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.2	<0.2
ST3-15 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5	<0.5	<0.2	<0.2
ST3-16 0.3-0.5	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.16	0.1694	0.16	0.1694	0.1694	0.1824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	-	-	-	-
ST3-16 0.8-1.0	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.03	0.03	0.03	0.03	0.03	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-
ST3-17 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.061	0.061	0.061	0.061	0.061	0.061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-17 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.05	0.0565	0.05	0.0565	0.0565	0.0565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-
ST3-18 0.3-0.4	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	-	-	-	-
ST3-18 1.0-1.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.011	0.011	0.011	0.011	0.011	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-
ST3-19 0.5-0.7	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	-	-	-
ST319 1.0-1.2	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
ST320 0.2-0.3	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.26	0.349	0.275	0.364	0.369	0.369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-
ST320 0-0.1	7/07/2019	664672	<0.005	<0.005	<0.005	<0.005	0.13	0.143	0.13	0.143	0.143	0.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-

Data Comments
#1 No respirable fibres detected.
#2 Organic fibres detected.
#3 Nil

Table B - Asbestos in Soil Analytical Results
Project Number - 54782
Project Name - Stage 3 East West Connector Road ESA

			Asbestos Laboratory													Asbestos - Trace Analysis				
			Approx. Sample Mass	Asbestos from ACM in Soil	Mass ACM	Mass Asbestos in ACM	Mass FA	Mass Asbestos in FA	Asbestos from FA & AF in Soil	Mass AF	Mass Asbestos in AF	Mass Asbestos in FA & AF	Total Asbestos#1	ACM>7 mm Estimation	FA and AF Estimation*#2	ACM - Comment	FA - Comment	AF - Comment	Organic Fibres - Comment	Respirable Fibres - Comment
			g	%w/w	g	g	g	g	%w/w	g	g	g	g/kg	%w/w	%(w/w)	Comment	Comment	Comment	Comment	Comment
EQL																				
NEPM 2013 Soil HIL D				0.05					0.001					0.05	0.001					
NEPM 2013 Soil HSL D - Sensitive Setting																				
Field_ID	**Sampled_Date-Tim**	**Lab Report Number**																		
ST3-01 0-0.1	7/07/2019	664672	401	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-02 0-0.1	7/07/2019	664672	403	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QA20190707_01	7/07/2019	664672	339	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
QC20190707-01	7/07/2019	09-Oct-2505	423	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-03 0-0.1	7/07/2019	664672	451	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-04 0-0.1	7/07/2019	664672	391	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-05 0-0.1	7/07/2019	664672	435	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-06 0-0.1	7/07/2019	664672	561	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-08 0-0.1	7/07/2019	664672	425	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-09 0-0.1	7/07/2019	664672	515	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-10 0-0.1	7/07/2019	664672	570	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-11 0-0.1	7/07/2019	664672	482	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-12 0-0.1	7/07/2019	664672	633	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-13 0-0.15	7/07/2019	664672	493	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-14 0-0.1	7/07/2019	664672	502	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected
ST3-15 0-0.1	7/07/2019	664672	281	0	0	0	0	0	0	0	0	0	-	-	-	No asbestos detected at the reporting limit of 0.001% w/w.*	NIL	NIL	Organic fibre detected	No respirable fibres detected

Appendix A Photographs

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Photograph 1 – Drill rig operating in the western portion of the site in proximity to the Dunheved Open Channel

Photograph 2 – Location collected directly adjacent to the Dunheved Open Channel culvert

Photograph 3 – the approximated 1.2 m width Dunheved Open Channel culvert

Photograph 4 – Soil cores of locations ST3-13 and ST3-14

JBS&G

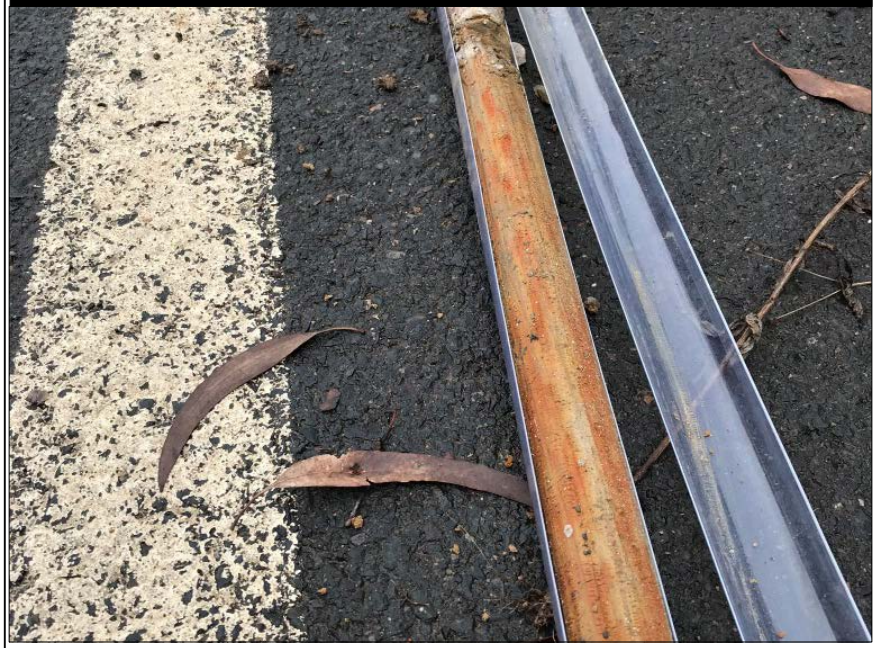
Job No: 54782	
Client: Minter Ellison	
Version: Rev 0	Date: 15/07/2019
Drawn By: GB	Checked By: MP
Not to Scale	
Coord. Sys n/a	

Environmental Site Assessment – Stage 3 of the East West Connector Road, NSW

APPENDIX A

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Photograph 5: Soil core at location ST3- 08



Photograph 6: Soil Core at location ST3-02

Photograph 7: Soil Cores at Locations ST3-09, ST3-10 and ST3-11

Photograph 8 – Soil Cores at locations ST3-17, ST3-18 and ST3-19

JBS&G

Job No: 54782	
Client: Minter Ellison	
Version: Rev 0	Date: 15/07/2019
Drawn By: GB	Checked By: MP
Not to Scale	
Coord. Sys n/a	

Environmental Site Assessment – Stage 3 of the East West Connector Road, NSW

APPENDIX A

Document Set ID: 8830578
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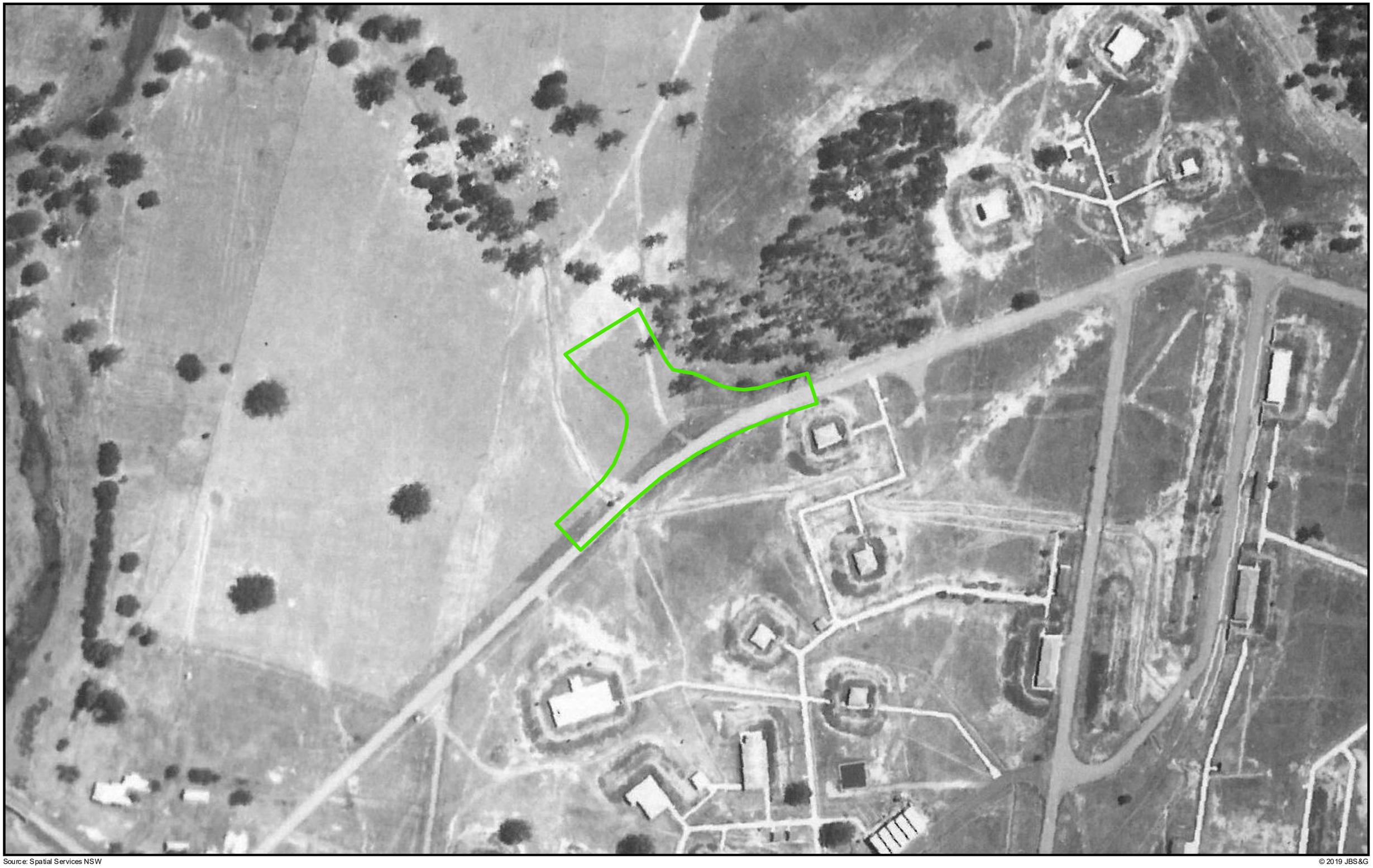
Appendix B Aerial Photographs

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019



Source: Spatial Services NSW

© 2019 JBS&G

0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

JBS&G **Historical Aerial 1947**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_1947

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

0 20 40 80 m

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Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 1955**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_1955

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

© 2019 JBS&G

0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 1965**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_19655

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 1975**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_1975

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 1982**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_1982

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev.	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 1991**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_1991

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

JBS&G Historical Aerial 2002

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_2002

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev.	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

Legend:

JBS&G **Historical Aerial 2005**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_2005

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: www.nearmap.com - Imagery 20091020

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0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

Rev.	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

JBS&G **Historical Aerial 2009**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_2009

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: Spatial Services NSW

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0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

Rev	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

JBS&G Historical Aerial 2017

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_2017

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Source: www.nearmap.com - Imagery 20180408

© 2019 JBS&G

0 15 30 60 m

Scale: 1:2,000

Datum: GDA 1994 MGA Zone 56 - AHD

Legend:

Stage 3 Boundary

Rev.	Description	Drn.	Date
A3			
A	Aerials - Stage 3	RF	15-07-2019

JBS&G **Historical Aerial 2018**

Client: Minter Ellison

Project: Central Precinct

Job No: 54782 File Name: 54020_2018

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Appendix C EPA Records

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

List of NSW Contaminated Sites Notified to EPA as of 20 March 2019

Background

A strategy to systematically assess, prioritise and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

For some notifications, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any offsite consequences to the community or environment. Such sites would still need to be cleaned up, but this could be done in conjunction with any subsequent building or redevelopment of the land. These sites may not require intervention under the CLM Act, but could be dealt with through the planning and development consent process.

Where indications are that contamination is significant enough to warrant regulation having regard to the matters in section 12 of the CLM Act, the EPA may apply the regulatory provisions of the CLM Act to have the appropriate person (for example, the responsible polluter and/or landowner) investigate and remediate the site.

Where the EPA reasonably suspects that a pollution incident is occurring (or has occurred) at a premise, the EPA, as the appropriate regulatory authority, may choose to regulate the incident and any resulting contamination under the POEO Act by ordering the occupier or the owner to carry out certain actions.

As such, the sites notified to the EPA and presented in the following table are at various stages of the assessment and/or remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The tables provide an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the responsible landowner.

The following questions and answers may assist those interested in this issue:

Frequently asked questions

What is the difference between the "List of NSW Contaminated Sites Notified to the EPA" and the "Contaminated Land: Record of Notices"?

A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing on this "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

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Why my site appears on the list?

Your site appears on the list because of one or more of the following reasons:

- The site owner and/or the person partly or fully responsible for causing the contamination notified to the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the "polluter" believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that the EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily imply the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.
- The contamination is being managed under a specifically tailored program operated by another agency (for example t
- he Department of Industry and Investment's *Derelict Mines Program*).

I am the owner of a site that appears on the list. What should I do?

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

I am a prospective buyer of a site that appears on the list. What should I do?

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You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon, particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. Alternatively, the EPA may require information via a notice issued under s77 of the *Contaminated Land Management Act 1997* or issue a Preliminary Investigation Order.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being	The EPA has completed an assessment of the contamination and decided

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finalised	that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA as *the appropriate regulatory authority* reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the

(EP&A Act)	*Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the *Contaminated Land Management Act 1997* (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BERESFIELD	Former Koppers Timber Treatment Site	53 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79902937	151.6358846
BERKELEY VALE	Former Berkeley Vale Service Station	121-123 Lakedge AVENUE	Service Station	Regulation under CLM Act not required	-33.34899186	151.4423109
BERKSHIRE PARK	Shell Coles Express Berkshire Park	746 - 752 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.66508654	150.7990243
BEROWRA	Caltex Berowra Service Station	12-14 Berowra Waters ROAD	Service Station	Regulation under CLM Act not required	-33.6233827	151.1505554
BEROWRA	7-Eleven Berowra Service Station	965-969 Pacific (Cnr Waratah Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62673163	151.1479171
BEROWRA	Shell Coles Express Berowra	955 Pacific (Cnr Yallambee Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62818015	151.1475736
BEROWRA	42 Berowra Waters Road	42 Berowra Waters ROAD	Unclassified	Regulation under CLM Act not required	-33.6203211	151.1482454
BERRIGAN	Caltex Service Station Berrigan	155-165 Chanter STREET	Service Station	Regulation under CLM Act not required	-35.6557616	145.8015557
BERRY	Berry Service Centre - Shell Branded	88 Queen STREET	Service Station	Regulation under CLM Act not required	-34.77571634	150.6961713
BERRY	Shell Berry - Now Oleum branded	75 Queen STREET	Service Station	Regulation being finalised	-34.77500516	150.695167
BEXLEY	7-Eleven Bexley	474 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95160096	151.1252355
BEXLEY	7-Eleven (former Mobil) Service Station Bexley	613 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95539246	151.118447
BILLINUDGEL	CSR Readymix	Mogo PLACE	Other Industry	Regulation under CLM Act not required	-28.50210255	153.5278161
BILLINUDGEL	Billinudgel General Store	2A Wilfred STREET	Service Station	Under assessment	-28.50435	153.52701
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881
BLACKMANS FLAT	Lamberts Gully Mine	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	Land at Reservoir Road	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLACKTOWN	7-Eleven Service Station	60 Walters ROAD	Service Station	Regulation under CLM Act not required	-33.77599783	150.8948926
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.990197	151.11361
BLAKEHURST	The Bay Nursing Home	392-394 Princes HIGHWAY	Service Station	Under assessment	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74627	150.6137669

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SPRINGVALE	Springvale Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.40334736	150.1070462
ST CLAIR	7-Eleven (former Mobil) Service Station	4 Endeavour AVENUE	Service Station	Regulation under CLM Act not required	-33.79430926	150.7885793
ST IVES	7-Eleven (former Mobil) St Ives Service Station	157-159 Mona Vale Road, corner Putarri AVENUE	Service Station	Regulation under CLM Act not required	-33.73265301	151.1563899
ST IVES	Caltex Service Station	452 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.70752272	151.187545
ST IVES	Caltex Service Station	164 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7307595	151.1570462
ST IVES	Caltex Service Station St Ives	363 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7168971	151.1735263
ST IVES	Shell Service Station	179-181 Mona Vale ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73124859	151.1575827
ST LEONARDS	Telstra Data Centre	4A Herbert STREET	Other Petroleum	Under assessment	-33.81873741	151.1914222
ST MARYS	Former Woolworths Service Station	120-128 Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75525115	150.7752897
ST MARYS	7-Eleven (former Mobil) Service Station	2 Christie STREET	Service Station	Regulation under CLM Act not required	-33.74790843	150.7767667
ST MARYS	7-Eleven (former Mobil) Service Station	2 Wilson STREET	Service Station	Regulation under CLM Act not required	-33.77790415	150.771689
ST MARYS	Solveco	38 LINKS ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.738673	150.771554
ST MARYS	Integral Energy Mt Druitt Transmission Substation	69 Kurrajong North ROAD	Other Industry	Regulation under CLM Act not required	-33.76376093	150.7921691
ST MARYS	Caltex St Marys Service Station	Wordoo St Cnr Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75334263	150.7755489
ST MARYS	Chemcolour Industries Ltd	19-25 Anne STREET	Chemical Industry	Under assessment	-33.75027071	150.7725397
ST MARYS	Old Drycleaning location	1-7 Queen STREET	Other Industry	Under assessment	-33.73873	150.771747
ST PETERS	Cooks River Rail Terminal	20 Canal ROAD	Unclassified	Regulation under CLM Act not required	-33.91943986	151.1726689
ST PETERS	Camdenville Park	May STREET	Other Industry	Regulation under CLM Act not required	-33.90911815	151.176951
ST PETERS	Former Tidyburn Facility	53 Barwon Park ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.9130091	151.1809912
ST PETERS	BP Express Service Station	2 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90982281	151.1809936
ST PETERS	Former Industrial Manufacturing Facility (Taubman's Paints)	75 Mary STREET	Other Industry	Regulation under CLM Act not required	-33.91307297	151.1731383
STANMORE	125 Corunna Road	125 Corunna ROAD	Unclassified	Regulation under CLM Act not required	-33.88937382	151.1644589
STRATHFIELD	7-Eleven (former Mobil) Service Station	577 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88736091	151.0743474

Search results

Your search for: **General Search** with the following criteria

Name - ADI St Marys

returned 0 result

Search Again

Document: Sept5_Ep8365778
Version: 1, Version Date: 28/08/2019

Appendix D Heritage Records

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Version: 1, Version Date: 28/08/2019

Office of Environment & Heritage

Search for NSW heritage

Return to search page where you can refine/broaden your search.

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

Section 2. Items listed under the NSW Heritage Act.

Your search did not return any matching results.

Section 3. Items listed by Local Government and State Agencies.

Your search returned 36 records.

Item name	Address	Suburb	LGA	Information source
Bennett Wagon	Pioneer Park Great Western Highway	St Marys	Penrith	LGOV
Brick Cottage	31-33 Pages Road	St Marys	Penrith	LGOV
Brick Cottage	18 Princess Mary Street	St Marys	Penrith	LGOV
Brick Cottage	40 Gidley Street	St Marys	Penrith	LGOV
Brick Cottage	100-104 Saddington Street	St Marys	Penrith	LGOV
Brick Cottage	38 Gidley Street	St Marys	Penrith	LGOV
Bronte - Villa	50 Gidley Street	St Marys	Penrith	LGOV
Dunheved Fire Station	50 Christie Street	St Marys	Penrith	LGOV
Explosives Storehouse	146 Dunheved Circuit	St Marys	Penrith	LGOV
Gothic Revival Cottage	24 Princess Mary Street	St Marys	Penrith	LGOV
Margaret Farm- House, Barn &	Pages,Barber,Wilson & Schleicher Sts	St	Penr	LGOV

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Tannery Site		Marys	ith	
Milestone	Fronting 410-422 Great Western Highway(between Marsden Rd & Day St)	St Marys	Penrith	LGOV
Mimosa - Dwelling, Fence & Garden	13 Pages Road	St Marys	Penrith	LGOV
Mimosa Stables (Former)	11 Pages Road	St Marys	Penrith	LGOV
Moore Cottage	8 Sainsbury Street	St Marys	Penrith	LGOV
Mourilyan - (original section) of House	329-333 Great Western Highway	St Marys	Penrith	LGOV
Sawmill Precinct		St Marys	Penrith	LGOV
Shop	373 Great Western Highway	St Marys	Penrith	LGOV
South Creek Bridge (Eastbound)	Great Western Highway	St Marys	Penrith	SGOV
St Mary Magdalene Church, Hall, Cemetery, & Grounds	299-311 Great Western Highway	St Marys	Penrith	LGOV
St Marys Council Chambers (Former)	2-6 Mamre Road	St Marys	Penrith	LGOV
St Marys General Cemetery	175-191 Great Western Highway	St Marys	Penrith	LGOV
St Marys Railway Station	Station Street	St Marys	Penrith	LGOV
St Marys Railway Station Group	Queen Street	St Marys	Penrith	SGOV
St. Mary Magdalene Cemetery				LGOV
St. Marys Public School	2 - 6 Princess Mary Street	St Marys	Penrith	LGOV
St. Marys Railway Station Parcels Office				LGOV
Thompsons Tannery (Former)		St Marys	Penrith	LGOV
Thompsons Tannery Site - Tannery Pits (Former) & Well	94 Saddington Street	St Marys	Penrith	LGOV
Thompsons Tannery Site(former)	Saddington Street	St Marys	Penrith	LGOV
Victoria Park and Memorial	Great Western Highway	St Marys	Penrith	LGOV
Victoria Park War Memorial		St Marys	Penrith	LGOV
Wagon Wheel Hotel	449 Great Western Highway	St Marys	Penrith	LGOV
Weatherboard Cottage	20 Princess Mary Street	St Marys	Penrith	LGOV
Weatherboard Cottage	22 Princess Mary Street	St Marys	Penrith	LGOV
Woolpack Inn (Ruin)	556 Great Western Highway	St Marys	Penrith	LGOV

There was a total of 36 records matching your search criteria.

Key:
LGA = Local Government Area
GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.
Note: While the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

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Heritage
Heritage places
- World Heritage List
- National Heritage List
- Commonwealth Heritage List
- List of Overseas Places of Historic Significance to Australia
- Register of the National Estate
- Nominating a heritage place
- Finalised Priority Assessment Lists

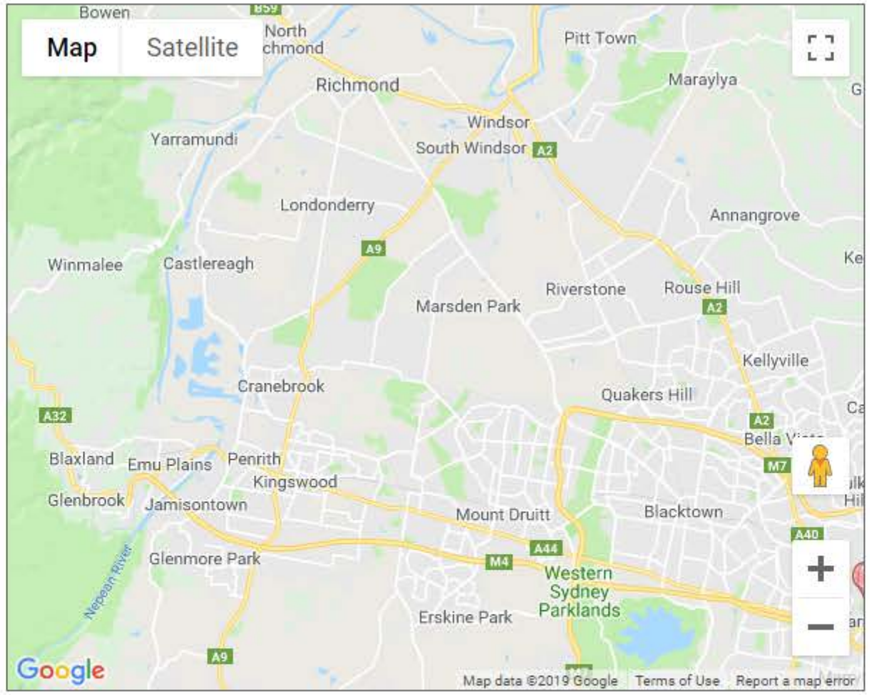
Australia's National Heritage List

The National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation.

Use our interactive map or select from the list below to find out more about a listed place.

Australia's Heritage: National Treasures is a journey around Australia exploring the stories of some of these National Heritage places.

-- Zoom to a National Heritage place on the map --



Customise map view

- Show all places
- NSW
- Vic
- Qld
- SA
- WA
- Tas
- NT
- ACT
- Antarctica
- External Territories

Note: for some places, the names given here may vary from the officially listed place names. For the official National Heritage place names (and numbers of listed places), see the Australian Heritage Database.

Appendix E QA/QC Documentation

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

ESDAT QA Checker
Project:54782 2019
Filter: SDG in('664672')

Overview Summary
- Count of Samples
- Summary By Compound
- Count of Results

Holding Times
- Holding Time Errors (0)

Blanks
- Field Blanks
- Detects in Lab Blanks (0)
- SDG's without Storage Blanks (1)
- SDG's without Method Blanks (0)

Duplicates
- Field and Interlab Duplicates
- Lab Duplicates with high RPDs (2)
- Duplicate Samples with incorrect or missing Parent Samples (0)
- Samples at the same Location/Depth/Time not specified as duplicates (0)

Surrogates
- Surrogate Variation > 30% or outside lab LCL or UCL (237)

Lab Control Samples
- SDG's without a Laboratory Control Sample (0)
- Laboratory Control Samples, Error > 30% (19)

Certified and Standard Reference Materials
- Certified Reference Materials - Error > 10% (0)

Matrix Spikes
- SDG's without a Matrix Spike (0)
- Trip Spikes with invalid Control Sample (0)
- Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples (2)
- Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (14)
- Trip Spike Recoveries (70% - 130% is acceptable) (6)

Inorganic
- Na + CL > TDS (0)
- BOD > COD (0)
- BOD > COD (0)

Other
- Unit Conversion Problems (32)
- OriginalChemNames Requiring Validation (1)
- Samples with no Results (0)
- Samples associated with Wells which are not specified in the Well Table (0)
- Aborted Analysis (7)

INSERT TABLE NAME
Project Number: [Project_Number]
Project Name: [Project_Name]

Contents

Count of Samples

Matrix Type	SOIL	WATER
First Sample Date	7/07/2019	7/07/2019
Last Sample Date	7/07/2019	7/07/2019
Sampling Period (days)	1	1
Number of Samples Submitted	27	3
Number of Non QA Samples Submitted	26	0
Number of Field Blanks	0	0
Number of Trip Blanks	0	2
Number of Rinsates	0	1
Number of Field Duplicates	1	0
Number of Trip Spikes	0	1
Number of Lab Duplicates	6	0
Number of LCSs	10	2
Number of CRMs	0	0
Number of Method Blanks	7	2
Number of Storage Blanks	0	0
Number of Matrix Spikes	10	1
Number of Matrix Spike Dupes	0	0

INSERT TABLE NAME
Project Number: [Project_Number]
Project Name: [Project_Name]

					Num Results	Holding Times (days)			Lab Control Samples			Method and Storage Blanks			Laboratory Duplicates			Surrogates			Matrix,Trip and Compound Spikes			Field,Rinsate and Trip Blanks			Field Duplicates		
Matrix_Type	Filter	Method_Type	ChemName	Range	Non QA (Normal + Composite)	Volatility Group	Sample to Extraction	Sample to Analysis	Acceptable	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	Max RPD > EQL x 1	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	Max RPD > EQL x 1	Num Reported	Acceptable
SOIL	Asbestos	Asbestos	ACM - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		AF - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Approx. Sample Mass		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Asbestos from ACM in Soil		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Asbestos from FA & AF in Soil		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		FA - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass ACM		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass AF		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass Asbestos in ACM		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass Asbestos in AF		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass Asbestos in FA		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass Asbestos in FA & AF		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Mass FA		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Organic Fibres - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Respirable Fibres - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos		Synthetic Fibres - Comment		14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Asbestos																													
SOIL	Heavy Metal	Heavy Metal	Arsenic (Total)	2 mg/kg	14	Other	2	4	Y	99 to 99	1	Y	ND	1	Y	27	1	Y		0		109 to 109	1	Y		0		7	1	Y
SOIL	Heavy Metal		Cadmium	0.4 mg/kg	14	Other	2	4	Y	105 to 105	1	Y	ND	1	Y		1	Y		0		112 to 112	1	Y		0			1	Y
SOIL	Heavy Metal		Chromium (Total)	5 mg/kg	14	Other	2	4	Y	102 to 102	1	Y	ND	1	Y	7	1	Y		0		100 to 100	1	Y		0		11	1	Y
SOIL	Heavy Metal		Copper	5 mg/kg	14	Other	2	4	Y	101 to 101	1	Y	ND	1	Y	34	1	N		0		108 to 108	1	Y		0		17	1	Y
SOIL	Heavy Metal		Lead	5 mg/kg	14	Other	2	4	Y	102 to 102	1	Y	ND	1	Y	80	1	N		0		101 to 101	1	Y		0		12	1	Y
SOIL	Heavy Metal		Mercury (Inorganic)	0.1 mg/kg	14	Other	2	4	Y	98 to 98	1	Y	ND	1	Y		1	Y		0		115 to 115	1	Y		0		0	1	Y
SOIL	Heavy Metal		Nickel	5 mg/kg	14	Other	2	4	Y	101 to 101	1	Y	ND	1	Y	4	1	Y		0		104 to 104	1	Y		0		0	1	Y
SOIL	Heavy Metal		Zinc	5 mg/kg	14	Other	2	4	Y	97 to 97	1	Y	ND	1	Y	17	1	Y		0		113 to 113	1	Y		0		15	1	Y
SOIL	Heavy Metal																													
SOIL	Inorganic	Inorganic	% Moisture 103oC	1 %	25	Other	1	4	Y		0			0		9	2	Y		0			0			0		4	1	Y
SOIL	Inorganic																													
SOIL	OCP	OCP	4,4-DDE	0.05 mg/kg	14	SVOC	2	4	Y	128 to 128	1	Y	ND	1	Y		1	Y		0		121 to 121	1	Y		0			1	Y
SOIL	OCP		Aldrin	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		119 to 119	1	Y		0			1	Y
SOIL	OCP		Aldrin + Dieldrin (Sum of Total)	0.05 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	OCP		alpha-BHC	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		127 to 127	1	Y		0			1	Y
SOIL	OCP		beta-BHC	0.05 mg/kg	14	SVOC	2	4	Y	120 to 120	1	Y	ND	1	Y		1	Y		0		111 to 111	1	Y		0			1	Y
SOIL	OCP		Chlordane	0.1 mg/kg	14	SVOC	2	4	Y	119 to 119	1	Y	ND	1	Y		1	Y		0		121 to 121	1	Y		0			1	Y
SOIL	OCP		DDD	0.05 mg/kg	14	SVOC	2	4	Y	129 to 129	1	Y	ND	1	Y		1	Y		0		123 to 123	1	Y		0			1	Y
SOIL	OCP		DDT	0.05 mg/kg	14	SVOC	2	4	Y	126 to 126	1	Y	ND	1	Y		1	Y		0		73 to 73	1	Y		0			1	Y
SOIL	OCP		DDT+DDE+DDD (Sum of Total)	0.05 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	OCP		delta-BHC	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		124 to 124	1	Y		0			1	Y
SOIL	OCP		Dieldrin	0.05 mg/kg	14	SVOC	2	4	Y	128 to 128	1	Y	ND	1	Y		1	Y		0		125 to 125	1	Y		0			1	Y
SOIL	OCP		Endosulfan alpha	0.05 mg/kg	14	SVOC	2	4	Y	126 to 126	1	Y	ND	1	Y		1	Y		0		119 to 119	1	Y		0			1	Y
SOIL	OCP		Endosulfan beta	0.05 mg/kg	14	SVOC	2	4	Y	126 to 126	1	Y	ND	1	Y		1	Y		0		124 to 124	1	Y		0			1	Y
SOIL	OCP		Endosulfan sulphate	0.05 mg/kg	14	SVOC	2	4	Y	126 to 126	1	Y	ND	1	Y		1	Y		0		126 to 126	1	Y		0			1	Y
SOIL	OCP		Endrin	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		115 to 115	1	Y		0			1	Y
SOIL	OCP		Endrin aldehyde	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		111 to 111	1	Y		0			1	Y
SOIL	OCP		Endrin ketone	0.05 mg/kg	14	SVOC	2	4	Y	128 to 128	1	Y	ND	1	Y		1	Y		0		111 to 111	1	Y		0			1	Y
SOIL	OCP		Heptachlor	0.05 mg/kg	14	SVOC	2	4	Y	126 to 126	1	Y	ND	1	Y		1	Y		0		117 to 117	1	Y		0			1	Y
SOIL	OCP		Heptachlor Epoxide	0.05 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		117 to 117	1	Y		0			1	Y
SOIL	OCP		Hexachlorobenzene	0.05 mg/kg	14	SVOC	2	4	Y	124 to 124	1	Y	ND	1	Y		1	Y		0		120 to 120	1	Y		0			1	Y
SOIL	OCP		Lindane	0.05 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0		111 to 111	1	Y		0			1	Y
SOIL	OCP		Methoxychlor	0.2 mg/kg	14	SVOC	2	4	Y	127 to 127	1	Y	ND	1	Y		1	Y		0		79 to 79	1	Y		0			1	Y
SOIL	OCP		Organochlorine Pesticides EPAVic	0.1 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	OCP		Other Organochlorine Pesticides EPAVic	0.1 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	OCP		Surrogate Dibutylchlorendate		0	SVOC			Y		0			0			0	N	78 to 102	5	Y		0			0			0	N
SOIL	OCP		Surrogate TCMX		0	SVOC			Y		0			0			0	N	90 to 122	7	Y		0			0			0	N
SOIL	OCP		Toxaphene	1 mg/kg	14	SVOC	2	4	Y	119 to 119	1	Y	ND	1	Y		0	N		0		112 to 112	1	Y		0			1	Y
SOIL	OCP																													
SOIL	Organic	Organic	>C10-C16 Fraction	50 mg/kg	14	SVOC	2	4	Y	79 to 79	1	Y	ND	1	Y		1	Y		0		75 to 75	1	Y		0			1	Y
SOIL	Organic		>C10-C16 less Naphthalene (F2)	50 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Organic		>C10-C40 Fraction (Total)	100 mg/kg	14	SVOC	2	4	Y		0			0			0	N		0			0			0		0	1	Y
SOIL	Organic		>C16-C34 Fraction	100 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y	0	1	Y		0			0			0		0	1	Y
SOIL	Organic		>C34-C40 Fraction	100 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	Organic		1,1,1,2-tetrachloroethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,1,1-trichloroethane		0	VOC			Y	109 to 109	1	Y	ND	1	Y		0	N		0		94 to 94	1	Y		0			0	N
SOIL	Organic		1,1,2,2-tetrachloroethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,1,2-trichloroethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,1-dichloroethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,1-dichloroethene		0	VOC			Y	115 to 115	1	Y	ND	1	Y		0	N		0		101 to 101	1	Y		0			0	N
SOIL	Organic		1,2,3-trichloropropane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,2-dibromoethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,2-Dichlorobenzene		0	VOC			Y	118 to 118	1	Y	ND	1	Y		0	N		0		94 to 94	1	Y		0			0	N
SOIL	Organic		1,2-dichloroethane		0	VOC			Y	108 to 108	1	Y	ND	1	Y		0	N		0		91 to 91	1	Y		0			0	N
SOIL	Organic		1,2-dichloropropane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,3-dichlorobenzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,3-dichloropropane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		1,4-dichlorobenzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		3-chloropropene		0	SVOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		4-chlorotoluene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		4-Methyl-2-pentanone (MIBK)		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Bromobenzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Bromochloromethane		0	Other			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Bromodichloromethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Bromomethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		C6-C10 Fraction	20 mg/kg	14	VOC	2	4	Y	99 to 99	1	Y	ND	1	Y		1	Y		0		90 to 90	1	Y		0			1	Y
SOIL	Organic		C6-C10 less BTEX (F1)	20 mg/kg	14	VOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	Organic		C6-C9 Fraction	20 mg/kg	14	VOC	2	4	Y	99 to 99	1	Y	ND	1	Y		1	Y		0		88 to 88	1	Y		0			1	Y
SOIL	Organic		Carbon disulfide		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		Carbon tetrachloride		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Chlorobenzene		0	Other			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Chloroethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		Chloroform		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Chloromethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		cis-1,2-dichloroethene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		cis-1,3-dichloropropene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Dibromochloromethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		Dibromomethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Dichlorodifluoromethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		Dichloromethane		0	SVOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Iodomethane		0	VOC			Y		0		ND	1	Y		1	Y		0			0			0			0	N
SOIL	Organic		Isopropylbenzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Naphthalene	0.5 mg/kg	14	VOC	2	4	Y	129 to 129	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y		0			1	Y
SOIL	Organic		Styrene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Tetrachloroethene		0	SVOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		trans-1,2-dichloroethene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		trans-1,3-dichloropropene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic		Tribromomethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N

SOIL	Organic		Trichloroethene		0	VOC			Y	104 to 104	1	Y	ND	1	Y		0	N		0		90 to 90	1	Y		0			0	N
SOIL	Organic		Trichlorofluoromethane		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	N
SOIL	Organic																													
SOIL	PAH	PAH	4-Terphenyl-d14		0	SVOC			Y		0			0			0	N	109 to 131	15	N		0			0			0	N
SOIL	PAH		Acenaphthene	0.5 mg/kg	14	SVOC	2	4	Y	106 to 106	1	Y	ND	1	Y		0	N		0		100 to 100	1	Y		0			1	Y
SOIL	PAH		Acenaphthylene	0.5 mg/kg	14	SVOC	2	4	Y	105 to 105	1	Y	ND	1	Y		0	N		0		100 to 100	1	Y		0			1	Y
SOIL	PAH		Anthracene	0.5 mg/kg	14	SVOC	2	4	Y	104 to 104	1	Y	ND	1	Y		0	N		0		95 to 95	1	Y		0			1	Y
SOIL	PAH		Benz(a)anthracene	0.5 mg/kg	14	SVOC	2	4	Y	102 to 102	1	Y	ND	1	Y		0	N		0		98 to 98	1	Y		0		18	1	Y
SOIL	PAH		Benzo(a)pyrene	0.5 mg/kg	14	SVOC	2	4	Y	101 to 101	1	Y	ND	1	Y		0	N		0		92 to 92	1	Y		0		18	1	Y
SOIL	PAH		Benzo(a)pyrene TEQ (lower bound)*	0.5 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0		33	1	N
SOIL	PAH		Benzo(a)pyrene TEQ (medium bound)*	0.5 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0		50	1	N
SOIL	PAH		Benzo(a)pyrene TEQ (upper bound)*	0.5 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0		8	1	Y
SOIL	PAH		Benzo(b,j)fluoranthene	0.5 mg/kg	14	SVOC	2	4	Y	93 to 93	1	Y	ND	1	Y		0	N		0		93 to 93	1	Y		0		0	1	Y
SOIL	PAH		Benzo(g,h,i)perylene	0.5 mg/kg	14	SVOC	2	4	Y	90 to 90	1	Y	ND	1	Y		0	N		0		97 to 97	1	Y		0		0	1	Y
SOIL	PAH		Benzo(k)fluoranthene	0.5 mg/kg	14	SVOC	2	4	Y	115 to 115	1	Y	ND	1	Y		0	N		0		98 to 98	1	Y		0			1	Y
SOIL	PAH		Chrysene	0.5 mg/kg	14	SVOC	2	4	Y	106 to 106	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y		0			1	Y
SOIL	PAH		Dibenz(a,h)anthracene	0.5 mg/kg	14	SVOC	2	4	Y	92 to 92	1	Y	ND	1	Y		0	N		0		95 to 95	1	Y		0			1	Y
SOIL	PAH		Fluoranthene	0.5 mg/kg	14	SVOC	2	4	Y	114 to 114	1	Y	ND	1	Y		0	N		0		107 to 107	1	Y		0		22	1	Y
SOIL	PAH		Fluorene	0.5 mg/kg	14	SVOC	2	4	Y	106 to 106	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y		0			1	Y
SOIL	PAH		Indeno(1,2,3-c,d)pyrene	0.5 mg/kg	14	SVOC	2	4	Y	90 to 90	1	Y	ND	1	Y		0	N		0		93 to 93	1	Y		0		18	1	Y
SOIL	PAH		Naphthalene	0.5 mg/kg	14	VOC	2	4	Y	104 to 104	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y		0			1	Y
SOIL	PAH		PAHs (Total)	0.5 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0		81	1	N
SOIL	PAH		Phenanthrene	0.5 mg/kg	14	SVOC	2	4	Y	109 to 109	1	Y	ND	1	Y		0	N		0		99 to 99	1	Y		0		0	1	Y
SOIL	PAH		Pyrene	0.5 mg/kg	14	SVOC	2	4	Y	113 to 113	1	Y	ND	1	Y		0	N		0		105 to 105	1	Y		0		25	1	Y
SOIL	PAH		Surrogate 2-fluorobiphenyl		0	SVOC			Y		0			0			0	N	106 to 130	15	N		0			0			0	N
SOIL	PAH																													
SOIL	PCB	PCB	Aroclor 1016	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1221	0.1 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1232	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1242	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1248	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1254	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	PCB		Aroclor 1260	0.5 mg/kg	14	SVOC	2	4	Y	80 to 80	1	Y	ND	1	Y		1	Y		0		101 to 101	1	Y		0			1	Y
SOIL	PCB		PCBs (Total)	0.5 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		0	N		0			0			0			1	Y
SOIL	PCB		Surrogate Dibutylchlorendate		0	SVOC			Y		0			0			0	N	83 to 121	10	Y		0			0			0	N
SOIL	PCB		Surrogate TCMX		0	SVOC			Y		0			0			0	N	87 to 131	8	N		0			0			0	N
SOIL	PCB																													
SOIL	PFAS	PFAS	13C2-4:2 FTS (surr.)		0	Other			Y		0			0			0	N	to 180 *1Not Determ	25	N		0			0			0	N
SOIL	PFAS		13C2-6:2 FTS (surr.)		0	Other			Y		0			0			0	N	43 to 180	25	N		0			0			0	N
SOIL	PFAS		13C2-8:2 FTS (surr.)		0	Other			Y		0			0			0	N	66 to 185	25	N		0			0			0	N
SOIL	PFAS		13C2-PFDoDA (surr.)		0	Other			Y		0			0			0	N	116 to 156	25	N		0			0			0	N
SOIL	PFAS		13C2-PFTeDA (surr.)		0	Other			Y		0			0			0	N	18 to 145	25	N		0			0			0	N
SOIL	PFAS		13C2-PFUnDA (surr.)		0	Other			Y		0			0			0	N	118 to 161	25	N		0			0			0	N
SOIL	PFAS		13C3-PFBS (surr.)		0	Other			Y		0			0			0	N	60 to 153	25	N		0			0			0	N
SOIL	PFAS		13C4-PFBA (surr.)		0	Other			Y		0			0			0	N	92 to 122	25	Y		0			0			0	N
SOIL	PFAS		13C4-PFHpA (surr.)		0	Other			Y		0			0			0	N	81 to 122	25	Y		0			0			0	N
SOIL	PFAS		13C5-PFHxA (surr.)		0	SVOC			Y		0			0			0	N	87 to 145	25	N		0			0			0	N
SOIL	PFAS		13C5-PFNA (surr.)		0	Other			Y		0			0			0	N	76 to 132	25	N		0			0			0	N
SOIL	PFAS		13C5-PFPeA (surr.)		0	Other			Y		0			0			0	N	53 to 98	25	N		0			0			0	N
SOIL	PFAS		13C6-PFDA (surr.)		0	SVOC			Y		0			0			0	N	92 to 124	25	Y		0			0			0	N
SOIL	PFAS		13C8-FOSA (surr.)		0	Other			Y		0			0			0	N	45 to 109	25	N		0			0			0	N
SOIL	PFAS		13C8-PFOA (surr.)		0	Other			Y		0			0			0	N	87 to 123	25	Y		0			0			0	N
SOIL	PFAS		13C8-PFOS (surr.)		0	SVOC			Y		0			0			0	N	84 to 134	25	N		0			0			0	N
SOIL	PFAS		18O2-PFHxS (surr.)		0	Other			Y		0			0			0	N	78 to 144	25	N		0			0			0	N
SOIL	PFAS		1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTS)	0.005 mg/kg	24	Other	3	4	Y	107 to 107	1	Y	ND	1	Y		2	Y		0		123 to 123	1	Y		0			1	Y
SOIL	PFAS		1H.1H.2H.2H-perfluorododecanesulfonic acid	0.005 mg/kg	24	Other	3	4	Y	102 to 102	1	Y	ND	1	Y		2	Y		0		109 to 109	1	Y		0			1	Y
SOIL	PFAS		1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTS)	0.005 mg/kg	24	Other	3	4	Y	111 to 111	1	Y	ND	1	Y		2	Y		0		107 to 107	1	Y		0			1	Y
SOIL	PFAS		1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTS)	0.01 mg/kg	24	Other	3	4	Y	106 to 106	1	Y	ND	1	Y		2	Y		0		105 to 105	1	Y		0			1	Y
SOIL	PFAS		2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	0.005 mg/kg	24	Other	3	4	Y	57 to 57	1	N	ND	1	Y		2	Y		0		68 to 68	1	N		0			1	Y
SOIL	PFAS		2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	0.005 mg/kg	24	SVOC	3	4	Y	108 to 108	1	Y	ND	1	Y		2	Y		0		76 to 76	1	Y		0			1	Y
SOIL	PFAS		D3-N-MeFOSA (surr.)		0	Other			Y		0			0			0	N	32 to 114	25	N		0			0			0	N
SOIL	PFAS		D3-N-MeFOSAA (surr.)		0	Other			Y		0			0			0	N	t to 200 *5Not Determ	25	N		0			0			0	N
SOIL	PFAS		D5-N-EtFOSA (surr.)		0	Other			Y		0			0			0	N	53 to 90	25	N		0			0			0	N
SOIL	PFAS		D5-N-EtFOSAA (surr.)		0	SVOC			Y		0			0			0	N	56 to 198	25	N		0			0			0	N
SOIL	PFAS		D7-N-MeFOSE (surr.)		0	Other			Y		0			0			0	N	to 142 *1Not Determ	25	N		0			0			0	N
SOIL	PFAS		D9-N-EtFOSE (surr.)		0	Other			Y		0			0			0	N	28 to 124	25	N		0			0			0	N
SOIL	PFAS		N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	0.005 mg/kg	24	Other	3	4	Y	125 to 125	1	Y	ND	1	Y		2	Y		0		114 to 114	1	Y		0			1	Y
SOIL	PFAS		N-ethyl-perfluorooctanesulfonamidoacetic acid	0.01 mg/kg	24	Other	3	4	Y	115 to 115	1	Y	ND	1	Y		2	Y		0		112 to 112	1	Y		0			1	Y
SOIL	PFAS		N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	0.005 mg/kg	24	Other	3	4	Y	88 to 88	1	Y	ND	1	Y		2	Y		0		102 to 102	1	Y		0			1	Y
SOIL	PFAS		N-methyl-perfluorooctanesulfonamidoacetic acid	0.01 mg/kg	24	Other	3	4	Y	116 to 116	1	Y	ND	1	Y		2	Y		0		118 to 118	1	Y		0			1	Y
SOIL	PFAS		Perfluorobutanesulfonic acid (PFBS)	0.005 mg/kg	24	Other	3	4	Y	97 to 97	1	Y	ND	1	Y		2	Y		0		113 to 113	1	Y		0			1	Y
SOIL	PFAS		Perfluorobutanoic acid (PFBA)	0.005 mg/kg	24	Other	3	4	Y	138 to 138	1	N	ND	1	Y		2	Y		0		133 to 133	1	N		0			1	Y
SOIL	PFAS		Perfluorodecanesulfonic acid (PFDS)	0.005 mg/kg	24	Other	3	4	Y	117 to 117	1	Y	ND	1	Y		2	Y		0		120 to 120	1	Y		0			1	Y
SOIL	PFAS		Perfluorodecanoic acid (PFDA)	0.005 mg/kg	24	Other	3	4	Y	126 to 126	1	Y	ND	1	Y		2	Y		0		122 to 122	1	Y		0			1	Y
SOIL	PFAS		Perfluorododecanoic acid (PFDoA)	0.005 mg/kg	24	Other	3	4	Y	98 to 98	1	Y	ND	1	Y		2	Y		0		137 to 137	1	N		0			1	Y
SOIL	PFAS		Perfluoroheptanesulfonic acid (PFHpS)	0.005 mg/kg	24	SVOC	3	4	Y	135 to 135	1	N	ND	1	Y		2	Y		0		135 to 135	1	N		0			1	Y
SOIL	PFAS		Perfluoroheptanoic acid (PFHpA)	0.005 mg/kg	24	Other	3	4	Y	133 to 133	1	N	ND	1	Y		2	Y		0		123 to 123	1	Y		0			1	Y
SOIL	PFAS		Perfluorohexanesulfonic acid (PFHxS)	0.005 mg/kg	21	Other	3	4	Y	120 to 120	1	Y	ND	1	Y		2	Y		0		116 to 116	1	Y		0			1	Y
SOIL	PFAS		Perfluorohexanoic acid (PFHxA)	0.005 mg/kg	24	Other	3	4	Y	113 to 113	1	Y	ND	1	Y		2	Y		0		124 to 124	1	Y		0			1	Y
SOIL	PFAS		Perfluorononanoic acid (PFNA)	0.005 mg/kg	24	Other	3	4	Y	132 to 132	1	N	ND	1	Y		2	Y		0		141 to 141	1	N		0			1	Y
SOIL	PFAS		Perfluorooctanesulfonamide (FOSA)	0.005 mg/kg	24	Other	3	4	Y	94 to 94	1	Y	ND	1	Y		2	Y		0		136 to 136	1	N		0			1	Y
SOIL	PFAS		Perfluorooctanesulfonic acid (PFOS)	0.005 mg/kg	16	Other	3	4	Y	118 to 118	1	Y	ND	1	Y		2	Y		0		120 to 120	1	Y		0			0	N
SOIL	PFAS		Perfluorooctanoic acid (PFOA)	0.005 mg/kg	23	Other	3	4	Y	129 to 129	1	Y	ND	1	Y		2	Y		0		112 to 112	1	Y		0			1	Y
SOIL	PFAS		Perfluoropentanesulfonic acid (PFPeS)	0.005 mg/kg	24	SVOC	3	4	Y	95 to 95	1	Y	ND	1	Y		2	Y		0		117 to 117	1	Y		0			1	Y
SOIL	PFAS		Perfluoropentanoic acid (PFPeA)	0.005 mg/kg	24	Other	3	4	Y	96 to 96	1	Y	ND	1	Y		2	Y		0		93 to 93	1	Y		0			1	Y
SOIL	PFAS		Perfluoropropanesulfonic acid (PFPrS)		24	Other	3	4	Y	94 to 94	1	Y	ND	1	Y		2	Y		0		129 to 129	1	Y		0			1	Y
SOIL	PFAS		Perfluorotetradecanoic acid (PFTeDA)	0.005 mg/kg	24	Other	3	4	Y	95 to 95	1	Y	ND	1	Y		2	Y		0		107 to 107	1	Y		0			1	Y
SOIL	PFAS		Perfluorotridecanoic acid (PFTrDA)	0.005 mg/kg	24	Other	3	4	Y	80 to 80	1	Y	ND	1	Y		2	Y		0		88 to 88	1	Y		0			1	Y
SOIL	PFAS		Perfluoroundecanoic acid (PFUnA)	0.005 mg/kg	24	Other	3	4	Y	135 to 135	1	N	ND	1	Y		2	Y		0		122 to 122	1	Y		0			1	Y
SOIL	PFAS		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.005 mg/kg	24	SVOC	1	4	Y		0			0			0	N		0			0			0		9	1	Y
SOIL	PFAS		Sum of PFASs (n=28)	0.05 mg/kg	24	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	PFAS		Sum of PFHxS and PFOS	0.005 mg/kg	24	Other	1	4	Y		0			0			0	N		0			0			0		9	1	Y
SOIL	PFAS		Sum of US EPA PFAS (PFOS + PFOA)*	0.005 mg/kg	24	SVOC	1	4	Y		0			0			0	N		0			0			0		9	1	Y
SOIL	PFAS		Sum of WA DER PFAS (n=10)	0.01 mg/kg	24	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	PFAS																													
SOIL	TPH	TPH	C10-C14 Fraction	20 mg/kg	14	SVOC	2	4	Y	83 to 83	1	Y	ND	1	Y		1	Y		0		80 to 80	1	Y		0			1	Y
SOIL	TPH		C10-C36 Fraction (Total)	50 mg/kg	14	SVOC	1	4	Y		0			0			0	N		0			0			0		53	1	N
SOIL	TPH		C15-C28 Fraction	50 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	TPH		C29-C36 Fraction	50 mg/kg	14	SVOC	2	4	Y		0		ND	1	Y	0	1	Y		0			0			0		53	1	N
SOIL	TPH																													
SOIL	VOC	VOC	1,1,1,2-tetrachloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,1,1-trichloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,1,2,2-tetrachloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,1,2-trichloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,1-dichloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,1-dichloroethene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,2,3-trichloropropane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,2,4-trimethyl benzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,2-dibromoethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,2-Dichlorobenzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,2-dichloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y

SOIL	VOC		1,2-dichloropropane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,3,5-trimethyl benzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,3-dichlorobenzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,3-dichloropropane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		1,4-dichlorobenzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		2-Butanone (MEK)	0.5 mg/kg	14	VOC	2	4	Y		0		ND	1	Y		1	Y		0			0			0			1	Y
SOIL	VOC		2-Propanone (Acetone)	0.5 mg/kg	14	Other	2	4	Y		0		ND	1	Y		0	N		0			0			0			1	Y
SOIL	VOC		3-chloropropene	0.5 mg/kg	14	SVOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		4-chlorotoluene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		4-Methyl-2-pentanone (MIBK)	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Bromobenzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Bromochloromethane	0.5 mg/kg	14	Other	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Bromodichloromethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Bromomethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Carbon disulfide	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Carbon tetrachloride	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Chlorinated Hydrocarbons EPAVic	0.5 mg/kg	14	VOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Chlorobenzene	0.5 mg/kg	14	Other	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Chloroethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Chloroform	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Chloromethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		cis-1,2-dichloroethene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		cis-1,3-dichloropropene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Dibromochloromethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Dibromomethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Dichlorodifluoromethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Dichloromethane	0.5 mg/kg	14	SVOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Ethylbenzene	0.1 mg/kg	1	VOC	2	4	Y		0			0			0	N		0			0			0			0	**N**
SOIL	VOC		Iodomethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Isopropylbenzene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Other Chlorinated Hydrocarbons EPAVic	0.5 mg/kg	14	VOC	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Styrene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Surrogate 4-BFB		0	VOC			Y		0			0			0	N	110 to 135	12	**N**		0			0			0	**N**
SOIL	VOC		Surrogate toluene-d8		0	VOC			Y		0			0			0	N	118 to 144	15	**N**		0			0			0	**N**
SOIL	VOC		Tetrachloroethene	0.5 mg/kg	14	SVOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Toluene	0.1 mg/kg	9	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Total MA[8*]	0.5 MG/KG	14	Other	1	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		trans-1,2-dichloroethene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		trans-1,3-dichloropropene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Tribromomethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Trichloroethene	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Trichlorofluoromethane	0.5 mg/kg	14	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC		Vinyl Chloride	0.5 mg/kg	14	VOC	2	4	Y		0		ND	1	Y		0	N		0			0			0			1	Y
SOIL	VOC		Xylene (Total)	0.3 mg/kg	8	VOC	2	4	Y		0			0			0	N		0			0			0			1	Y
SOIL	VOC																													
SOIL	Volatile	Volatile	1,2,4-trimethyl benzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	**N**
SOIL	Volatile		1,3,5-trimethyl benzene		0	VOC			Y		0		ND	1	Y		0	N		0			0			0			0	**N**
SOIL	Volatile		Benzene	0.1 mg/kg	14	VOC	2	4	Y	113 to 113	1	Y	ND	1	Y		1	Y		0		96 to 96	1	Y		0			1	Y
SOIL	Volatile		Ethylbenzene	0.1 mg/kg	13	VOC	2	4	Y	117 to 117	1	Y	ND	1	Y		1	Y		0		97 to 97	1	Y		0			1	Y
SOIL	Volatile		Surrogate 4-BFB		0	VOC			Y		0			0			0	N	115 to 124	3	Y		0			0			0	**N**
SOIL	Volatile		Toluene	0.1 mg/kg	5	VOC	2	4	Y	110 to 110	1	Y	ND	1	Y		1	Y		0		94 to 94	1	Y		0			0	**N**
SOIL	Volatile		Xylene (m & p)	0.2 mg/kg	14	VOC	2	4	Y	110 to 110	1	Y	ND	1	Y		1	Y		0		92 to 92	1	Y		0			1	Y
SOIL	Volatile		Xylene (o)	0.1 mg/kg	14	VOC	2	4	Y	105 to 105	1	Y	ND	1	Y		1	Y		0		87 to 87	1	Y		0			1	Y
SOIL	Volatile		Xylene (Total)	0.3 mg/kg	6	VOC	2	4	Y	108 to 108	1	Y	ND	1	Y		1	Y		0		91 to 91	1	Y		0			0	**N**
SOIL	Volatile																													
WATER	PFAS	PFAS	13C2-4:2 FTS (surr.)		0	Other			Y		0			0			0	N	102 to 151	2	**N**		0			0			0	**N**
WATER	PFAS		13C2-6:2 FTS (surr.)		0	Other			Y		0			0			0	N	39 to 51	2	**N**		0			0			0	**N**
WATER	PFAS		13C2-8:2 FTS (surr.)		0	Other			Y		0			0			0	N	35 to 37	2	**N**		0			0			0	**N**
WATER	PFAS		13C2-PFDoDA (surr.)		0	Other			Y		0			0			0	N	58 to 64	2	**N**		0			0			0	**N**
WATER	PFAS		13C2-PFTeDA (surr.)		0	Other			Y		0			0			0	N	33 to 41	2	**N**		0			0			0	**N**
WATER	PFAS		13C2-PFUnDA (surr.)		0	Other			Y		0			0			0	N	82 to 85	2	Y		0			0			0	**N**
WATER	PFAS		13C3-PFBS (surr.)		0	Other			Y		0			0			0	N	101 to 106	2	Y		0			0			0	**N**
WATER	PFAS		13C4-PFBA (surr.)		0	Other			Y		0			0			0	N	114 to 114	2	Y		0			0			0	**N**
WATER	PFAS		13C4-PFHpA (surr.)		0	Other			Y		0			0			0	N	102 to 108	2	Y		0			0			0	**N**
WATER	PFAS		13C5-PFHxA (surr.)		0	SVOC			Y		0			0			0	N	111 to 119	2	Y		0			0			0	**N**
WATER	PFAS		13C5-PFNA (surr.)		0	Other			Y		0			0			0	N	135 to 142	2	**N**		0			0			0	**N**
WATER	PFAS		13C5-PFPeA (surr.)		0	Other			Y		0			0			0	N	76 to 78	2	Y		0			0			0	**N**
WATER	PFAS		13C6-PFDA (surr.)		0	SVOC			Y		0			0			0	N	72 to 76	2	Y		0			0			0	**N**
WATER	PFAS		13C8-FOSA (surr.)		0	Other			Y		0			0			0	N	36 to 42	2	**N**		0			0			0	**N**
WATER	PFAS		13C8-PFOA (surr.)		0	Other			Y		0			0			0	N	82 to 91	2	Y		0			0			0	**N**
WATER	PFAS		13C8-PFOS (surr.)		0	SVOC			Y		0			0			0	N	125 to 136	2	**N**		0			0			0	**N**
WATER	PFAS		18O2-PFHxS (surr.)		0	Other			Y		0			0			0	N	103 to 103	2	Y		0			0			0	**N**
WATER	PFAS		1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTS)		0	Other	3	4	Y	126 to 126	1	Y	ND	1	Y		0	N		0		137 to 137	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		1H,1H,2H,2H-perfluorododecanesulfonic acid		0	Other	3	4	Y	134 to 134	1	**N**	ND	1	Y		0	N		0		118 to 118	1	Y	ND	2	Y		0	**N**
WATER	PFAS		1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTS)		0	Other	3	4	Y	105 to 105	1	Y	ND	1	Y		0	N		0		113 to 113	1	Y	ND	2	Y		0	**N**
WATER	PFAS		1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)		0	Other	3	4	Y	139 to 139	1	**N**	ND	1	Y		0	N		0		147 to 147	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol		0	Other	3	4	Y	83 to 83	1	Y	ND	1	Y		0	N		0		86 to 86	1	Y	ND	2	Y		0	**N**
WATER	PFAS		2-(N-methylperfluoro-1-octane sulfonamido)-ethanol		0	SVOC	3	4	Y	135 to 135	1	**N**	ND	1	Y		0	N		0		100 to 100	1	Y	ND	2	Y		0	**N**
WATER	PFAS		D3-N-MeFOSA (surr.)		0	Other			Y		0			0			0	N	34 to 42	2	**N**		0			0			0	**N**
WATER	PFAS		D3-N-MeFOSAA (surr.)		0	Other			Y		0			0			0	N	45 to 51	2	**N**		0			0			0	**N**
WATER	PFAS		D5-N-EtFOSA (surr.)		0	Other			Y		0			0			0	N	26 to 32	2	**N**		0			0			0	**N**
WATER	PFAS		D5-N-EtFOSAA (surr.)		0	SVOC			Y		0			0			0	N	44 to 57	2	**N**		0			0			0	**N**
WATER	PFAS		D7-N-MeFOSE (surr.)		0	Other			Y		0			0			0	N	40 to 47	2	**N**		0			0			0	**N**
WATER	PFAS		D9-N-EtFOSE (surr.)		0	Other			Y		0			0			0	N	39 to 49	2	**N**		0			0			0	**N**
WATER	PFAS		N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)		0	Other	3	4	Y	130 to 130	1	**N**	ND	1	Y		0	N		0		101 to 101	1	Y	ND	2	Y		0	**N**
WATER	PFAS		N-ethyl-perfluorooctanesulfonamidoacetic acid		0	Other	3	4	Y	143 to 143	1	**N**	ND	1	Y		0	N		0		120 to 120	1	Y	ND	2	Y		0	**N**
WATER	PFAS		N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)		0	Other	3	4	Y	140 to 140	1	**N**	ND	1	Y		0	N		0		119 to 119	1	Y	ND	2	Y		0	**N**
WATER	PFAS		N-methyl-perfluorooctanesulfonamidoacetic acid		0	Other	3	4	Y	115 to 115	1	Y	ND	1	Y		0	N		0		113 to 113	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorobutanesulfonic acid (PFBS)		0	Other	3	4	Y	119 to 119	1	Y	ND	1	Y		0	N		0		108 to 108	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorobutanoic acid (PFBA)		0	Other	3	4	Y	137 to 137	1	**N**	ND	1	Y		0	N		0		134 to 134	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluorodecanesulfonic acid (PFDS)		0	Other	3	4	Y	85 to 85	1	Y	ND	1	Y		0	N		0		60 to 60	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluorodecanoic acid (PFDA)		0	Other	3	4	Y	128 to 128	1	Y	ND	1	Y		0	N		0		129 to 129	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorododecanoic acid (PFDoA)		0	Other	3	4	Y	131 to 131	1	**N**	ND	1	Y		0	N		0		130 to 130	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluoroheptanesulfonic acid (PFHpS)		0	SVOC	3	4	Y	118 to 118	1	Y	ND	1	Y		0	N		0		97 to 97	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluoroheptanoic acid (PFHpA)		0	Other	3	4	Y	142 to 142	1	**N**	ND	1	Y		0	N		0		121 to 121	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorohexanesulfonic acid (PFHxS)		0	Other	3	4	Y	132 to 132	1	**N**	ND	1	Y		0	N		0		107 to 107	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorohexanoic acid (PFHxA)		0	Other	3	4	Y	128 to 128	1	Y	ND	1	Y		0	N		0		113 to 113	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorononanoic acid (PFNA)		0	Other	3	4	Y	130 to 130	1	**N**	ND	1	Y		0	N		0		134 to 134	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluorooctanesulfonamide (FOSA)		0	Other	3	4	Y	145 to 145	1	**N**	ND	1	Y		0	N		0		122 to 122	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorooctanesulfonic acid (PFOS)		0	Other	3	4	Y	141 to 141	1	**N**	ND	1	Y		0	N		0		80 to 80	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorooctanoic acid (PFOA)		0	Other	3	4	Y	147 to 147	1	**N**	ND	1	Y		0	N		0		129 to 129	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluoropentanesulfonic acid (PFPeS)		0	SVOC	3	4	Y	136 to 136	1	**N**	ND	1	Y		0	N		0		137 to 137	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluoropentanoic acid (PFPeA)		0	Other	3	4	Y	130 to 130	1	**N**	ND	1	Y		0	N		0		125 to 125	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluoropropanesulfonic acid (PFPrS)		0	Other	3	4	Y	109 to 109	1	Y	ND	1	Y		0	N		0		141 to 141	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Perfluorotetradecanoic acid (PFTeDA)		0	Other	3	4	Y	124 to 124	1	Y	ND	1	Y		0	N		0		113 to 113	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluorotridecanoic acid (PFTrDA)		0	Other	3	4	Y	125 to 125	1	Y	ND	1	Y		0	N		0		102 to 102	1	Y	ND	2	Y		0	**N**
WATER	PFAS		Perfluoroundecanoic acid (PFUnA)		0	Other	3	4	Y	130 to 130	1	**N**	ND	1	Y		0	N		0		133 to 133	1	**N**	ND	2	Y		0	**N**
WATER	PFAS		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)[4*]		0	SVOC	1	4	Y		0			0			0	N		0			0		ND	2	Y		0	**N**
WATER	PFAS		Sum of PFASs (n=28)		0	Other	1	4	Y		0			0			0	N		0			0		ND	2	Y		0	**N**
WATER	PFAS		Sum of PFHxS and PFOS		0	Other	1	4	Y		0			0			0	N		0			0		ND	2	Y		0	**N**
WATER	PFAS		Sum of US EPA PFAS (PFOS + PFOA)[7*]		0	SVOC	1	4	Y		0			0			0	N		0			0		ND	2	Y		0	**N**
WATER	PFAS		Sum of WA DER PFAS (n=10)		0	Other	1	4	Y		0			0			0	N		0			0		ND	2	Y		0	**N**

WATER	PFAS																											
WATER	Volatile	Volatile	Benzene		0	VOC	1	4	Y	88 to 88	1	Y	ND	1	Y		0	**N**		0		100 to 100	1	Y	ND	1	Y		0	**N**
WATER	Volatile		Ethylbenzene		0	VOC	1	4	Y	97 to 97	1	Y	ND	1	Y		0	**N**		0		97 to 97	1	Y	ND	1	Y		0	**N**
WATER	Volatile		Surrogate 4-BFB		0	VOC			Y		0			0			0	**N**	88 to 95	2	Y		0			0		0	**N**
WATER	Volatile		Toluene		0	VOC	1	4	Y	92 to 92	1	Y	ND	1	Y		0	**N**		0		100 to 100	1	Y	ND	1	Y		0	**N**
WATER	Volatile		Xylene (m & p)		0	VOC	1	4	Y	98 to 98	1	Y	ND	1	Y		0	**N**		0		97 to 97	1	Y	ND	1	Y		0	**N**
WATER	Volatile		Xylene (o)		0	VOC	1	4	Y	98 to 98	1	Y	ND	1	Y		0	**N**		0		98 to 98	1	Y	ND	1	Y		0	**N**
WATER	Volatile		Xylene (Total)		0	VOC	1	4	Y	98 to 98	1	Y	ND	1	Y		0	**N**		0		98 to 98	1	Y	ND	1	Y		0	**N**

INSERT TABLE NAME
Project Number: [Project_Number]
Project Name: [Project_Name]
WATER Field Blanks (WATER)
Filter: SDG in('664672')

SDG	664672	664672	664672
Field ID	RINSATE	TRIP BLANK	TB
Sampled_Date/Time	7/07/2019	7/07/2019	7/07/2019
Sample Type	Rinsate	Trip_B	Trip_B

Filter	Method_Type	ChemName	Units	EQL			
PFAS	PFAS	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	µg/L	0.05	<0.05	<0.05	
PFAS		2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol	µg/L	0.05	<0.05	<0.05	
PFAS		1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	
PFAS		1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTS)	µg/L	0.05	<0.05	<0.05	
PFAS		1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTS)	µg/L	0.01	<0.01	<0.01	
PFAS		1H.1H.2H.2H-perfluorododecanesulfonic acid	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorododecanoic acid (PFDoA)	µg/L	0.01	<0.01	<0.01	
PFAS		N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01	<0.01	
PFAS		N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01	<0.01	
PFAS		N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01	<0.01	
PFAS		N-methyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluorobutanesulfonic acid (PFBS)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorooctanesulfonamide (FOSA)	µg/L	0.05	<0.05	<0.05	
PFAS		Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluoropropanesulfonic acid (PFPrS)	ug/l	0.01	<0.01	<0.01	
PFAS		Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluoroundecanoic acid (PFUnA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.01	<0.01	<0.01	
PFAS		Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01	<0.01	<0.01	
PFAS		Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	
PFAS		Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	
PFAS		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	
PFAS		Sum of WA DER PFAS (n=10)	µg/L	0.05	<0.05	<0.05	
PFAS		Sum of PFASs (n=28)	µg/L	0.1	<0.1	<0.1	
PFAS							
Volatile	Volatile	Benzene	mg/l	0.001			<0.001
Volatile		Ethylbenzene	mg/l	0.001			<0.001
Volatile		Toluene	mg/l	0.001			<0.001
Volatile		Xylene (o)	mg/l	0.001			<0.001
Volatile		Xylene (m & p)	mg/l	0.002			<0.002
Volatile		Xylene (Total)	mg/l	0.003			<0.003

INSERT TABLE NAME
Project Number: [Project_Number]
Project Name: [Project_Name]

SOIL

Field Duplicates (SOIL)
Filter: SDG in('664672')

SDG	664672	664672		664672	ENVIROLAB 2019-07-09T00:00:00	
Field ID	ST3-02 0-0.1	QA20190707_01	RPD	ST3-02 0-0.1	QC20190707-01	RPD
Sampled Date/Time	7/07/2019	7/07/2019		7/07/2019	7/07/2019	

Filter	Method_Ty	ChemName	Units	EQL					
VOC	VOC	Total MAH*	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC										
Heavy Metal	Heavy Meta	Arsenic (Total)	mg/kg	2 (Primary): 4 (Interlab)	7.8	7.3	7	**7.8**	**5.0**	**44**
Heavy Metal		Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0
Heavy Metal		Chromium (Total)	mg/kg	5 (Primary): 1 (Interlab)	41.0	46.0	11	**41.0**	**29.0**	**34**
Heavy Metal		Copper	mg/kg	5 (Primary): 1 (Interlab)	59.0	50.0	17	**59.0**	**43.0**	**31**
Heavy Metal		Lead	mg/kg	5 (Primary): 1 (Interlab)	62.0	55.0	12	**62.0**	**38.0**	**48**
Heavy Metal		Mercury (Inorganic)	mg/kg	0.1	0.2	0.2	0	**0.2**	**0.1**	**67**
Heavy Metal		Nickel	mg/kg	5 (Primary): 1 (Interlab)	27.0	27.0	0	27.0	23.0	16
Heavy Metal		Zinc	mg/kg	5 (Primary): 1 (Interlab)	280.0	240.0	15	**280.0**	**170.0**	**49**
Heavy Metal										
Organic	Organic	C6-C9 Fraction	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
Organic										
TPH	TPH	C10-C14 Fraction	mg/kg	20 (Primary): 50 (Interlab)	<20.0	<20.0	0	<20.0	<50.0	0
TPH		C15-C28 Fraction	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<100.0	0
TPH		C29-C36 Fraction	mg/kg	50 (Primary): 100 (Interlab)	**86.0**	**50.0**	**53**	86.0	110.0	24
TPH		C10-C36 Fraction (Total)	mg/kg	50	**86.0**	**50.0**	**53**	86.0		
TPH										
Organic	Organic	>C10-C16 Fraction	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0
Organic		>C16-C34 Fraction	mg/kg	100	100.0	<100.0	0	100.0	120.0	18
Organic		>C34-C40 Fraction	mg/kg	100	<100.0	<100.0	0	<100.0	100.0	0
Organic		>C10-C40 Fraction (Total)	mg/kg	100 (Primary): 50 (Interlab)	100.0	<100.0	0	**100.0**	**220.0**	**75**
Organic		>C10-C16 less Naphthalene (F2)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0
Organic		C6-C10 Fraction	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
Organic		C6-C10 less BTEX (F1)	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<25.0	0
Organic		Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
Organic										
PAH	PAH	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH										
VOC	VOC	Ethylbenzene	mg/kg	0.1 (Primary): 1 (Interlab)	<0.1	<0.1	0	<0.1	<1.0	0
VOC		Xylene (Total)	mg/kg	0.3 (Primary): 3 (Interlab)	<0.3	<0.3	0	<0.3	<3.0	0
VOC										
Volatile	Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	<0.1	<0.1	0	<0.1	<0.2	0
Volatile		Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.5	0
Volatile		Xylene (o)	mg/kg	0.1 (Primary): 1 (Interlab)	<0.1	<0.1	0	<0.1	<1.0	0
Volatile		Xylene (m & p)	mg/kg	0.2 (Primary): 2 (Interlab)	<0.2	<0.2	0	<0.2	<2.0	0
Volatile										
PAH	PAH	Acenaphthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Acenaphthylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Benz(a)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	0.6	18	<0.5	0.2	0
PAH		Benzo(a)pyrene	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	0.6	18	<0.5	0.3	0
PAH		Benzo(a)pyrene TEQ (lower bound)*	mg/kg	0.5	**<0.5**	**0.7**	**33**	<0.5	<0.5	0
PAH		Benzo(a)pyrene TEQ (medium bound)*	mg/kg	0.5	**0.6**	**1.0**	**50**	0.6	<0.5	18
PAH		Benzo(a)pyrene TEQ (upper bound)*	mg/kg	0.5	1.2	1.3	8	**1.2**	**<0.5**	**82**
PAH		Benzo(b,j)fluoranthene	mg/kg	0.5	0.5	<0.5	0	0.5		
PAH		Benzo(g,h,i)perylene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	0.5	0	<0.5	0.3	0
PAH		Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5		
PAH		Chrysene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	0.2	0
PAH		Dibenz(a,h)anthracene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Fluoranthene	mg/kg	0.5 (Primary): 0.1 (Interlab)	0.8	1.0	22	0.8	0.6	29
PAH		Fluorene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PAH		Indeno(1,2,3-c,d)pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	0.6	18	<0.5	0.2	0
PAH		PAHs (Total)	mg/kg	0.5	**2.0**	**4.7**	**81**	2.0		
PAH		Phenanthrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	0.5	0	<0.5	0.3	0
PAH		Pyrene	mg/kg	0.5 (Primary): 0.1 (Interlab)	0.7	0.9	25	**0.7**	**0.5**	**33**
PAH										
OCP	OCP	4,4-DDE	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Aldrin	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Aldrin + Dieldrin (Sum of Total)	mg/kg	0.05	<0.05	<0.05	0	<0.05		
OCP		alpha-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		beta-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Chlordane	mg/kg	0.1	<0.1	<0.1	0	<0.1		
OCP		DDD	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		DDT	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Dieldrin	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		DDT+DDE+DDD (Sum of Total)	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		delta-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endosulfan alpha	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endosulfan beta	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endosulfan sulphate	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endrin	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endrin aldehyde	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Endrin ketone	mg/kg	0.05	<0.05	<0.05	0	<0.05		
OCP		Heptachlor	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Heptachlor Epoxide	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Lindane	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP		Methoxychlor	mg/kg	0.2 (Primary): 0.1 (Interlab)	<0.2	<0.2	0	<0.2	<0.1	0
OCP		Toxaphene	mg/kg	1	<1.0	<1.0	0	<1.0		
OCP										
VOC	VOC	1,1,1,2-tetrachloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,1,1-trichloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,1,2,2-tetrachloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,1,2-trichloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,1-dichloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,2,3-trichloropropane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,2-dichloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,2-dichloropropane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,3-dichloropropane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Bromochloromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Carbon tetrachloride	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Chloroethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Chloromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Dichlorodifluoromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Dichloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC		Trichlorofluoromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,1-dichloroethene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		3-chloropropene	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC		4-chlorotoluene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		cis-1,2-dichloroethene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		cis-1,3-dichloropropene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Tetrachloroethene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		trans-1,2-dichloroethene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		trans-1,3-dichloropropene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Trichloroethene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Vinyl Chloride	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		2-Propanone (Acetone)	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC										
PCB	PCB	Aroclor 1016	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		Aroclor 1221	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
PCB		Aroclor 1232	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		Aroclor 1242	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		Aroclor 1248	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		Aroclor 1254	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		Aroclor 1260	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB		PCBs (Total)	mg/kg	0.5 (Primary): 0.1 (Interlab)	<0.5	<0.5	0	<0.5	<0.1	0
PCB										
PFAS	PFAS	2-(N-methylperfluoro-1-octane sulfonan	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		2-(N-ethylperfluoro-1-octane sulfonamic	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		1H.1H.2H.2H-perfluorohexanesulfonic a	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		1H.1H.2H.2H-perfluorooctanesulfonic ac	mg/kg	0.01	<0.01	<0.01	0	<0.01		
PFAS		1H.1H.2H.2H-perfluorodecanesulfonic a	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		1H.1H.2H.2H-perfluorododecanesulfonic	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorobutanoic acid (PFBA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorohexanoic acid (PFHxA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		

INSERT TABLE NAME
Project Number: [Project_Number]
Project Name: [Project_Name]

SOIL

Field Duplicates (SOIL)
Filter: SDG in('664672')

				SDG	664672	664672		664672	ENVIROLAB 2019-07-09T00:00:00	
				Field ID	ST3-02 0-0.1	QA20190707_01	RPD	ST3-02 0-0.1	QC20190707-01	RPD
				Sampled Date/Time	7/07/2019	7/07/2019		7/07/2019	7/07/2019	
PFAS		Perfluoroheptanoic acid (PFHpA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorodecanoic acid (PFDA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorododecanoic acid (PFDoA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		N-methylperfluoro-1-octane sulfonamid	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluoropentanoic acid (PFPeA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		N-ethylperfluoro-1-octane sulfonamide	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorooctanoic acid (PFOA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		N-ethyl-perfluorooctanesulfonamidoace	mg/kg	0.01	<0.01	<0.01	0	<0.01		
PFAS		Perfluorononanoic acid (PFNA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		N-methyl-perfluorooctanesulfonamidoa	mg/kg	0.01	<0.01	<0.01	0	<0.01		
PFAS		Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorooctanesulfonamide (FOSA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluoroheptanesulfonic acid (PFHpS)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluoroundecanoic acid (PFUnA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Perfluoropentanesulfonic acid (PFPeS)	mg/kg	0.005	<0.005	<0.005	0	<0.005		
PFAS		Sum of PFHxS and PFOS	mg/kg	0.005	0.0081	0.0074	9	0.0081		
PFAS		Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	0.0081	0.0074	9	0.0081		
PFAS		Sum of enHealth PFAS (PFHxS + PFOS + F	mg/kg	0.005	0.0081	0.0074	9	0.0081		
PFAS		Sum of WA DER PFAS (n=10)	mg/kg	0.01	<0.01	<0.01	0	<0.01		
PFAS		Sum of PFASs (n=28)	mg/kg	0.05	<0.05	<0.05	0	<0.05		
PFAS										
VOC	VOC	1,2,4-trimethyl benzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,3,5-trimethyl benzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Bromobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Isopropylbenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Styrene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,2-dibromoethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		2-Butanone (MEK)	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC		4-Methyl-2-pentanone (MIBK)	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC		Bromomethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Dibromomethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Iodomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC										
OCP	OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.1	0
OCP										
VOC	VOC	1,2-Dichlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,3-dichlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		1,4-dichlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Chlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Bromodichloromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Chloroform	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Dibromochloromethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC		Tribromomethane	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<1.0	0
VOC										
Asbestos	Asbestos	Approx. Sample Mass	G		403.0	339.0	17	403.0		
Asbestos		Asbestos from ACM in Soil	%w/w		0.0	0.0	0	0.0		
Asbestos		Asbestos from FA & AF in Soil	%w/w		0.0	0.0	0	0.0		
Asbestos		Mass ACM	G		0.0	0.0	0	0.0		
Asbestos		Mass Asbestos in ACM	G		0.0	0.0	0	0.0		
Asbestos		Mass FA	G		0.0	0.0	0	0.0		
Asbestos		Mass Asbestos in FA	G		0.0	0.0	0	0.0		
Asbestos		Mass AF	G		0.0	0.0	0	0.0		
Asbestos		Mass Asbestos in AF	G		0.0	0.0	0	0.0		
Asbestos		Mass Asbestos in FA & AF	G		0.0	0.0	0	0.0		
Asbestos		ACM - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos		AF - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos		FA - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos		Organic Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos		Respirable Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos		Synthetic Fibres - Comment	COMMENT		1.0	1.0	0	1.0		
Asbestos										
VOC	VOC	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC										
Inorganic	Inorganic	% Moisture 103oC	%	1	28.0	27.0	4	28.0		
Inorganic										
OCP	OCP	Organochlorine Pesticides EPAVic	mg/kg	0.1	<0.2	<0.2	0	<0.2		
OCP		Other Organochlorine Pesticides EPAVic	mg/kg	0.1	<0.2	<0.2	0	<0.2		
OCP										
VOC	VOC	Chlorinated Hydrocarbons EPAVic	mg/kg	0.5	<0.5	<0.5	0	<0.5		
VOC		Other Chlorinated Hydrocarbons EPAVic	mg/kg	0.5	<0.5	<0.5	0	<0.5		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 30 (1-10 x EQL); 30 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix F Laboratory Reports and Chain of Custody

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

eurofins | mgt

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NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name: **JBS & G Australia (NSW) P/L**

Contact name: George Black
Project name: ST MARYS
Project ID: 54782
COC number: Not provided
Turn around time: 3 Day
Date/Time received: Jul 8, 2019 5:55 PM
Eurofins | mgt reference: **664672**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 14.7 degrees Celsius.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☒ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☑ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

QC20190707-01 (1xJar, 1XPFAS Tub, 1XBag) sample forwarded to Envirolab.

Contact notes

If you have any questions with respect to these samples please contact:

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to George Black - gblack@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **George Black**

Report **664672-S**
Project name ST MARYS
Project ID 54782
Received Date Jul 08, 2019

Client Sample ID			G01 ST3-01 0-0.1	ST3-02 0-0.1	ST3-03 0-0.1	ST3-04 0.8-0.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10886	S19-Jl10887	S19-Jl10888	S19-Jl10890
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	87	< 50	62	< 50
TRH C29-C36	50	mg/kg	220	86	96	< 50
TRH C10-36 (Total)	50	mg/kg	307	86	158	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	120	121	125	116
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			[G01]ST3-01 0-0.1	ST3-02 0-0.1	ST3-03 0-0.1	ST3-04 0.8-0.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10886	S19-Jl10887	S19-Jl10888	S19-Jl10890
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	120	121	125	116
Toluene-d8 (surr.)	1	%	134	137	141	128
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	250	100	130	< 100
TRH >C34-C40	100	mg/kg	250	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	500	100	130	< 100

Client Sample ID			[G01]ST3-01 0-0.1	ST3-02 0-0.1	ST3-03 0-0.1	ST3-04 0.8-0.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10886	S19-Jl10887	S19-Jl10888	S19-Jl10890
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.7	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	0.5	0.6	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.6	0.8	1.4	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Pyrene	0.5	mg/kg	0.6	0.7	1.2	< 0.5
Total PAH*	0.5	mg/kg	1.2	2	4.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	118	114	106	121
p-Terphenyl-d14 (surr.)	1	%	124	123	111	128
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 10	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.5	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	115	102	88	90
Tetrachloro-m-xylene (surr.)	1	%	131	100	89	100

Client Sample ID			[G01]ST3-01 0-0.1	ST3-02 0-0.1	ST3-03 0-0.1	ST3-04 0.8-0.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10886	S19-Jl10887	S19-Jl10888	S19-Jl10890
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	<5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	115	102	88	90
Tetrachloro-m-xylene (surr.)	1	%	131	100	89	100
Heavy Metals						
Arsenic	2	mg/kg	2.9	7.8	4.8	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	29	41	29	35
Copper	5	mg/kg	48	59	41	9.5
Lead	5	mg/kg	18	62	32	31
Mercury	0.1	mg/kg	< 0.1	0.2	0.1	< 0.1
Nickel	5	mg/kg	22	27	20	6.2
Zinc	5	mg/kg	110	280	130	21
% Moisture	1	%	18	28	16	19
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	95	97	107	92
13C5-PFPeA (surr.)	1	%	80	70	76	84
13C5-PFHxA (surr.)	1	%	106	121	116	109
13C4-PFHpA (surr.)	1	%	106	105	92	81
13C8-PFOA (surr.)	1	%	105	109	93	102
13C5-PFNA (surr.)	1	%	103	114	109	102
13C6-PFDA (surr.)	1	%	101	94	94	92
13C2-PFUnDA (surr.)	1	%	130	138	137	144
13C2-PFDoDA (surr.)	1	%	120	132	154	141
13C2-PFTeDA (surr.)	1	%	125	105	136	127

Client Sample ID			[G01]ST3-01 0-0.1	ST3-02 0-0.1	ST3-03 0-0.1	ST3-04 0.8-0.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10886	S19-Jl10887	S19-Jl10888	S19-Jl10890
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	90	72	89	93
D3-N-MeFOSA (surr.)	1	%	78	72	100	108
D5-N-EtFOSA (surr.)	1	%	70	64	77	90
D7-N-MeFOSE (surr.)	1	%	97	52	103	85
D9-N-EtFOSE (surr.)	1	%	49	55	89	85
D5-N-EtFOSAA (surr.)	1	%	113	121	136	140
D3-N-MeFOSAA (surr.)	1	%	153	171	195	177
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	[N09]8.1	[N09]6.2	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	83	69	63	60
18O2-PFHxS (surr.)	1	%	93	90	83	83
13C8-PFOS (surr.)	1	%	117	111	117	115
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	139	157	92	80
13C2-6:2 FTSA (surr.)	1	%	139	112	117	63
13C2-8:2 FTSA (surr.)	1	%	100	93	95	66
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	8.1	6.2	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	8.1	6.2	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	8.1	6.2	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			ST3-05 0-0.1	ST3-06 0-0.1	ST3-08 0-0.1	ST3-09 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10891	S19-Jl10892	S19-Jl10893	S19-Jl10894
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	76	-
TRH C29-C36	50	mg/kg	< 50	62	66	-
TRH C10-36 (Total)	50	mg/kg	< 50	62	142	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	117	135	122	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			ST3-05 0-0.1	ST3-06 0-0.1	ST3-08 0-0.1	ST3-09 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10891	S19-Jl10892	S19-Jl10893	S19-Jl10894
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	117	135	122	-
Toluene-d8 (surr.)	1	%	133	144	138	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	110	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	110	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	0.7	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			ST3-05 0-0.1	ST3-06 0-0.1	ST3-08 0-0.1	ST3-09 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10891	S19-Jl10892	S19-Jl10893	S19-Jl10894
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	0.6	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	1.3	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	115	109	117	-
p-Terphenyl-d14 (surr.)	1	%	123	114	125	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	< 1	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	95	99	91	-
Tetrachloro-m-xylene (surr.)	1	%	99	97	92	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	95	99	91	-
Tetrachloro-m-xylene (surr.)	1	%	99	97	92	-

Client Sample ID			ST3-05 0-0.1	ST3-06 0-0.1	ST3-08 0-0.1	ST3-09 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10891	S19-Jl10892	S19-Jl10893	S19-Jl10894
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	7.5	6.6	19	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	30	17	14	-
Copper	5	mg/kg	20	12	18	-
Lead	5	mg/kg	23	26	14	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	19	11	8.0	-
Zinc	5	mg/kg	56	32	20	-
% Moisture	1	%	18	6.7	11	19
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	93	116	111	107
13C5-PFPeA (surr.)	1	%	59	93	73	67
13C5-PFHxA (surr.)	1	%	87	120	131	120
13C4-PFHpA (surr.)	1	%	102	93	119	100
13C8-PFOA (surr.)	1	%	89	100	97	102
13C5-PFNA (surr.)	1	%	100	96	76	101
13C6-PFDA (surr.)	1	%	92	98	106	102
13C2-PFUnDA (surr.)	1	%	136	131	127	148
13C2-PFDoDA (surr.)	1	%	138	126	116	131
13C2-PFTeDA (surr.)	1	%	91	67	55	127
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	70	45	49	86
D3-N-MeFOSA (surr.)	1	%	75	47	53	94
D5-N-EtFOSA (surr.)	1	%	82	57	54	79
D7-N-MeFOSE (surr.)	1	%	66	62	47	88
D9-N-EtFOSE (surr.)	1	%	70	46	28	66
D5-N-EtFOSAA (surr.)	1	%	99	56	59	124
D3-N-MeFOSAA (surr.)	1	%	179	145	132	187

Client Sample ID			ST3-05 0-0.1	ST3-06 0-0.1	ST3-08 0-0.1	ST3-09 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10891	S19-Jl10892	S19-Jl10893	S19-Jl10894
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	77	74	68	78
18O2-PFHxS (surr.)	1	%	88	95	95	78
13C8-PFOS (surr.)	1	%	123	118	111	116
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	97	180	164	83
13C2-6:2 FTSA (surr.)	1	%	114	127	151	82
13C2-8:2 FTSA (surr.)	1	%	76	89	133	111
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	79	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	79	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	123	124	115	135

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	123	124	115	135
Toluene-d8 (surr.)	1	%	139	134	125	140
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	114	113	130	115
p-Terphenyl-d14 (surr.)	1	%	123	119	131	109
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
d-BHC	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 10	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	94	78	116	97
Tetrachloro-m-xylene (surr.)	1	%	104	90	114	97
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 5	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	<5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	94	78	116	97
Tetrachloro-m-xylene (surr.)	1	%	104	90	114	97
Heavy Metals						
Arsenic	2	mg/kg	3.8	4.1	8.9	3.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	18	17	15
Copper	5	mg/kg	9.2	20	26	96
Lead	5	mg/kg	6.8	14	20	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	14	9.9	8.8
Zinc	5	mg/kg	14	57	68	76
% Moisture	1	%	10	15	19	8.1
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	-	< 5	< 5	< 5

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	-	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	-	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	-	99	107	108
13C5-PFPeA (surr.)	1	%	-	70	75	73
13C5-PFHxA (surr.)	1	%	-	99	109	114
13C4-PFHpA (surr.)	1	%	-	101	92	92
13C8-PFOA (surr.)	1	%	-	92	91	88
13C5-PFNA (surr.)	1	%	-	100	110	106
13C6-PFDA (surr.)	1	%	-	99	101	100
13C2-PFUnDA (surr.)	1	%	-	142	140	137
13C2-PFDoDA (surr.)	1	%	-	150	139	146
13C2-PFTeDA (surr.)	1	%	-	101	118	115
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	-	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	-	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	-	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	-	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	-	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	-	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	-	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	-	72	73	77
D3-N-MeFOSA (surr.)	1	%	-	77	59	81
D5-N-EtFOSA (surr.)	1	%	-	70	61	79
D7-N-MeFOSE (surr.)	1	%	-	128	74	142
D9-N-EtFOSE (surr.)	1	%	-	97	46	54
D5-N-EtFOSAA (surr.)	1	%	-	145	117	111
D3-N-MeFOSAA (surr.)	1	%	-	193	186	182
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	-	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	-	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	-	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	-	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	-	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	-	111	81	62
18O2-PFHxS (surr.)	1	%	-	109	96	79
13C8-PFOS (surr.)	1	%	-	127	129	125

Client Sample ID			ST3-09 0.4-0.5	[G01]ST3-10 0-0.1	ST3-11 0-0.1	ST3-12 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10895	S19-Jl10896	S19-Jl10897	S19-Jl10898
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	-	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	-	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	-	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	-	62	87	102
13C2-6:2 FTSA (surr.)	1	%	-	66	117	77
13C2-8:2 FTSA (surr.)	1	%	-	73	104	77
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	-	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	-	< 50	< 50	< 50

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	25	< 20	-
TRH C15-C28	50	mg/kg	160	96	130	-
TRH C29-C36	50	mg/kg	290	130	120	-
TRH C10-36 (Total)	50	mg/kg	450	251	250	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	126	121	125	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Volatile Organics						
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	126	121	125	-
Toluene-d8 (surr.)	1	%	142	134	140	-

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	370	180	220	-
TRH >C34-C40	100	mg/kg	260	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	630	180	220	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	1.7	5.4	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.1	2.0	5.4	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.4	2.2	5.4	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	0.8	-
Benz(a)anthracene	0.5	mg/kg	0.6	1.1	2.8	-
Benzo(a)pyrene	0.5	mg/kg	0.7	1.3	3.4	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	1.0	3.0	-
Benzo(g.h.i)perylene	0.5	mg/kg	0.5	1.1	2.7	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	0.9	2.0	-
Chrysene	0.5	mg/kg	0.5	1.0	2.9	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	0.9	-
Fluoranthene	0.5	mg/kg	0.9	3.0	9.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	0.5	1.0	2.2	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	1.8	6.2	-
Pyrene	0.5	mg/kg	0.8	2.7	8.4	-
Total PAH*	0.5	mg/kg	4.5	14.9	44.8	-
2-Fluorobiphenyl (surr.)	1	%	126	124	125	-
p-Terphenyl-d14 (surr.)	1	%	121	118	117	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	< 1	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	83	121	102	-
Tetrachloro-m-xylene (surr.)	1	%	87	122	97	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	83	121	102	-
Tetrachloro-m-xylene (surr.)	1	%	87	122	97	-
Heavy Metals						
Arsenic	2	mg/kg	2.7	7.1	7.3	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	42	26	33	-
Copper	5	mg/kg	23	40	25	-
Lead	5	mg/kg	22	28	29	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	40	13	10	-
Zinc	5	mg/kg	49	130	110	-
% Moisture	1	%	18	18	17	33
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	102	101	112	105
13C5-PFPeA (surr.)	1	%	82	94	88	53
13C5-PFHxA (surr.)	1	%	131	100	124	119
13C4-PFHpA (surr.)	1	%	96	119	121	101
13C8-PFOA (surr.)	1	%	118	102	123	97

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFNA (surr.)	1	%	132	103	117	103
13C6-PFDA (surr.)	1	%	113	111	111	100
13C2-PFUnDA (surr.)	1	%	157	118	140	142
13C2-PFDoDA (surr.)	1	%	134	124	134	121
13C2-PFTeDA (surr.)	1	%	145	18	62	102
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	13
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	95	77	76	78
D3-N-MeFOSA (surr.)	1	%	99	32	53	70
D5-N-EtFOSA (surr.)	1	%	78	54	54	62
D7-N-MeFOSE (surr.)	1	%	107	69	103	61
D9-N-EtFOSE (surr.)	1	%	103	52	67	64
D5-N-EtFOSAA (surr.)	1	%	198	143	112	138
D3-N-MeFOSAA (surr.)	1	%	INT	174	170	180
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	9.4
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	160
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	109	145	124	130
18O2-PFHxS (surr.)	1	%	125	130	117	113
13C8-PFOS (surr.)	1	%	133	128	134	84
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	69	73	100	66
13C2-6:2 FTSA (surr.)	1	%	54	174	109	57
13C2-8:2 FTSA (surr.)	1	%	121	128	124	100

Client Sample ID			ST3-13 0-0.15	ST3-14 0-0.1	ST3-15 0-0.1	ST3-16 0.3-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10899	S19-Jl10900	S19-Jl10901	S19-Jl10902
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	169.4
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	160
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	169.4
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	169.4
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	182.4

Client Sample ID			ST3-16 0.8-1.0	ST3-17 0-0.1	ST3-17 1.0-1.2	ST3-18 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10903	S19-Jl10904	S19-Jl10905	S19-Jl10906
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
% Moisture	1	%	21	20	23	9.4
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	110	122	107	109
13C5-PFPeA (surr.)	1	%	57	98	79	67
13C5-PFHxA (surr.)	1	%	117	145	112	141
13C4-PFHpA (surr.)	1	%	109	106	90	113
13C8-PFOA (surr.)	1	%	98	115	87	115
13C5-PFNA (surr.)	1	%	105	118	109	130
13C6-PFDA (surr.)	1	%	99	124	95	120
13C2-PFUnDA (surr.)	1	%	145	143	150	161
13C2-PFDoDA (surr.)	1	%	154	137	146	152
13C2-PFTeDA (surr.)	1	%	131	108	133	116
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	96	80	96	87

Client Sample ID			ST3-16 0.8-1.0	ST3-17 0-0.1	ST3-17 1.0-1.2	ST3-18 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10903	S19-Jl10904	S19-Jl10905	S19-Jl10906
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	92	67	101	89
D5-N-EtFOSA (surr.)	1	%	82	68	73	77
D7-N-MeFOSE (surr.)	1	%	133	96	INT	111
D9-N-EtFOSE (surr.)	1	%	110	95	105	69
D5-N-EtFOSAA (surr.)	1	%	182	155	177	157
D3-N-MeFOSAA (surr.)	1	%	INT	195	INT	200
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	[N09]6.5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]30	[N09]61	[N09]50	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	107	126	107	131
18O2-PFHxS (surr.)	1	%	113	136	110	144
13C8-PFOS (surr.)	1	%	109	114	107	131
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	52	103	55	98
13C2-6:2 FTSA (surr.)	1	%	95	86	107	113
13C2-8:2 FTSA (surr.)	1	%	102	121	96	129
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	30	61	56.5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	30	61	50	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	30	61	56.5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	30	61	56.5	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	61	56.5	< 50

Client Sample ID			ST3-18 1.0-1.1	ST3-19 0.5-0.7	ST319 1.0-1.2	ST320 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10907	S19-Jl10908	S19-Jl10909	S19-Jl10910
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
% Moisture	1	%	20	9.1	17	38
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5

Client Sample ID			ST3-18 1.0-1.1	ST3-19 0.5-0.7	ST319 1.0-1.2	ST320 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10907	S19-Jl10908	S19-Jl10909	S19-Jl10910
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	107	104	99	96
13C5-PFPeA (surr.)	1	%	87	62	65	69
13C5-PFHxA (surr.)	1	%	135	118	111	133
13C4-PFHpA (surr.)	1	%	112	90	88	107
13C8-PFOA (surr.)	1	%	95	107	104	117
13C5-PFNA (surr.)	1	%	100	114	113	120
13C6-PFDA (surr.)	1	%	100	92	106	110
13C2-PFUnDA (surr.)	1	%	151	161	145	121
13C2-PFDoDA (surr.)	1	%	156	156	153	127
13C2-PFTeDA (surr.)	1	%	142	142	118	88
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	100	109	85	74
D3-N-MeFOSA (surr.)	1	%	108	114	104	58
D5-N-EtFOSA (surr.)	1	%	81	87	81	53
D7-N-MeFOSE (surr.)	1	%	114	132	140	59
D9-N-EtFOSE (surr.)	1	%	124	108	115	45
D5-N-EtFOSAA (surr.)	1	%	145	185	171	149
D3-N-MeFOSAA (surr.)	1	%	167	INT	INT	171
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	[N09]13
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]11	< 5	< 5	[N09]130
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	95	120	116	141
18O2-PFHxS (surr.)	1	%	104	109	100	138
13C8-PFOS (surr.)	1	%	122	124	115	101

Client Sample ID			ST3-18 1.0-1.1	ST3-19 0.5-0.7	ST319 1.0-1.2	ST320 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10907	S19-Jl10908	S19-Jl10909	S19-Jl10910
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	62	64	72	INT
13C2-6:2 FTSA (surr.)	1	%	90	43	75	180
13C2-8:2 FTSA (surr.)	1	%	73	94	89	185
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	11	< 5	< 5	143
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	11	< 5	< 5	130
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	11	< 5	< 5	143
Sum of WA DWER PFAS (n=10)*	10	ug/kg	11	< 10	< 10	143
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	143

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10911	S19-Jl10912
Date Sampled			Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	-	< 20
TRH C10-C14	20	mg/kg	-	< 20
TRH C15-C28	50	mg/kg	-	< 50
TRH C29-C36	50	mg/kg	-	50
TRH C10-36 (Total)	50	mg/kg	-	50
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	110
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10911	S19-Jl10912
Date Sampled			Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit		
Volatile Organics				
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5
Xylenes - Total	0.3	mg/kg	-	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	110
Toluene-d8 (surr.)	1	%	-	118

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10911	S19-Jl10912
Date Sampled			Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50
TRH >C16-C34	100	mg/kg	-	< 100
TRH >C34-C40	100	mg/kg	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	0.7
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	1.0
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.3
Acenaphthene	0.5	mg/kg	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	0.6
Benzo(a)pyrene	0.5	mg/kg	-	0.6
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5
Fluoranthene	0.5	mg/kg	-	1.0
Fluorene	0.5	mg/kg	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	0.6
Naphthalene	0.5	mg/kg	-	< 0.5
Phenanthrene	0.5	mg/kg	-	0.5
Pyrene	0.5	mg/kg	-	0.9
Total PAH*	0.5	mg/kg	-	4.7
2-Fluorobiphenyl (surr.)	1	%	-	120
p-Terphenyl-d14 (surr.)	1	%	-	114
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10911	S19-Jl10912
Date Sampled			Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2
Toxaphene	1	mg/kg	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	111
Tetrachloro-m-xylene (surr.)	1	%	-	106
Polychlorinated Biphenyls				
Aroclor-1016	0.5	mg/kg	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	111
Tetrachloro-m-xylene (surr.)	1	%	-	106
Heavy Metals				
Arsenic	2	mg/kg	-	7.3
Cadmium	0.4	mg/kg	-	< 0.4
Chromium	5	mg/kg	-	46
Copper	5	mg/kg	-	50
Lead	5	mg/kg	-	55
Mercury	0.1	mg/kg	-	0.2
Nickel	5	mg/kg	-	27
Zinc	5	mg/kg	-	240
% Moisture	1	%	22	27
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	5.0	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	[N09]15	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5
13C4-PFBA (surr.)	1	%	118	96
13C5-PFPeA (surr.)	1	%	67	59
13C5-PFHxA (surr.)	1	%	131	123
13C4-PFHpA (surr.)	1	%	122	87

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl10911	S19-Jl10912
Date Sampled			Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C8-PFOA (surr.)	1	%	102	104
13C5-PFNA (surr.)	1	%	113	105
13C6-PFDA (surr.)	1	%	100	97
13C2-PFUnDA (surr.)	1	%	150	137
13C2-PFDoDA (surr.)	1	%	147	128
13C2-PFTeDA (surr.)	1	%	119	77
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10
13C8-FOSA (surr.)	1	%	94	75
D3-N-MeFOSA (surr.)	1	%	89	74
D5-N-EtFOSA (surr.)	1	%	69	60
D7-N-MeFOSE (surr.)	1	%	105	97
D9-N-EtFOSE (surr.)	1	%	80	81
D5-N-EtFOSAA (surr.)	1	%	171	141
D3-N-MeFOSAA (surr.)	1	%	197	170
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	[N09]89	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]260	[N09]7.4
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5
13C3-PFBS (surr.)	1	%	153	109
18O2-PFHxS (surr.)	1	%	104	117
13C8-PFOS (surr.)	1	%	85	108
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	5	ug/kg	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	134	58
13C2-6:2 FTSA (surr.)	1	%	99	97
13C2-8:2 FTSA (surr.)	1	%	100	86

Client Sample ID			ST320 0.2-0.3	QA20190707_01
Sample Matrix			**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-Jl10911**	**S19-Jl10912**
Date Sampled			**Jul 07, 2019**	**Jul 07, 2019**
Test/Reference	LOR	Unit		
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	349	7.4
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	275	7.4
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	364	7.4
Sum of WA DWER PFAS (n=10)*	10	ug/kg	369	< 10
Sum of PFASs (n=30)*	50	ug/kg	369	< 50

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 09, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 09, 2019	14 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 09, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 09, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 09, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jul 09, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 09, 2019	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Organochlorine Pesticides	Sydney	Jul 09, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Jul 09, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Jul 08, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 10, 2019	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 10, 2019	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 10, 2019	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 10, 2019	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Address: Level 1, 50 Margaret St
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Project Name: ST MARYS
Project ID: 54782

Order No.:
Report #: 664672
Phone: 02 8245 0300
Fax:

Received: Jul 8, 2019 5:55 PM
Due: Jul 11, 2019
Priority: 3 Day
Contact Name: George Black

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	ST3-01 0-0.1	Jul 07, 2019		Soil	S19-Jl10886	X				X	X		X	X	X
2	ST3-02 0-0.1	Jul 07, 2019		Soil	S19-Jl10887	X				X	X		X	X	X
3	ST3-03 0-0.1	Jul 07, 2019		Soil	S19-Jl10888	X				X	X		X	X	X
4	ST3-04 0-0.1	Jul 07, 2019		Soil	S19-Jl10889	X									
5	ST3-04 0.8-0.9	Jul 07, 2019		Soil	S19-Jl10890					X	X		X	X	X
6	ST3-05 0-0.1	Jul 07, 2019		Soil	S19-Jl10891	X				X	X		X	X	X
7	ST3-06 0-0.1	Jul 07, 2019		Soil	S19-Jl10892	X				X	X		X	X	X
8	ST3-08 0-0.1	Jul 07, 2019		Soil	S19-Jl10893	X				X	X		X	X	X
9	ST3-09 0-0.1	Jul 07, 2019		Soil	S19-Jl10894	X							X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
10	ST3-09 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10895					X	X		X	X	
11	ST3-10 0-0.1	Jul 07, 2019		Soil	S19-Jl10896	X				X	X		X	X	X
12	ST3-11 0-0.1	Jul 07, 2019		Soil	S19-Jl10897	X				X	X		X	X	X
13	ST3-12 0-0.1	Jul 07, 2019		Soil	S19-Jl10898	X				X	X		X	X	X
14	ST3-13 0-0.15	Jul 07, 2019		Soil	S19-Jl10899	X				X	X		X	X	X
15	ST3-14 0-0.1	Jul 07, 2019		Soil	S19-Jl10900	X				X	X		X	X	X
16	ST3-15 0-0.1	Jul 07, 2019		Soil	S19-Jl10901	X				X	X		X	X	X
17	ST3-16 0.3-0.5	Jul 07, 2019		Soil	S19-Jl10902							X			X
18	ST3-16 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10903							X			X
19	ST3-17 0-0.1	Jul 07, 2019		Soil	S19-Jl10904							X			X
20	ST3-17 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10905							X			X
21	ST3-18 0.3-0.4	Jul 07, 2019		Soil	S19-Jl10906							X			X

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Version: 1, Version Date: 28/08/2019

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Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
22	ST3-18 1.0-1.1	Jul 07, 2019		Soil	S19-Jl10907							X			X
23	ST3-19 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10908							X			X
24	ST319 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10909							X			X
25	ST320 0-0.1	Jul 07, 2019		Soil	S19-Jl10910							X			X
26	ST320 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10911							X			X
27	QA20190707_01	Jul 07, 2019		Soil	S19-Jl10912	X				X	X		X	X	X
28	TRIP BLANK	Jul 07, 2019		Water	S19-Jl10913										X
29	TB	Jul 07, 2019		Water	S19-Jl10914				X						
30	TS	Jul 07, 2019		Water	S19-Jl10915				X						
31	RINSATE	Jul 07, 2019		Water	S19-Jl10916										X
32	ST3-01 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10917			X							

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Version: 1, Version Date: 28/08/2019

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
33	ST3-02 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10918			X							
34	ST3-02 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10919			X							
35	ST3-02 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10920			X							
36	ST3-03 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10921			X							
37	ST3-05 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10922			X							
38	ST3-07 0-0.1	Jul 07, 2019		Soil	S19-Jl10923			X							
39	ST3-07 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10924		X								
40	ST3-08 0.7-0.8	Jul 07, 2019		Soil	S19-Jl10925		X								
41	ST3-10 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10926			X							
42	ST3-11 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10927			X							
43	ST3-12 0.6-0.8	Jul 07, 2019		Soil	S19-Jl10928			X							
44	ST3-13 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10929			X							

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Received: Jul 8, 2019 5:55 PM
Due: Jul 11, 2019
Priority: 3 Day
Contact Name: George Black

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
45	ST3-14 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10930			X							
46	ST3-15 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10931			X							
Test Counts						15	15	15	2	15	15	26	26	15	27

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	99			70-130	Pass	
TRH C10-C14	%	83			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
o-Xylene	%	105			70-130	Pass	
Xylenes - Total	%	108			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	109			70-130	Pass	
1.2-Dichlorobenzene	%	118			70-130	Pass	
1.2-Dichloroethane	%	108			70-130	Pass	
Trichloroethene	%	104			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	129			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
TRH >C10-C16	%	79			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	105			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	102			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	93			70-130	Pass	
Benzo(g.h.i)perylene	%	90			70-130	Pass	
Benzo(k)fluoranthene	%	115			70-130	Pass	
Chrysene	%	106			70-130	Pass	
Dibenz(a.h)anthracene	%	92			70-130	Pass	
Fluoranthene	%	114			70-130	Pass	
Fluorene	%	106			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	90			70-130	Pass	
Naphthalene	%	104			70-130	Pass	
Phenanthrene	%	109			70-130	Pass	
Pyrene	%	113			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	119			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDD	%	129			70-130	Pass	
4.4'-DDE	%	128			70-130	Pass	
4.4'-DDT	%	126			70-130	Pass	
a-BHC	%	127			70-130	Pass	
Aldrin	%	127			70-130	Pass	
b-BHC	%	120			70-130	Pass	
d-BHC	%	127			70-130	Pass	
Dieldrin	%	128			70-130	Pass	
Endosulfan I	%	126			70-130	Pass	
Endosulfan II	%	126			70-130	Pass	
Endosulfan sulphate	%	126			70-130	Pass	
Endrin	%	127			70-130	Pass	
Endrin aldehyde	%	127			70-130	Pass	
Endrin ketone	%	128			70-130	Pass	
Heptachlor	%	126			70-130	Pass	
Heptachlor epoxide	%	127			70-130	Pass	
Hexachlorobenzene	%	124			70-130	Pass	
Methoxychlor	%	127			70-130	Pass	
Toxaphene	%	119			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	80			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			70-130	Pass	
Cadmium	%	105			70-130	Pass	
Chromium	%	102			70-130	Pass	
Copper	%	101			70-130	Pass	
Lead	%	102			70-130	Pass	
Mercury	%	98			70-130	Pass	
Nickel	%	101			70-130	Pass	
Zinc	%	97			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	138			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	96			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	113			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	133			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	129			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	132			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	126			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	135			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	98			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	80			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	88			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	125			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	108			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	57			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	115			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	116			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	94			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	95			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	120			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	135			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	118			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	117			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	111			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	106			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	102			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl06393	NCP	%	88			70-130	Pass	
TRH C10-C14	S19-Jl12086	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	S19-Jl06393	NCP	%	90			70-130	Pass	
TRH >C10-C16	S19-Jl12086	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Jl06813	NCP	%	100			70-130	Pass	
Acenaphthylene	S19-Jl06813	NCP	%	100			70-130	Pass	
Anthracene	S19-Jl06813	NCP	%	95			70-130	Pass	
Benz(a)anthracene	S19-Jl06813	NCP	%	98			70-130	Pass	
Benzo(a)pyrene	S19-Jl06813	NCP	%	92			70-130	Pass	
Benzo(b&j)fluoranthene	S19-Jl06813	NCP	%	93			70-130	Pass	
Benzo(g.h.i)perylene	S19-Jl06813	NCP	%	97			70-130	Pass	
Benzo(k)fluoranthene	S19-Jl06813	NCP	%	98			70-130	Pass	
Chrysene	S19-Jl06813	NCP	%	99			70-130	Pass	
Dibenz(a.h)anthracene	S19-Jl06813	NCP	%	95			70-130	Pass	
Fluoranthene	S19-Jl06813	NCP	%	107			70-130	Pass	
Fluorene	S19-Jl06813	NCP	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl06813	NCP	%	93			70-130	Pass	
Naphthalene	S19-Jl06813	NCP	%	99			70-130	Pass	
Phenanthrene	S19-Jl06813	NCP	%	99			70-130	Pass	
Pyrene	S19-Jl06813	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-Jn29389	NCP	%	121			70-130	Pass	
4.4'-DDD	S19-Jl07922	NCP	%	123			70-130	Pass	
4.4'-DDE	S19-Jn29389	NCP	%	121			70-130	Pass	
4.4'-DDT	S19-Jn29389	NCP	%	73			70-130	Pass	
a-BHC	S19-Jn29389	NCP	%	127			70-130	Pass	
Aldrin	S19-Jn29389	NCP	%	119			70-130	Pass	
b-BHC	S19-Jn29389	NCP	%	111			70-130	Pass	
d-BHC	S19-Jn29389	NCP	%	124			70-130	Pass	
Dieldrin	S19-Jn29389	NCP	%	125			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	S19-Jn29389	NCP	%	119			70-130	Pass	
Endosulfan II	S19-Jn29389	NCP	%	124			70-130	Pass	
Endosulfan sulphate	S19-Jn29389	NCP	%	126			70-130	Pass	
Endrin	S19-Jn29389	NCP	%	115			70-130	Pass	
Endrin aldehyde	S19-Jn29389	NCP	%	111			70-130	Pass	
Endrin ketone	S19-Jn29389	NCP	%	111			70-130	Pass	
g-BHC (Lindane)	S19-Jn29389	NCP	%	111			70-130	Pass	
Heptachlor	S19-Jn29389	NCP	%	117			70-130	Pass	
Heptachlor epoxide	S19-Jn29389	NCP	%	117			70-130	Pass	
Hexachlorobenzene	S19-Jn29389	NCP	%	120			70-130	Pass	
Methoxychlor	S19-Jn29389	NCP	%	79			70-130	Pass	
Toxaphene	S19-Jl05896	NCP	%	112			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Zinc	S19-Jl11427	NCP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl10887	CP	%	96			70-130	Pass	
Toluene	S19-Jl10887	CP	%	94			70-130	Pass	
Ethylbenzene	S19-Jl10887	CP	%	97			70-130	Pass	
m&p-Xylenes	S19-Jl10887	CP	%	92			70-130	Pass	
o-Xylene	S19-Jl10887	CP	%	87			70-130	Pass	
Xylenes - Total	S19-Jl10887	CP	%	91			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S19-Jl10887	CP	%	101			70-130	Pass	
1.1.1-Trichloroethane	S19-Jl10887	CP	%	94			70-130	Pass	
1.2-Dichlorobenzene	S19-Jl10887	CP	%	94			70-130	Pass	
1.2-Dichloroethane	S19-Jl10887	CP	%	91			70-130	Pass	
Trichloroethene	S19-Jl10887	CP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl10887	CP	%	99			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl10887	CP	%	109			70-130	Pass	
Cadmium	S19-Jl10887	CP	%	112			70-130	Pass	
Chromium	S19-Jl10887	CP	%	100			70-130	Pass	
Copper	S19-Jl10887	CP	%	108			70-130	Pass	
Lead	S19-Jl10887	CP	%	101			70-130	Pass	
Mercury	S19-Jl10887	CP	%	115			70-130	Pass	
Nickel	S19-Jl10887	CP	%	104			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S19-Jl10893	CP	%	101			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S19-Jl10906	CP	%	133			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S19-Jl10906	CP	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S19-Jl10906	CP	%	124			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S19-Jl10906	CP	%	123			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S19-Jl10906	CP	%	112			50-150	Pass	
Perfluorononanoic acid (PFNA)	S19-Jl10906	CP	%	141			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S19-Jl10906	CP	%	122			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	S19-Jl10906	CP	%	122			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S19-Jl10906	CP	%	137			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S19-Jl10906	CP	%	88			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S19-Jl10906	CP	%	107			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S19-Jl10906	CP	%	136			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S19-Jl10906	CP	%	102			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S19-Jl10906	CP	%	114			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S19-Jl10906	CP	%	76			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S19-Jl10906	CP	%	68			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S19-Jl10906	CP	%	112			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S19-Jl10906	CP	%	118			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S19-Jl10906	CP	%	113			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S19-Jl10906	CP	%	117			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S19-Jl10906	CP	%	129			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S19-Jl10906	CP	%	117			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S19-Jl10906	CP	%	116			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S19-Jl10906	CP	%	135			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S19-Jl10906	CP	%	120			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S19-Jl10906	CP	%	120			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S19-Jl10906	CP	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S19-Jl10906	CP	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S19-Jl10906	CP	%	123			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S19-Jl10906	CP	%	109			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl10886	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Jl10886	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Jl10886	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Jl10886	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Jl10886	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Jl10886	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Jl10886	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Jl10886	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Jl10886	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl06811	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S19-Jl12440	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl10886	CP	mg/kg	2.9	3.8	<1	30%	Pass	
Cadmium	S19-Jl10886	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl10886	CP	mg/kg	29	31	7.0	30%	Pass	
Copper	S19-Jl10886	CP	mg/kg	48	68	<1	30%	Pass	
Lead	S19-Jl10886	CP	mg/kg	18	42	<1	30%	Pass	
Mercury	S19-Jl10886	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl10886	CP	mg/kg	22	23	1.0	30%	Pass	
Zinc	S19-Jl10886	CP	mg/kg	110	130	16	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-Jl10892	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-Jl10892	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-Jl10892	CP	mg/kg	62	62	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-Jl10892	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-Jl10892	CP	mg/kg	< 100	100	6.0	30%	Pass	
TRH >C34-C40	S19-Jl10892	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl10892	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan I	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl10892	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl10892	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S19-Jl10892	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S19-Jl10892	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S19-Jl10894	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S19-Jl10894	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S19-Jl10894	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S19-Jl10894	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S19-Jl10896	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S19-Jl10896	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S19-Jl10896	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S19-Jl10896	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Jl10898	CP	%	8.1	8.9	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Jl10902	CP	%	33	33	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised By

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Bryan Wilson	Senior Analyst-PFAS (QLD)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention:	George Black
Report	664672-AID
Project Name	ST MARYS
Project ID	54782
Received Date	Jul 08, 2019
Date Reported	Jul 11, 2019

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name ST MARYS
Project ID 54782
Date Sampled Jul 07, 2019
Report 664672-AID

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
ST3-01 0-0.1	19-Jl10886	Jul 07, 2019	Approximate Sample 401g Sample consisted of: Brown coarse-grained soil, rocks, cement and bituminous fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-02 0-0.1	19-Jl10887	Jul 07, 2019	Approximate Sample 403g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-03 0-0.1	19-Jl10888	Jul 07, 2019	Approximate Sample 451g Sample consisted of: Brown coarse-grained soil, rocks, bituminous fragments and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-04 0-0.1	19-Jl10889	Jul 07, 2019	Approximate Sample 391g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-05 0-0.1	19-Jl10891	Jul 07, 2019	Approximate Sample 435g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-06 0-0.1	19-Jl10892	Jul 07, 2019	Approximate Sample 561g Sample consisted of: Brown coarse-grained soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-08 0-0.1	19-Jl10893	Jul 07, 2019	Approximate Sample 425g Sample consisted of: Brown coarse-grained soil, rocks and bituminous fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-09 0-0.1	19-Jl10894	Jul 07, 2019	Approximate Sample 515g Sample consisted of: Brown coarse-grained soil, rocks, cement and bituminous fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins | mgt Sample No.	Date Sampled	Sample Description	Result
ST3-10 0-0.1	19-Jl10896	Jul 07, 2019	Approximate Sample 570g Sample consisted of: Brown coarse-grained soil, rocks, cement and bituminous fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-11 0-0.1	19-Jl10897	Jul 07, 2019	Approximate Sample 482g Sample consisted of: Brown coarse-grained soil, rocks, brick and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-12 0-0.1	19-Jl10898	Jul 07, 2019	Approximate Sample 633g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-13 0-0.15	19-Jl10899	Jul 07, 2019	Approximate Sample 493g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-14 0-0.1	19-Jl10900	Jul 07, 2019	Approximate Sample 502g Sample consisted of: Brown coarse-grained soil, rocks and bituminous fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
ST3-15 0-0.1	19-Jl10901	Jul 07, 2019	Approximate Sample 281g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
QA20190707_01	19-Jl10912	Jul 07, 2019	Approximate Sample 339g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 08, 2019	Indefinite

ABN – 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: ST MARYS
Project ID: 54782

Order No.:
Report #: 664672
Phone: 02 8245 0300
Fax:

Received: Jul 8, 2019 5:55 PM
Due: Jul 11, 2019
Priority: 3 Day
Contact Name: George Black

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	ST3-01 0-0.1	Jul 07, 2019		Soil	S19-Jl10886	X				X	X		X	X	X
2	ST3-02 0-0.1	Jul 07, 2019		Soil	S19-Jl10887	X				X	X		X	X	X
3	ST3-03 0-0.1	Jul 07, 2019		Soil	S19-Jl10888	X				X	X		X	X	X
4	ST3-04 0-0.1	Jul 07, 2019		Soil	S19-Jl10889	X									
5	ST3-04 0.8-0.9	Jul 07, 2019		Soil	S19-Jl10890					X	X		X	X	X
6	ST3-05 0-0.1	Jul 07, 2019		Soil	S19-Jl10891	X				X	X		X	X	X
7	ST3-06 0-0.1	Jul 07, 2019		Soil	S19-Jl10892	X				X	X		X	X	X
8	ST3-08 0-0.1	Jul 07, 2019		Soil	S19-Jl10893	X				X	X		X	X	X
9	ST3-09 0-0.1	Jul 07, 2019		Soil	S19-Jl10894	X							X		X

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Site # 23736

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: ST MARYS
Project ID: 54782

Order No.:
Report #: 664672
Phone: 02 8245 0300
Fax:

Received: Jul 8, 2019 5:55 PM
Due: Jul 11, 2019
Priority: 3 Day
Contact Name: George Black

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
10	ST3-09 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10895					X	X		X	X	
11	ST3-10 0-0.1	Jul 07, 2019		Soil	S19-Jl10896	X				X	X		X	X	X
12	ST3-11 0-0.1	Jul 07, 2019		Soil	S19-Jl10897	X				X	X		X	X	X
13	ST3-12 0-0.1	Jul 07, 2019		Soil	S19-Jl10898	X				X	X		X	X	X
14	ST3-13 0-0.15	Jul 07, 2019		Soil	S19-Jl10899	X				X	X		X	X	X
15	ST3-14 0-0.1	Jul 07, 2019		Soil	S19-Jl10900	X				X	X		X	X	X
16	ST3-15 0-0.1	Jul 07, 2019		Soil	S19-Jl10901	X				X	X		X	X	X
17	ST3-16 0.3-0.5	Jul 07, 2019		Soil	S19-Jl10902							X			X
18	ST3-16 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10903							X			X
19	ST3-17 0-0.1	Jul 07, 2019		Soil	S19-Jl10904							X			X
20	ST3-17 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10905							X			X
21	ST3-18 0.3-0.4	Jul 07, 2019		Soil	S19-Jl10906							X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
22	ST3-18 1.0-1.1	Jul 07, 2019		Soil	S19-Jl10907							X			X
23	ST3-19 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10908							X			X
24	ST319 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10909							X			X
25	ST320 0-0.1	Jul 07, 2019		Soil	S19-Jl10910							X			X
26	ST320 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10911							X			X
27	QA20190707_01	Jul 07, 2019		Soil	S19-Jl10912	X				X	X		X	X	X
28	TRIP BLANK	Jul 07, 2019		Water	S19-Jl10913										X
29	TB	Jul 07, 2019		Water	S19-Jl10914				X						
30	TS	Jul 07, 2019		Water	S19-Jl10915				X						
31	RINSATE	Jul 07, 2019		Water	S19-Jl10916										X
32	ST3-01 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10917			X							

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
33	ST3-02 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10918			X							
34	ST3-02 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10919			X							
35	ST3-02 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10920			X							
36	ST3-03 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10921			X							
37	ST3-05 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10922			X							
38	ST3-07 0-0.1	Jul 07, 2019		Soil	S19-Jl10923			X							
39	ST3-07 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10924		X								
40	ST3-08 0.7-0.8	Jul 07, 2019		Soil	S19-Jl10925		X								
41	ST3-10 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10926			X							
42	ST3-11 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10927			X							
43	ST3-12 0.6-0.8	Jul 07, 2019		Soil	S19-Jl10928			X							
44	ST3-13 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10929			X							

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
45	ST3-14 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10930			X							
46	ST3-15 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10931			X							
Test Counts						15	15	15	2	15	15	26	26	15	27

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

S19-Jl10886, S19-Jl10887, S19-Jl10888, S19-Jl10889, S19-Jl10891, S19-Jl10893, S19-Jl10897, S19-Jl10899, S19-Jl10901, S19-Jl10912: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **George Black**

Report **664672-W**
Project name ST MARYS
Project ID 54782
Received Date Jul 08, 2019

Client Sample ID			**TRIP BLANK**	**TB**	**[R20]TS**	**RINSATE**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins | mgt Sample No.			**S19-Jl10913**	**S19-Jl10914**	**S19-Jl10915**	**S19-Jl10916**
Date Sampled			**Jul 07, 2019**	**Jul 07, 2019**	**Jul 07, 2019**	**Jul 07, 2019**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	-	< 0.001	100	-
Toluene	0.001	mg/L	-	< 0.001	100	-
Ethylbenzene	0.001	mg/L	-	< 0.001	97	-
m&p-Xylenes	0.002	mg/L	-	< 0.002	97	-
o-Xylene	0.001	mg/L	-	< 0.001	98	-
Xylenes - Total	0.003	mg/L	-	< 0.003	98	-
4-Bromofluorobenzene (surr.)	1	%	-	95	88	-
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
13C4-PFBA (surr.)	1	%	114	-	-	114
13C5-PFPeA (surr.)	1	%	76	-	-	78
13C5-PFHxA (surr.)	1	%	119	-	-	111
13C4-PFHpA (surr.)	1	%	108	-	-	102
13C8-PFOA (surr.)	1	%	82	-	-	91
13C5-PFNA (surr.)	1	%	142	-	-	135
13C6-PFDA (surr.)	1	%	76	-	-	72
13C2-PFUnDA (surr.)	1	%	82	-	-	85
13C2-PFDoDA (surr.)	1	%	58	-	-	64
13C2-PFTeDA (surr.)	1	%	41	-	-	33

Client Sample ID			TRIP BLANK	TB	[R20]TS	RINSATE
Sample Matrix			Water	Water	Water	Water
Eurofins | mgt Sample No.			S19-Jl10913	S19-Jl10914	S19-Jl10915	S19-Jl10916
Date Sampled			Jul 07, 2019	Jul 07, 2019	Jul 07, 2019	Jul 07, 2019
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
13C8-FOSA (surr.)	1	%	42	-	-	36
D3-N-MeFOSA (surr.)	1	%	34	-	-	42
D5-N-EtFOSA (surr.)	1	%	26	-	-	32
D7-N-MeFOSE (surr.)	1	%	40	-	-	47
D9-N-EtFOSE (surr.)	1	%	39	-	-	49
D5-N-EtFOSAA (surr.)	1	%	44	-	-	57
D3-N-MeFOSAA (surr.)	1	%	45	-	-	51
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
13C3-PFBS (surr.)	1	%	101	-	-	106
18O2-PFHxS (surr.)	1	%	103	-	-	103
13C8-PFOS (surr.)	1	%	136	-	-	125
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	-	-	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	-	-	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N15]	0.01	ug/L	< 0.01	-	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	102	-	-	151
13C2-6:2 FTSA (surr.)	1	%	39	-	-	51
13C2-8:2 FTSA (surr.)	1	%	37	-	-	35
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	-	-	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	-	-	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	-	-	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	-	-	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	-	-	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Jul 08, 2019	14 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 10, 2019	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 10, 2019	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 10, 2019	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 10, 2019	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: ST MARYS
Project ID: 54782

Order No.:
Report #: 664672
Phone: 02 8245 0300
Fax:

Received: Jul 8, 2019 5:55 PM
Due: Jul 11, 2019
Priority: 3 Day
Contact Name: George Black

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Asbestos - WA guidelines	HOLD	HOLD	BTEX	Eurofins | mgt Suite B13	Volatile Organics	Moisture Set	Moisture Set	Eurofins | mgt Suite B7	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	ST3-01 0-0.1	Jul 07, 2019		Soil	S19-Jl10886	X				X	X		X	X	X
2	ST3-02 0-0.1	Jul 07, 2019		Soil	S19-Jl10887	X				X	X		X	X	X
3	ST3-03 0-0.1	Jul 07, 2019		Soil	S19-Jl10888	X				X	X		X	X	X
4	ST3-04 0-0.1	Jul 07, 2019		Soil	S19-Jl10889	X									
5	ST3-04 0.8-0.9	Jul 07, 2019		Soil	S19-Jl10890					X	X		X	X	X
6	ST3-05 0-0.1	Jul 07, 2019		Soil	S19-Jl10891	X				X	X		X	X	X
7	ST3-06 0-0.1	Jul 07, 2019		Soil	S19-Jl10892	X				X	X		X	X	X
8	ST3-08 0-0.1	Jul 07, 2019		Soil	S19-Jl10893	X				X	X		X	X	X
9	ST3-09 0-0.1	Jul 07, 2019		Soil	S19-Jl10894	X							X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
10	ST3-09 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10895					X	X		X	X	
11	ST3-10 0-0.1	Jul 07, 2019		Soil	S19-Jl10896	X				X	X		X	X	X
12	ST3-11 0-0.1	Jul 07, 2019		Soil	S19-Jl10897	X				X	X		X	X	X
13	ST3-12 0-0.1	Jul 07, 2019		Soil	S19-Jl10898	X				X	X		X	X	X
14	ST3-13 0-0.15	Jul 07, 2019		Soil	S19-Jl10899	X				X	X		X	X	X
15	ST3-14 0-0.1	Jul 07, 2019		Soil	S19-Jl10900	X				X	X		X	X	X
16	ST3-15 0-0.1	Jul 07, 2019		Soil	S19-Jl10901	X				X	X		X	X	X
17	ST3-16 0.3-0.5	Jul 07, 2019		Soil	S19-Jl10902							X			X
18	ST3-16 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10903							X			X
19	ST3-17 0-0.1	Jul 07, 2019		Soil	S19-Jl10904							X			X
20	ST3-17 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10905							X			X
21	ST3-18 0.3-0.4	Jul 07, 2019		Soil	S19-Jl10906							X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
22	ST3-18 1.0-1.1	Jul 07, 2019		Soil	S19-Jl10907							X			X
23	ST3-19 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10908							X			X
24	ST319 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10909							X			X
25	ST320 0-0.1	Jul 07, 2019		Soil	S19-Jl10910							X			X
26	ST320 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10911							X			X
27	QA20190707_01	Jul 07, 2019		Soil	S19-Jl10912	X				X	X		X	X	X
28	TRIP BLANK	Jul 07, 2019		Water	S19-Jl10913										X
29	TB	Jul 07, 2019		Water	S19-Jl10914				X						
30	TS	Jul 07, 2019		Water	S19-Jl10915				X						
31	RINSATE	Jul 07, 2019		Water	S19-Jl10916										X
32	ST3-01 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10917			X							

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
33	ST3-02 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10918			X							
34	ST3-02 0.5-0.7	Jul 07, 2019		Soil	S19-Jl10919			X							
35	ST3-02 1.0-1.2	Jul 07, 2019		Soil	S19-Jl10920			X							
36	ST3-03 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10921			X							
37	ST3-05 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10922			X							
38	ST3-07 0-0.1	Jul 07, 2019		Soil	S19-Jl10923			X							
39	ST3-07 0.8-1.0	Jul 07, 2019		Soil	S19-Jl10924		X								
40	ST3-08 0.7-0.8	Jul 07, 2019		Soil	S19-Jl10925		X								
41	ST3-10 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10926			X							
42	ST3-11 0.4-0.5	Jul 07, 2019		Soil	S19-Jl10927			X							
43	ST3-12 0.6-0.8	Jul 07, 2019		Soil	S19-Jl10928			X							
44	ST3-13 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10929			X							

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X		X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794							X					X	X		X
Perth Laboratory - NATA Site # 23736															
45	ST3-14 0.4-0.6	Jul 07, 2019		Soil	S19-Jl10930			X							
46	ST3-15 0.2-0.3	Jul 07, 2019		Soil	S19-Jl10931			X							
Test Counts						15	15	15	2	15	15	26	26	15	27

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	98			70-130	Pass	
o-Xylene	%	98			70-130	Pass	
Xylenes - Total	%	98			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	137			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	130			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	128			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	142			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	147			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	130			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	128			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	130			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	131			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	125			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	124			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	145			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	140			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	130			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	135			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	83			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	143			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	115			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	119			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	87			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	109			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	136			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	132			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	118			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	141			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	85			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	139			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	126			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	134			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M19-Jl11739	NCP	%	134			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M19-Jl11739	NCP	%	125			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M19-Jl11739	NCP	%	113			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M19-Jl11739	NCP	%	121			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M19-Jl11739	NCP	%	129			50-150	Pass	
Perfluorononanoic acid (PFNA)	M19-Jl11739	NCP	%	134			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M19-Jl11739	NCP	%	129			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M19-Jl11739	NCP	%	133			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorododecanoic acid (PFDoDA)	M19-Jl11739	NCP	%	130			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M19-Jl11739	NCP	%	102			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M19-Jl11739	NCP	%	113			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M19-Jl11739	NCP	%	122			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M19-Jl11739	NCP	%	119			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M19-Jl11739	NCP	%	101			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M19-Jl11739	NCP	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M19-Jl11739	NCP	%	86			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M19-Jl11739	NCP	%	120			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M19-Jl11739	NCP	%	113			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M19-Jl11739	NCP	%	108			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M19-Jl11739	NCP	%	61			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M19-Jl11739	NCP	%	141			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M19-Jl11739	NCP	%	137			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M19-Jl11739	NCP	%	107			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M19-Jl11739	NCP	%	97			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M19-Jl11739	NCP	%	80			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M19-Jl11739	NCP	%	60			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M19-Jl11739	NCP	%	113			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M19-Jl11739	NCP	%	147			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M19-Jl11739	NCP	%	137			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M19-Jl11739	NCP	%	118			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorononanoic acid (PFNA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M19-Jl11738	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M19-Jl11738	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Nibha Vaidya	Analytical Services Manager
Bryan Wilson	Senior Analyst-PFAS (QLD)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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#664672

019742

CHAIN OF CUSTODY

JBS&G

454

PROJECT NO.: 54782	LABORATORY BATCH NO.:
PROJECT NAME: ST MARYS	SAMPLERS: GB
DATE NEEDED BY: 72 hr TAT	QC LEVEL: NEPM (2013)

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) sblack@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HEAVY METALS	TRH/BTEX	PAHs	OCPs/PCBs	VOCs	PFAS	ASBESTOS	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
ST3-01 0-0.1	Soil	7/07/19	—	JAR+BAG+PFAS+ICE	/	x	x	x	x	x	x	x			
ST3-01 0.5-0.7				JAR + PFAS + ICE											
ST3-02 0-0.1				JAR+B + PFAS		x	x	x	x	x	x	x			
ST3-02 0.2-0.3				J + PFAS											
ST3-02 0.5-0.7				J + pfas											
ST3-02 1.0-1.2				J + pfas											
ST3-03 0-0.1				J+b + pfas		x	x	x	x	x	x	x			
ST3-03 0.4-0.6				J + pfas											
ST3-04 0-0.1				j + b + pfas								x			
ST3-04 0.8-0.9				j + pfas		x	x	x	x	x	x				
ST3-05 0-0.1				j + b + pfas		x	x	x	x	x	x	x			
ST3-05 0.4-0.5				j + pfas											
ST3-06 0-0.1				j + b + pfas		x	x	x	x	x	x	x			
ST3-07 0-0.1				↓											
ST3-07 0.8-1.0				pfas											
ST3-08 0-0.1				j + b + pfas		x	x	x	x	x	x	x			
ST3-08 0.7-0.8				pfas											
ST3-09 0-0.1				j + b + pfas							x	x			
ST3-09 0.4-0.5				j + r		x	x	x	x	x					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: G. Black DATE: 7/07/19	CONSIGNMENT NOTE NO.	NAME: DATE: 5:35pm	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Envirolab	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

019743

CHAIN OF CUSTODY

JBS&G

455

PROJECT NO.: 54782
PROJECT NAME: ST MARYS
DATE NEEDED BY: 72 hr TAT
LABORATORY BATCH NO.:
SAMPLERS: GB
QC LEVEL: NEPM (2013)
PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....Shsch.....@jbsg.com.au; (3) .....@jbsg.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HEAVY METALS	TRH/BTEX	PAHs	OCPs/PCBs	VOCs	PFAS	ASBESTOS	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
ST3-10 0-0.1	SOIL	7/07/19	—	b+j+pfas		X	X	X	X	X	X	X			
ST3-10 0.2-0.3				jar											
ST3-11 0-0.1				b+j+pfas		X	X	X	X	X	X	X			
ST3-11 0.4-0.5				j											
ST3-12 0-0.1				b+j+pfas		X	X	X	X	X	X	X			
ST3-12 0.6-0.8				j											
ST3-13 0-0.15				b+j+pfas		X	X	X	X	X	X	X			
ST3-13 0.4-0.6				jar											
ST3-14 0-0.1				bag+j+pfas		X	X	X	X	X	X	X			
ST3-14 0.4-0.6				j											
ST3-15 0-0.1				b+j+pfas		X	X	X	X	X	X	X			
ST3-15 0.2-0.3				j+pfas											
ST3-16 0.3-0.5				pfas							X				
ST3-16 0.8-1.0											X				
ST3-17 0-0.1											X				
ST3-17 1.0-1.2											X				
ST3-18 0.3-0.4											X				
ST3-18 1.0-1.1											X				
ST3-19 0.5-0.7											X				

RELINQUISHED BY:
NAME: G Beach DATE: 7/07/19
OF: JBS&G
NAME: DATE:
OF:

METHOD OF SHIPMENT:
CONSIGNMENT NO.
TRANSPORT CO.
CONSIGNMENT NO.
TRANSPORT CO

RECEIVED BY:
NAME: Katherine Ford DATE: 8/7/19 5:56pm
OF: Eurofins
NAME: DATE:
OF:

FOR RECEIVING LAB USE ONLY:
COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
COOLER TEMP ..... deg C
COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

019744

CHAIN OF CUSTODY

456

PROJECT NO.: 54782	LABORATORY BATCH NO.:
PROJECT NAME: ST MARYS	SAMPLERS: GB
DATE NEEDED BY: 72 hr TAT	QC LEVEL: NEPM (2013)

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) gblack@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HEAVY METALS	TRH/BTEX	PAHs	OCPs/PCBs	VOCs	PFAS	ASBESTOS	BTEX	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
ST319 1.0-1.2	SOIL	7/07/19	—	pfas							X					
ST320 0-0.1	↓			↓							X					
ST320 0.2-0.3											X					
QA 201907 07-01				pfas + bag + ICE + jar		X	X	X	X	X	X	X				
Trip blank	WATER			pfas bottle							X					
TB/TS				vials									X			
RINSATE				pfas bottle.							X					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: G.BLACK DATE: 7/07/19.	CONSIGNMENT NOTE NO. —	NAME: DATE: 8/7/19. 5:55AM	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	OF: Eurofins	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	George Black

Sample Login Details

Your reference	54782, St Marys
Envirolab Reference	221255
Date Sample Received	09/07/2019
Date Instructions Received	09/07/2019
Date Results Expected to be Reported	12/07/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 soil
Turnaround Time Requested	3 days
Temperature on Receipt (°C)	11.3
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Short
QC20190707-01	✓	✓	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 221255

Client Details

Client	JBS & G (NSW & WA) Pty Ltd
Attention	George Black
Address	Level 1, 50 Margaret St, Sydney, NSW, 2000

Sample Details

Your Reference	**54782, St Marys**
Number of Samples	1 soil
Date samples received	09/07/2019
Date completed instructions received	09/07/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	12/07/2019
Date of Issue	12/07/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jaimie Loa-Kum-Cheung, Metals Supervisor
Lucy Zhu, Senior Asbestos Analyst
Phalak Inthakesone, Organics Development Manager, Sydney
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

VOCs in soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	11/07/2019
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1

VOCs in soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	119
Surrogate aaa-Trifluorotoluene	%	93
Surrogate Toluene-d_8	%	94
Surrogate 4-Bromofluorobenzene	%	84

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	11/07/2019
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	93

svTRH (C10-C40) in Soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	11/07/2019
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	110
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	120
TRH >C_{34} -C_{40}	mg/kg	100
Total +ve TRH (>C10-C40)	mg/kg	220
Surrogate o-Terphenyl	%	88

PAHs in Soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	10/07/2019
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.3
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	0.6
Pyrene	mg/kg	0.5
Benzo(a)anthracene	mg/kg	0.2
Chrysene	mg/kg	0.2
Benzo(b,j+k)fluoranthene	mg/kg	0.3
Benzo(a)pyrene	mg/kg	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	0.3
Total +ve PAH's	mg/kg	3.0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	93

Organochlorine Pesticides in soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	10/07/2019
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	84

PCBs in Soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date extracted	-	10/07/2019
Date analysed	-	10/07/2019
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCLMX	%	84

Acid Extractable metals in soil		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date prepared	-	10/07/2019
Date analysed	-	10/07/2019
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	29
Copper	mg/kg	43
Lead	mg/kg	38
Mercury	mg/kg	0.1
Nickel	mg/kg	23
Zinc	mg/kg	170

Moisture		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date prepared	-	10/07/2019
Date analysed	-	11/07/2019
Moisture	%	28

Asbestos ID - soils NEPM - ASB-001		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date analysed	-	10/07/2019
Sample mass tested	g	423.74
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos#1	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

PFAS in Soils Extended		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Date prepared	-	11/07/2019
Date analysed	-	11/07/2019
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.3
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	6.8
Perfluorodecanesulfonic acid	µg/kg	0.4
Perfluorobutanoic acid	µg/kg	0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.4
Perfluorononanoic acid	µg/kg	0.2
Perfluorodecanoic acid	µg/kg	1
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	0.7
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.1
10:2 FTS	µg/kg	<0.1
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	94
Surrogate $^{13}C_2$ *PFOA*	%	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	88
Extracted ISTD $^{18}O_2$ *PFHxS*	%	93
Extracted ISTD $^{13}C_4$ *PFOS*	%	94
Extracted ISTD $^{13}C_4$ *PFBA*	%	85

PFAS in Soils Extended		
Our Reference		221255-1
Your Reference	UNITS	QC20190707-01
Date Sampled		07/07/2019
Type of sample		soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	73
Extracted ISTD $^{13}C_2$ *PFHxA*	%	72
Extracted ISTD $^{13}C_4$ *PFHpA*	%	78
Extracted ISTD $^{13}C_4$ *PFOA*	%	84
Extracted ISTD $^{13}C_5$ *PFNA*	%	88
Extracted ISTD $^{13}C_2$ *PFDA*	%	76
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	73
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	91
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	84
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	77
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	102
Extracted ISTD $^{13}C_8$ *FOSA*	%	70
Extracted ISTD d_3 *N MeFOSA*	%	68
Extracted ISTD d_5 *N EtFOSA*	%	79
Extracted ISTD d_7 *N MeFOSE*	%	80
Extracted ISTD d_9 *N EtFOSE*	%	83
Extracted ISTD d_3 *N MeFOSAA*	%	71
Extracted ISTD d_5 *N EtFOSAA*	%	65
Total Positive PFHxS & PFOS	µg/kg	7.1
Total Positive PFOS & PFOA	µg/kg	7.2
Total Positive PFAS	µg/kg	10

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Method ID	Methodology Summary
Org-035	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	10/07/2019
Date analysed	-			11/07/2019	[NT]	[NT]	[NT]	[NT]	11/07/2019	11/07/2019
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	83	115
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	89	122
2,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	92	130
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	85	114
1,1-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-014	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	90	123
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	92	127
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-014	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	95	133
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	93	127
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-014	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
o-Xylene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-014	112	[NT]	[NT]	[NT]	[NT]	107	105
Surrogate aaa-Trifluorotoluene	%		Org-014	77	[NT]	[NT]	[NT]	[NT]	86	98
Surrogate Toluene-d_8	%		Org-014	94	[NT]	[NT]	[NT]	[NT]	95	93
Surrogate 4-Bromofluorobenzene	%		Org-014	88	[NT]	[NT]	[NT]	[NT]	99	99

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	10/07/2019
Date analysed	-			11/07/2019	[NT]	[NT]	[NT]	[NT]	11/07/2019	11/07/2019
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	79	119
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	79	119
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	79	112
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	79	119
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	75	111
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	81	126
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	79	120
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	77	[NT]	[NT]	[NT]	[NT]	86	98

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Date analysed	-			11/07/2019	[NT]	[NT]	[NT]	[NT]	11/07/2019	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-003	85	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Date analysed	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	104	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Date analysed	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	93	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Date analysed	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	93	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Date analysed	-			10/07/2019	[NT]	[NT]	[NT]	[NT]	10/07/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	110	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	105	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
Date prepared	-			11/07/2019	[NT]	[NT]	[NT]	[NT]	11/07/2019	11/07/2019
Date analysed	-			11/07/2019	[NT]	[NT]	[NT]	[NT]	11/07/2019	11/07/2019
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	103	101
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	111	108
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	113	118
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	103	104
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	118	92
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	119	105
Perfluorobutanoic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	114	116
Perfluoropentanoic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	109	107
Perfluorohexanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	111	113
Perfluoroheptanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	102	107
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	106	107
Perfluorononanoic acid	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	103	106
Perfluorodecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	110	105
Perfluoroundecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	108	99
Perfluorododecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	111	113
Perfluorotridecanoic acid	µg/kg	0.5	Org-035	<0.5	[NT]	[NT]	[NT]	[NT]	92	101
Perfluorotetradecanoic acid	µg/kg	5	Org-035	<5	[NT]	[NT]	[NT]	[NT]	107	116
4:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	105	106
6:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	106	105
8:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	110	126
10:2 FTS	µg/kg	0.1	Org-035	<0.1	[NT]	[NT]	[NT]	[NT]	102	138
Perfluorooctane sulfonamide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	122	126
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	112	102
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	103	104
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-035	<1	[NT]	[NT]	[NT]	[NT]	115	119
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-035	<5	[NT]	[NT]	[NT]	[NT]	111	97
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	104	98
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-035	<0.2	[NT]	[NT]	[NT]	[NT]	109	110
Surrogate $^{13}C_8$ *PFOS*	%		Org-035	104	[NT]	[NT]	[NT]	[NT]	107	98
Surrogate $^{13}C_2$ *PFOA*	%		Org-035	98	[NT]	[NT]	[NT]	[NT]	99	95

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-035	105	[NT]	[NT]	[NT]	[NT]	98	88
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-035	101	[NT]	[NT]	[NT]	[NT]	96	85
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-035	110	[NT]	[NT]	[NT]	[NT]	95	94
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-035	94	[NT]	[NT]	[NT]	[NT]	93	89
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-035	85	[NT]	[NT]	[NT]	[NT]	84	68
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-035	90	[NT]	[NT]	[NT]	[NT]	89	71
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-035	99	[NT]	[NT]	[NT]	[NT]	95	74
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-035	101	[NT]	[NT]	[NT]	[NT]	99	78
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-035	107	[NT]	[NT]	[NT]	[NT]	102	82
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-035	102	[NT]	[NT]	[NT]	[NT]	103	80
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-035	90	[NT]	[NT]	[NT]	[NT]	91	74
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-035	118	[NT]	[NT]	[NT]	[NT]	115	91
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-035	114	[NT]	[NT]	[NT]	[NT]	125	76
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-035	85	[NT]	[NT]	[NT]	[NT]	84	73
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-035	97	[NT]	[NT]	[NT]	[NT]	94	89
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-035	136	[NT]	[NT]	[NT]	[NT]	123	98
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-035	106	[NT]	[NT]	[NT]	[NT]	105	70
Extracted ISTD d_3 *N MeFOSA*	%		Org-035	109	[NT]	[NT]	[NT]	[NT]	106	72
Extracted ISTD d_5 *N EtFOSA*	%		Org-035	107	[NT]	[NT]	[NT]	[NT]	112	73
Extracted ISTD d_7 *N MeFOSE*	%		Org-035	119	[NT]	[NT]	[NT]	[NT]	111	77

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	221255-1
Extracted ISTD d_9 *N EtFOSE*	%		Org-035	112	[NT]	[NT]	[NT]	[NT]	112	77
Extracted ISTD d_3 *N MeFOSAA*	%		Org-035	84	[NT]	[NT]	[NT]	[NT]	82	70
Extracted ISTD d_5 *N EtFOSAA*	%		Org-035	93	[NT]	[NT]	[NT]	[NT]	82	60

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

019745

CHAIN OF CUSTODY

JBS&G

PROJECT NO.: 54782	LABORATORY BATCH NO.:
PROJECT NAME: St MARYS	SAMPLERS: GB.
DATE NEEDED BY: 72 hr TAT	QC LEVEL: NEPM (2013)

PHONE: Sydney: 02 8245 0300 | Perth: 08 9488 0100 | Brisbane: 07 3112 2688

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) .....Slsec.....@jbsg.com.au; (3) .....@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	HEAVY METALS	TPH/BTEX	PAHs	OCPs/PCBs	VOCs	PAHs	ASBESTOS	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
QC20190707-01	Soil	7/07/19	—	Jar & pGs + Bag + ice	—	x	x	x	x	x	x	x			

PLEASE SEND TO ENVIROLAB

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 22125

Date Received: 9/7

Time Received: 11:56

Received by: AZ

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: G-BEACH DATE: 7/07/19	CONSIGNMENT NOTE NO. —	NAME: Suzanne Kaye	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF: JBS&G	TRANSPORT CO.	DATE: 9/7/19 5:55PM	
		OF: Eurofins	COOLER TEMP 16.7 deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: Bobby Zheng DATE: 9/7	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF: ALS AZ 11:56	COOLER TEMP ..... deg C 11.3

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

IMSO FormsO13 – Chain of Custody - Generic

Appendix G Borelogs and Calibration

Document Set ID: 8830578
Version: 1, Version Date: 28/08/2019

ST3-01

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown, damp, firm, heterogenous and of low plasticity. Rootlet inclusions.	ST3-01_0-0.1	No odours, asbestos or staining.
		0.10		Fill	Gravelly CLAY. Grey and damp. Heterogenous with inclusions of roadbase gravels.		No odours, asbestos or staining.
		0.30		Fill	Asphalt.		No odours, asbestos or staining.
		0.40		GM-GC	Silty clayey GRAVEL. Grey and moist. Firm, heterogenous and of medium plasticity. Inclusions of igneous gravels.		
	0.5					ST3-01_0.5-0.7	
							No odours, asbestos or staining.
	1.0						
		1.00		CL-ML	Silty CLAY. Grey and wet. Firm and of medium plasticity. Inclusions of shale gravels.		No odours, asbestos or staining.
		1.20			Borehole ST3-01 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-02

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and damp. Heterogenous, firm and of low plasticity. Inclusions of igneous gravels.	ST3-02_0-0.1	No odours, asbestos or staining. QAQC20190707-01.
		0.10		Fill	Gravelly CLAY. Brown-orange. Inclusions of sandstone and igneous gravels.	ST3-02_0.2-0.3	No odours, asbestos or staining.
	0.5						
		0.50		Fill	Silty CLAY. Grey-brown and damp. Heterogenous with inclusions of fine bitumen and igneous gravels.	ST3-02_0.5-0.6	No odours, asbestos or staining.
	1.0						
		1.00		CL-ML	Silty CLAY. Grey and saturated. Soft and of low plasticity.	ST3-02_1-1.2	No odours, asbestos or staining.
		1.20			Borehole ST3-02 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-03

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Gravelly CLAY. Brown and damp-wet. Heterogenous, low plasticity with inclusions of roadbase gravels.	ST3-03_0-0.1	No odours, asbestos or staining.
		0.15		Fill	Silty CLAY. Brown-orange and damp. Heterogenous and of low plasticity. Inclusions of fine igneous gravels.		No odours, asbestos or staining.
		0.35		Fill	Asphalt.		No odours, asbestos or staining.
		0.40		Fill	Silty CLAY. Orange-brown. Occasional Asphalt inclusions.	ST3-03_0.4-0.6	
	0.5						No odours, asbestos or staining.
		0.80		CL-ML	Silty CLAY. Grey-brown and moist. Heterogenous, firm and of low plasticity.		
	1.0						No odours, asbestos or staining.
		1.20			Borehole ST3-03 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-04

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and moist. Heterogenous, firm and of low plasticity.	ST3-04_0-0.1	No odours, asbestos or staining.
		0.20		Fill	Silty CLAY. Brown and damp. Heterogenous with inclusions of sandstone gravels.		No odours, asbestos or staining.
	0.5	0.40		Fill	Silty CLAY. Brown and damp. Heterogenous with inclusions of sandstone gravels and some charcoal.	ST3-04_0.8-0.9	No odours, asbestos or staining.
	1.0	0.90		CL-ML	Silty CLAY. Yellow-brown and wet. Heterogenous, firm and of low plasticity.		No odours, asbestos or staining.
	1.5	1.20			Borehole ST3-04 terminated at 1.2m		
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-05

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and damp. Heterogenous, soft and of low plasticity. Inclusions of rootles and minor igneous gravels.	ST3-05_0-0.1	No odours, asbestos or staining.
	0.5	0.40		CL-ML	Silty CLAY. Orange-brown and damp. Heterogenous, and damp. Firm, low plasticity with inclusions of ironstone and charcoals.	ST3-05_0.4-0.5	No odours, asbestos or staining.
	1.0						
		1.20			Borehole ST3-05 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-06

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown, heterogenous and dry. Stiff, of low plasticity. Inclusions of some sand and igneous gravels.	ST3-06_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Orange and damp. Heterogenous and of low plasticity.		
	0.5						No odours, asbestos or staining.
	1.0						
		1.20			Borehole ST3-06 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-07

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and damp. Heterogenous and of low plasticity with inclusions of rootlets.	ST3-07_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Brown-orange and dry. Heterogenous, stiff and of low plasticity.		
	0.5						No odours, asbestos or staining.
	1.0					ST3-07_0.8-1	
		1.20			Borehole ST3-07 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-08

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Light brown and dry. Heterogenous, and of low plasticity. Inclusions of rootlets and gravels.	ST3-08_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Light brown and dry. Heterogenous and of low plasticity.		
	0.5						No odours, asbestos or staining.
						ST3-08_0.7-0.8	
	1.0						
		1.20			Borehole ST3-08 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-09

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty gravelly CLAY. Brown and damp. Heterogenous and of low plasticity. Inclusions of minor igneous gravels.	ST3-09_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Yellow-brown and dry. Heterogenous, stiff and of low plasticity.		
	0.5					ST3-09_0.4-0.5	
	1.0						No odours, asbestos or staining.
		1.20			Borehole ST3-09 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-10

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty gravelly CLAY. Brown and moist. Heterogenous, firm and of low plasticity inclusions of igneous gravels.	ST3-10_0-0.1	No odours, asbestos or staining.
		0.15		CL-ML	Silty CLAY. Orange-brown and dry. Heterogenous, stiff and of low plasticity. Inclusions of ironstones.	ST3-10_0.2-0.3	
	0.5						No odours, asbestos or staining.
	1.0						
		1.20			Borehole ST3-10 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-11

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Gravelly CLAY. Brown and damp. Heterogenous, firm and of low plasticity. Inclusions of igneous gravels, tile and terracotta.	ST3-11_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Orange-brown and damp. Heterogenous, stiff and of medium plasticity.		
	0.5					ST3-11_0.4-0.5	
	1.0						No odours, asbestos or staining.
		1.20			Borehole ST3-11 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-12

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Gravelly sandy CLAY. Brown and damp. Heterogenous with inclusions of igneous gravels.	ST3-12_0-0.1	No odours, asbestos or staining.
		0.30		CL-ML	Silty CLAY. Orange-brown and dry. Heterogenous, stiff and of low plasticity.		
	0.5					ST3-12_0.6-0.8	No odours, asbestos or staining.
	1.0						
		1.20			Borehole ST3-12 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-13

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Gravelly CLAY. Grey-brown and damp. Heterogenous, firm and of low plasticity. Inclusions of igneous sandstone gravels and tile fragments.	ST3-13_0-0.15	No odours, asbestos or staining.
	0.5	0.40		CL-ML	Silty CLAY. Orange-brown and damp. Heterogenous, stiff and of low plasticity. Inclusions of ironstone.	ST3-13_0.4-0.6	No odours, asbestos or staining.
	1.0						
		1.20			Borehole ST3-13 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-14

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty gravelly CLAY. Grey and moist. Heterogenous, firm and of low plasticity. Inclusions of igneous gravels.	ST3-14_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML	Silty CLAY. Orange-brown and damp. Heterogenous, stiff and of medium plasticity.		
	0.5					ST3-14_0.4-0.6	
	1.0						No odours, asbestos or staining.
		1.20			Borehole ST3-14 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-15

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty clayey GRAVEL. Brown and damp. Heterogenous, firm and of low plasticity.	ST3-15_0-0.1	No odours, asbestos or staining.
		0.10		CL-ML-GM	(REWORKED NATURAL). Silty gravelly CLAY. Heterogenous and dry. Stiff with inclusions of gravels.	ST3-15_0.2-0.3	No odours, asbestos or staining.
		0.30		CL-ML	Silty CLAY. Yellow-red and damp. Heterogenous, stiff and of low plasticity. Inclusion of roots.		No odours, asbestos or staining.
	0.5						
	1.0						
		1.20			Borehole ST3-15 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-16

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and damp. Heterogenous, firm and of low plasticity. Inclusions of rootlets and igneous gravels.		No odours, asbestos or staining. Western adjaacent DOC.
		0.20		Fill	Gravelly CLAY. Brown-orange and damp. Heterogenous, firm and of low plasticity with fine gravels.	ST3-16_0.3-0.5	No odours, asbestos or staining.
	0.5						
		0.50		Fill	Silty CLAY. Grey-brown and saturated.	ST3-16_0.8-1	No odours, asbestos or staining.
	1.0						
		1.00		Fill	Gravelly CLAY. Grey and wet. Igneous gravels.		No odours, asbestos or staining.
		1.20			Borehole ST3-16 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-17

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Silty CLAY. Brown and damp. Heterogenous and of low plasticity with inclusions of rootlets.	ST3-17_0-0.1	No odours, asbestos or staining. Adjacent outlet DOC.
		0.20		Fill	Silty CLAY. Orange-brown and damp. Heterogenous, firm and of low plasticity.		
	0.5						No odours, asbestos or staining.
	1.0						
		1.00		Fill	Gravel. Grey and saturated. Inclusions of igneous gravels, decomposing organic detritus.	ST3-17_1-1.2	No odours, asbestos or staining. Pipe foundation.
		1.20			Borehole ST3-17 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-18

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Asphalt.		No odours, asbestos or staining.
		0.05		Fill	Road base.		No odours, asbestos or staining.
		0.10		Fill	SAND.		No odours, asbestos or staining.
		0.20		Fill	Coal/bitument		No odours, asbestos or staining.
		0.30		Fill	Gravelly silty CLAY. Brown and damp. Heterogenous and of low plasticity.	ST3-18_0.3-0.4	
	0.5						No odours, asbestos or staining.
		0.60		Fill	Silty CLAY. Orange-grey and wet. Heterogenous and medium dense.		No odours, asbestos or staining.
	1.0					ST3-18_1-1.1	
		1.20			Borehole ST3-18 terminated at 1.2m		
	1.5						
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-19

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road St Marys

Date: 7/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 1.2
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
Push Tube				Fill	Road base.		No odours, asbestos or staining.
	0.5	0.40		Fill	Gravelly SAND. Grey and damp. Heterogenous, with inclusions of medium road base gravels and subgrade material.	ST3-19_0.5-0.7	No odours, asbestos or staining.
	1.0	1.00		Fill	SAND. Medium grained and wet.	ST3-19_1-1.2	No odours, asbestos or staining.
	1.5	1.20			Borehole ST3-19 terminated at 1.2m		
	2.0						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 11/7/19

ST3-20

Project Number: 54782
Client: Minter Ellison
Project Name: Jordan Springs PFAS Assessment
Site Address: Links Road, St Marys

Date: 15/07/2019
Logged By: G. Black
Contractor: Terratest
Total Hole Depth (mbgs): 0.3
Bore Diameter (mm):

Eastings (GDA 94):
Northings (GDA 94):
Zone/Area/Permit#:
Reference Level: Ground Surface
Elevation (m):

Method	Depth (mbgs)	Contact (mbgs)	Graphic Log	Lithological Class	Lithological Description	Samples Tests Remarks	Additional Observations
				CL-ML	Silty CLAY. Light brown and damp. Heterogenous and of medium plasticity.	ST3-20_0-0.1	No asbestos, odours or staining.
						ST3-20_0.2-0.3	No asbestos, odours or staining.
		0.30			Borehole ST3-20 terminated at 0.3m		
	0.5						

BOREHOLE JBSG BOREHOLE - 2017.GPJ GINT STD AUSTRALIA.GDT 15/7/19

Field Equipment Calibration and Decontamination

JBS&G

PROJECT NAME:	ST MARYS	**PROJECT NO:**	54732
FIELD DATES:	7/07/19	**FIELD STAFF:**	GD.

CALIBRATION SUMMARY
EQUIPMENT:
CALIBRATION STANDARD:

DATE	TIME	READING (ppm_v)	COMMENTS

DECONTAMINATION SUMMARY

EQUIPMENT: HA at 1 location STB-20

1. Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3. Was the equipment contaminated with grease, tar or similar material? If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y Y	N N	(NA)
4. Was phosphate-free detergent used to wash the equipment? Liquinox	(Y)	N	NA
5. Was the equipment rinsed with clean water?	(Y)	N	NA
6. Was the equipment then rinsed with deionised water?	Y	(N)	NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	(Y)	N	NA

WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.

FRESH PAIR of NITRILE GLOVES WORN for Each sample collected

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7/07/19.

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PFAS Sampling Checklist Part 1

Checklist for items prohibited at site during PFAS Investigations (mostly adopted from WA DER 2016)		
Clothing and Food		Y/N
New clothing	Has all field clothing to be washed a minimum of six times after purchase before using at the site?	Y
Clothing, including boots, with stain-resistant, rain resistant, or waterproof coatings/treated fabric (e.g. GORE-TEX®)	Where sampling during rain was unaviodable, was polyethylene rain gear (e.g. disposable LDPE), vinyl, or polyvinyl chloride (PVC) waterproof clothing used?	Y
Tyvek® clothing	Have Tyvek clothes been removed from field bag and vehicle prior to mobilising to site?	Y
Fast food wrappers and containers, pre-wrapped foods and snacks (e.g. chocolate bars, energy bars, muesli bars, potato chips etc.)	Is all food being taken to site contained in rigid plastic containers or bags or stainless steel containers?	Y
Sampling Equipment and Containers		
Teflon®-containing or -coated field equipment (tubing, bailers, tape, plumbing paste, etc.)	Does all sampling equipment comprise High Density Polyethylene (HDPE), silicone tubing, and HDPE or polypropylene?	Y
Teflon®-lined lids on containers (e.g. sample containers, rinsate water storage containers)	Have specific sample containers provided by the laboratory confirmed to comprise either polypropylene or HDPE for sample containers?	Y
Other Products		
Aluminium foil	Has HDPE sheeting (commonly used as drop cloths for painting or home improvement) been sourced as a replacment for aluminium foil, if required?	N/A
Self-sticking notes and similar office products (e.g. 3M Post-it notes)	Have these products been removed from site vehicles and field documentation?	Y
Waterproof paper, notebooks, and labels	Have all waterproof stationary been removed from site vehicles and field documentation and replaced with standard paper and paper labels? Aluminum clipboard to be used	Y
Markers (e.g. Sharpies)	Have ball point pens used for all labelling and note taking?	Y
Drilling fluid containing PFAS	If a drilling method requiring drilling fluid is to be used at the site has it been confirmed that drilling fluids to be used are PFAS-free?	N/A
Detergents and decontamination solutions (e.g. Decon 90® Decontamination Solution)	Follow water-only decontamination approach. Is sufficient water avaliable on-site for removing all debris by scrubbing with a plastic brush followed by thorough rinsing with tap water and triple rinsing with distilled or deionised water?	Y
Reusable chemical or gel ice packs (e.g. BlueIce®)	Has all ice been contained by double bagging in plastic (polyethylene) bags?	Y
Many Sunscreens and Insect Repellents contain PFASs and should not be brough to site	Is one of the following or other acceptable products available for use at the site? Sunscreens - Alba Organics Natural Sunscreen, Yes to Cucumbers, Aubrey Organics, Jason Naturakl Sunblock, Kiss my face, and baby sunscreens that are PFAS free or "natural" Insect Repellants - Jason Natural Quit Bugging Me, Repel Lemon Eucalyptus Insect Repellent, Herbal Armor, California Baby Natural Bug Spray, BabyGanics Sunscreen and insect repellent - Avon Skin So Soft Bug Guard Plus - SPF 30 Lotion	Y

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APPENDIX E

Interim Advice IA2 Variation Section 34: Stages 1 to 3, East West Connector Road

Zoic Environmental

ZOIC Environmental Pty Ltd
ABN 23 154 745 525
Suite 1, Level 9
189 Kent Street Sydney 2000
Phone: +61 2 9251 8070
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19197 IA2 final 15Aug19.docx

15 August 2019

Maryland Development Company Pty Limited
c/o Luke Walker
Minter Ellison
Governor Macquarie Tower
1 Farrer Place
Sydney NSW 2000

Via email: luke.walker@minterellison.com
cc: tara.kahrovic@minterellison.com

Dear Luke,

Re: Confidential & Privileged

Interim Advice IA2 Variation Section 34 – Stages 1 to 3, East West Connector Road, St Mary's NSW

1 Introduction

Minter Ellison, on behalf of Maryland Development Company Pty Limited (MDC) and St Marys Land Limited (St Marys), has appointed Kylie Lloyd of Zoic Environmental Pty Ltd (Zoic), a NSW EPA Auditor accredited (No. 0302) under the Contaminated Land Management (CLM) Act 1997, to conduct an Audit of the East West Connector Road (EWCR), associated Regional Open Space (ROS) and the Dunheved Link Road (DLR) ("the site"), as identified by the figure included as Attachment A to this letter.

Minter Ellison is acting on behalf of MDC and St Marys to agree draft conditions of consent with both Penrith and Blacktown Local Government Areas (LGA's) for the proposed development.

To address Penrith Council's concerns and address and their duties under Clause 7 of SEPP55, the reports listed in Section 3 below have been reviewed as part of an audit to assess suitability of the site for the proposed use. As such, this is the initial step of an audit.

It is noted that as required in Section 3.6.2 of the NSW EPA (2017) Contaminated Land Management Guidelines for the NSW Site Auditor Scheme (3rd edition), use of an Interim Audit Advice is permissible to provide interim advice on works or plans, but that all Interim Advice letters must specify the interim advice does not constitute a site audit report or statement and cannot pre-empt the conclusion to be drawn at the end of the audit process. An interim advice letter cannot be issued independent of an SAS or SAR. The Audit will be prepared as defined under Section 4 of the Contaminated Land Management Act 1997 (as amended).

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2 Scope of Audit and Nature of Interim Advice

NSW EPA (2017) describes the site assessment and audit process as:

1. *Consultant is commissioned to assess contamination*. The contaminated site consultant designs and undertakes the site assessment and, where required, all remediation and validation activities to achieve the objectives specified by the owner or developer; and
2. *Site auditor reviews the consultant's work*. The site owner or developer commissions the Auditor to review the consultant's work. The Auditor then prepares a SAR and SAS at the conclusion of the review, which are given to the owner or developer.

Therefore, the contaminated land consultant and other relevant parties should be satisfied that the work to be conducted conforms to all appropriate regulations, standards and guidelines and is suitable based on the site history and the proposed land use.

The audit is currently non-statutory in nature. Should conditions be issued requiring Auditor involvement, the audit will become statutory and require notification to NSW EPA.

3 Current Interim Advice

In preparing this interim audit advice, the Auditor has reviewed the following reports related to land contamination assessment that have been recently updated due to comments made in Interim Advice No. 1 (19197 IA1, 25 July 2019):

- JBS&G (14 August 2019) Additional Targeted Assessment of Dunheved Portion (Stage 2b) of Stage 2 East West Connector Road, Dunheved Precinct, St Marys NSW (Ref: 54782-121646 (Rev 0))
- JBS&G (14 August 2019) Phase 2 Environmental Site Assessment (ESA) Stage 3 East West Connector Road, Links Road St Mary's, NSW (Ref: 54782/123128 (Rev 0));
- JBS&G (14 August 2019) Contamination Management Plan (CMP) for Stages 1 to 3 of the East West Connector Road, St Mary's, NSW (Ref: 54782/123244 (Rev 0)).
- JBS&G (14 August 2019) Remedial Action Plan Stage 2b and Stage 3 – East West Connector Road St Marys, NSW (Ref: 54782/123642 Rev 0).

Documents previously referred to in other interim advices and pertinent to this Interim Advice include:

- JBS&G Australia Pty Limited (JBS&G) (17 April 2019) Phase 1 Preliminary Site Assessment East West Connector Road, Jordan Springs East, NSW (Ref: 54782/121318 (Rev 2));
- JBS&G (6 February 2019) Environmental Site Assessment and Unexploded Ordnance Clearance for Stage 2 of the East West Connector Road, Ropes Crossing to Jordan Springs East, NSW (54020/118884 (Rev 0);
- JBS&G (31 December 2018) Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (54020-119670 (Rev0));
- JBS&G (17 July 2019) Environmental Site Assessment (ESA) W Series Buildings within Regional Open Space – Central Precinct, NSW (Ref: 54020/12316 (Rev A)); and
- JBS&G (12 February 2019) Characterisation of the Munitions Bund within the Regional Open Space Area, Central Precinct, Llandilo, NSW (Ref: 54158-117693 Rev 0).

The purpose of the current Interim Audit Advice (IA2) is to document Auditor findings following the review of existing information related to site conditions and contamination status. This advice also outlines any data gaps identified in the existing information which

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should be addressed by the appointed consultant as either part of any further investigation works, or as part of any remedial or validation works that may be required at the site.

4 Background

4.1 Former ADI St Marys property

In 1993 the NSW Government endorsed the release of the 1535 hectare former ADI St Marys property for Urban Development. As the property straddles the boundary between two local government areas (Blacktown and Penrith), the NSW Government endorsed a regional environmental plan to cover the development of the property. State Regional Environmental Plan SREP30 was gazetted and zones the land for a combination of urban, employment, regional open space and regional park land uses.

Whilst the SREP30 identified six development precincts known as Western Precinct, Central Precinct, North and South Dunheved Precincts, Ropes Creek Precinct and Eastern Precinct, the environmental investigations were completed for these areas denoting them as sectors; Western Sector, North Western Sector, Central Sector West, Southern Sector West, Northern Sector, Southern Sector East, Central Sector East, North Eastern Sector and Eastern Sector.

The former ADI St Marys property has undergone previous environmental investigation works including extensive environmental assessment and remediation works in the mid 1990's. Following investigation and remediation works, the site was historically validated as part of Southern Sector East and the Southern Sector west, within the Southern Sector West and the Southern Sector East validation reports (ADI 1996). The site is covered by the following three historical Site Audit Statements prepared by HLA-Envirosciences (CHK001/1 Kidd 1999), (CHK001/6 Kidd 1999) and (CHK001/7 Kidd 1999). The reports confirm that the property was suitable for proposed uses with the exception of excluded areas including footprints of original buildings, car parks, roads and stockpiles that were inaccessible for remedial and validation works when previous works were conducted.

4.2 The Site Description

The site is identified in the figure included as Attachment A to this letter. The following highlights key features:

- Stage 1 – an approximately 4.58 hectare area of former paved road, excluded from previous investigations located within Blacktown Council, being developed as road.
- Stage 2A – an approximately 1.93 hectare area of former paved road, excluded from previous investigations located within Penrith Council, being developed as a road.
- Stage 2B – an approximately 3.36 hectare area of former ADI St Marys property adjacent to Site 12 where filling occurred, located within Blacktown and Penrith Council and currently being developed as a road within Dunheved Industrial Precinct
- Stage 2C – an approximately 24.33 hectare area of former ADI St Marys property adjacent Site 11 where filling may have occurred and containing part of former X Series and W Series building footprints which were excluded from previous investigations located within Penrith Council and proposed for future development as parkland and sports field area (subject to future development consents).
- Stage 3 – an approximately 0.67 hectare area of former ADI St Marys property adjacent to Site 12 where filling occurred, located within Penrith Council and currently being developed as a road within Dunheved Industrial Precinct and within the adjacent Links Road

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4.3 Deferred Commencement Conditions

As part of the approval of the EWCR, ROS, and DLR the client has been provided with two draft conditions to enable approval of the Stage 2 works (DA 18/0221) and Stage 3 (DA18/0381) works.

Concerns have been raised regarding the Schedule 1 Deferred Commencement conditions as it is considered the following conditions are likely to be unlawful:

- Stage 2 Draft Conditions Without Prejudice – DA18/0221
  - Draft Condition B, which relates to investigation of the contamination status of the site in accordance with an Auditor endorsed sampling analysis and quality plan (SAQP)
  - Draft Condition E, a Site Audit Statement (SAS) or Interim Advice (IA) is provided confirming that *"all land subject to the development is suitable for use."*
- Stage 3 Draft Conditions Without Prejudice – DA18/0381
  - Draft Condition D, which relates to investigation of the contamination status of the site in accordance with an Auditor endorsed SAQP
  - Draft Condition G, a SAS or IA is provided confirming that "all land subject to the development is suitable for use."

5 Summary of Investigation

5.1 Stage 1

JBS&G completed an Environmental Site Assessment for Stage 1 of the EWCR with the objective to characterise contamination in accordance with the Auditor approved Sampling Analysis and Quality Plan drawing conclusions on the suitability of the site for the proposed use.

These works comprised soil investigations and pavement investigations during August 2018 and were reviewed and assessed by the Auditor as suitable pending receipt of UXO clearance. The UXO clearance was subsequently provided and confirmed as appropriate.

As a result Stage 1 was considered suitable for proposed commercial/industrial land use providing pavement material was tracked and placed below pavement only and not within landscape verges.

5.2 Stage 2A

In October 2018, JBS&G completed an Environmental Assessment for Stage 2 (considered to be approximately Stage 2A of the current site). Similarly to Stage 1, the objective of works for Stage 2 was to characterise contamination in accordance with the Auditor approved Sampling Analysis and Quality Plan drawing conclusions on the suitability of the site for the proposed use.

These works comprised soil investigations and pavement investigations during October 2018 and were reviewed. The Auditor raised questions regarding the absence of testing in an 'approximate bridge location' identified by GTEK as 'South Creek Bridge'.

Additional works were requested to meet the required soil characterisation for PFAS and this is proposed to be addressed as part of Section 5.6.6 of the JBS&G (14 August 2019) Contaminant Management Plan.

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In addition, it was considered that pavement material from this stage should also be tracked and placed below pavement only and not within landscape verges of any newly proposed roads. As documented in Section 5.1 of the Contaminant Management Plan (JBS&G 14 August 2019) all bitumen material are required to be tracked and only reused within the paved road portion of the site.

5.3 Stage 2B

In December JBS&G provided a report that characterised potential contamination for all non PFAS data collected over the past 18 months within the Dunheved Precinct which incorporates the Stage 2B site.

As documented in the Auditor's interim advice dated 21 September 2018, JBS&G completed an assessment on whether PFAS, as attributed to the former ADI St Marys property, has caused significant levels of PFAS contamination to be present within soils, groundwater, surface water, sediment and/or biota within or in proximity to the property. Further objectives of the JBS&G assessment included where PFAS is identified, to determine whether PFAs impact poses a potential human health or ecological risk under the current and/or proposed future site uses.

JBS&G summarised the following areas as potential historical storage and handling locations of PFAS materials:

- Historical Areas of Fires
- Fire Station
- Storage of Biosolids (SP30 and Dunheved)
- Offsite sources including an adjacent industrial area, a number of tributaries flowing into Dunheved Precinct from the surrounding rural, residential and commercial areas and adjacent waste water treatment processes.

As a result, JBS&G completed a staged assessment of the potential presence of PFAS on the former ADI St Marys property, and subsequent development areas to delineate impact and/or assess the potential for complete exposure pathways / linkages to be present. The detailed investigation on Dunheved Precinct, and SP30 reported:

- Significant concentrations of PFAS were identified in soils:
  - Within historical biosolids as associated with SP30 and characterised as a mixture of carboxylic and sulfonic forms of PFAS; and
  - Within soils in proximity of the Open Channel passing though the south-western portion of the Dunheved portion of the site. PFAS is typically present as sulfonic forms only.
- Significant concentrations of PFAS were identified in groundwater:
  - Adjoining and a short distance hydrogeologically downgradient of Stockpile SP30. Groundwater impact is characterised as being a mixture of carboxylic and sulfonic forms of PFAS, but free of PFOS;
  - In proximity of the Open Channel passing though the south-western portion of the Dunheved Precinct. The highest concentrations of PFAS are associated with less saline water. Sulfonic forms of PFAS are present at higher concentrations than carboxylic forms, with PFOS and PFHxS the predominant forms present;

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- Underlying an area of North Dunheved characterised as being a mixture of carboxylic and sulfonic forms of PFAS, but free of PFOS. The northern extent of this impact is not delineated as investigations have been restricted in the north; and
- Adjoining the northern portion of the western boundary to the Sydney Water STP. Groundwater impact has been characterised as being a mixture of carboxylic and sulfonic forms of PFAS.

A number of questions were raised by the Auditor and have yet to be addressed regarding the appropriateness of conclusions and suitability of the site which require resolution pending consultation with NSW EPA.

Recent investigations (as reported JBS&G 7 August 2019) were completed to assess the extent and source of PFAS impacted soils within the Stage 2B portion of the site, specifically around location DHN-72. JBS&G concluded that a significant source of PFAS impact was previously identified to the west of the south-eastern portion of the Stage 2 corridor associated with an off-site inflow of PFAS impacted surface water. This impact has been identified to extent into the EWCR boundary and will require remediation as per the JBS&G RAP.

JBS&G further concluded that the localised PFAS impact that had been identified with sample location DHN-72 was likely to be consequent of the historical storage and handling of PFAS affected biosolids to the east of the Stage 2 corridor. JBS&G considered this is the highest level of PFAS impact within the EWCR Stage 2 corridor and should be considered as an appropriate starting point for interim management works.

Notwithstanding the above, an Environmental Site Assessment is required for the entire Stage 2B site, ensuring suitable testing, confirming depth of fill both within the Dunheved Industrial Precinct, and north, where Stage 2B joins Stage 1 and Stage 2A interchange. This has been included as part of a data gap assessment as documented in Section 5.4 of the JBS&G Remediation Action Plan for Stage 2b and Stage 3 EWCR (14 August 2019).

5.4 Stage 2C

Although JBS&G has not completed a site wide assessment of the Stage 2C Regional Open Space area, several investigations have been completed within this stage.

In July 2019, JBS&G completed an environmental site assessment on the W Series Building Footprints to characterise potential contamination at the site as outlined the Penrith City Council consent conditions and in accordance with the JBS&G (2017) SAQP and relevant NSW EPA guidelines, and to draw conclusions regarding the suitability of the site for the proposed open space land use. JBS&G concluded

Similarly, in February 2019, approximately 5000 m^3 of material stockpiled and known as the munitions bund was assessed at a rate of 1 sample per 125 m^3. JBS&G concluded this material was suitable for reuse in the regional open space.

As identified in in previous interim advices, any deviations of the works on the W Series building from the approved SAQP will be required to be addressed as part of confirmation works proposed in Section 5.6 of the Contaminant Management Plan for Stages 1 to 3 of the EWCR (14 August 2019). Based on works completed and reviewed of the munitions bund, the Auditor concurs that stockpiles are to be managed in accordance with the Contamination Management Plan during construction works to ensure they are suitable for the end use and contain no unacceptable aesthetic impact.

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It is noted that a culvert is identified within this Stage 2C that has been identified as not previously having UXO clearance. As required as part of the previous audit conditions, upon removal as part of the EWCR construction works, this area will be cleared of any UXO presence.

5.5 Stage 3

In December 2018, JBS&G provided a report that characterised potential contamination for all non PFAS data collected over the past 18 months within the Dunheved Precinct which incorporates the Stage 2B site. In addition, a detailed investigation on Dunheved Precinct, and SP30 was completed to assess the presence of PFAS.

This work was supplemented with sampling at 15 locations across the site. Samples were analysed for selected heavy metals, PAH, TRH/BTEX, OCPs, PCBs, VOCs, asbestos and PFAS.

JBS&G recommended that a Remediation Action Plan be prepared that is specific to the PFAS impacted areas identified within Stage 3 of the EWCR and a Contaminant Management Plan be prepared to manage requirements associated with pavement removal, unexpected finds and imported fill. This has been included as part of a data gap assessment as documented in Section 5.4 of the Remediation Action Plan for Stage 2b and Stage 3 EWCR (14 August 2019).

6 Auditor Comments

Based on the review of documents outlined in Section 3 above, the Auditor considers that the site is capable of being made suitable for the proposed EWCR development, subject to the following conditions:

1. An updated Phase 1 should be prepared to cover all stages of the EWCR site and include accurate legal identifiers (Lot and DP numbers) site area, registered surveyed figures showing boundary coordinates confirming historical summary.
2. Sampling as identified as part of the Additional Characterisation of the Site Areas outlined within Section 5.6 of the Construction Management Plan (JBS&G 14 Aug 2019) and the Data Gap Requirements within Section 5.4 of the Remediation Action Plan (JBS&G 14 Aug 2019) will be completed. The culmination of these works will be included in a Data Gap Assessment report as required in Section 7.6 of the Remediation Action Plan (JBS&G, 14 August 2019) for review by the Auditor;
3. Adequate assessment of potential groundwater impact associated with the former sewage sludge and the PFAS impact together with a conceptual site model.
4. Following confirmation of acceptable PFAS criteria from NSW EPA for the Dunheved Precinct, the Remedial Action Plan for the EWCR should be reviewed to ensure compliance with EPA requirements.
5. On completion of the remediation works, a suitably qualified and experienced Environmental Consultant must collate detailed documentation regarding materials tracking and prepare a Validation Report in accordance with guidelines made or approved by NSW EPA confirming that the remediation works have been completed in accordance with the RAP and that the site is suitable for the proposed use. The Validation Report must be reviewed and endorsed by the Auditor in the form of Interim Advice prior to finalisation.
6. On receipt of all final documents, a Site Audit Statement and associated Site Audit Report is required confirming that the site is suitable for the proposed land use.

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7 Closure

This interim advice does not constitute a Site Audit Statement or a Site Audit Report, but rather is provided to assist the Client in the assessment and management of contamination issues at the site. The information provided herein should not be considered pre-emptive of the final Audit conclusions. It represents the Auditor's opinion based on the review of currently available information.

Should you have any queries or wish to discuss any points, please do not hesitate to contact the undersigned.

Yours sincerely,

Kylie Lloyd
Contaminated Site Auditor (0302)
Zoic Environmental Pty Ltd

Diana Turner
Senior Environmental Scientist
Zoic Environmental Pty Ltd

Attachments: Attachment A – Figure of Site
Attachment B – Tables

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Attachment A – Figure of Site

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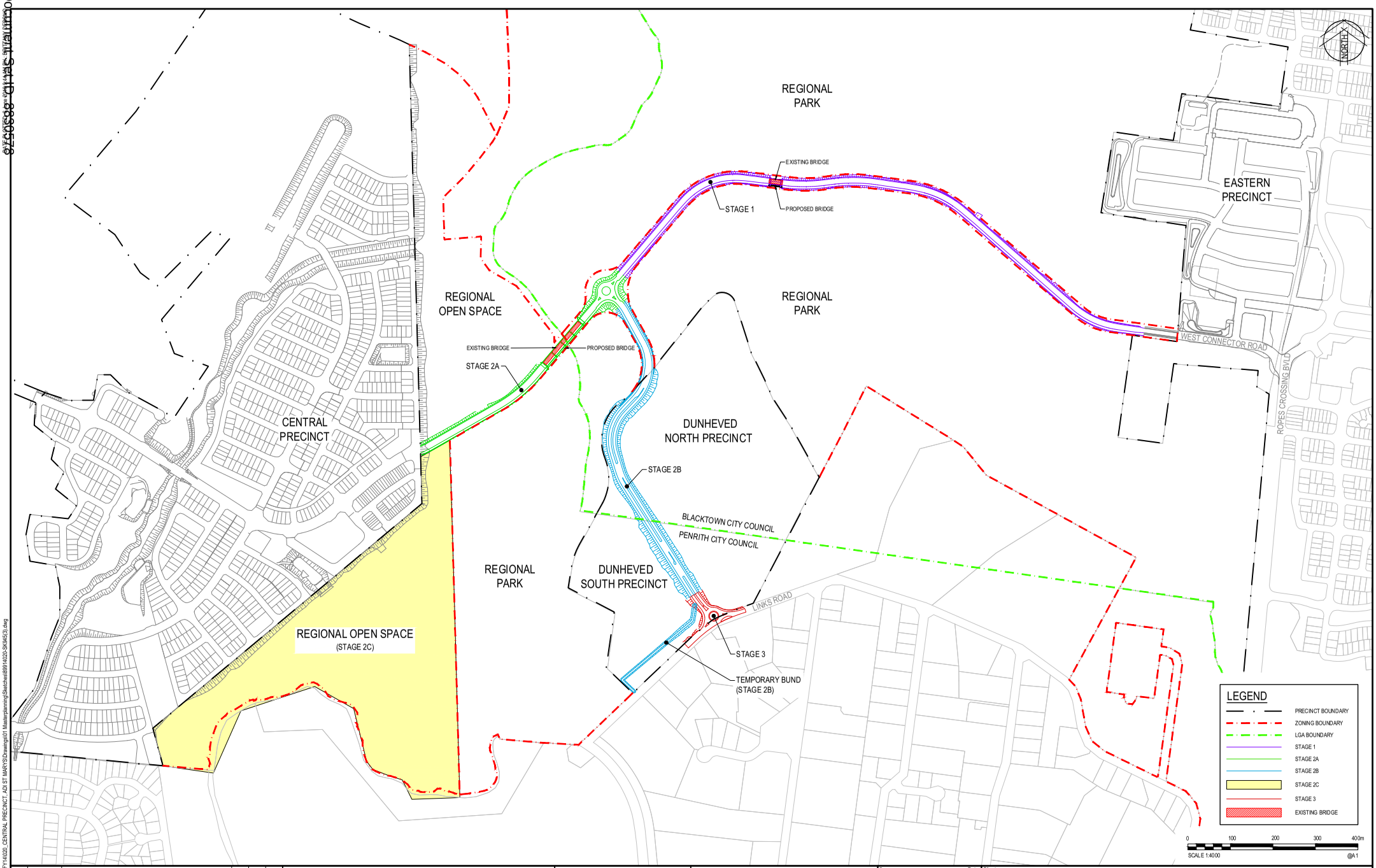

Rev.	Date	Description	Des.	Verif.	Appd.
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2	05.06.19	REISSUED FOR INFORMATION	BJD		ARM
1	05.06.19	ISSUED FOR INFORMATION	BJD		ARM

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Drawn	BJD	Date 05.06.19
Checked	ARM	Date 05.06.19
Designed	BJD	Date 05.06.19
Verified		Date
Approved	ARM	05.06.19

Client: LENDLEASE
Project: JORDAN SPRINGS EAST
EAST WEST CONNECTOR ROAD
Title: GENERAL ARRANGEMENT PLAN

Status: FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Datum	Scale	Size
A.H.D.	1:4000	A1

Drawing Number: 89914020-SK945
Revision: 3

Attachment B - Tables

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Table A: Summary of Site Information

Title	Details
Street Address:	
Property Description:	• Stage 1: Part Lot 102 DP1249590 • Stage 2A: Part Lot 6 DP 1248480 • Stage 2B: Part Lot 102 DP1249590, Part Lot 3 DP1133301, Part Lot 1 DP1132380 • Stage 2C: Part Lot 6 DP 1248480 • Stage 3: Part Lot 1 DP1132380
Current Site Ownership:	Maryland Development Company Pty Limited
Geographical Coordinates At approximate centre of site:	Lat: -33.733259 ° Long: 150.759603 °
Property Size:	• Stage 1: 4.58 hectares • Stage 2A: 1.93 hectares • Stage 2B: 3.36 hectares • Stage 2C: 24.33 hectares • Stage 3: 0.67 hectares
Local Government Area:	• Stage 1: Blacktown Council - DA17-00963 • Stage 2A: Penrith Council - DA2018/0221 • Stage 2B: Penrith Council - DA2018/0221 • Stage 2C: Penrith Council - DA2018/0221 • Stage 3: Penrith Council - DA2018/0381
Current and past Use:	• Stage 1: Past and Current – East-West component former and current road traversing east-west from Ropes Crossing to Jordan Springs East • Stage 2A: Past and Current – East-West component former and current road traversing east-west from Ropes Crossing to Jordan Springs East • Stage 2B: Past – Former ADI St Marys property + adjacent to Site 12 where filling occurred. Current - Part of Dunheved industrial precinct • Stage 2C: Past – adjacent to Site 11 where filling may have occurred, Containing part of X Series Buildings and W Series Buildings Current– used for staging current Jordan Springs East development that is proposed to be developed as park land and sports field area (subject to future development consents – known as Regional Open Space) adjacent to the Jordan Springs East development • Stage 3: Past– Former St Marys buffer land + adjacent to TNT Filling station. Current – Part of Dunheved industrial precinct

Table B: Immediate Site Surrounds

Title	Details
North:	Regional Open Space as part of former ADI St Marys property and Central Precinct Development
East:	Regional Open Space, Ropes Crossing Development and Wianamatta Regional Park
South:	Dunheved industrial Precinct, Dunheved Golf Course and regional open space
West:	Regional Open Space, Jordan Springs East Development

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Table C: Summary of Works Completed

Date	Report Objectives, Scope and Outcomes
JBS&G (26 February 2018), Sampling Analysis and Quality Plan for the East West Connector Road (Ref 54158/113437 (Rev 0)	The objective of the report was: • to provide an approach to characterise potential contamination on the EWCR and draw conclusions regarding the suitability of the site for proposed use as a roadway The scope of the report included: • A conceptual site model for the site identifying potential contaminants of concern. • A stratified sampling approach was adopted on a 20m linear transect through the length of the paved road. • Although some fill was anticipated, it was considered that deep fill would be unlikely. As a result, any deep fill would result in an increased sampling density. • Any locations with samples exceeding the nominated criteria appropriate for ongoing commercial/industrial use (appropriate for a road), would be delineated. The Auditor endorsed the report in Interim Advice IA84 (14124, IA84, 28 February 2018) with the following requirement: • At the completion of works, a final survey will be prepared which overlays the proposed road (pavement and verges) with the current paved road boundary. If areas over the current road are not covered by the proposed road (being assessed to meet HIL D), these area will require assessment to meet Regional Open Space landuse criteria (HIL C). It is noted the SAQP covered the east west component of Stage 1 and Stage 2A only.
JBS&G (10 October 2018) Environmental Site Assessment for Stage 1 EWCR (Ref: 54020/117855 (Rev A)	The objective of the report was: • to characterise contamination in accordance with the SAQP, drawing conclusions on the suitability of the site for the proposed use and to assess the suitability of road pavement for use as engineering fill across the former ADI St Marys property The scope of the report included: • JBS&G completed a detailed site investigation and soil sampling at the site on the 15th, 16th, 17th and 20th of August 2018. • Pavement sampling was completed earlier, on the 13th August 2018. • 76 test pits were excavated and fill was described as light brown, silty gravelly clay soil with inclusions of shale and igneous gravels. • Samples were collected from each testpit location and analysed based on field work observations • Three samples of road pavement were also collected. The outcome of the report was: • The site comprised a bitumen paved road with no curbing extending east to west from approximately 150 m east of South Creek to the boundary of the Western Collector Road Extension. The road was generally level. • No visible ACM, odours or staining were noted in the fill. • Minor amounts of bituminous fragments were observed within shallow soils. Fill was recorded across the site from the surface to a maximum depth of 1.5 m below ground surface (bgs). Natural soils comprised red/grey/brown to grey mottled clay of medium plasticity at depths ranging from 0.3 m to 2.1 m bgs. • JBS&G identified that pavement materials contained coal tar and elevated concentrations of B(a)P were reported in shallow fill. By using multiple extraction procedure (MEP), JBS&G reported the PAHs were not leaching. • No potential risks to human health are present on the site from exploded ordnance items;

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	• Pavement materials identified for re-use were affected by elevated concentrations of PAHs and unsuitable for direct exposures. No significant leachable levels of constituents were measured, and the material is considered suitable to be used as engineered fill on a future roadway where it is placed underlying a future roadway pavement. • Soils are suitable for the proposed use of the site as a roadway; and • No aesthetic issues are present at the site. Based on the conclusions of this assessment, JBS&G reported Stage 1 of the EWCR is suitable for the proposed land use (roadway), subject to the management of existing pavement materials. JBS&G recommended the following actions: • Appropriate tracking and placement survey to confirmation the placement of pavement material beneath the future paved/sealed road; and • The unexpected finds protocol as per the Contamination Management Plan (CMP, JBS&G 2018) is followed. The Auditor endorsed the report in Interim Advice IA84 (28 February 2018) with the following requirement: • UXO clearance report to confirm the UXO clearance discussion presented in the ESA; • Pavement material generated from the Stage 1 area may only placed beneath sealed roadway only, and not within any adjacent landscape verges. • Placement of the pavement material is be completed under detailed material tracking protocol, including documentation of the initial pavement removal, temporary stockpiling and testing, volume and depth of materials placed beneath the new road, as well as off-site disposal requirements (if required).
JBS&G (10 October 2018) Environmental Site Assessment for Stage 2 EWCR (Ref: 54020/117855 (Rev A) *[Stage 2 comprises approximately Stage 2A of the current site]*	The objective of the report was: • to characterise contamination in accordance with the SAQP, drawing conclusions on the suitability of the site for the proposed use and to assess the suitability of road pavement for use as engineering fill across the former ADI St Marys property The scope of the report included: • JBS&G completed a detailed site investigation and soil sampling for Stage 2A of EWCR on the 18th October 2018. • Pavement sampling was completed earlier, on the 13th August 2018. • A total of 19 test pits were excavated, and fill was described as light brown, silty gravelly clay soil with inclusions of shale and igneous gravels, at depths of up to 0.5m below ground surface. • Samples were collected from each testpit location and analysed based on field work observations • Three samples of road pavement were also collected. The outcome of the report was: • The site comprised a bitumen paved road with no curbing extending east to west from approximately 150 m east of South Creek to the boundary of the Western Collector Road Extension. The road was generally level, with cut and fill completed in some areas. JBS&G reported that significant filling of site won material was required near the banks of South Creek, to achieve finished design levels in this area. • No visible ACM, odours or staining were noted in the fill. • Minor amounts of bituminous fragments were observed within shallow soils. Fill was recorded across the site from the surface to a maximum depth of 1.5 m below ground surface (bgs). Natural soils comprising red/grey/brown to grey mottled clay of medium plasticity at depths ranging from 0.5 m to 6.0 m bgs.

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Date	Report Objectives, Scope and Outcomes
	• No potential risks to human health are present on the site from exploded ordnance items; • Pavement materials identified for re-use were affected by elevated concentrations of PAHs and unsuitable for direct exposures. No significant leachable levels of constituents were measured, and the material is considered suitable to be used as engineered fill on a future roadway where it is placed underlying a future roadway pavement. • Soils are suitable for the proposed use of the site as a roadway; and • No aesthetic issues are present at the site. Based on the conclusions of this assessment, JBS&G reported Stage 1 of the EWCR is suitable for the proposed land use (roadway), subject to the management of existing pavement materials. JBS&G recommended the following actions: • Appropriate tracking and placement survey to confirmation the placement of pavement material beneath the future paved/sealed road; and • The unexpected finds protocol as per the Contamination Management Plan (CMP, JBS&G 2018) is followed. The Auditor endorsed the report in Interim Advice IA99 (18 December 2018) with the following requirement: • As JBS&G identifies an 'approximate bridge location' and GTEK figure identifies an 'South Creek Bridge' which were excluded from each assessment, clearance of this portion of the road as suitable for the intended land use is required. Please include confirmation that the portion of the road on either side of South Creek is suitable for the proposed landuse, meeting the required soil characterisation, and is clear of UXO. • Pavement material generated from the Stage 2 area may only be placed beneath sealed roadway, and not within any adjacent landscape verges. • Placement of the pavement material is be completed under detailed material tracking protocol, including documentation of the initial pavement removal, temporary stockpiling and testing, volume and depth of materials placed beneath the new road, as well as off-site disposal requirements (if required).
GTEK (22 November 2018)	The objective of the report was: • To confirm the absence of a 20mm Projectile at 150mm grading to a 20 Pdr Projectile at 1m below ground surface along the East West connector road within the former ADI St Marys property The scope of the report included: • GTEK personnel collected data with a TM7 EMU Electromagnetic instrument used over the site with a line spacing of 0.5m at sample interval of 20 readings per meter. Positional control was maintained utilising fibreglass survey chains, flags and DGNSS positioning data • Data was gridded and interpreted to identify anomalies at the 50emu amplitude, ensuring all complete 20mm cannon projectiles were identified at a depth of 150mm and items of the size of a 20 Pdr projectile were located at 1m depth. • Dig sheets were prepared at each interpretation location. Finds were recorded on the dig sheet. When a metallic item was removed, the location was searched again to ensure a deeper item was not being masked. The outcomes of the report were: • GTEK found no munitions along the site searched. • It is noted GTEK states data was collected over 100%, but no data was collected at the Ropes Creek Deviation Bridge (located outside of the site boundary) or the South Creek Bridge (located within the site boundary) were not included.

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Date	Report Objectives, Scope and Outcomes
JBS&G (31 December 2018) Additional Analytes Summary Letter for the Dunheved Industrial Precinct, St Mary's, NSW (Ref: 54020-119670 (Rev0));	The objectives of the report were: • Characterise potential contamination at the site using all non PFAS data collected over the past 18 months and • To use this information to draw conclusions regarding the suitability of the site for the proposed use or make recommendations to enable such conclusions The scope of the report included: • Site Inspection; • Soil investigations conducted in November 2017, February 2018 and between May and September 2018; • Analysis of soil samples and groundwater samples for a range of contaminants including Heavy Metals, total recoverable hydrocarbons (TRH), Benzene, Toluene, Ethylbenzenes and Xylenes (BTEX), Polyaromatic hydrocarbons (PAHs), Organochlorine pesticides (OCPs), Polychlorinated biphenyls (PCBs) and Asbestos; and • Preparation of this additional analysis letter report The outcomes of the report were: • Soils at the site were not identified to pose an aesthetic risk noting the proposed commercial/industrial use of the site; • Soil analytical results were reported at concentrations below the adopted criteria; and • Groundwater analytical results were generally reported at concentrations below the adopted criteria. Elevated concentrations of heavy metals identified were not considered to pose a risk given groundwater is not used as a resource and has limited migration potential;
JBS&G (6 February 2019) Environmental Site Assessment and Unexploded Ordnance Clearance for Stage 2 of the East West Connector Road, Ropes Crossing to Jordan Springs East, NSW (54020/118884 (Rev 0);	The objectives of the report were: • The to characterise potential contamination within the site in accordance with the SAQP (JBS&G 2018a) and relevant NSW EPA guidelines, and to draw conclusions regarding the suitability of the site for the proposed use • To assess the suitability of road pavement materials as present on the existing roadway for use as engineering fill on the wider site The scope of the report included: • Review previous Environmental Investigation and Site Audit Reports; • Site inspection of roadway and adjacent verges following pavement removal; • Assessment of pavement materials, Unexploded Ordnance (UXO) Clearance; • Testpiting along the paved road at 20 m intervals on the 18th of October 2018 and 21st January 2019. • Pavement sampling was completed earlier on the 13 August 2018; • Analysis of selected soil samples for potential contaminants of concern (PCOCs); • Interpretation of laboratory analytical results including comparison against relevant NEPC landuse criteria; and • Preparation of this Environmental Assessment Report in general accordance with guidelines made or approved by the NSW Environment and Protection Authority (EPA). Scope 1 The outcomes of the report were: • No potential risks to human health are present on the site from exploded ordnance items; • Pavement materials identified for re-use were affected by elevated concentrations of PAHs and unsuitable for direct exposures. No significant leachable levels of constituents were measured, and the material is considered suitable to be used as engineered fill on a future roadway where it is placed underlying a future roadway pavement.

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<table>
<tr><th>Date</th><th>Report Objectives, Scope and Outcomes</th></tr>
<tr><td></td><td>
• Soils are suitable for the proposed use of the site as a roadway; and
• No aesthetic issues are present at the site.
Based on the conclusions of this assessment, JBS&G reported Stage 2 of the EWCR is suitable for the proposed land use (roadway), subject to the management of existing pavement materials. JBS&G recommended the following actions:
• Appropriate tracking and placement survey to confirmation the placement of pavement material beneath the future paved/sealed road; and
• The unexpected finds protocol as per the Contamination Management Plan (CMP, JBS&G 2018) is followed.
</td></tr>
<tr><td>JBS&G (17 April 2019)
Phase 1 Preliminary Site Assessment East West Connector Road, Jordan Springs East, NSW
(Ref: 54782/121318 (Rev 2))</td><td>
The objectives of the report were:
• to draw conclusions that the site can be made suitable for the proposed land use.
• JBS&G noted that as historical roads were excluded from previous site audits (as is the case for the EWCR), the historical audit did not cover portions of the current site. Further, potential impacts regarding PFAS is required as is now specified under current guidance
The scope of the report included:
• JBS&G completed a desktop review of local and regional background documents,
• reviewed previous soil and groundwater sampling for the site,
• completed a site inspection
• developed a conceptual site model (CSM)
• identified potential areas of environmental concern and chemicals of potential concern.
The outcomes of the report were that the following were identified
<table>
<tr><td>East West Connector Road</td><td>Fill materials underlying the road</td><td>Heavy metals PAHs, TRH, BTEX, OCPs, OPPs, PCBs, asbestos, explosives Metallic debris UXO</td></tr>
<tr><td>East West Connector Road</td><td>Paved Road asphalt</td><td>Heavy metals, PAHs, TRH/BTEX, asbestos and explosives, Coal Tar</td></tr>
<tr><td>East West Connector Road</td><td>Fly tipping</td><td>Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs and asbestos</td></tr>
<tr><td>Dunheved Link Road</td><td>Historical use of the site for sewage sludge and</td><td>Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos and PFAS</td></tr>
<tr><td>Dunheved Link Road</td><td>Effluent storage</td><td>PFAS</td></tr>
<tr><td>Dunheved Link Road</td><td>Impact associated with the Dunheved Open Channel</td><td>Heavy metals, PAHs, TRH/BTEX, OCPs, OPPs, PCBs, asbestos</td></tr>
<tr><td>Regional open Space</td><td>flytipping</td><td>Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs and asbestos</td></tr>
<tr><td>Regional open Space</td><td>Building Footprints</td><td>Heavy metals, PAHs, TPH/BTEX, OCPs, PCBs, asbestos and</td></tr>
<tr><td>Regional open Space</td><td>Fill materials and impact from demolition works, use of Paved Road asphalt</td><td>Explosives (RDX (research department explosive), TNT</td></tr>
</table>
</td></tr>
</table>

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			(trinitrotoluene), 2,4-DNT (2,4-Dinitrotoluene) and 2,6-DNT (2,6-dinitrotoluene)
	JBS&G concluded that the site can be made suitable for the proposed use in accordance with clause 7 of SEPP 55 subject to the following actions • The EWCR requires further investigation including a SAQP covering required pavement removal, UXO clearance and a detailed site assessment with soil sampling and analysis of soils present underlying roadways. The SAQP and investigations require review and endorsement by the Site Auditor; • Sampling works can only occur following removal of the existing roadway; • Formerly inaccessible areas of the ROS including building footprints require UXO clearance and assessment in accordance with the existing JBS&G SAQP for JSE (JBS&G 2017); • The previously prepared Remedial Action Plan (JBS&G 2018) should be updated to address PFAS impacted soils and groundwater identified within the Dunheved Links Road; and • A Site Audit Statement will be required as specific to the roadway, to confirm the site as suitable for the proposed use.		
JBS&G (14 August 2019) Additional Targeted Assessment of Dunheved Portion (Stage 2b) of Stage 2 East West Connector Road, Dunheved Project, St Marys NSW (Ref: 54782-121646 Rev 0);	The objectives of the report were • To determine the extent and source of PFAS impacted soils present at location DHN-72 located within the road corridor within Stage 2B of the site. • to collect additional sampling and analysis along the western boundary of the south-eastern portion of the Stage 2 portion of the east-west connector road to determine: • Whether PFAS impact requiring remediation is present at the extent of the area identified as a portion of Stage 2B Site • To provide additional data to assess whether the impact at DHN-72 within Stage 2B is consequent of historical storage and handling of biosolids as occurred to the east of the road corridor or consequent of inflow of PFAS impacted surface water to Dunheved as occurred to the west of the road corridor. The scope of the report included: • Review previous relevant JBS&G reports from Dunheved; • Sample soils from surface to 0.1m, 0.8-1.0m at locations ST201, ST204, ST206, ST208 adjoining the western boundary of SE portion of Stage 2B EWCR. The sample locations were in close proximity to the western boundary of the roadway; • Analysis of samples for PFAS with appropriate QA/QC • Assessment of the levels of PFAS and development of advice as to the likely extent of PFAS impact within the road corridor The outcomes of the report were: • Soils were generally found to be consistent with conditions as reported in JBS&G (2018). • Levels of PFAS constituents were below detection limits in each of the primary samples apart from a detection of PFHxS at sample location ST204 at a depth of 0.8-1.0 m. The detection very slightly exceeded the laboratory detection limit, however was well below any potentially applicable criteria. The conclusions of the report were: • A significant source of PFAS impact was previously identified to the west of the southeastern portion of the Stage 2 corridor as associated with an off-site inflow of PFAS impacted surface water. This impact has been		

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	identified to extend into the EWCR boundary and will require remediation as per the RAP (JBS&G 2019c); • Gross levels or widespread indicators of PFAS impact were not identified during the additional targeted investigation as undertaken to determine if the source to the west had substantially affected the corridor; and • Localised PFAS impact has been previously identified at sample location DHN-72 (JBS&G 2018) as more than likely consequent of the historical storage and handling of PFAS affected biosolids to the east of the Stage 2 corridor. This is the highest level of PFAS impact within the Stage 2 corridor and should be considered as an appropriate starting point for interim management works that are otherwise being documented in the RAP developed for the roadworks (JBS&G 2019c)
JBS&G (19 July 2019) Environmental Site Assessment W Series Buildings within Regional Open Space – Central Precinct, NSW (Ref: 54020/12316 (Rev B));	The objectives of the report were: • to characterise potential contamination at the site as outlined the Penrith City Council consent conditions and in accordance with the JBS&G (2017) SAQP and relevant NSW EPA guidelines, and to draw conclusions regarding the suitability of the site for the proposed open space land use. The scope of the report included: • Management of ordnance contractor to complete metallic debris removal and ordnance survey works across the site. • Drilling 35 borehole locations using hand auger method to 0.5m below ground surface (mbgs). • Borehole logging and sample collection. Selected soil samples were submitted to NATA accredited laboratories for the analysis of heavy metals, TRH, BTEX, PAHs, OCP, PBCs, explosives and asbestos. • Data collection and ESA report preparation The outcomes of the report were: • Fill materials were generally observed to be limited to surface soils of approximately 0-0.3m depth. It is noted that slightly deeper fill was identified at locations T01 and W11-01 to W11-05 of greater than 0.5 m in depth, the deeper fill was observed to be reworked materials for building foundations. • A single ACM fragment was observed at the surface in the vicinity of the W series building footprints, the fragment was collected and disposed of safely. • Concentrations of heavy metals were below HIL-A and EIL with the exception of chromium. Following statistical analysis, the 95% UCL was 35.38mg/kg which was below HIL-A. • Concentrations of BTEX, PAHs, OCPs, PCBs, explosives were below HIL-A. Minor detection of TRH was identified, but below HSL and ESL. • E coli and salmonella were tested from soil samples recovered from the former septic tank, with recorded concentrations noted to be consistent with anticipated background levels in no-contaminated soils. • No visible ACM was observed within the boreholes, a single ACM fragment was observed in the vicinity of the W series buildings, the fragment was collected and disposed of appropriately. • G-tek concluded the no munitions were identified at the site and JBS&G concluded that • the site is 'free of UXO'. • No potential risk to human health is present on the site from exploded ordnance items; • No potential risk to human health or ecological health are present associated with potential contaminants of concern, heavy metals, TRH/BTEX, PAHs, OCPs/PCBs, explosive residues or asbestos; and

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	• No aesthetic issues associated with staining, odours or soils heavily impacted with building rubble and other anthropogenic materials are present on the site area.
JBS&G (12 February 2019) Characterisation of the Munitions Bund within the Regional Open Space Area, Central Precinct, Llandilo, NSW (Ref: 54158-117693 Rev 0)	The objectives of the report are to characterise the munition bund soils to confirm if they are suitable for reuse at the Central Regional Open Space area which requires significant filling. The scope of the report included: • Collection of 40 samples from 20 locations along the munitions bund mound; • Analysis of samples for TRH, BTEX, PAHs, OCPs, PCBs PFAS and asbestos; and • Preparation of a material characterisation letter. The outcomes of the report were: • JBS&G considered the munitions bund material is considered suitable for reuse within the Central Regional Open Space Area (central ROS area) without further assessment, remediation or management. • As the central ROS area requires filling to meet design levels and any large unsuitable materials will be screened out during filling and compaction; • Material tracking of reused material will be required in accordance with the SRAP (JBS&G 2017) and the Stockpile Work Plan (JBS&G 2018b)
JBS&G (14 August 2019) Contamination Management Plan (CMP) for Stages 1 to 3 of the East West Connector Road, St Mary's, NSW (Ref: 54782/123244 (Rev 0).	The objective of the report is to provide a framework to manage potential contamination issues that may be encountered during the roadway construction works. The report provides approaches for: • Areas of Concern during works • Unexpected Finds Protocol • Potential Explosive Ordnance Materials identification and management • Asbestos identification and management • Stockpile, Soil and Material Management • Additional Characterisation of Site Areas and stockpiles (including Stage 2C).
JBS&G (14 August 2019) Phase 2 Environmental Site Assessment – Stage 3 East West Connector Road (Ref: 54782/123128 (Rev 0).	The objectives of the report were: • To characterise potential contamination at the site as outlined in the Penrith City Council (PCC, Council) consent conditions; • to draw conclusions on whether the site can be made; and • to identify any recommendations for management required for the proposed development. The scope of the report included: • Desktop review of available local, regional background, and historical environmental information • Review of previous soil and groundwater sampling and analysis works • Development of a Conceptual Site Model • Detailed site inspection • Systematic sampling (at 15 locations) across the site and targeted sampling in proximity to the Dunheved Open Channel and associated stormwater culvert underlying Links Rd (5 locations) and known to be a source of PFAS contamination, with the aid of a push tube. Samples were collected to generally 1.2mbgl, which was generally at least 0.5m into natural material. Deeper fill was observed at ST3-16 and ST3-20 and natural soil was not achieved. • Laboratory analysis for heavy metals, PAH, TRH/BTEX, OCPs, PCBs, VOCs and asbestos (14 samples), PFAS (24 samples) and comparison to HIL D and HSL D.

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	JBS&G concluded: • No potential risk to human health or ecological health are present associated with potential contaminants of concern, heavy metals, TRH/BTEX, PAHs, OCPs/PCBs, VOCs or asbestos; • PFAS impact to soils adjacent to the Dunheved Open Channel were identified; • No aesthetic risks were identified at the site; • A Remedial Action Plan (RAP) is required to address PFAS impacted soils. The RAP can require the affected soils currently held within the Dunheved portion of the St Marys development site; and • Surplus soils and/or demolition materials as generated by future road construction works should be managed consistent with a Contamination Management Plan (CMP) as specific to the roadworks project. JBS&G recommended • A new RAP be prepared that is specific to the PFAS impacted areas identified within Stage 3 of the EWCR; and • A Contamination Management Plan (CMP) be prepared to cover all stages of the EWCR and include management requirements associated with pavement removal, unexpected finds and imported fill.
JBS&G (14 August 2019) Remedial Action Plan Stage 2b and Stage 3 – East West Connector Road St Marys, NSW (Ref: 54782/123642 Rev 0)	The objectives of the RAP are to: • Characterise and document the known extent of PFAS impact via presentation of a conceptual site model (CSM); • Develop a remedial strategy to remove all PFAS impacted soil within the EWCR; and • Identify the requirements for validation requirements following site remediation. • To confirm that the site is suitable for the proposed landuse. The RAP is for Stage 2b and Stage 3 only. The contaminants being managed are PFAS in soil and groundwater, asbestos if encountered and other COPCs if encountered. It is noted that, groundwater impact will be addressed on a broader site scale as part of the Dunheved Industrial Precinct and is not addressed specifically in this RAP. The preferred remedial strategy is removal of impacted soil from Stage 2b and Stage 3 EWCR site and placement within the designated PFAS impacted soils stockpiling area to undergo remediation at a later stage and following EPA endorsement of remedial strategies. The RAP also provides: • Data Gap Assessment for Stage 2b and Stage 3. • Material tracking plan • Validation plan • Contingency plan • Regulatory and planning requirements • Environmental management • Health and safety

Table D: Review of JBS&G (14 August 2019) CMP

Requirement	CMP	Auditor Comment
What is the nature and location of the residual contamination on site?	Section 1.1 states that three SAS issued by HLA Envirosciences in 1999 confirmed that the property was suitable for use excluding areas of original	It is noted the main contaminant of concern identified is PFAS, but other potential contaminants of concern will be identified or excluded as part of the data gap assessment works.

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Requirement	CMP	Auditor Comment
	buildings, car parks, roads and stockpiles that were inaccessible at the time. JBS&G has since conducted addition investigations in previously inaccessible areas (refer to Sections 3 and 4 above) together with a comprehensive PFAS investigation (JBS&G 2018). Section 1.2 states that extensive sampling indicates that the site was generally environmentally suitable from a contamination perspective but portion of Stage 2 and Stage 3 were found to be impacted by elevated levels of PFAS in soils. The proposed interim strategy for management of PFAS impacted soil within the Dunheved precinct is being implemented while consultation with NSW EPA occurs to determine the significance of these levels. The strategy involves removal of all soil with detectable levels of PFAS within the corridor to the existing storage area.	It is understood that soil remediation on the site will be sufficient to remove potential future risk to groundwater and the environment. Whilst Section 4.1 of the CMP states that asbestos has not been detected during investigations, a fragment was found in works conducted on Stage 2C and additional investigation is required.
What are the objectives of the CMP?	Section 1.2 states that the CMP provides a framework to manage potential contamination issues that may be encountered during the roadway construction works. It is also understood that imported fill materials will be required to create the proposed site levels during construction works. As such imported fill materials and site reused soils will be required to comply with the procedures of the existing Imported Fill Protocol (IFP). It is additionally noted that the procedures provided for UXO will only come into operation if additional non cleared items are identified as unexpected finds during the construction works (all apparent areas as visible at the surface as paved areas / former buildings have been cleared at the time of preparation of this CMP). Asbestos management will only come into operation if either greater than 10 m2 of ACM is identified or if friable asbestos (FA) or asbestos fines (AF) are encountered as unexpected finds during works.	These objectives are appropriate for the purposes as a CMP.
How are the contaminants going to be managed?	Sections 3, 4, 5 and 6 of the CMP note the following: • Where Areas of Concern (AOC) are identified during the works, the area will be quarantined • Contamination AOC will be inspected by the Consultant who will advise regarding required investigation / removal requirements	The management actions are considered to be appropriate

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Requirement	CMP	Auditor Comment
	• UXO AOC will be managed in accordance with the protocols outlined in Section 3 • Asbestos AOC will be managed in accordance with the protocols outlined in Section 4 • Bitumen pavement removal, cut to fill works involving off site disposal and reuse of site stockpiles (including Stage 2 ROS from UXO clearance and demolition) and importation of fill for use to create site levels will occur in accordance with the protocols outlined in Section 5 and the Imported Fill Protocols. • Movement of all bulk quantities of construction materials will be subject to the material tracking system outlined in Section 6	
Who is responsible for the implementation of the CMP?	Section 1.5 states that the Property Owner, or their nominated representative (project manager, Principal Contractor, Superintendent, etc.) is required to manage the implementation of the CMP.	This requirement is considered to have been met.
Does the CMP provide a summary of actions required by the CMP?	The CMP presents the following Sections to address necessary management actions: • Section 2: Unexpected Finds Protocol (UFP) • Section 3: Explosive Ordnance Materials (UXO) • Section 4: Asbestos Management Plan (AMP) • Section 5: Stockpile Soil and Material Management (SSMM) • Section 6: Material Tracking Protocol (MTP)	The relevant sections of the CMP present the necessary actions for each element that requires management.
Over what timeframe will the CMP be implemented?	Section 1.2 states that the CMP will apply during construction works of the EWCR	The requirement has been met.
How is off site migration of contamination being managed?	Section 4.1 states that the objectives of the AMP are to outline, monitor and enforce safe environmental conditions for all persons outside the AOC. Section 4.2.3 states that airborne asbestos monitoring and dust monitoring will be completed during any asbestos works.	The removal of PFAS impacted area (as detailed in the RAP for Stage 2b and 3) will manage potential offsite migration.
Does the remaining contamination affect groundwater quality?	Section 5.10 states that groundwater assessment is not proposed, but will be assessed in the broader scale RAP for the former St Marys Development site. The removal of PFAS impacted soil from Stage 2b and Stage 3 will mitigate impacts to groundwater.	The requirement has been met.

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Requirement	CMP	Auditor Comment
How will the integrity of the cap be maintained in the long term?	No information provided	Not applicable as soils will be suitable for use in their final areas of deposition
Is there any risk to human health in structures overlying the cap?	No information provided	Not applicable as soils will be suitable for use in their final areas of deposition
Is the CMP a stand alone document?	Not applicable	The CMP is generally a standalone document with reference to managing contamination on the site, but does not cover remediation of the site for site suitability. The exception relates to Importation of Material and reference to the RAP for Stage 2b and 3 (JBS&G 14 August 2019), Imported Fill Protocol (2015) and Addendum IFP (2017), which are considered acceptable in this instance.

Table E: Review of JBS&G (14 August 2019) RAP

Requirement	Consultant Consideration	Auditor Comment
Remediation Goal:	Section 1.2 of the RAP states the objective of the RAP are to: • Characterise and document the known extent of PFAS impact via presentation of a conceptual site model (CSM); • Develop a remedial strategy to remove all PFAS impacted soil within the EWCR; and • Identify the requirements for validation requirements following site remediation. • To confirm that the site is suitable for the proposed land use. Section 5.1 states that the remedial goals are to: • Prevent potential direct contact of human and ecological populations within the site to impacted soils retained / present at the site; • Prevent potential phyto-toxicity effects of flora contact to impacted soils (where applicable); • Remove potential ongoing sources of environmental contamination (i.e. unexpected finds, if encountered); and • Mitigate direct contact to underlying groundwater affected by PFAS.	The remediation goal is appropriate, given the road will be paved reducing any residual leaching potential.
Extent of remediation required as outlined in RAP:	Section 4.1 states the COPCs were limited to PFAS in soil, noting that groundwater impact will be addressed on a broader site scale.	Section 4.1 section should be expanded to discuss other COPCs. As sufficient characterisation of the road footprint has not been completed a contingency is

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	Section 5.3 and Figure 3 provide extent of PFAS impacted material. The average depth of impact was estimated to be 1mbgl. Groundwater impact was not targeted as it is not considered to pose a potential risk for onsite use as no direct exposure pathways are anticipated. Surface water has been excluded as no surface water bodies exist within the impacted areas of the site.	required for remediation of non-PFAS contaminants. The Auditor accepts the exclusion of groundwater and surface water from this RAP, only under the provision it will be included within the RAP for the broader Dunheved property. Section 5.3 and Figure 3 are currently not accepted by the Auditor as the area of PFAS impact given the limited sampling within the road footprint. As a result, prior to the implementation outlined in the RAP, the Auditor requires a detailed site suitability assessment be provided which addresses data gaps, including for COPCs other than PFAS. This report shall also confirm the extent of PFAS impact requiring remediation.
Discussion of possible remediation options:	Section 5.2 provides discussion of remediation options, which included: • On-site treatment of soil • Off-site treatment of soil • Consolidation and isolation of soil with appropriately designed barrier • Removal of contaminated soil to an approved site or facility • Implementation of management strategy	The appropriate remediation options have been considered.
Selected remediation option:	Section 5.2 states that temporary strategy for the PFAS is to remove the impacted soils from Stage 2b and Stage 3 EWCR site and placement within the designated PFAS impacted soils stockpiling area to undergo remediation at a later stage and following EPA endorsement of remedials strategies.	This strategy is considered appropriate for PFAS contaminated material. A contingency should be considered for non-PFAS impacted soils identified during additional characterisation (See below)
Rationale for selected remedial option:	Section 5.2 states that the remedial option was selected until EPA endorsement of remedial strategies is obtained.	The rationale for the remedial strategy is appropriate.
Basis for selected remediation criteria:	Section 7.5 provides validation criterion: • Soil criterion to meet Eurofins MGT laboratory limit of reporting of 0.005mg/kg for PFOS, PFOA and PFHxS. • The potential leaching of PFAS from soil be considered should excavation be identified to be close to groundwater depth.	The criterion is appropriate, noting: • The adopted soil criterion is above the interim ecological terrestrial biota guideline value for the protection of birds (0.0019mg/kg) and mammalian diet (0.0046mg/kg) for PFOS/PFHxS. This is appropriate, noting the road and associated footpaths will be paved. JBS&G have provided a risk based argument which is acceptable.
Data gap assessment	Section 5.4 provides the following data gap assessment: • Sampling from 52 locations approximately 20m grid along the	This requirement has been met

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	current roadway on Stage 2b and Stage 3 with particular focus beneath paved roads. • At least 1 sample per location will be analysed for a range of analytes including metals, TRH/BTEX, PAH, OCPs, PCBs PFAS and asbestos.	
Proposed testing to validate the site after remediation:	Section 7 provides validation plan, which includes: • DQOs • 1 per 5m for walls and 1 per 25m^2 for bases for excavations within Stage 3 • 1 per 10m for walls and 1 per 100m^2 for bases for excavations within Stage 2	This requirement has been met
Contingency plan for remediation:	Section 8 provides contingency plan, which includes: • Unexpected finds protocol • Remedial strategy failure • Complaints • Severe weather	JBS&G provide appropriate contingencies.
Interim site management plan prior to implementation of remediation (health, safety & environment):	Section 5.1 states that interim management is as per the procedures in JBS&G (2018) PFAS Management Plan, Central Precinct and Dunheved Developments, St Marys NSW (Rev A).	This is considered appropriate, noting that the document has not been reviewed by the Auditor.
Site management plan for remediation works (environment)	Section 10.1 requires preparation of a remediation environmental management plan by the Principal Contractor, which documents the environmental monitoring and management measures. The required elements of the REMP include: • Dust and airborne hazard control • Flora and fauna • Heritage/archaeological • Visual impacts • Emergency response • Noise control • Traffic • Protection of adjoining structures' • Odour control • Handling of contaminated soil and groundwater • Soil storage/placement areas • Sediment control • Operation of site office • Decontamination of heavy equipment • Environmental monitoring • Environmental criteria • Material classification • Community relations plan	This requirement has been adequately addressed.

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Requirement	Consultant Consideration	Auditor Comment
	• Incident reporting • Security and signage • EMP review • Training • Contact details Section 6 provides material tracking plan.	
Site management plan for remediation works (health & safety)	Section 10.2 provides requirement of health and safety, which includes: • Requirement of preparation of work health and safety management plan by the Principal Contractor • Additional site-specific elements/procedures • Additional consideration of chemical contaminants	Section 10.2 is considered to appropriately address this requirement.
Remediation schedule	Section 10.1.4 states the appointed Remediation Contractor will prepare proposed schedule within the REMP.	It is considered appropriate for the Remediation Contractor to identify the remediation schedule. This will be based on additional characterisation.
Hours of operation	Section 10.1.4 states the hours of operation will be restricted to: • Mondays to Fridays 7am to 6pm • Saturdays 7am to 1pm (if inaudible on neighbouring residential premises), otherwise 8am to 1pm • No works permitted on Sundays and public holidays	JBS&G states that the working hours are in accordance with Draft consent conditions, and therefore considered to be appropriate. This should be confirmed once the DA consent is finalised.
Contingency plans for incidents:	Section 10.1.2 requires procedures for emergency response be provided in the REMP.	Contingency measure preparation by the Remediation Contractor is appropriate.
Licenses and approvals:	Section 9.1 has considered the following permits/approvals/notifications: • SEPP55 – The proposed remedial works are considered to be Category 1 remediation, requires development consent. • PoEO Act – The development is not considered to be scheduled activity under this Act. • PoEO (Waste) Regulation 2014 – The regulation includes non-licensed activities and waste transporting. • NSW EPA (2014) Waste Classification Guidelines – Waste for offsite disposal shall be waste classified under these guidelines. • Water Management Act 2000 – Dewatering is not required. Controlled activities are not anticipated. • Sydney Regional Environmental Plan (SERP) No 30 – St Marys	The requirement has been addressed, noting that: • The Penrith City Council consent conditions provide requirement for discharge of liquid waste to sewer main. • EPA consent is required for discharge of chemicals into the environment.

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Requirement	Consultant Consideration	Auditor Comment
	• St Marys Environmental Planning Strategy (EPS) 2000. • Penrith City Council consent conditions. • Blacktown Council consent conditions • SafeWork NSW and NSW WHS Regulations	
Contact persons	Section 10.1.2 states that contact persons will be provided in the REMP.	This is considered acceptable.
Community relations (where applicable)	Section 10.1.2 states that community relations plan will be provided in the remediation environmental management plan.	This is considered acceptable.
Staged progress reporting (where applicable)	Not provided	This is not anticipated to be required.
Long term site management plan	Not provided	This is not anticipated given the proposed remedial strategy.

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