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PRELIMINARY SITE INVESTIGATION (PSI)

1 Station Lane, Penrith NSW

Prepared for

Station Lane Pty Ltd

ATF

The Station Lane Trust

July 2018

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ABBREVIATIONS

AIP	*Australian Institute of Petroleum Ltd*	**QA/QC**	*Quality Assurance, Quality Control*
ANZECC	*Australian and New Zealand Environment and Conservation Council*	**RAC**	*Remediation Acceptance Criteria*
AST	*Aboveground Storage Tank*	**RAP**	*Remediation Action Plan*
BGL	*Below Ground Level*	**RPD**	*Relative Percentage Difference*
BTEX	*Benzene, Toluene, Ethyl benzene and Xylene*	**SAC**	*Site Assessment Criteria*
COC	*Chain of Custody*	**SVC**	*Site Validation Criteria*
DA	*Development Approval*	**SWL**	*Standing Water Level*
DP	*Deposited Plan*	**TCLP**	*Toxicity Characteristics Leaching Procedure*
DQOs	*Data Quality Objectives*	**TPH**	*Total Petroleum Hydrocarbons*
EPA	*Environment Protection Authority*	**UCL**	*Upper Confidence Limit*
ESA	*Environmental Site Assessment*	**UST**	*Underground Storage Tank*
HIL	*Health-Based Soil Investigation Level*	**VHC**	*Volatile Halogenated Compounds*
LGA	*Local Government Area*	**VOC**	*Volatile Organic Compounds*
NEHF	*National Environmental Health Forum*	**DPI**	Department of Primary Industries
NEPC	*National Environmental Protection Council*		
NHMRC	*National Health and Medical Research Council*		
OCP	*Organochlorine Pesticides*		
OPP	*Organophosphate Pesticides*		
PAH	*Polycyclic Aromatic Hydrocarbon*		
PCB	*Polychlorinated Biphenyl*		
PID	*Photo Ionisation Detector*		
PQL	*Practical Quantitation Limit*		

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EXECUTIVE SUMMARY

Benviron Group was appointed by Station Lane Pty Ltd ATF The Station Lane Trust to undertake a Preliminary Site Investigation (PSI) for the property situated at 1 Station Lane, Penrith NSW ("the site").

Refer to **Figure 1** - Site Locality and **Figure 2** - Site Features &Borehole Locations Plan.

The site is currently occupied by one single storey residential type dwelling and is proposed to be redeveloped into a six-storey residential flat building with two-level basement and landscape areas.

A site visit was undertaken on 05th June 2018. Fieldwork and reporting was conducted in general accordance with the Benviron Group proposal and with reference to relevant regulatory criteria and Benviron Group fieldwork protocols.

The preliminary soil assessment revealed the following:

- The laboratory results for all soil samples were below the adopted detection limits and/or the relevant guideline criteria.
- No asbestos was detected in the soil sample analysed.

The following areas identified in the CSM as a potential concern are addressed as follows:

- Historical uses;
- Areas of potential filling (underground services, beneath buildings and driveway areas);

- Carpark areas / driveways where leaks and spills from cars may have occurred; and
- Degrading building features.

Based on the results of this investigation it is considered that the risks to human health and the environment associated with soil and groundwater contamination at the site are low in the context of the proposed use of the site. The site is ***suitable*** for the proposed development, subject to the following recommendations:

- Any soil requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014).
- An Asbestos Clearance Certificate is recommended to be completed once all existing buildings are structures have been demolished.

If during any potential site works any significant unexpected occurrence is identified, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

Thank you for the opportunity of undertaking this work. We would be pleased to provide further information on any aspects of this report.

1.0 INTRODUCTION

Benviron Group was appointed by Station Lane Pty Ltd ATF The Station Lane Trust to undertake a Preliminary Site Investigation (PSI) for the property situated at 1 Station Lane, Penrith NSW ("the site").

Refer to **Figure 1** - Site Locality and **Figure 2** - Site Features &Borehole Locations Plan.

The site is currently occupied by one single storey residential type dwelling and is proposed to be redeveloped into a six-storey residential flat building with two-level basement and landscape areas.

This PSI has been requested determine the potential for onsite contamination arising from any areas of concern located within the site and its surrounding area. This report shall provide a preliminary assessment of any site contamination and, if required, provide a basis for a more detailed investigation.

A site visit was undertaken on 05th June 2018. Fieldwork and reporting was conducted in general accordance with the Benviron Group proposal and with reference to relevant regulatory criteria and Benviron Group fieldwork protocols.

Soils sampled across the Site were assessed against the Site Acceptance Criteria (SAC) provided by the National Environment Protection (Assessment of Site Contamination) Measure (NEPM 2013) Table 1A - Residential B.

The format of this report closely follows that recommended in the NSW Environment Protection Authority (EPA), now the Office of Environment and Heritage (OEH) "*Guidelines for Consultants Reporting on Contaminated Sites*" - 2011.

2.0 OBJECTIVE

The objective of this PSI was to assess the potential for the soils and groundwater at the site to have been impacted by previous and current activities undertaken at or adjacent to the site and to assess the site suitability for the proposed development.

This report may also recommend additional investigations and / or remediation works and possible strategies for the management of the site.

3.0 SCOPE OF WORKS

The scope of works for this PSI included:

- Research and review of the information available, including previous environmental investigations, past and current titles, aerial photographs, EPA records and anecdotal evidence, site survey, site records on waste management practices;
- Site walkover, including research of the location of sewers, drains, holding tanks and pits, spills, patches of discoloured vegetation, etc;
- Quality Assurance/Quality Control (QA/QC): work will be undertaken in accordance with relevant regulations and are consistent with industry standards.
- Preliminary soil sampling;

4.0 SITE IDENTIFICATION

4.1 Site identification

The site is identified as follows:

Table 1: Site Identification Review

Site Identifier	Site Details	
Site Location	1 Station Lane, Penrith NSW	
Lot/DP	Lot 2B DP161921	
Site Coordinates #	NE corner: Latitude: -33.75463, Longitude: 150.693348 NW corner: Latitude: -33.754644, Longitude: 150.693179 SE corner: Latitude: -33.754937, Longitude: 150.693131 SW corner: Latitude: -33.75495, Longitude: 150.69294	
Parish	Mulgoa	
County	Cumberland	
Nearest Survey Marker	P,12635D, 58m SE	
Site Area #	663 m^2	
Local Government Area (LGA)	Penrith	
Zoning##	R4 – High Density Residential	
Surrounding Land Uses	*North*	Residential
	South	Drainage line then community hall
	East	Street then Residential
	West	Residential

Notes:

Refer to NSW LPI "Six Maps" https://maps.six.nsw.gov.au/

https://www.planningportal.nsw.gov.au/find-a-property

5.0 SITE HISTORY AND PROPOSED DEVELOPMENT

5.1 Underground Services

Dial Before You Dig' plans were requested and reviewed for the Site. Plans were provided by Endeavour Energy, Jemena Gas West, NBN Co, Roads and Maritime Services, Sydney Water and Telstra NSW. The plans did not indicate the presence of any major underground services or utility easements at the site with the exception of an NBN fibre optic cable and a Telstra cable.

The NBN plan and Telstra Plan indicate cables entering the property in the northeast corner and running diagonally to the centre. It is noted that these underground services are considered potential preferential pathways.

Refer to **Appendix A** – DBYD Plans.

5.2 Review of Historical Maps

A search of the maps originally produced by Higinbotham & Robinson was undertaken. No relevant information was found.

5.3 Review of Aerial Photographs

A number of aerial photographs obtained from the NSW Department of Lands and/or the Land and Property Information Spatial Information Exchange website "Six maps" were reviewed as part of this PSI. Copies of the aerial photographs are kept in the offices of Benviron Group and are available for examination upon request. The results of this review are presented in the following table:

Table 2 Review of Aerial Photographs

Year	Site		Surrounding areas
1943	Vacant	The site appeared to be Vacant block	N: Residential S: Street then Vacant block E: Vacant then street W: Vacant block
1956	Vacant	No major changes.	N: Residential S: Street then Vacant block E: Vacant then street W: Vacant block
1970	Residential	A residential house was constructed between 1956 and 1970.	N: More Residential buildings S: Street then buildings E: Residential-type building then street W: Residential-type building in the southeast corner
1994	Residential	No major changes.	N: Residential S: Street then buildings E: Residential-type building then street W: Residential-type building
2005	Residential	No major changes	No major changes
Six Maps	Residential	No major changes from the 2005 aerial photograph.	N: Residential S: Street then buildings E: Residential-type building then street W: Residential-type buildings
Current	As per inspection	The site is as inspected (section 7.1)	As per inspection

The aerial photographs indicate the site had been vacant since at least 1943. And a residential property was constructed between 1956 and 1970. It remained as per the residential use with possible some minor alterations to the buildings (sheds/trees) on the site.

The surrounding land had been predominantly vacant and/or residential to the north, east and west of the site and has remained residential in nature to the current date. The land to the south was identified as vacant land in the 1943. From 1956 to 1970, the land to the south had been commercial/ community buildings and the building remained the same shape until present date.

Refer to **Appendix B** – Historical Aerial Photographs.

5.4 Title search

A review of historical documents held at the NSW Department of Lands offices was undertaken to characterise the previous land use and occupiers of the site.

Table 3 Historical land title data

Lot 2B in DP16192 (1 Station Lane, Penrith NSW)		
Year	**Proprietor**	**Company/Personal Occupation**
2017-Current	Regina Leimanis	
1956	Imants Leimanis Rehina Leimanis	
1935	Fred Johnston	Schoolteacher
Before 1935	L.H. Byrnes	

In summary, the land titles have indicated the following:

- The property at 1 Station Lane has been owned by private individuals from at least 1935 to the current date.
- The land titles have revealed no concerns in relation to potential land use.

Refer to **Appendix C** – Land Titles Information.

5.5 NSW EPA Records

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act.

A search of the database revealed that the subject site is not listed. One property is listed within the suburb of Penrith. However, it is not considered to have any adverse effect due to it located more than 2km away from the site.

It should be noted that the NSW EPA record of Notices for Contaminated Land does not provide a record of all contaminated land in NSW.

Refer to **Appendix D** – NSW EPA Records.

5.6 NSW EPA POEO Register

A search of the POEO Register revealed that the site was not listed.

Refer to **Appendix D** – NSW EPA Records.

5.7 Section 149(2) Planning Certificate

The Planning Certificate – Section 149 (2) of the Environmental Planning & Assessment Act 1979 for the site was provided by the client. A summary of the information pertaining to site is provided below:

1 Station Lane

- The Penrith Local Environmental Plan 2010 applies to the land
- The Sydney Regional Environmental Plan No.9 Extractive Industry applies to the local government area of Penrith
- The Sydney Regional Environmental Plan No.20 – Hawkesbury- Nepean River applies to the local government area of Penrith
- The land is currently zoned – R4 High Density Residential under the Penrith LEP 2010.
- The land does not include or comprise critical habitat under any environmental planning instrument.
- The land is not located within a conservation area under the provisions of the Auburn LEP 2010.
- There is no item of environmental heritage situated on the land.
- The following complying development code may be carried on the land

  - General Housing Code
  - Rural Housing Code
  - Housing Alterations Code
  - General Development Code
  - Commercial and Industrial Alterations Code
  - Subdivisions Code
  - Demolition Code
  - Fire Safety Code
- The land is not within a proclaimed mine subsidence district.
- The land is not affected by the operation of sections 38 or 39 of the Costal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.
- The land is not affected by any road widening or road realignment under division 2 of part 3 of the Roads Act 1993 or any environmental planning instrument or any resolution of the council.
- The land is affected by the Asbestos Policy adopted by Council.
- The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).
- The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.
- Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing, residential flat buildings, industrial or commercial is subject to flood related development controls.
- The land is not biodiversity certified land.

- The land is not under biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995 relates.
- The land is not shown to be bushfire prone land as defined in EP& A Act 1979.
- The land is not subject to Orders under Trees Act 2006.

Refer to **Appendix E** – Section 149 Planning Certificate.

5.8 SafeWork Records

The site was inspected on the 05th June 2018 and there were no visual indicators of USTs and/or related infrastructure in areas accessible. Benviron Group has considered the site inspection, aerial photographs & land title information and concluded the land use appeared to be entirely vacant and/or residential. Therefore, based on the weight of evidence above no SafeWork NSW search was undertaken for this site.

5.9 Anecdotal evidence

No anecdotal evidence regarding contamination was identified for the site.

5.10 Summary of site history

In summary:

- The land title information indicated the property at 1 Station Lane has been owned by private individuals from at least 1935 to the current date. The land titles have revealed no concerns in relation to potential land use.
- The aerial photographs indicate the site had been vacant since at least 1943. And a residential property was constructed between 1956 and 1970. It remained as per the residential use with possible some minor alterations to the buildings (sheds/trees) on the site.
- The surrounding land had been predominantly vacant and/or residential to the north, east and west of the site and has remained residential in nature to the current date. The land to the south was identified as vacant land in the 1943. From 1956 to 1970, the land to the south had been commercial/ community buildings and the building remained the same shape until present date.
- NSW EPA Records have indicated that the subject site is not listed.
- The Section 149 planning certificate has been reviewed as part of this investigation. It has revealed no concerns in relation to potential land use.
- The Council records have not been accessed to disclose file records relating to the site as part of this investigation.
- The site was inspected on the 05th June 2018 and there were no visual indicators of USTs and/or related infrastructure in areas accessible. Benviron Group has considered the site inspection, aerial photographs & land title information and concluded the land use appeared to be entirely vacant and/or residential. Therefore, based on the weight of evidence above no SafeWork NSW search was undertaken for this site.

5.11 Integrity Assessment

The information found in the historical sources has been found to be in general concurrence. It is therefore considered that accuracy of this data is acceptable for this investigation.

5.12 Proposed Development

The site is currently occupied by one single storey residential type dwelling and is proposed to be redeveloped into a six-storey residential flat building with two-level basement and landscape areas.

Refer to **Appendix G** - Proposed Development Plans.

6.0 SITE CONDITION AND SURROUNDING ENVIRONMENT

Table 4: Site Condition and Surrounding Environment Review

Site Information	Descriptions
Sensitive Receivers	The nearest sensitive human receptors are the current and future users of the site, construction workers during the site redevelopment and the general public. The nearest watercourse is Peach Tree Creek located 950m west of the site.
Soil Landscape *Review of NSW Soil and Land Information website ESPADE.*	The Soil Landscape Map viewed on NSW ESPADE indicates that the site is located within the Richmond landscape area. These soils are considered localised flood hazard, localised seasonal waterlogging, localised water erosion hazard on terrace edges.
Topography Review of NSW Soil and Land Information website ESPADE.	The topography viewed on NSW ESPADE indicated the following for the Richmond Landscape: Quaternary terraces of the Nepean and Georges Rivers. Mainly flat (slopes <1%). Splays and levees provide local relief (<3 m). Tree cover, now almost completely cleared, was formerly a low open-woodland (dry sclerophyll). Based on the site inspection it was determined that the site was generally flat.

<table>
<tr><th>Site Information</th><th>Descriptions</th></tr>
<tr><td>Geological Profile</td><td>The Geological Map of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991) published by the Department of Minerals and Energy indicates that the residual soils within the site to be underlain by Quaternary Age soils of the Cranebrook Formation, comprising of gravel, sand, silt and clay.</td></tr>
<tr><td>Presence of Acid Sulphate Soils

Review of NSW Department of Land & Water Conservation (DLWC) Acid Sulphate Soil Risk Maps (Edition Two, December 1997, Scale 1:250,000).</td><td>A review of the Acid Sulphate Soil Risk Maps indicated that the site is not included in the maps, so there is a “No Known Occurrence” of acid sulphate soil materials within the soil profile.</td></tr>
<tr><td>Salinity Potential
Review of DIPNR Salinity Potential in Western Sydney 2002 Risk Map

Refer to Appendix H – Salinity Risk Map.</td><td>A review of the Salinity Potential in Western Sydney 2002 Map (DIPNR March 2003) was undertaken for the site. The map indicated the site is located in an area listed as moderate salinity potential.

Reference should be made to Appendix I for a copy of the Salinity Risk Map.</td></tr>
<tr><td>Localised Hydrogeology
Review of DPI (Office of Water) Database.</td><td>
<table>
<tr><th>Number</th><th>Location from Site</th><th>Depth (m BGL)</th><th>SWL (m BGL)</th><th>Use</th><th>Water Bearing Zones</th></tr>
<tr><td>GW029710</td><td>290m W</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
</table>
</td></tr>
</table>

Site Information	Descriptions					
Appendix I – DPI (Office of Water) Database Records.	GW103048	290m SW	-	-	-	-
	GW111987	GW111987	-	-	-	-
	GW111988	330m NW	-	-	-	-
	GW111989	330m NW	-	-	-	-
Nearest Surface Water Body	The nearest watercourse is Peach Tree Creek located 950m west of the site.					
Local Meteorology (Bureau of Meteorology BOM website) **Appendix J** – BOM Data.	The monthly rainfall of the local surrounding area is represented by the data collected from the BOM rainfall gauge located in Penrith Lake AWS NSW, which is located approximately 3.5km from Penrith. The records indicate that the lowest & highest monthly rainfall recorded in June (date of fieldwork) was 3.2mm & 150.2mm respectively.					
Nearest Active Service Station (Google Maps Search)	2.5km north west of the site.					

7.0 SITE INSPECTION

7.1 Site observations

The site was visited on the 05th June 2018 by Benviron Group Environmental Scientist to inspect the site for any potential sources of contamination.

At the time of the site visit the following observations were made as per the following table:

Table 5: Site Inspection Review

Factors Considered	Description of Sites
Buildings & Structures on Site	The site is trapezoid in shape and is occupied by a single storey residential house with garage and concrete driveway. The site consists of court The remainder of the site contains grassed areas.
Percentage Hard-standing surface	60%
Concrete Condition	Average
Chemical Storage	No chemical storage areas were noticed in the accessible areas during the site inspection.
Above and Underground Storage Tanks	USTs and ASTs were not identified within the property.
Trade Waste Pits	No trade waste agreements or pits were identified for the building.
Nearby Electrical Transformers	No electrical transformers were identified within the site
Asbestos	Fibro cement fragments were noted on the eaves of the house. Potential asbestos may exist somewhere else due

	to the limitation of the accessible areas.
Site Vegetation	Appeared healthy.
Soil Staining and Odours	No odours were identified within the property. No significant soil staining was noted during the inspection.
Stormwater and Sewer	Stormwater and sewage were connected to the local utilities.

Refer to **Figure 1** - Site Locality, **Figure 2** - Site Features & Borehole Locations Plan and **Appendix F** – Site Photographs.

8.0 CONCEPTUAL SITE MODEL (CSM)

Based on the above information, site history and site walkover, the areas of potential concern and associated contaminants for the site CSM were identified. These are summarised in the following table.

Table 6: Areas and Contaminants of Concern

Known and potential contamination source	Associated Contaminants
Historical& Current Site Uses	Heavy Metals, TRH, BTEX, PAH, OCP, PCB
Imported Fill	Heavy Metals, TRH, BTEX, PAH, OCP, PCB
Car parking Areas	TRH, BTEX, PAH
Building degradation/ Demolition	Heavy Metals and Asbestos

Table 7: Potentially Contaminated Media

Known and potential contamination source	Associated Contaminants
Fill Material	There is the potential for contamination to be present in the upper fill material.
Groundwater	There is the potential for the leaching of contaminants into groundwater onsite and also migration of the contaminants.

Potential for Migration

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, site inspection and previous report are present in solid (e.g. impacted fill, asbestos) and liquid (e.g. dissolved in water) forms.

Aerial photography has indicated that there are unsealed ground surfaces and therefore there is the potential for migration of contaminants via wind-blown dust.

Rainfall infiltration at the site is expected to occur in unsealed areas. There is therefore the potential that soil contamination could result in impacts to shallow groundwater.

Potential Exposure Pathways

Potential exposure pathways include:

- Dermal;
- Ingestion; and
- Inhalation.

Due to the presence of exposed potentially impacted soil/fill on ground surfaces, dermal exposure is considered a potential exposure pathway.

The potential for ingestion of soil is considered as a potential exposure pathway.

Receptors

Potential receptors of environmental impact present within the site which will be required to be addressed with respect to the suitability of the site for the proposed use include:

- Excavation/construction/maintenance workers conducting activities at the site, who may potentially be exposed to COPCs through direct contact with impacted soils, Vapour Intrusion and/or groundwater present within excavations and/or inhalation of dusts/fibres associated with impacted soils;
- Future occupants/users of the site may potentially be exposed to COPCs through direct contact with impacted soils and/or ingestion of impacted soils and/or inhalation of dusts/fibres associated with impacted soils and/or exposure to vapour; and/or
- Offsite sensitive receptors of groundwater;
- Flora species to be established on vegetated areas of the site; and
- Peach Tree Creek.

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 gases.

Man-made preferential pathways are present throughout the site, generally associated with fill materials and services present beneath existing ground surface. Fill materials and service lines are anticipated to have a higher permeability than the underlying natural soil and/or bedrock.

The NBN plan and Telstra Plan indicate cables entering the property in the northeast corner and running diagonally to the centre. It is noted that these underground services are considered potential preferential pathways.

9.0 REVIEW OF DATA QUALITY OBJECTIVES

The DQOs were also prepared using Appendix IV of the Site Auditor Guidelines. These require 7 steps. The steps being

a. State the problem
b. Identify the decisions
c. Identify inputs to decision
d. Define the study boundaries
e. Develop a decision rule
f. Specify limits on decision errors
g. Optimise the design for obtaining data

9.1 State the Problem

The site requires to be confirmed suitable for the proposed development. The site is proposed to be redeveloped and has had some areas of potential concern, those being impacts from historical & current uses, imported fill of unknown origin, degradation of the building materials and leakages from vehicles on site.

Technically defensible evidence needs to be provided so that the identified Site does not present an unacceptable risk to human health or the environment and is suitable for the intended land use.

9.2 Identify the Decisions

The decisions to be made on the contamination and the new environmental data required includes considering relevant site contamination criteria for each medium (fill, soil and sediment). A proposed use of the 95% UCL on the mean concentrations for all soil chemicals of potential concern must be less than the site criteria identified for the relevant land use suitability.

The decisions made in completing this assessment are as follows:

- Does the site or is the site likely to present a risk of harm to humans or the environment
- Is the site currently suitable for the proposed land use being residential with access to soil
- Is there a potential for soil and groundwater contamination
- Is there a potential for offsite migration issues
- Does the sampling results meet the site criteria proposed
- If not, does the site require remediation works

9.3 Identify Inputs to Decision

This step requires the identification of the environmental variables/characteristics that need measuring, identification of which media (fill, soil etc.) need to be collected, identification of the site criteria for each medium of concern and appropriate analytical testing. Inputs include:

- Existing site information
- Site history

- Regional geology, topography and hydrogeology
- Potential contaminants
- Proposed Land Use
- Site assessment criteria
- Results as measured against criteria

9.4 Define the Study Boundaries

Specific spatial and temporal aspects must be provided to identify the boundaries of the investigation and to identify any restrictions that may hinder the assessment process. The site is located at 1 Station Lane, Penrith NSW and is currently registered as Lot 2B in DP161921. The site is approximately 663 m^2 in area.

Refer to **Figure 1** - Site Locality and **Figure 2** - Site Features & Borehole Locations Plan.

9.5 Develop a Decision Rule

The information obtained through this assessment will be used to characterise the soils and the groundwater on the site in terms of contamination issues and risks to human health and the environment. The decision rule in characterising the site will be as follows:

- Laboratory test results will be measured against the criteria provided within this report
- The site will be deemed suitable for the proposed use if the following criteria are fulfilled:
    - Soil and groundwater concentrations are within background levels

- QA/QC shows data can be relied upon
- Results generally meet regulatory criteria
- Results are from NATA accredited laboratories
- Detection limits are below assessment criteria
- Results can be shown to be of minimal concern

9.6 Specify Limits on Decision Errors

The limits on decision errors for this assessment are as follows:

- The assessment criteria adopted from the guidelines within this report have risk probabilities already incorporated.
- The acceptable limits for inter/intra laboratory duplicate sample comparisons are laid out within our protocols.
- The acceptable limits for laboratory QA/QC parameters are based upon the laboratory reported acceptable limits and those stated within the NEPM 1999 Guidelines (2013 Amendment)

9.7 Optimise the Design for Obtaining Data

A resource-effective sampling and analysis design was undertaken for data collection that satisfies the DQO's. The sampling and analytical plan is designed to avoid Type 1 and Type 2 errors and includes defining minimum sample numbers required to detect contamination as determined with procedures provided in the NSW EPA 1995 Sampling Design Guidelines and AS 4482.1 - 2005 and appropriate quality control procedures.

Furthermore, only laboratories accredited by NATA for the analysis undertaken were used. The laboratory data was assessed from quality data calculated during this

assessment. Field QA/QC protocols adopted and incorporate traceable documentation of procedures used in the sampling and analytical program and in data verification procedures.

10.0 PRELIMINARY SOIL INVESTIGATION

The preliminary soil investigation took place on the 05th June 2018 and was designed to meet the Data Quality Objectives.

10.1 Soil Assessment

Two soil samples were recovered from two boreholes labelled S1 and S2. These locations were selected to detect any contamination that may have originated from past and present activities, and due to potential excavation and future development in these areas.

Table 8: Sampling Information - Soil

Analyte / Analyte Group		SAMPLING DATE	DUPLICATE & SPLIT	HEAVY METALS	TRH	BTEX	PAH	OCP	PCB	Asbestos %w /w
Sample	Depth (m)									
S1	0-0.2	05.06.2018		✔	✔	✔	✔			
S2	0-0.2	05.06.2018		✔	✔	✔	✔	✔	✔	✔

The locations of the boreholes are shown in **Figure 2** and details of the borehole logs are presented in **Appendix K** – Borehole Logs.

Based on information from all boreholes, the surface and sub-surface profile across the site is generalised as follows:

- Fill: Silty Sands

10.2 Sampling Density and Rationale

The NSW EPA "Sampling Design Guidelines" (September 1995) requires a minimum sampling density of six (6) sampling points for a site area of 663m^2.

Benviron Group recovered two soil samples from two boreholes. Sampling was preliminary in nature and not designed to meet the above guidelines, but target any potential areas of concern.

10.3 Sampling Methodology

In summary:

- Soil samples were collected using a hand auger, DCP and U50 to collect undisturbed samples.
- Samples were transferred directly into appropriately labelled clean laboratory supplied containers;
- Samples were transferred into chilled eskies for sample preservation;
- A Chain of Custody was completed and forwarded to the laboratory. Sampling analysis was based on field observations and was in accordance to the schedule outlined in Table 8.
- Soil samples were submitted to their respective laboratories as specified in Section 11.

11.0 QUALITY ASSURANCE / QUALITY CONTROL

11.1 General QA/QC

The frequency required for each field quality assurance / quality control (QA/QC) sample is presented in the table below.

Table 9: QA/QCs Frequencies

	Intra Lab	Inter Lab	Rinsate	Spikes	Blanks
Sampling Frequency	1 in 20	1 in 20	1/day	1/day	1/day

During the contamination assessment the integrity of data collected is considered vital. With the assessment of the site, a number of measures were taken to ensure the quality of the data. These are as follows:

11.2 Sample Containers

Soil samples collected during the investigation were placed immediately into laboratory prepared glass jars with Teflon lid inserts. Standard identification labels were adhered to each individual container and labelled according to depth, date, sampling team and media collected.

11.3 Decontamination

All equipment used in the sampling program was decontaminated prior to use and between samples to prevent cross contamination. Decontamination of equipment involved the following procedures:

- Cleaning equipment in potable water to remove gross contamination;
- Cleaning in a solution of Decon 90;
- Rinsing in clean demineralised water then wiping with clean lint free cloths;

Benviron Group also adopted a sampling gradient of lowest to highest potential contamination to minimise the impact of cross contamination. This gradient was determined from the historical review and the on-site inspection that was carried out prior to sampling.

Although Benviron Group maintains consistent sampling procedures, a rinsate sample is obtained to ensure false positive samples are not generated and that decontamination procedures are effective in preventing cross contamination. The Rinsate water is collected after being in contact generally with the trowel used for sampling. Analytical results that target the contaminants of concern are compared to a blank sample, which is taken directly from the rinsate water container supplied by the laboratory.

A rinsate sample was not collected as the samples were taken directly from the U50 tube via DCP & hand auger and therefore the chance for cross-contamination was minimal.

11.4 Sample Tracking, Identification and Holding Times

All samples were forwarded to Envirolab under recognised chain of custodies with clear identification outlining the date, location, sampler and sample ID. All samples were recorded by the laboratory as meeting their respective holding times. The sample tracking system is considered adequate for the purposes of sample collection.

11.5 Sample Transport

All samples were packed into an esky with ice from the time of collection. A trip blank and trip spike are collected where appropriate. These were transported under chain of custody from the site to Envirolab Pty Ltd, a NATA registered laboratory. During the project, the laboratory reported that all the samples arrived intact and were analysed within holding times for the respective analytes.

Samples were kept below 4°C at all times, soil samples submitted for asbestos analysis are not required to be kept below 4°C.

11.6 Trip Spike

Trip Spike samples were obtained from the laboratory prior to conducting field sampling where volatile substances are suspected. Benviron Group QA/QC procedures for the collection of environmental samples involves the collection of trip blanks, trip spikes and duplicate samples both intra and inter laboratory.

Trip Spike samples were not collected as part of this investigation. Results indicate that no volatile hydrocarbons were present within the samples and therefore losses most likely would not have occurred.

11.7 Trip Blank

A trip blank accompanied the sampling for the sampling process and is not separated from the sample collection and transportation process. The purpose of the trip blank is to identify whether cross-contamination is occurring during the sample collection and transport process.

Trip Blank samples were not collected as part of this investigation. Results indicate that no volatile hydrocarbons were present within the samples and therefore cross contamination most likely would not have occurred.

11.8 Laboratory QA/QC

The integrity of analytical data provides the second step in the QA/QC process for total data compliance. The data validation techniques adopted by Benviron Group are based upon techniques published by the US EPA and in line with methods and guidelines adopted by the NSW EPA and outlined in the NEPM, 2013.

Descriptions are provided of the specific mechanisms used in the assessment of accuracy, precision and useability of analytical data within the project.

Refer to **Appendix L**- NATA Accredited Analytical Results.

12.0 SITE ASSESSMENT CRITERIA

12.1 SOILS

12.1.1 Health Investigation Levels (HILs)

To assess the contamination status of soils at a site, the NSW EPA refers to the document entitled National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) (Amendment 2013).

The site is currently occupied by one single storey residential type dwelling and is proposed to be redeveloped into a six-storey residential flat building with two-level basement and landscape areas.

The site will be assessed against the NEPM exposure scenario 'Residential B' Health Investigation Levels of the above mentioned guidelines and specifically refers to the following:

HIL 'B' Residential with minimal opportunities for soil access: includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments

The soil regulatory guidelines are presented in the table below.

Table 10: Health Investigation Levels (HIL) Criteria for Soil Contaminants

	Residential B	Reference
Heavy Metals		
Arsenic	500	NEPM 2013 - Table 1(A)1 HILs
Beryllium	90	NEPM 2013 - Table 1(A)1 HILs
Boron	40000	NEPM 2013 - Table 1(A)1 HILs
Cadmium	150	NEPM 2013 - Table 1(A)1 HILs
Chromium (VI)	500	NEPM 2013 - Table 1(A)1 HILs
Cobalt	600	NEPM 2013 - Table 1(A)1 HILs
Copper	30000	NEPM 2013 - Table 1(A)1 HILs
Lead	1200	NEPM 2013 - Table 1(A)1 HILs
Manganese	14000	NEPM 2013 - Table 1(A)1 HILs
Mercury (Inorganic)	120	NEPM 2013 - Table 1(A)1 HILs
Methyl Mercury	30	NEPM 2013 - Table 1(A)1 HILs
Nickel	1200	NEPM 2013 - Table 1(A)1 HILs
Selenium	1400	NEPM 2013 - Table 1(A)1 HILs
Zinc	60000	NEPM 2013 - Table 1(A)1 HILs
Cyanide (Free)	300	NEPM 2013 - Table 1(A)1 HILs
Polycyclic Aromatic Hydrocarbons (PAHs)		
Carcinogenic PAHs (as Bap TEQ)	4	NEPM 2013 - Table 1(A)1 HILs
Total PAHs	400	NEPM 2013 - Table 1(A)1 HILs
Organochlorine Pesticides		
DDT + DDE + DDD	600	NEPM 2013 - Table 1(A)1 HILs
Aldrin + Dieldrin	10	NEPM 2013 - Table 1(A)1 HILs
Chlordane	90	NEPM 2013 - Table 1(A)1 HILs
Endosulfan	400	NEPM 2013 - Table 1(A)1 HILs
Heptachlor	10	NEPM 2013 - Table 1(A)1 HILs
HCB	15	NEPM 2013 - Table 1(A)1 HILs
Phenols		
Phenols	45000	NEPM 2013 - Table 1(A)1 HILs
Pentachlorophenol	130	NEPM 2013 - Table 1(A)1 HILs
Cresols	4700	NEPM 2013 - Table 1(A)1 HILs
Polychlorinated Biphenyls (PCBs)		
PCBs	1200	NEPM 2013 - Table 1(A)1 HILs
Other Pesticides		
Atrazine	470	NEPM 2013 - Table 1(A)1 HILs
Chlorpyrifos	340	NEPM 2013 - Table 1(A)1 HILs
Bifenthrin	840	NEPM 2013 - Table 1(A)1 HILs
Herbicides		
2,4,5-T	900	NEPM 2013 - Table 1(A)1 HILs
2,4-D	1600	NEPM 2013 - Table 1(A)1 HILs
MCPA	900	NEPM 2013 - Table 1(A)1 HILs
MCPB	900	NEPM 2013 - Table 1(A)1 HILs
Mecoprop	900	NEPM 2013 - Table 1(A)1 HILs
Picloram	6600	NEPM 2013 - Table 1(A)1 HILs
Other Organics		
PDBE (Br1-Br9)	2	NEPM 2013 - Table 1(A)1 HILs

Note - All values are in mg/kg

12.1.2 Health Screening Levels (HSLs)

The HSLs are applicable to generic land uses such as residential, commercial/industrial or recreational/public open space and different soil types between the ground surface and soils >4 metres below ground level. The HILs have been applied to assess human health risks via the inhalation and direct contact pathways of exposure.

It should be noted that HSL D can be used in lieu of HSL B for buildings that comprise car parks or commercial properties on the ground floor.

For assessing TRH and BTEX contamination at sites used for sensitive land use, such as residential, the NEPM refers to the Health Screening Levels (HSLs) “HSL A and HSLB”.

For selection of the health screening criteria an assessment of the in-situ soil profile should be undertaken. The soil profile consisted of predominantly Sand.

Table 11: Health Screening Levels (HSL) Criteria

	HSL A & HSL B	HSL A & HSL B	HSL A & HSL B	HSL A & HSL B	Soil Saturation Concentration (Csat)	Reference
	0m to <1m	1m to <2m	2m to <4m	4m+		
CLAY						
Toluene	480	NL	NL	NL	630	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	NL	NL	NL	NL	68	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	110	310	NL	NL	330	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	5	NL	NL	NL	10	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.7	1	2	3	430	NEPM 2013 - Table 1(A) 3 HSLs
F1	50	90	150	290	850	NEPM 2013 - Table 1(A) 3 HSLs
F2	280	NL	NL	NL	560	NEPM 2013 - Table 1(A) 3 HSLs
SAND						
Toluene	160	220	310	540	560	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	55	NL	NL	NL	64	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	40	60	95	170	300	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	3	NL	NL	NL	9	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.5	0.5	0.5	0.5	360	NEPM 2013 - Table 1(A) 3 HSLs
F1	45	70	110	200	950	NEPM 2013 - Table 1(A) 3 HSLs
F2	110	240	440	NL	560	NEPM 2013 - Table 1(A) 3 HSLs
SILT						
Toluene	390	NL	NL	NL	640	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	NL	NL	NL	NL	69	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	95	210	NL	NL	350	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	4	NL	NL	NL	10	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.6	0.7	1	2	440	NEPM 2013 - Table 1(A) 3 HSLs
F1	40	65	100	100	910	NEPM 2013 - Table 1(A) 3 HSLs
F2	230	NL	NL	NL	570	NEPM 2013 - Table 1(A) 3 HSLs

Note - All values are in mg/kg

12.1.3 (EILs) and (ESLs)

Ecological Investigation Levels (EILs) -

The NEPM 2013 states that "Ecological investigation levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. EILs have been derived for As, Cu, CrIII, DDT, naphthalene, Ni, Pb and Zn

Insufficient data was available to derive ACLs for arsenic (As), DDT, lead (Pb) and naphthalene. As a result, the derived EILs are generic to all soils and are presented as total soil contaminant concentrations in Tables 1B (4) and 1B (5) within the NEPM 2013.

For the purposes of EIL derivation, a contaminant incorporated in soil for at least two years is considered to be aged for the purpose of EIL derivation. The majority of contaminated sites are likely to be affected by aged contamination. Fresh contamination is usually associated with current industrial activity and chemical spills".

The following process describes the method for calculation of site specific EILs.

A. EILs for Ni, Cr III, Cu, Zn and Pb aged contamination (>2 years)

Steps 1–4 below describe the process for deriving site-specific EILs for the above elements using Tables 1B (1) – 1B (4), which can be found at the end of the NEPM 2013.

1. Measure or analyse the soil properties relevant to the potential contaminant of concern (pH, CEC, organic carbon, clay content). Sufficient samples need to be taken for these determinations to obtain representative values for each soil type in which the contaminant occurs.

2. Establish the sample ACL for the appropriate land use and with consideration of the soil-specific pH, clay content or CEC. The ACL for Cu may be determined by pH or CEC and the lower of the determined values should be selected for EIL calculation. Note that the ACL for Pb is taken directly from Table 1(B) 4.

3. Calculate the contaminant ABC in soil for the particular contaminant and location from a suitable reference site measurement or other appropriate method.

4. Calculate the EIL by summing the ACL and ABC:

$$EIL = ABC + ACL$$

B. EILs for As, DDT and naphthalene

EILs for aged contamination for DDT and naphthalene are not available and the adopted EIL is based on fresh contamination taken directly from Table 1B (5). The EILs for As, DDT and naphthalene are generic i.e. they are not dependent on soil type and are taken directly from Table 1B (5). Only EILs for fresh contamination are available for As, DDT and naphthalene due to the absence of suitable data for aged contaminants.

Ecological Screening Levels (ESLs) -

Ecological screening levels (ESLs) are presented based on a review of Canadian guidance for petroleum hydrocarbons in soil and application of the Australian methodology (Schedule B5b) to derive Tier 1 ESLs for BTEX, benzo(a)pyrene and F1 and F2 (Warne 2010a, 2010b)

The Canadian Council of the Ministers of the Environment (CCME) has adopted risk-based TPH standards for human health and ecological aspects for various land uses in the *Canada-wide standard for petroleum hydrocarbons (PHC) in soil* (CCME 2008) (CWS PHC). The standards established soil values including ecologically based criteria for sites affected by TPH contamination for coarse- and fine-grained soil types.

Table 12: Ecological Investigation Levels (EIL) and Ecological Screening Levels (ESL) Criteria

Contaminant	Age/Soil Texture	National parks and areas of high conservation value	Urban residential and open public spaces	Commercial and industrial	Reference
Ecological Investigation Levels (EILs)					
Heavy Metals					
Arsenic	**Fresh**	20	50	80	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	40	100	160	NEPM 2013 - Table 1(B) 1-5 EILs
Chromium (III)	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Copper	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Lead	**Fresh**	110	270	440	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	470	1100	1800	NEPM 2013 - Table 1(B) 1-5 EILs
Nickel	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Zinc	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	**Fresh**	10	170	370	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	10	170	370	NEPM 2013 - Table 1(B) 1-5 EILs
Organochlorine Pesticides					
DDT	**Fresh**	3	180	640	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	3	180	640	NEPM 2013 - Table 1(B) 1-5 EILs
Ecological Screening Levels (ESLs) and Management Limits					
F1 (C_6-C_{10})	**Coarse**				NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	125*	180*	215*	NEPM 2013 - Table 1(B) 6-7 EILs
F1 (C_6-C_{10})	**Coarse**		700	700	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	800	800	NEPM 2013 - Table 1(B) 6-7 EILs
F2 (>C_{10}-C_{16})	**Coarse**				NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	25*	120*	170*	NEPM 2013 - Table 1(B) 6-7 EILs
F2 (>C_{10}-C_{16})	**Coarse**		1000	1000	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	1000	1000	NEPM 2013 - Table 1(B) 6-7 EILs
F3 (>C_{16}-C_{34})	**Coarse**	-	300	1700	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	-	1300	2500	NEPM 2013 - Table 1(B) 6-7 EILs
F3 (>C_{16}-C_{34})	**Coarse**		2500	3500	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	3500	5000	NEPM 2013 - Table 1(B) 6-7 EILs
F4 (>C_{34}-C_{40})	**Coarse**	-	2800	3300	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	-	5600	6600	NEPM 2013 - Table 1(B) 6-7 EILs
F4 (>C_{34}-C_{40})	**Coarse**		10000	10000	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	10000	10000	NEPM 2013 - Table 1(B) 6-7 EILs
Benzene	**Coarse**	10	50	75	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	10	65	95	NEPM 2013 - Table 1(B) 6-7 EILs
Toluene	**Coarse**	10	85	135	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	65	105	135	NEPM 2013 - Table 1(B) 6-7 EILs
Ethylbenzene	**Coarse**	1.5	70	165	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	40	125	185	NEPM 2013 - Table 1(B) 6-7 EILs
Xylenes	**Coarse**	10	105	180	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	1.6	45	95	NEPM 2013 - Table 1(B) 6-7 EILs
Benzo(a)pyrene	**Coarse**	0.7	0.7	0.7	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	0.7	0.7	0.7	NEPM 2013 - Table 1(B) 6-7 EILs

Notes

1 Urban residential/public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.

2 Aged values are applicable to arsenic contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 Insufficient data was available to calculate aged values for DDT and naphthalene, consequently the values for fresh contamination should be used.

4 Insufficient data was available to calculate ACLs for As, DDT and naphthalene. The EIL should be taken directly from Table 1B(5).

5 ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

6 '-' indicates that insufficient data was available to derive a value.

7 To obtain F1, subtract the sum of BTEX concentrations from C6-C10 fraction and subtract naphthalene from >C10-C16 to obtain F2.

8 Management limits are applied after consideration of relevant ESLs and HSLs

9 Separate management limits for BTEX and naphthalene are not available hence these should not be subtracted from the relevant fractions to obtain F1 and F2.

12.2 Asbestos

Table 13: Health Screening Levels for Asbestos

	Health Screening Levels (w/w)			
Form of Asbestos	**Residential A**	**Residential B**	**Recreational C**	**Commercial/Industrial D**
Bonded ACM	0.01%	0.04%	0.02%	0.05%
FA and AF (Friable Asbestos)	0.001%			
All forms of asbestos	No visible asbestos for surface soil			

13.0 SOIL RESULTS

The laboratory certificates are presented in **Appendix L** – NATA Accredited Laboratory Certificates.

A summary of the results together with the assessment criteria adopted are provided in **Appendix M** – Summary Tables.

13.1 HEAVY METALS

13.2 Heath Investigation Levels

As indicated in Table M1 , all heavy metals were below the respective LOR and/or the Health Investigation Level (HIL) for a residential development, that being the HIL 'B'.

13.3 Ecological Investigation Levels

No EILs have been specifically derived for the site.

13.4 TRH, BTEX, NAPHTHALENE &/OR BENZO (A) PYRENE

13.5 Heath Screening Levels

As indicated in Table M1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'A' & HSL 'B' for a Sand soil profile with a source depth of "0m to <1m".

As shown in Table M1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), F3 (C_{16}-C_{34}), F4 (C_{34}-C_{40}), concentrations were below the Management Limits for a coarse grained soil texture in a "residential parkland and public open space" environment.

13.6 Ecological Screening Levels

As indicated in Table M1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), F3 (C_{16}-C_{34}), F4 (C_{34}-C_{40}), benzene, toluene, ethyl benzene, xylenes and benzo(a)pyrene concentrations were below the ESL for a fine grained soil texture in an "urban residential and public open space" environment.

13.7 PAH, OCP & PCB

13.8 Heath Investigation Levels

As indicated in Table M1, the concentrations of the benzo(a)pyrene (as TEQ), Total PAH, OCP & PCB were below the Health Investigation Level (HIL) for a residential development, that being the HIL 'B'.

13.9 EILs & ESLs

As indicated in Table M1, the concentrations of arsenic, naphthalene and DDT were below the EILs & ESLs for urban residential and public open space.

13.10 Asbestos

As indicated in Table M1 the laboratory analysis revealed the soil sample collected was below the %w/w asbestos for FA & AF adjusted assessment criteria & below the %w/w asbestos ACM – Residential use, childcare centres, preschools etc.

14.0 DISCUSSION

14.1 SOILS

The preliminary soil assessment revealed the following:

- The laboratory results for all soil samples were below the adopted detection limits and/or the relevant guideline criteria.
- No asbestos was detected in the soil sample analysed.

The following areas identified in the CSM as a potential concern are addressed as follows:

- Historical uses;
- Areas of potential filling (underground services, beneath buildings and driveway areas);
- Carpark areas / driveways where leaks and spills from cars may have occurred; and
- Degrading building features.

Based on the investigation including the previous site history, underground services plans, preliminary soil investigation results & site inspection; the potential for significant soil and/or groundwater impact is considered low.

Off-site impacts of contaminants in soil are generally governed by the transport media available and likely receptor(s). The most common transport medium is water, whilst receptors include uncontaminated soils, groundwater, surface water bodies, humans, flora & fauna.

Migration of soil contaminants to the deeper soils or groundwater regime would generally be via leaching of contaminants from the surface soil or fill, facilitated by the infiltration of surface water.

14.2 GROUNDWATER QUALITY

The potential risks to groundwater were considered to be low based on the following rationale:

- The preliminary soil results indicated the groundwater is unlikely to be impacted by the fill material presence on site.

14.3 Data Gap

The following data gaps were identified:

- The Council Records have been searched, but not been received and/reviewed as part of this investigation.
- The depth of the fill material has not been delineated in the preliminary sampling.

14.4 DUTY TO REPORT

Under Section 60 of the Contaminated Land Management Act 1997, the owner of the land is required to notify contamination in circumstances as indicated in the NSW EPA

(2015) *Guidelines on Duty to Report Contamination under the Contaminated Land Management Act 1997*.

Sites that are significantly impacted by soil, groundwater and ground gases are likely to require notification to the NSW EPA under section 60 of the CLM Act. A decision process for use by site owners or responsible persons considering reporting contamination under section 60 is provided in Appendix 1 (Figure 1) of the aforementioned guidelines.

15.0 CONCLUSION AND RECOMMENDATION

Based on the results of this investigation it is considered that the risks to human health and the environment associated with soil and groundwater contamination at the site are low in the context of the proposed use of the site. The site is ***suitable*** for the proposed development, subject to the following recommendations:

- Any soil requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014).
- An Asbestos Clearance Certificate is recommended to be completed once all existing buildings are structures have been demolished.

If during any potential site works any significant unexpected occurrence is identified, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

Thank you for the opportunity of undertaking this work. We would be pleased to provide further information on any aspects of this report.

16.0 LIMITATIONS

To the best of our knowledge information contained in this report is accurate at the date of issue, however, subsurface conditions, including groundwater levels and contaminant concentrations, can change in a limited time. This should be borne in mind if the report is used after a protracted delay.

There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site.

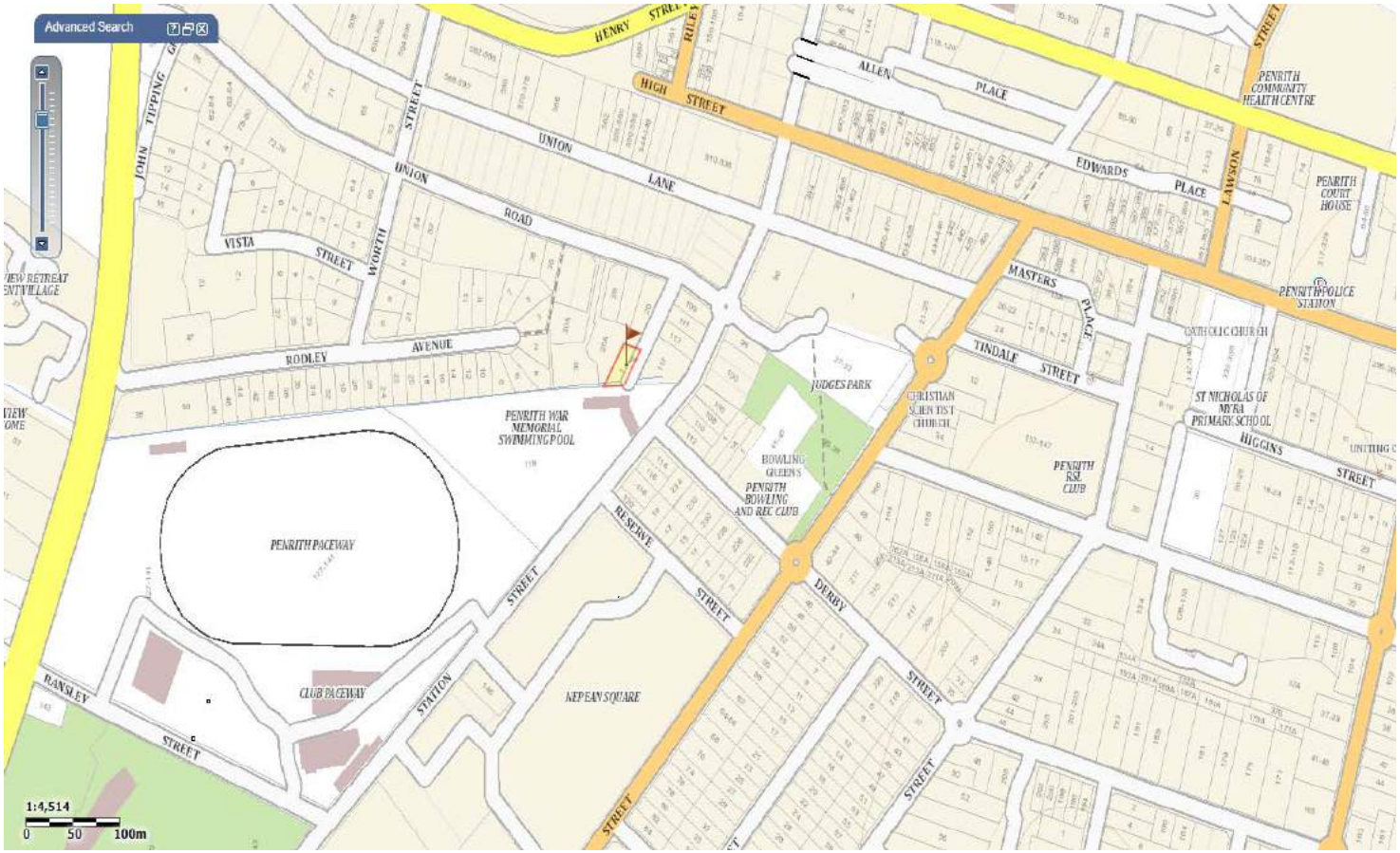
There is no investigation that is thorough enough to preclude the presence of material that presently or in the future, may be considered hazardous at the site. Since regulatory criteria are constantly changing, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that require remediation.

Opinions expressed herein are judgements and are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions.

REFERENCES

- Australian and New Zealand Environment and Conservation Council (ANZECC) (1996) – *Drinking Water Guidelines*.
- Australian and New Zealand Environment and Conservation Council (ANZECC) (2000) – *Guidelines for Fresh and Marine Waters*.
- Department of Urban Affairs and Planning – EPA (1998) "*Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land*".
- National Environmental Protection Council (NEPC) (1999) – *National Environmental Protection (Assessment of Site Contamination) Measure. Amendment 2013*
- NSW EPA (2014) "*Technical Note: Investigation of Service Station Sites*".
- NSW EPA (2009) "*Guidelines on Significant Risk of Harm from contaminated land and the duty to report*".
- NSW OEH "Guidelines for Consultants Reporting on Contaminated Sites" (2011). NSW Environment Protection Authority, Sydney.
- NSW DEC, "Guidelines for the Assessment and Management of Groundwater Contamination" (March 2007).
- NSW DEC "Guidelines for the NSW Site Auditor Scheme" (2006, 2nd edition). NSW Environment Protection Authority, Sydney.
- NSW EPA (2014) – "Waste Classification Guidelines, Part 1: Classifying Waste";
- NSW EPA "Guidelines for Consultants Reporting on Contaminated Sites" (2011). NSW Environment Protection Authority, Sydney.
- NSW EPA (2014) "Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997";
- NSW EPA "Sampling Design Guidelines" (1995). NSW Environment Protection Authority, Sydney

FIGURE 1: SITE LOCALITY



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Key Site Location	Benviron group simple sustainable solutions	**DRAWN** RL	**SITE LOCALITY**
		FIGURE 1	Station Lane Pty Ltd ATF The Staiton Lane Trust
		Job # E1856	1 Station Lane, Penrith NSW

FIGURE 2: SITE FEATURES & BOREHOLE LOCATIONS PLAN

N

Feature No	Details
a	Residential House (Brick)
b	Concrete Slab
c	Grass(Unpaved)
d	Residential Building
e	Community Hall
f	Drainage Line

Soil Exceedance (mg/kg)

Source: PS Surveyors 03.08.2017

Key

Site Location

Soil BH

Benviron group
simple sustainable solutions

DRAWN RL	**Site Features & Borehole Location Plan**
Figure 2	Station Lane Pty Ltd ATF The Staiton Lane Trust
Job # E1856	1 Station Lane, Penrith NSW

APPENDIX A: DBYD PLANS

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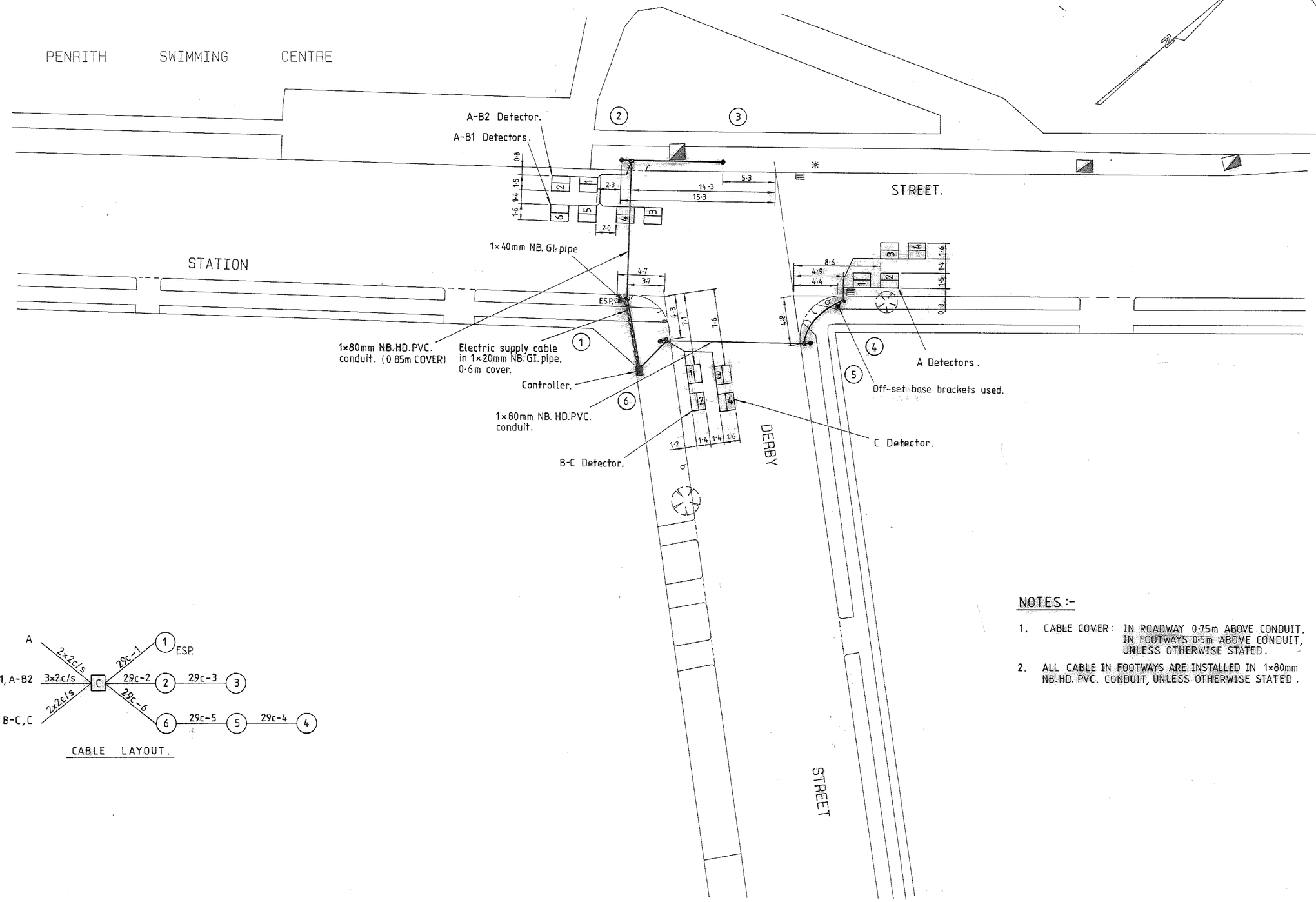
DATE IN SERVICE : 00/00/00

R T A



CABLE LAYOUT.

NOTES :-

1. CABLE COVER: IN ROADWAY 0·75m ABOVE CONDUIT. IN FOOTWAYS 0·5m ABOVE CONDUIT, UNLESS OTHERWISE STATED.
2. ALL CABLE IN FOOTWAYS ARE INSTALLED IN 1×80mm NB.HD. PVC. CONDUIT, UNLESS OTHERWISE STATED.

CABLE INSTALLATION.

A ORIGINAL ISSUE

PUBLIC UTILITY LEGEND		REFERENCE PLANS	
HYDRANT	□	SYMBOLS/ABBS.	VD003-6
STOP VALVE	▲	STD POSIT	VD001-5
GAS VALVE	#	DET SCHED EXP	VD018-10
SEWER MANHOLE	⊛	PRES. DETECT	2C005-9
TELECOM PIT	▨	SSG DIS. SEQ.	VD018-8
ELECT LIGHT POLE	☌	DESIGN L'OUT	SHT. 1
POWER POLE	○	CABLE CHART	SHT. 3
STAY POLE	⊘	SURVEYOR :	PENRITH CCL
TELEPHONE BOX	☎	DATE :	1991
TELECOM PILLAR	⊛	LOGIN :	N/A

U.S.D. Ref. Map45a H9
I.S.G. E: 271240
CO-ORDS N: 1263844

DESIGNED CNJ. ELECTRICAL.

CHECKED

G.H. 4.3.92
SITE CHECKED

RC 11-3-92
RECOMMENDED

APPROVED

SIGNED

NAME

POSITION
FOR DIV ENG PARRAMATTA

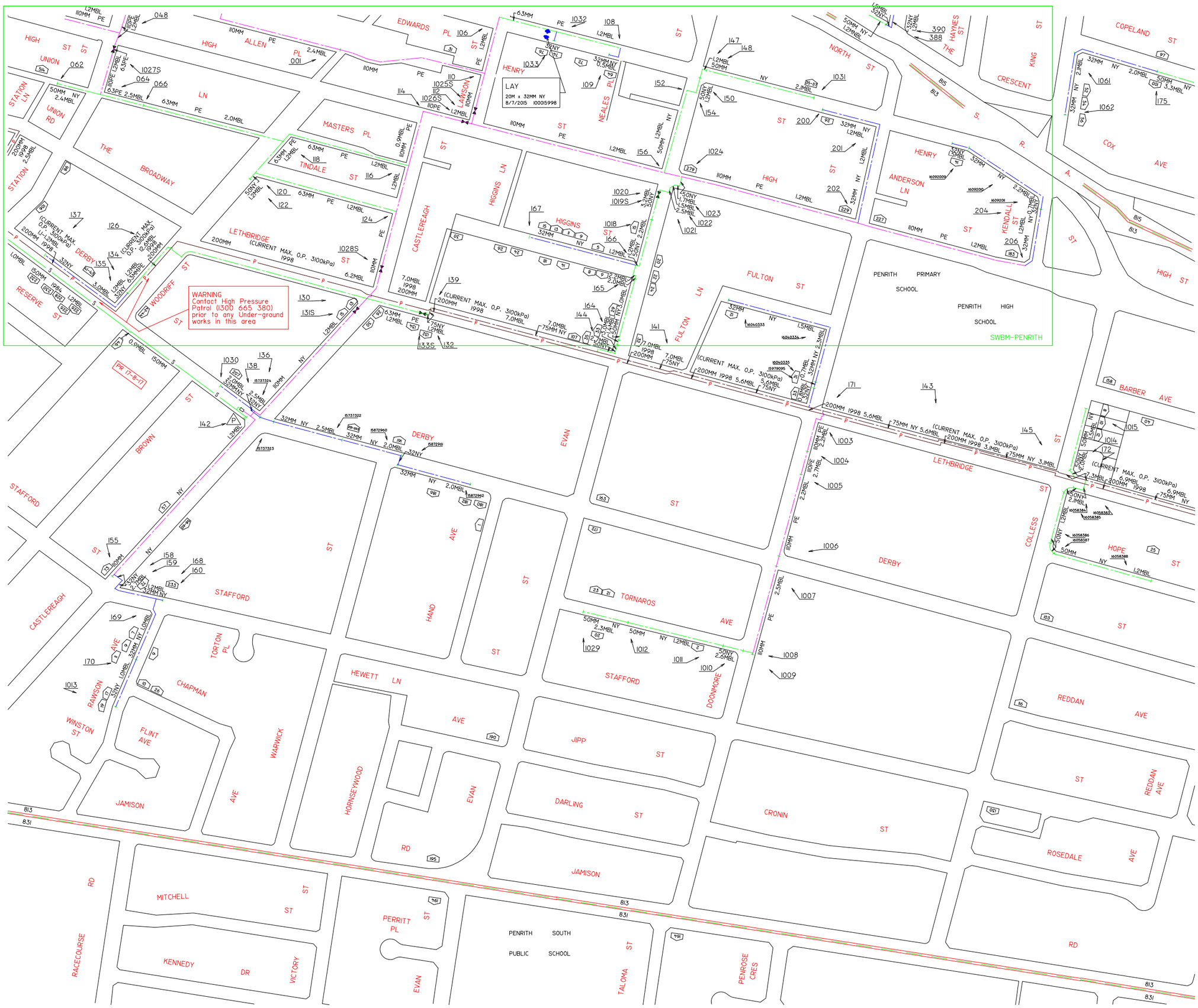
12 MAR 1992
DATE

Roads and Traffic Authority, N.S.W

CITY OF PENRITH
STATION STREET & DERBY STREET
PENRITH

TCS No 2621

REGION: SYDNEY WESTERN	DIVISION: PARRAMATTA OPS
DGS DRAWING FILE:	LOGIN:
SCALE 5 0 (1:200) 5 10	ISSUE A
FILE 358.TS.214	SUPERSEDES SHEET
REGN. 7000.358.VV.2621	SHEET 2



PENRITH 6D

SCALE 1:2000

50 0 50 100 150 200

THIS MAP UPDATED ON 30/05/18
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

PE6A	PE6B	SM4A
PE6C	PE6D	SM4C
PE9A	PE9B	SM7A

ADJOINING MAPS

815 / 813 / 831	PENRITH

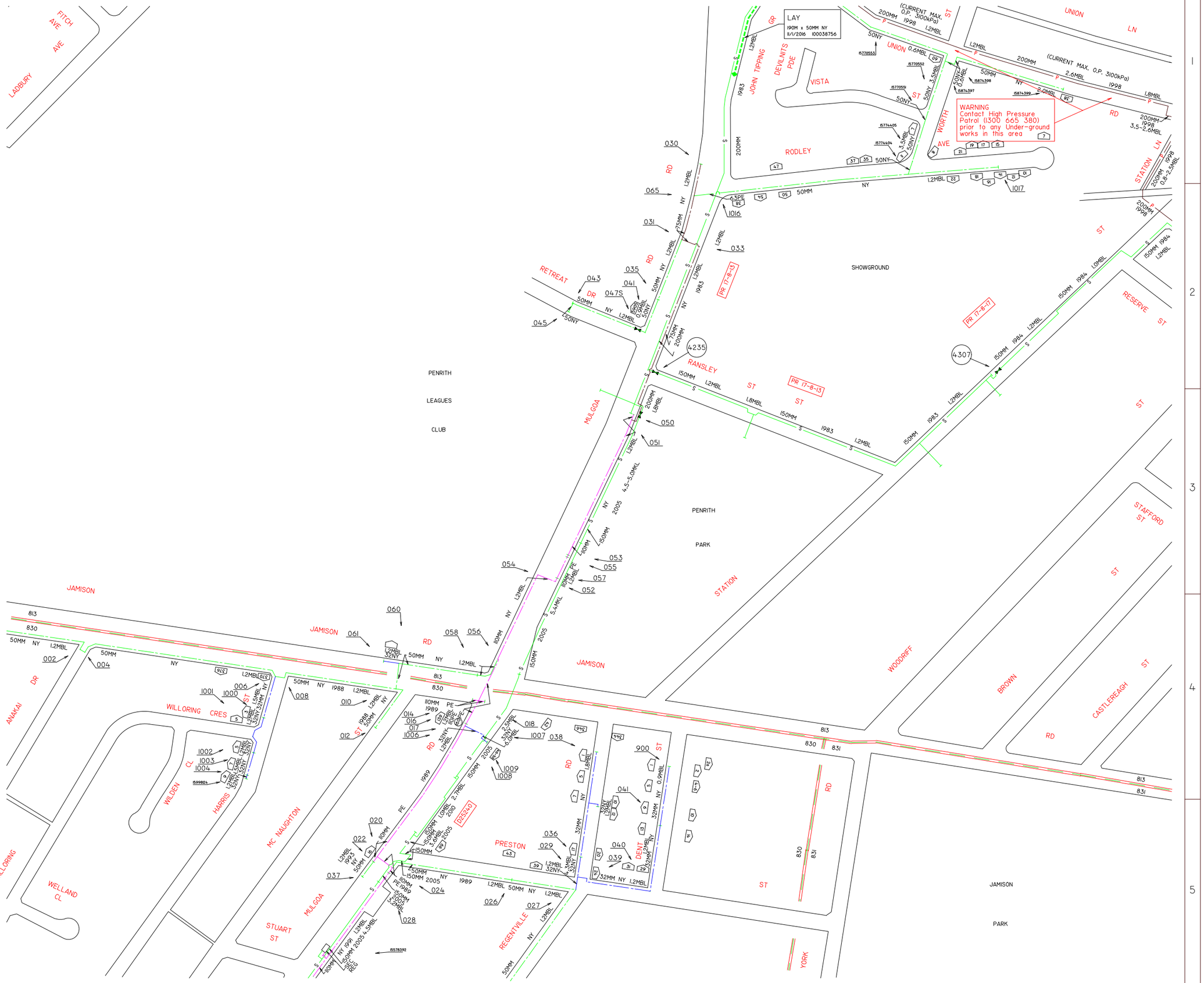
NETWORK AREA | MUNICIPALITY AREA

Jemena

KEY

		MAX ALLOWABLE OPERATING PRESSURE
T	TRUNK PIPELINE	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
400	NETWORK MAIN	400 kPa
	NETWORK MAIN	300 kPa
	NETWORK MAIN	210 kPa
100	NETWORK MAIN	100 kPa
30	NETWORK MAIN	30 kPa
	NETWORK MAIN	7 kPa
	NETWORK MAIN	2 kPa
	NETWORK MAIN WITH MAIN STUBS	
	PROPOSED MAINS	
PR 11-2 3	STEEL MAIN PROJECT NUMBER	
P	PRESSURE MONITORING STATION	
	VALVE	
	SYSTEM PRESSURE REGULATOR	
S	SIPHON	
123	NETWORK NODE	
123S	NETWORK VALVE NODE	
1298	VALVE NUMBER	
6NB	6 INCH CAST IRON MAIN	
150MM	150MM STEEL MAIN	
110MM PE/NY	110MM POLYETHYLENE/NYLON MAIN	
6NB 50MM NY	50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN	
1.2MBL	DISTANCE IN METRES OF MAIN FROM BOUNDARY LINE	
1957	YEAR LAID	
	MUNICIPALITY BOUNDARY	
	NETWORK BOUNDARY	
123	HOUSE NUMBER	

PENRITH 6D



PENRITH 6C

SCALE 1:2000

50 0 50 100 150 200

THIS MAP UPDATED ON 02/02/2018
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

DATE ALTERED:..... BY:.....

PE5B	PE6A	PE6B
PE5D	PE6C	PE6D
PE8B	PE9A	PE9B

ADJOINING MAPS

813 / 830 | 831	PENRITH

NETWORK AREA | MUNICIPALITY AREA

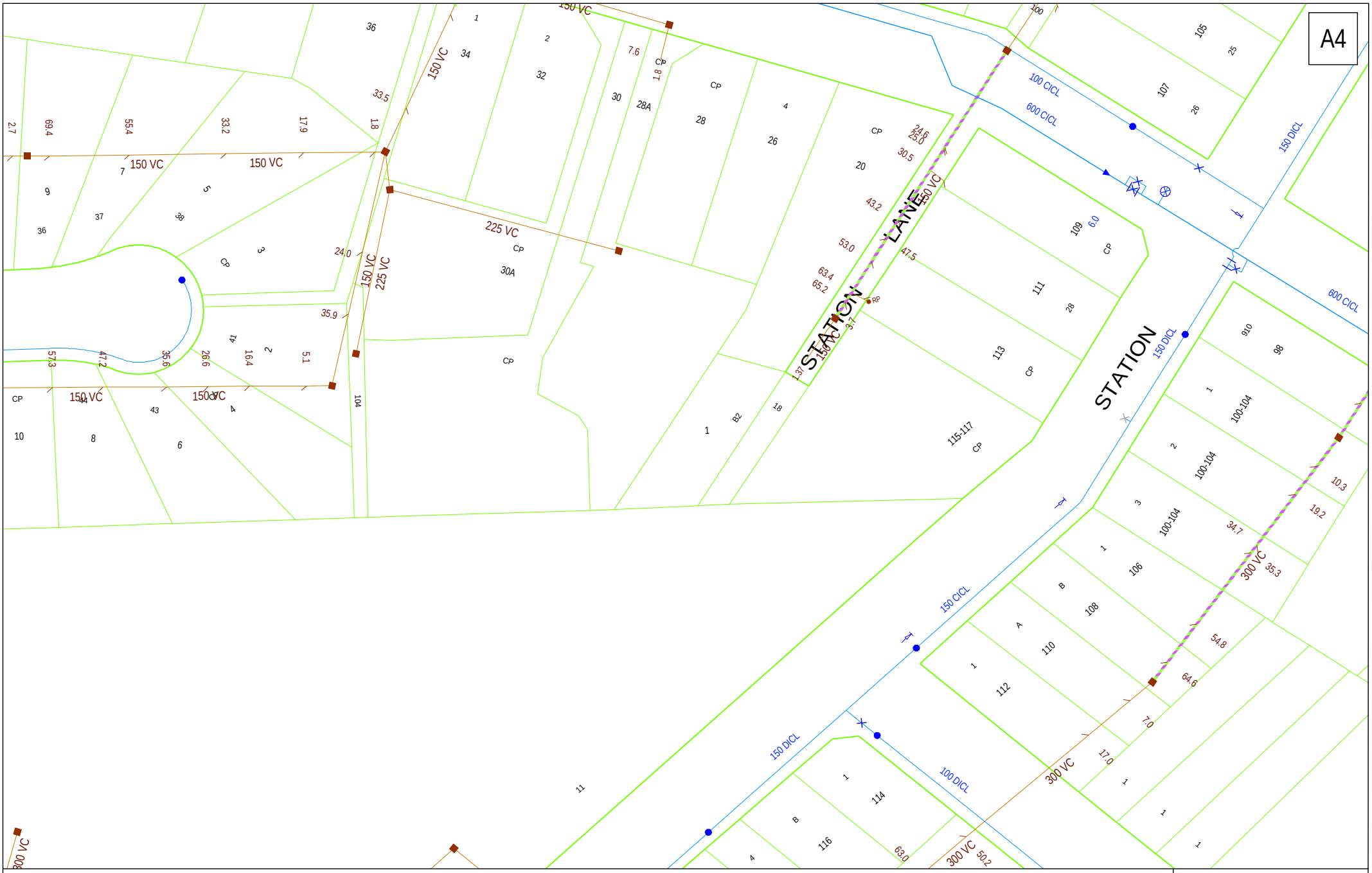
Jemena

KEY

MAX ALLOWABLE OPERATING PRESSURE

T	TRUNK PIPELINE	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
400	NETWORK MAIN	400 kPa
	NETWORK MAIN	300 kPa
	NETWORK MAIN	210 kPa
100	NETWORK MAIN	100 kPa
30	NETWORK MAIN	30 kPa
	NETWORK MAIN	7 kPa
	NETWORK MAIN	2 kPa
	NETWORK MAIN WITH MAIN STUBS	
	PROPOSED MAINS	
PR 11-2 3	STEEL MAIN PROJECT NUMBER	
P	PRESSURE MONITORING STATION	
	VALVE	
	SYSTEM PRESSURE REGULATOR	
S	SIPHON	
123	NETWORK NODE	
123S	NETWORK VALVE NODE	
298	VALVE NUMBER	
6NB	6 INCH CAST IRON MAIN	
150MM	150MM STEEL MAIN	
110MM PE/NY	110MM POLYETHYLENE/NYLON MAIN	
6NB 50MM NY	50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN	
1.2MBL	DISTANCE IN METRES OF MAIN FROM BOUNDARY LINE	
1957	YEAR LAID	
	MUNICIPALITY BOUNDARY	
	NETWORK BOUNDARY	
123	HOUSE NUMBER	

PENRITH 6C



DBYD Address:
n/a 1 Station Ln
Penrith NSW 2750

DBYD Job No: 14404639

DBYD Sequence No: 72511248

No warranty is given that the information shown is complete or accurate.

SYDNEY WATER CORPORATION

Scale: 1:1000

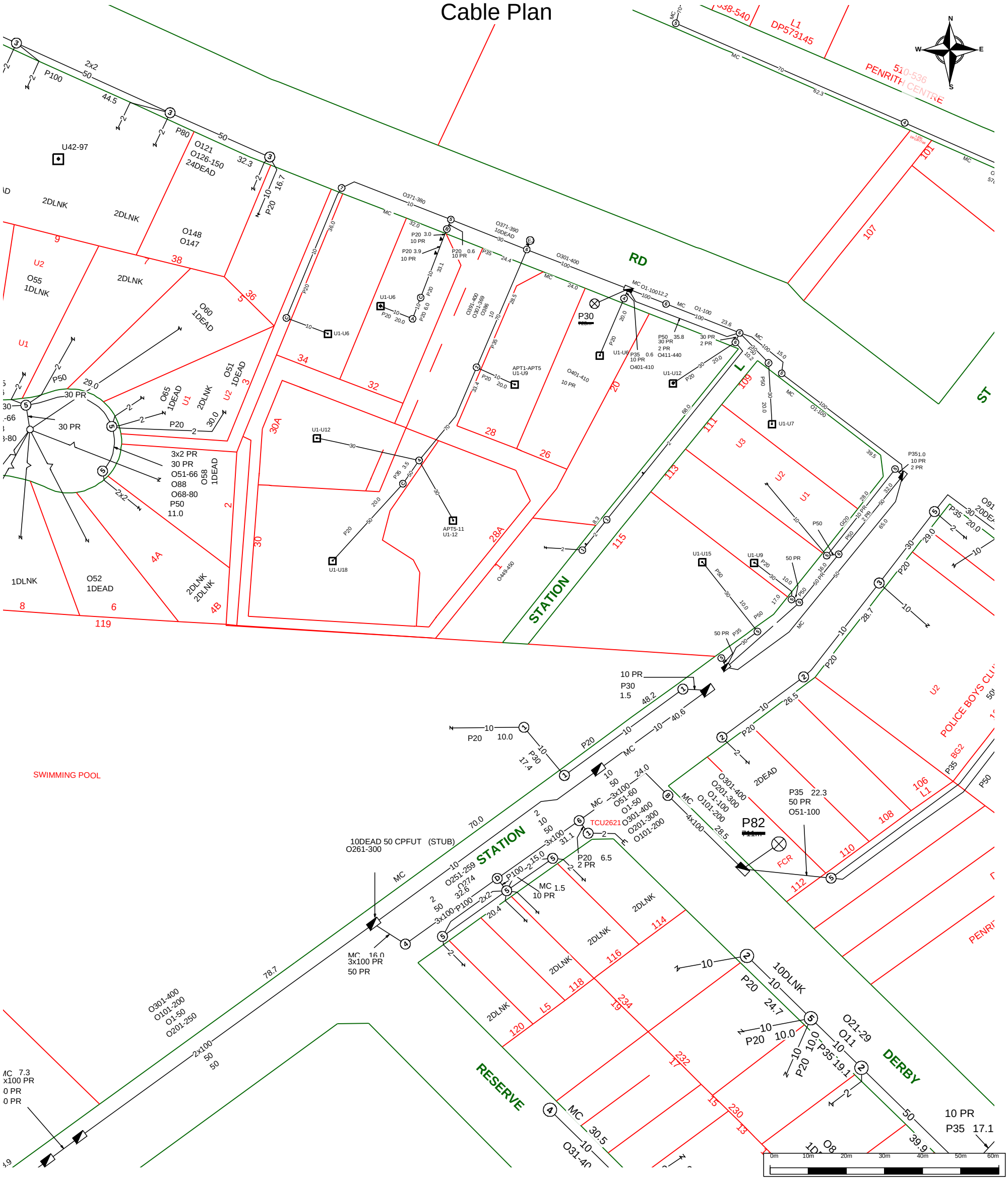
Date of Production: 15/06/2018

Plan 1 of 1

N

0m 5m 10m 15m 20m

Cable Plan



For all Telstra DBYD plan enquiries -
email - Telstra.Plans@team.telstra.com
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

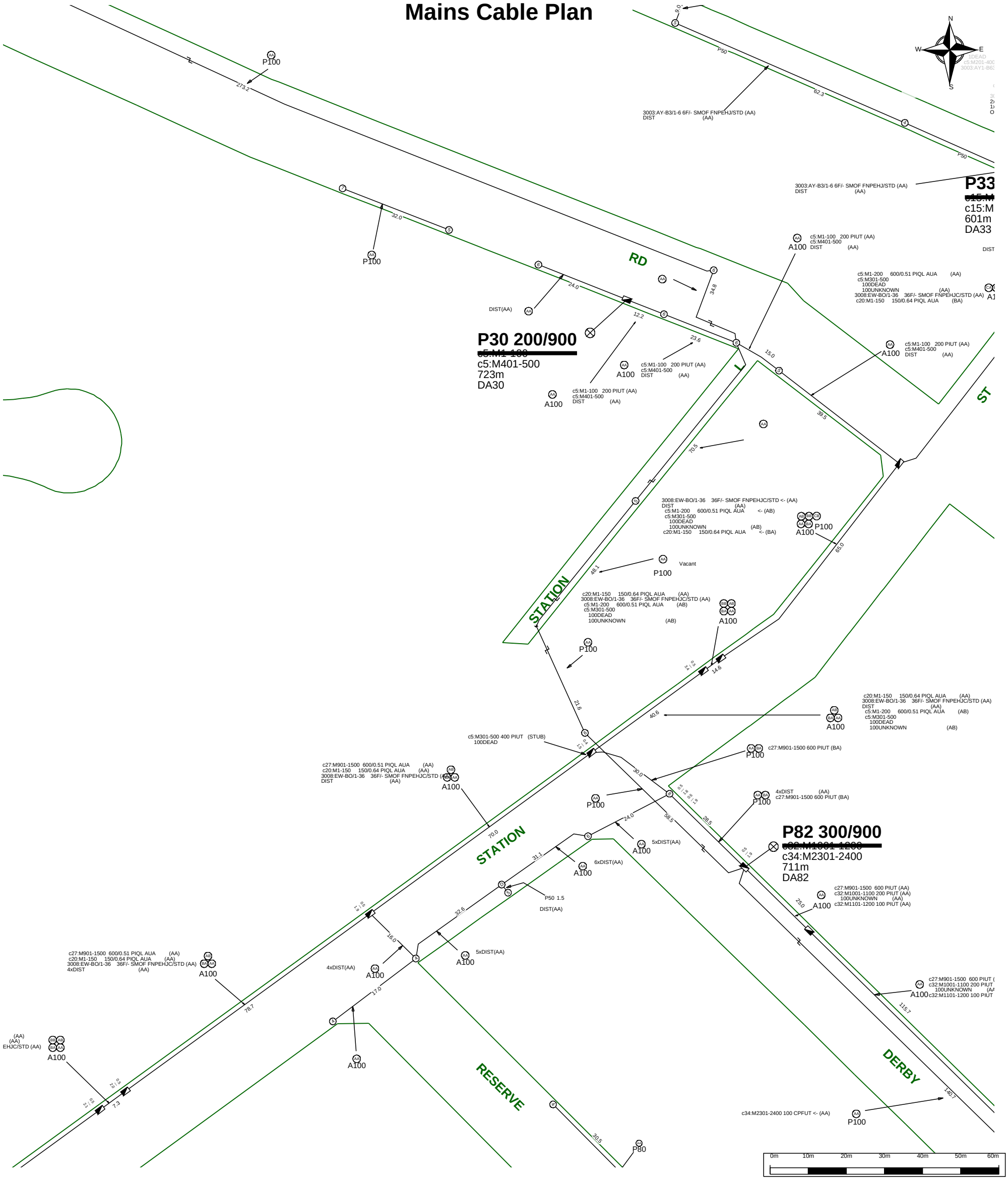
Generated On 15/06/2018 15:09:16

Sequence Number: 72511246

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

Mains Cable Plan



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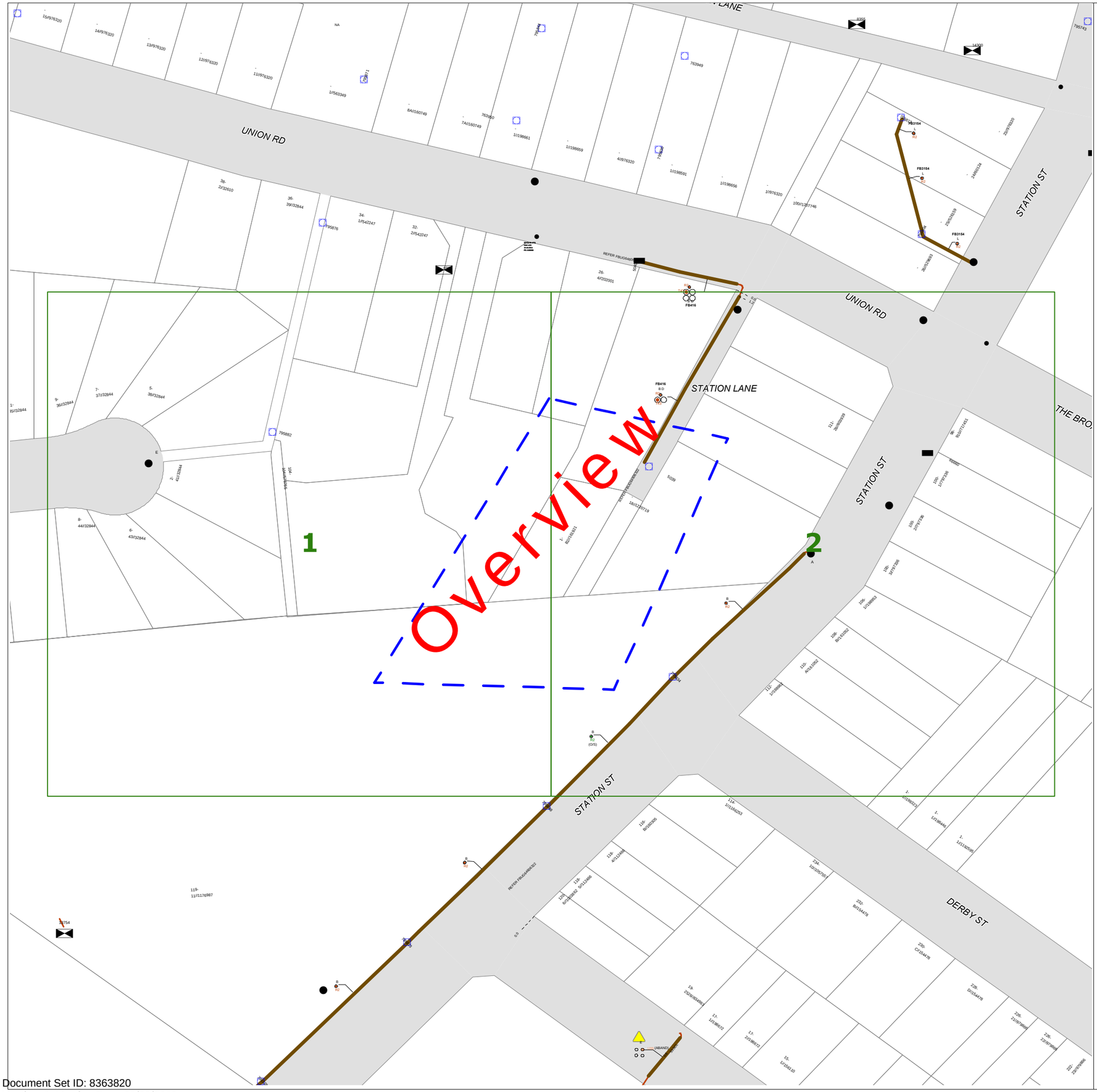
TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 15/06/2018 15:09:18

Sequence Number: 72511246

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.



Endeavour Energy

WARNING

- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
- In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
- The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
- The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
- Endeavour Energy underground earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
- Endeavour Energy plans **do not** show any underground customer service mains or information relating to service mains within private property.
- Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
- Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
- All plans must be printed and made available at the worksite where excavation is to be undertaken. Plans must be reviewed and understood by the crew on site prior to commencing excavation.

INFORMATION PROVIDED BY ENDEAVOUR ENERGY

- Any plans provided pursuant to this service are intended to show the approximate location of underground assets relative to road boundaries, property fences and other structures at the time of installation.
- Depth of underground assets may vary significantly from information provided on plans as a result of changes to road, footpath or surface levels subsequent to installation.
- Such plans have been prepared solely for use by Endeavour Energy staff for design, construction and maintenance purposes.
- All enquiry details and results are kept in a register.

DISCLAIMER

Whilst Endeavour Energy has taken all reasonable steps to ensure that the information contained in the plans is as accurate as possible it will accept no liability for inaccuracies in the information shown on such plans.

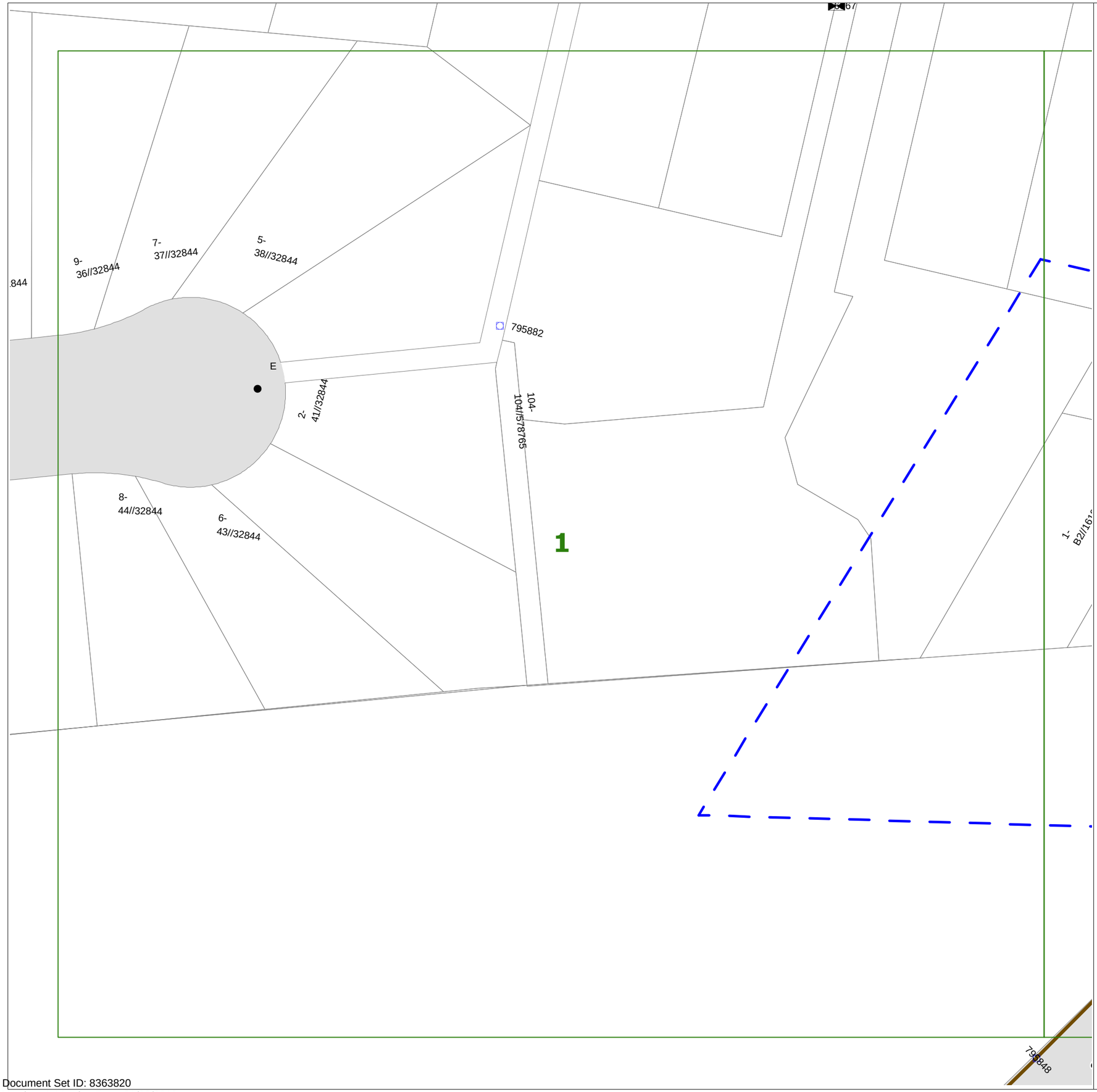
LEGEND

- Street light column (or)
- Padmount substation
- Overground pillar (O.G.Box) (or)
- Underground pit
- Duct run
- Cable run
- Typical duct section
- Asbestos warning

N

NOT TO SCALE

DBYD Sequence No.:	72511245
Issued Date:	15/06/2018



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LEGEND

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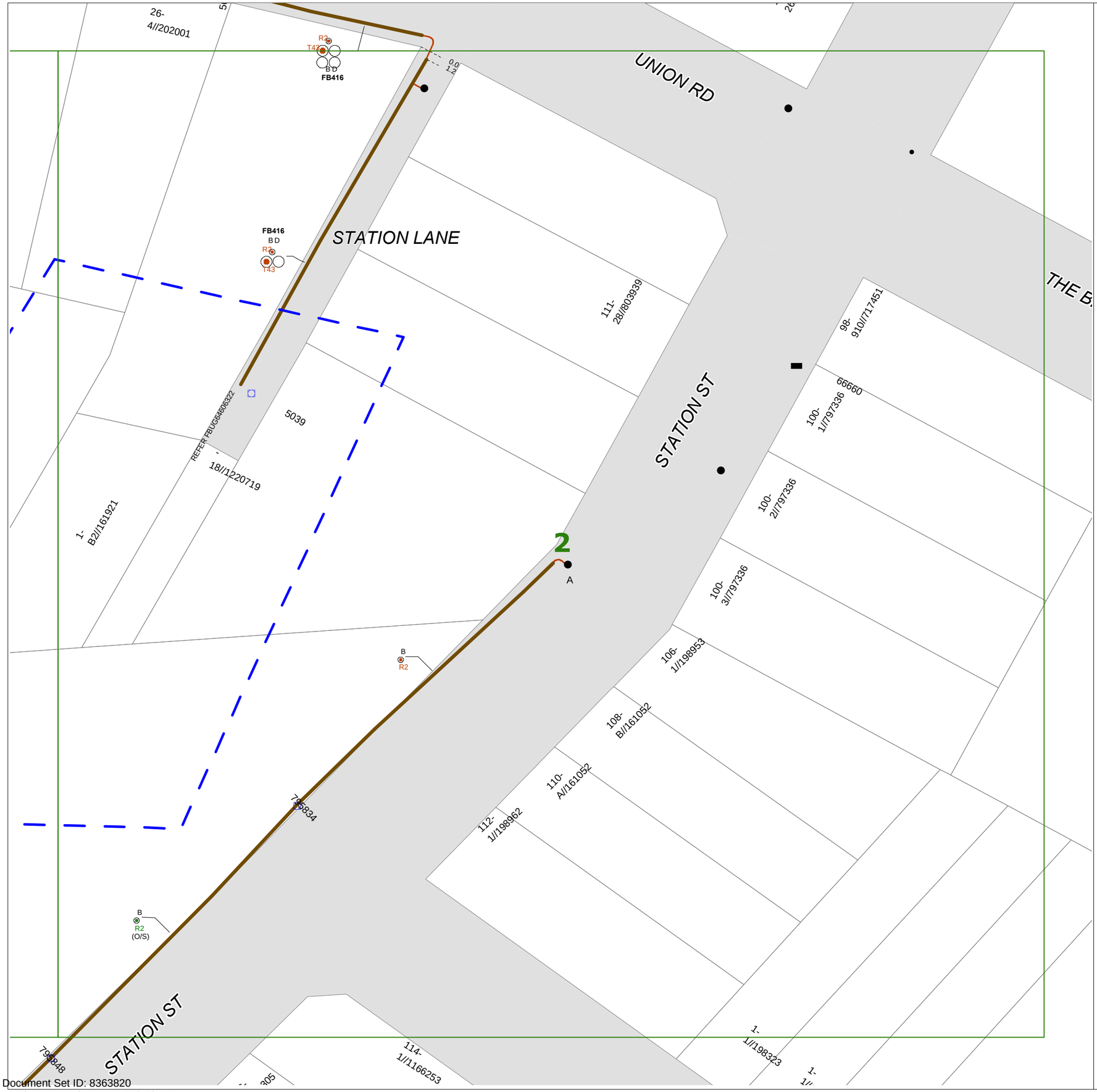
- Padmount substation
- or — Overground pillar (O.G.Box)
- Underground pit
- Duct run
- Cable run
- Typical duct section
- Asbestos warning

N

NOT TO SCALE

DBYD Sequence No.:	72511245
Issued Date:	15/06/2018



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- Padmount substation
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- Underground pit
- Duct run
- Cable run
- Typical duct section
- Asbestos warning

N

NOT TO SCALE

DBYD Sequence No.:	72511245
Issued Date:	15/06/2018

1263 750 N

271 500 E

BETTER BRAKES

B.B.C. HARDWARE

UNION

ST.

UNION

SL

CHINESE REST.

BRAGG & GREGGS

LN.

CAR PARK

ROAD

SUB 17550

SUB 6967

L110

L 39

L1

L 40

L 41

7526

7522

5040

5039

28219

51449

48421

240910

257845

VISTA ST.

WORTH AVE.

RODLEY

STATION LN.

STATION ST.

NOTES:
1. CABLES 0,6 FROM PROPERTY LINE, 0,6 COVER UNLESS OTHERWISE SHOWN.
2. LENGTHS IN METRES.

CABLE LEGEND		DUCT LEGEND	
SL	STREET LIGHT CONDUCTOR	B	50 PVC CONDUIT
SC	SERVICE CABLE	C	100 PVC CONDUIT
		D	125 PVC CONDUIT
		E	100 FIBRO CONDUIT
		F	140 FIBRO CONDUIT
		L	40 PVC CONDUIT

CABLE SCHEDULE

CODE	TYPE	CODE	TYPE
U12	150 mm 11 kV AL PLYSWS	T28	50 mm LV PVC/PVC
U13	150 mm 11 kV AL XLPE	T38	150 mm LV AL XLPE
U17	240 mm 11 kV AL PLYSWS	T43	185 mm LV AL XLPE
U18	.4 SQ IN 11 kV AL PLYSWS	T52	240 mm LV AL XLPE
U24	300 mm 11 kV AL PLYSWS	T57	240 mm LV AL PLYSWS
		T64	.4 SQ IN LV AL PLYSWS
		T53	240mm LV AL XLPE (CON.)
		T84	240mm LV AL XLPE

20-11-00

9-5-97

9538	UNION LANE	B.D.O.	7.2.92
8660	UNION LN.	W.R. B.D.O.	13-2-91
8494	UNION LN.	P.A.P. B.D.O.	23-1-91
4790	UNION LNE.		26-2-86
4743	WORTH ST. & UNION LNE.		
F.B.	LOCATION	CH'D	DATE

AMENDMENTS

THE PROSPECT COUNTY COUNCIL

U.G. RETICULATION
PENRITH

DRAWN	R.McK.	SCALE 1: 500	DATE 14-8-85
CHECKED			
CO-ORD D'SERV.		6460 - 6·3·2·2	Pe

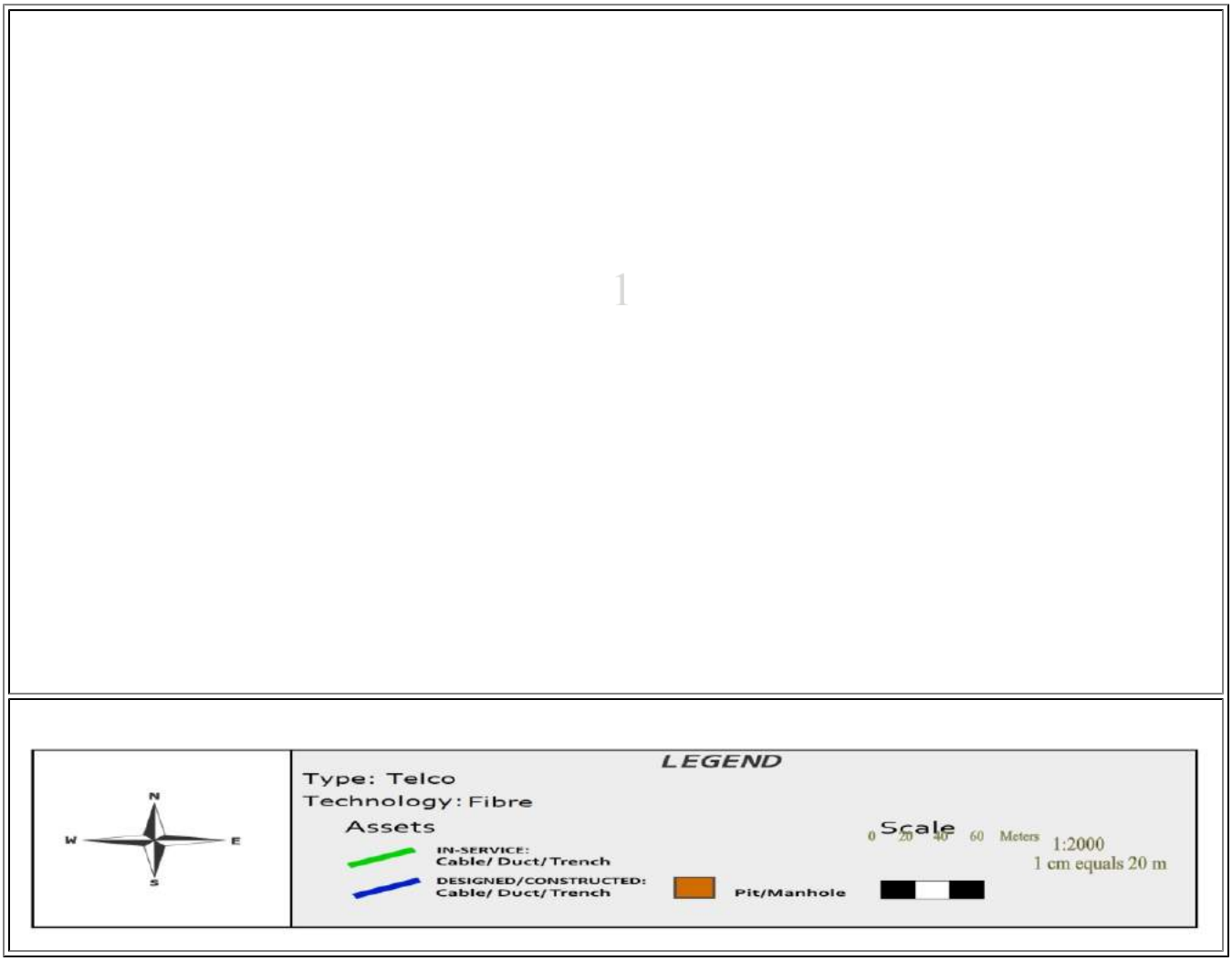
271 125 E

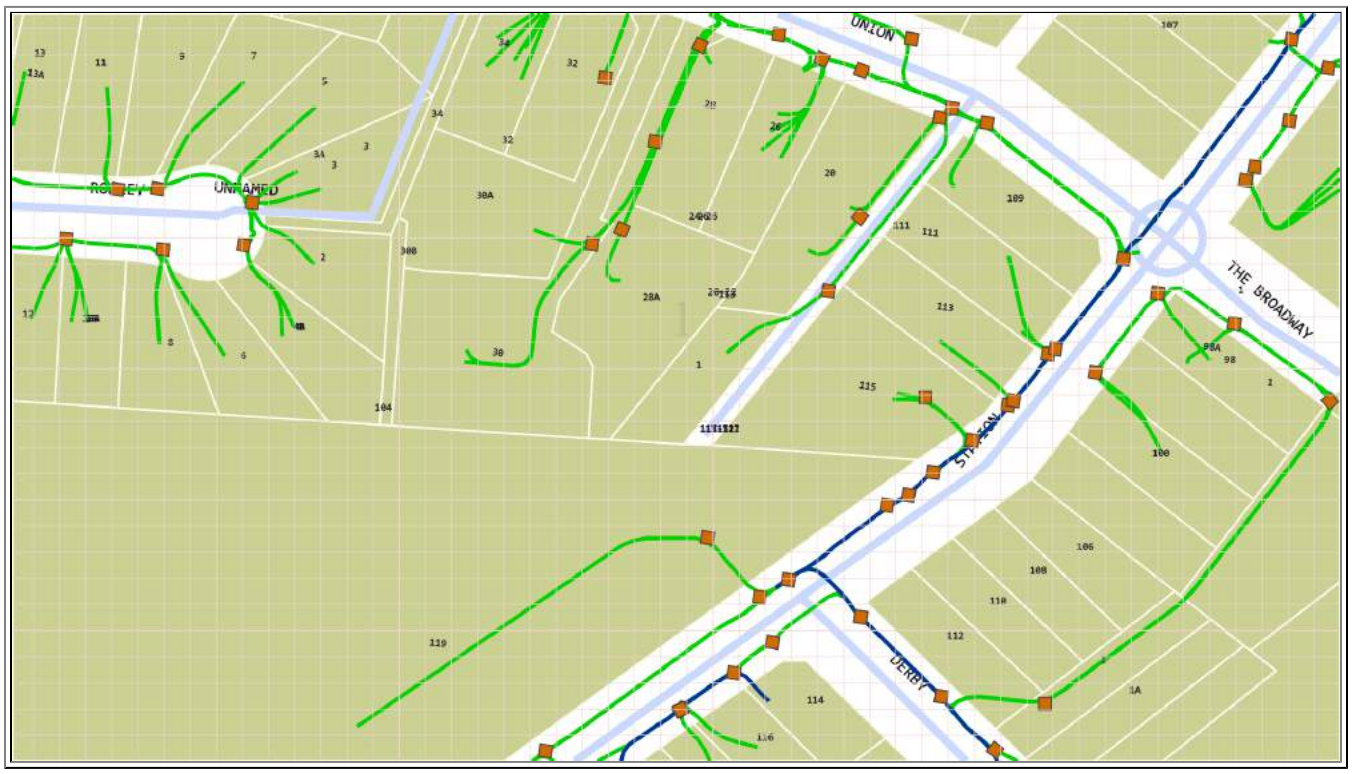
1263 438 N

Indicative Plans

Issue Date:	15/06/2018
Location:	1 Station Ln,Penrith,NSW-2750

DIAL BEFORE YOU DIG www.1100.com.au





Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

APPENDIX B: HISTORICAL AERIAL PHOTOGRAPHS

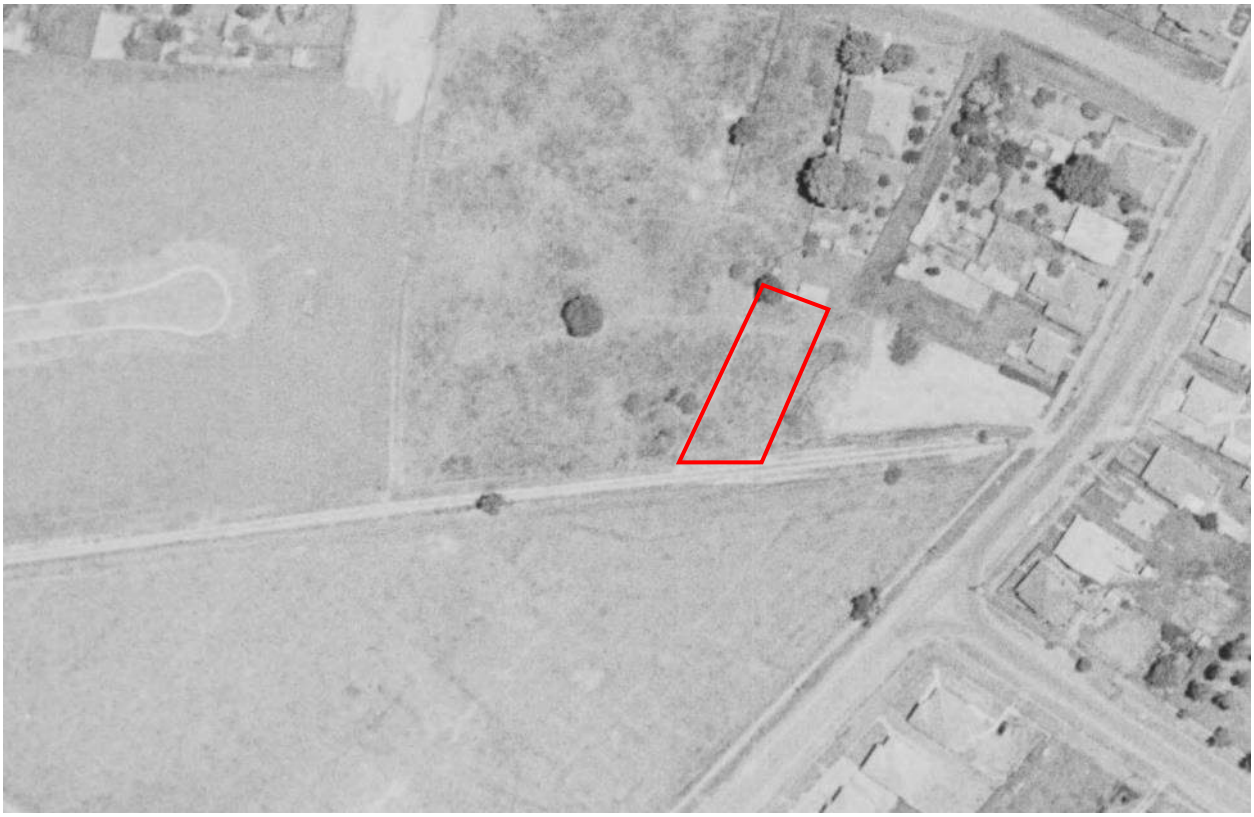
Historical Aerial Photographs

1 Station Lane,

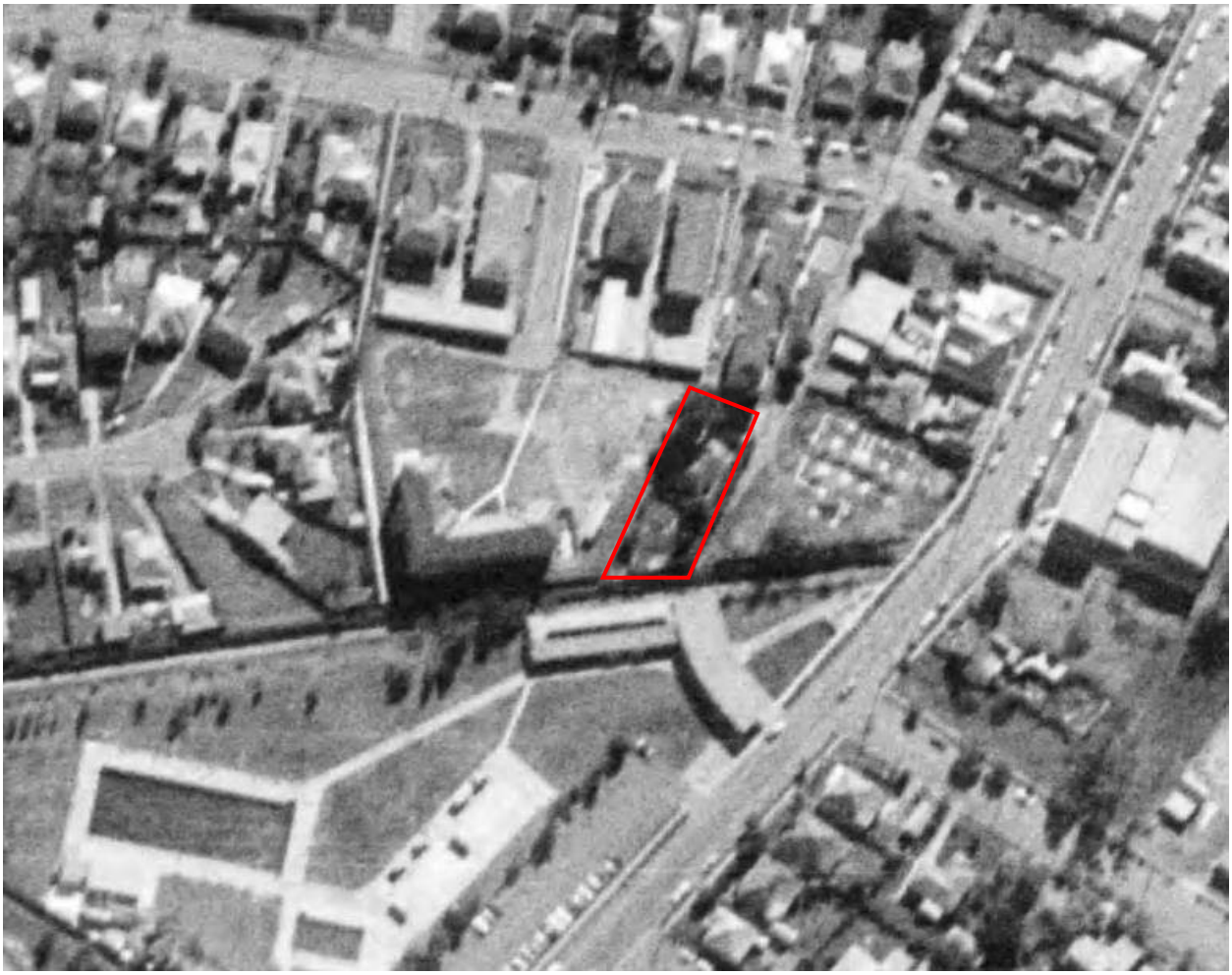
Penrith NSW

1943:

1956:



1970:



1994:

2005:

Current (Six Maps)

APPENDIX C: LAND TITLE INFORMATION

Title Search

15/06/2018 04:14 PM

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: B2/161921

SEARCH DATE	TIME	EDITION NO	DATE
15/6/2018	4:14 PM	3	8/1/2018

LAND

LOT B2 IN DEPOSITED PLAN 161921
AT PENRITH
LOCAL GOVERNMENT AREA PENRITH
PARISH OF MULGOA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP161921

FIRST SCHEDULE

REGINA LEIMANIS (CA85158)

SECOND SCHEDULE (3 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 LIMITED TITLE. LIMITATION PURSUANT TO SECTION 28T(4) OF THE REAL PROPERTY ACT, 1900. THE BOUNDARIES OF THE LAND COMPRISED HEREIN HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL.
3 AN27784 MORTGAGE TO ASF CUSTODIANS PTY LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

Historical Search

15/06/2018 04:14 PM

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

15/6/2018 4:14PM

FOLIO: B2/161921

First Title(s): OLD SYSTEM
Prior Title(s): BK 2391 NO 96

Recorded	Number	Type of Instrument	C.T. Issue
28/2/2002	CA85158	CONVERSION ACTION	FOLIO CREATED EDITION 1
14/9/2015	AJ811575	DEPARTMENTAL DEALING	
6/9/2017	AM701364	CAVEAT	
28/11/2017	AM921411	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 2
8/1/2018	AN27783	WITHDRAWAL OF CAVEAT	
8/1/2018	AN27784	MORTGAGE	EDITION 3

*** END OF SEARCH ***

Form: 12PV
Edition: 1307

APPLICATION FOR REPLACEMEN CERTIFICATE OF TIT

New South Wales
s111 Real Property Act 1900

AM921411P

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) **CERTIFICATE OF TITLE**

For which a replacement is requested: insert the folio identifier (number) only

B2/16/921

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
W	IRENA MCKENZIE 1 STATION LANE PENRITH. 2750 Reference (optional): 0411 253 999.	PV

(C) **REGISTERED PROPRIETOR**

Insert the names of all the registered proprietors

REGINA LEIMANIS

(D) **APPLICANT**

IRENA MCKENZIE (POA FOR REGINA LEIMANIS)

(E) The certificate of title referred to above has been *[tick one]*—

☑ mislaid ☐ destroyed ☐ stolen ☐ damaged or defaced.

(F) The applicant *[tick the applicable item(s)]*—

☑ is a private person who is a registered proprietor of the land in the certificate of title

☐ is a corporation which is a registered proprietor of the land in the certificate of title

☐ is a lending institution having a registered first mortgage over the land in the certificate of title

☐ had custody of the certificate of title at the time it was mislaid, destroyed, etc, and is—

- O a lending institution not having a registered first mortgage over the land in the certificate of title
- O a trustee institution
- O a legal practitioner
- O a licensed conveyancer.

☐ *[If other, specify]*: .....

The applicant hereby consents to the Registrar General contacting the relevant issuing authorities to validate any supporting evidence lodged with this application and applies for replacement of the certificate of title referred to above.

DATE 27/11/17
dd mm yyyy

(G) I certify that I am an eligible witness and that the applicant signed this dealing in my presence. [See note* below].

Signature of witness:

Name of witness: Melanie Grey

Address of witness: 693 High St Penrith

Daytime telephone number of witness: * 47216900

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of applicant:

3 cc
IRENA MCKENZIE
AS ATTORNEY FOR
REGINA LEIMANIS
BK.4723 No.23

SP 20712

PLEASE NOTE: Failure to comply with any relevant instruction contained in this application will lead to rejection of this application.

WARNING! SEVERE PENALTIES MAY BE IMPOSED FOR LODGING A FALSE APPLICATION.

* The witness may be contacted to verify the signing.

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

Form 10-1220

Statutory Declaration

New South Wales, Oaths Act 1900, Eighth Schedule

I, *[full name]* IRENA MCKENZIE (POA REGINA LEIMANIS)

of *[residential address]* 1 STATION LANE PENRITH NSW 2750

solemnly and sincerely declare that —

1) 1 STATION LANE PENRITH NSW. CTREF. 82/161921.

2) PROPERTY PURCHASED 1955.
CT HAS BEEN HELD IN PENRITH

3) HAVE BEEN UNABLE TO FIND.

4) REGINA ONLY PERSON IN POSSESSION OF LAND

5) CERTIFICATE NOT HELD BY ANY OTHER PERSON OR CORPORATION FOR LOAN OR ANY OTHER PURPOSE WHATSOEVER

6) REGINA HAS NEVER BEEN BANKRUPT OR INSOLVENT OR ASSIGNED ESTATE FOR BENEFIT OF CREDITORS.

7) RATES NOTICE IS TRUE AND CURRENT OF THIS PROPERTY.

and I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900.

Made and subscribed at *[place]* Penrith

in *[State or Territory]* NSW on *[date]* 27/11/17

in the presence of *[full name]* JOZIE CREEY

of *[residential address]* 333 High St Penrith,

☒ Justice of the Peace (J.P. Number 20712) ☐ Practising Solicitor

☐ Other qualified witness *[specify]* .....,

who certifies the following matters concerning the making of this statutory declaration by the person who made it:

1. I saw the face of the person OR* I did not see the face of the person because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering; and
2. ~~I have known the person for at least 12 months OR*~~ I have confirmed the person's identity using an identification document and the document I relied on was a DRIVERS LICENCE *[Omit ID No.]*

Signature of witness: .....

Signature of declarant: .....

* *Cross out the words which do not apply.*

No. 96 Book 2391 Conveyance

Ad Valorum Duty Paid £3-15-0 N.S.W. Department of Stamp Duties 12-12-56
Duly Stamped 7/6

THIS DEED made the second day of December One thousand nine hundred and fifty-six BETWEEN FRED JOHNSTON of Penrith in the State of New South Wales Schoolteacher (hereinafter called "the Vendor") of the one part AND IMANTS LEIMANIS of Penrith aforesaid Labourer. and REGINA PLATACIS of Penrith aforesaid Married Woman (hereinafter called "the Purchasers") of the other part WITNESSETH that in consideration of the sum of TWOHUNDRED AND SEVENTYFIVEPOUNDS (£275: 0: 0) paid by the Purchasers to the vendor (the receipt whereof is hereby acknowledged) the Vendor as beneficial owner doth hereby convey unto the Purchasers in fee simple as joint tenants ALL THAT piece or parcel of land being Lot B2 of a resubdivision of Lot B on Miscellaneous Plan of Subdivision Old System registered Number 3039 containing by admeasurement 26-1/4 perches situate at Penrith Municipality of Penrigh Parish of Mulgoa County of Cumberland and State of New South Wales COMMENCING at a point on the north western side of Station Lane bearing and distant successively 209 degrees 51 minutes for 149 feet 2 inches 210 degrees 53 minutes 40 seconds for 64 feet 5-3/4 inches from the intersection of the south western side of Union Road with the north western side of Station Lane bounded thence on the south east by the north west side of Station Lane being a fenced line bearing 210 degrees 53 minutes 40 seconds for 113 feet 5-3/4 inches bounded thence on the south by a fenced line bearing 266 degrees 58 minutes 15 seconds for 70 feet 0-1/2 inches to the south eastern corner of Lot A on Miscellaneous Plan of Subdivision Old System registered Number 3039 bounded thence on the north west by part of the south eastern boundary of Lot "A" aforesaid being a fenced line bearing 31 degrees 08 minutes 00 seconds 134 feet 2-1/8 inches bounded thence on the north east by a line bearing 103 degrees 10 minutes 25 seconds 60 feet 5 inches to the north western side of Station Lane and the point of commencement be the said several dimensions all a little more of less AND the Vendor as covenantor covenants with the purchasers as Covenantees to produce to them the deeds and documents mentioned in the Schedule hereto IN WITNESS WHEREOF the Vendor hath hereunto subscribed his name and affixed his seal.

£2
12 DEC 1956

THE SCHEDULE HEREINBEFORE REFERRED TO:

1. 19th February, 1935 - Conveyance L.H. Byrnes and anor to F. Johnston registered No. 65 Book 1711.

2. 19th February, 1935 - Mortgage F. Johnston to E. Brell registered No. 66 Book 1711 with discharge endorsed dated 18th July, 1936 and registered No. 67 Book 1756.

SIGNED SEALED AND DELIVERED by the said FRED JOHNSTON in the presence of:) Fred Johnston.

Solicitors
Penrith.

V. Leimanis

HELEN WRIGHT Clerk to Messrs. A.S. Lamrock & Son, solicitors, 34 High Street, Penrith, being duly sworn makes oath and says as follows: "THE writing contained on the preceding page has been compared by me with the original conveyance and is a true copy thereof."

SWORN by the Deponent at Sydney this twelfth day of December A.D. 1956, Before me:) Helen Wright

E. Walstra

DEPUTY REGISTRAR

RECEIVED into the office of the registration of deeds, etc., at Sydney this twelfth day of December A.D. 1956 at one minutes past three o'clock in the noon from the said Helen Wright.

E. Walstra

DEPUTY REGISTRAR.

APPENDIX D: NSW EPA RECORDS

Contaminated land

Management of contaminated land
Consultants and site auditor scheme
Underground petroleum storage systems
Guidelines under the CLM Act
NEPM amendment
Further guidance
Record of notices
About the record
Search the record
Search tips
Disclaimer

Search results

Your search for: Suburb: PENRITH

Matched 7 notices relating to 1 site.

Search Again | Refine Search

PENRITH	Castlereagh ROAD	Crane Enfield Metals	4 current and 3 former

Page 1 of 1

18 June 2018

Number	Name	Location	Type	Status	Issued date
21071	SR Solutions Pty Ltd	2115-2131 Castlereagh Road , PENRITH, NSW 2750	POEO licence	Pending	
6357	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	POEO licence	Issued	7-Jun-00
1007008	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	5-Jul-02
1020003	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	9-Sep-02
1072516	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20-Aug-07
1085783	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	21-Oct-08
1104746	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	6-Aug-09
1109805	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26-Feb-10
1512576	ACI OPERATIONS PTY. LTD.	130-172 ANDREW ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	12-Aug-14
247	BORAL RESOURCES (NSW) PTY LTD	PEACHTREE ROAD, PENRITH, NSW 2750	POEO licence	No longer in force	22-Aug-00
12405	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	9-Mar-06
1070974	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	30-Jul-07
1077652	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31-Aug-07
1109988	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19-Apr-10
1525967	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31-Oct-14
1526072	CAPRAL LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	11-Nov-14
1098	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	26-Jun-00
1017498	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	24-Nov-03
1072470	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20-Sep-07
1104995	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	4-Nov-09
1512789	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	Compliance Audit	Complete	13-Mar-13
1512775	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19-Mar-13
1515690	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26-Jul-13
1525217	CRANE ENFIELD METALS PTY. LIMITED	2115 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26-Sep-14
10945	CUMMINS SOUTH PACIFIC PTY. LTD.	7 Andrews Road, PENRITH, NSW 2750	POEO licence	Surrendered	19-Jun-00
1035208	CUMMINS SOUTH PACIFIC PTY. LTD.	7 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	8-Mar-04
308	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	17-Jan-00
1024064	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	6-Jan-03
1044228	DORF CLARK INDUSTRIES LIMITED	2101 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	8-Feb-05
11290	ENDEAVOUR ENERGY	96-120 Blaikie Road, PENRITH, NSW 2750	POEO licence	No longer in force	8-Jan-01
1035197	ENDEAVOUR ENERGY	96-120 Blaikie Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	8-Mar-04
1526441	Glass Recovery Services Pty Ltd	126 Andrews Road, PENRITH, NSW 2740	s.91 Clean Up Notice	Issued	27-Jan-15
1535765	Glass Recovery Services Pty Ltd	126 Andrews Road, PENRITH, NSW 2740	s.91 Clean Up Notice	Issued	23-Aug-16
3085780565	Glass Recovery Services Pty Ltd	126 Andrews Road, PENRITH, NSW 2740	Penalty Notice	Issued	28-Oct-16
20381	Glass Recovery Services Pty Ltd	126 Andrews Road, PENRITH, NSW 2740	POEO licence	Issued	7-Nov-17
12132	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	POEO licence	Surrendered	1-Oct-04
1097227	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	2-Feb-09
1104874	GULF WESTERN PREMIUM QUALITY LUBRICATING OILS (MANUFACTURING) PTY LIMITED	1 COOMBES DRIVE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	17-Aug-09
6472	JAMES KEITH COSGROVE	8 HOYLE PLACE, PENRITH, NSW 2750	POEO licence	Surrendered	21-Jun-00
1044521	JAMES KEITH COSGROVE	8 HOYLE PLACE, PENRITH, NSW 2750	s.58 Licence Variation	Issued	16-Feb-05
7019	JAMISON PRIVATE HOSPITAL PROPERTY PTY LTD	366 JAMISON ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	20-Mar-01
2869	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	5-Jun-00

1012903	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	18-Feb-02
1525246	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	2-Oct-14
1556498	LD&D MILK PTY LTD	2257 - 2265 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.96 Prevention Notice	Issued	8-Sep-17
21087	MEYER TIMBER N.S.W. PTY LTD	2101-2113 Castlereagh Road, PENRITH, NSW 2750	POEO licence	Issued	6-Apr-18
3741	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	31-Jan-01
1007235	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10-May-01
1008444	NAREX AUSTRALIA PTY LTD	LOT D FROGMORE ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	20-Aug-01
2818	PANASONIC AVC NETWORKS AUSTRALIA PTY LTD	164 STATION STREET, PENRITH, NSW 2750	POEO licence	Surrendered	24-Mar-00
1048338	PANASONIC AVC NETWORKS AUSTRALIA PTY LTD	164 STATION STREET, PENRITH, NSW 2750	s.58 Licence Variation	Issued	31-May-05
10349	SYDNEY OLYMPIC PARK AUTHORITY	CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	6-Jan-00
1409	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	25-May-00
1005313	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	22-Oct-01
1017898	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	26-Jun-02
1018895	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23-Dec-02
1028330	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	8-Jul-03
1032690	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	25-Nov-03
1032982	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19-Mar-04
1047700	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	30-Jun-05
1061410	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	29-Jun-06
1074754	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	27-Jun-07
1116048	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	2-Jul-10
1129012	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	27-Jun-11
1504851	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	28-Jun-12
1528922	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23-Mar-15
1538189	SYDNEY WATER CORPORATION	CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	19-Feb-16
11461	TOTAL CONCRETE SOLUTIONS PTY LIMITED	261 COOMBES DRIVE, PENRITH, NSW 2750	POEO licence	No longer in force	19-Oct-01
1294	VICARY CORPORATION PTY LIMITED	60-62 REGENTVILLE ROAD, PENRITH, NSW 2750	POEO licence	Surrendered	22-Aug-00
12106	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	POEO licence	Surrendered	28-Apr-04
1042219	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10-Nov-04
1065654	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	25-Oct-06
1093267	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	10-Nov-08
1127751	VIP STEEL PACKAGING PTY LTD	182-184 Andrews Road, PENRITH, NSW 2750	s.58 Licence Variation	Issued	3-Jun-11
5269	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	POEO licence	Issued	10-Aug-00
1066270	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	15-Dec-06
1072508	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	23-Jul-07
1100623	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	7-Oct-09
1526064	VIRBAC (AUSTRALIA) PTY LTD	2152 CASTLEREAGH ROAD, PENRITH, NSW 2750	s.58 Licence Variation	Issued	11-Nov-14

APPENDIX E: SECTION 149 PLANNING CERTIFICATE

PENRITH
CITY COUNCIL

Civic Centre
601 High Street, Penrith

PO Box 60 Penrith NSW 2751

Telephone: 02 4732 7777
Facsimile: 02 4732 7958

Email: pencit@penrithcity.nsw.gov.au

PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

Property No: 541284
Your Reference: JB Leimanis
Contact No.

Issue Date: 13 March 2017
Certificate No: 17/01168

Issued to: William Boxsell Georgas
P O Box 960
CASTLE HILL NSW 1765

PRECINCT 2010

DESCRIPTION OF LAND

County: CUMBERLAND **Parish: MULGOA**

Location: 1 Station Lane PENRITH NSW 2750
Land Description: Lot 2B DP 161921

- PART 1 PRESCRIBED MATTERS –

In accordance with the provisions of Section 149(2) of the Act the following information is furnished in respect of the abovementioned land:

1 *NAMES OF RELEVANT PLANNING INSTRUMENTS AND DCPs*

1(1) The name each environmental planning instrument that applies to the carrying out of development on the land:

Penrith Local Environmental Plan 2010, published 22nd September 2010, as amended, applies to the land.

Sydney Regional Environmental Plan No.9 - Extractive Industry (No.2), gazetted 15 September 1995, as amended, applies to the local government area of Penrith.

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 - 1997), gazetted 7 November 1997, as amended, applies to the local government area of Penrith (except land to which State Environmental Planning Policy (Penrith Lakes Scheme) 1989 applies).

The following State environmental planning policies apply to the land (subject to the exclusions noted below):

State Environmental Planning Policy No.1 - Development Standards. (Note: This policy does not apply to the land to which Penrith Local Environmental Plan 2010 or State Environmental Planning Policy (Western Sydney Employment Area) 2009 apply.)
State Environmental Planning Policy No.19 - Bushland in Urban Areas. (Note: This policy does not apply to certain land referred to in the National Parks and Wildlife Act 1974 and the Forestry Act 1916.)
State Environmental Planning Policy No.21 - Caravan Parks.
State Environmental Planning Policy No.30 - Intensive Agriculture.
State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land). (Note: This policy does not apply to land identified as coastal protection, environmental protection, escarpment, floodway, natural hazard, non-urban, rural, rural residential, water catchment or wetland.)

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Envi ental Planning and Assessment Act, 1979

State Environmental Planning Policy No.33 - H urdous and Offensive Development.
State Environmental Planning Policy No.50 - C i Estate Development. (Note: This policy does not apply to the land to which State Environmental Planning Policy (Penrith Lakes Scheme) applies.
State Environmental Planning Policy No.55 - Re ediation of Land.
State Environmental Planning Policy No.62 - Su ainable Aquaculture.
State Environmental Planning Policy No.64 - A(ertising and Signage.
State Environmental Planning Policy No.65 - D(gn Quality of Residential Apartment Development.
State Environmental Planning Policy No.70 - A1 rdable Housing (Revised Schemes).
State Environmental Planning Policy (Housing Seniors or People with a Disability) 2004 (Note: This policy applies to land within New South Wales that is land zoned primaril or urban purposes or land that adjoins land zoned primarily for urban purposes, but only as detailed in clause 4 of the policy.)
State Environmental Planning Policy (Building S stainability Index: BASIX) 2004.
State Environmental Planning Policy (Major Development) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (

1(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act:

(Information is provided in this section only if a proposed environmental planning instrument that is or has been the subject of community consultation or on public exhibition under the Act will apply to the carrying out of development on the land.)

Draft State Environmental Planning Policy (Infrastructure) Amendment (Shooting Ranges) 2013 applies to the land.
Draft State Environmental Planning Policy (Education Establishments and Child Care Facilities) 2017 applies to the land.
State Environmental Planning Policy (Infrastructure) Amendment (Review) 2016 applies to the land

1(3) The name of each development control plan that applies to the carrying out of development on the land:

Penrith Development Control Plan 2014 applies to the land.

2 *ZONING AND LAND USE UNDER RELEVANT LEPs*

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

2(a)-(d) the identity of the zone; the purposes that may be carried out without development consent; the purposes that may not be carried out except with development consent; and the purposes that are prohibited within the zone. Any zone(s) applying to the land is/are listed below and/or in annexures.

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

(Note: If no zoning appears in this section see section 1(1) for zoning and land use details (under the Sydney Regional Environmental Plan or State Environmental Planning Policy that zones this property).)

Zone R4 High Density Residential
(Penrith Local Environmental Plan 2010)

1 Objectives of zone

- To provide for the housing needs of the community within a high density residential environment.
- To provide a variety of housing types within a high density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To ensure that a high level of residential amenity is achieved and maintained.
- To encourage the provision of affordable housing.
- To ensure that development reflects the desired future character and dwelling densities of the area.

2 Permitted without consent
Home occupations
3 Permitted with consent
Boarding houses; Building identification signs; Business identification signs; Car parks; Child care centres; Community facilities; Emergency services facilities; Environmental protection works; Exhibition homes; Exhibition villages; Flood mitigation works; Home-based child care; Home businesses; Information and education facilities; Neighbourhood shops; Places of public worship; Recreation areas; Recreation facilities (indoor); Residential accommodation; Respite day care centres; Roads; Shop top housing
4 Prohibited
Rural workers' dwellings; Any other development not specified in item 2 or 3

Flood planning
All or part of the subject land is identified in Penrith Local Environmental Plan 2010 (PLEP 2010) Clause 7.2 Flood Planning. Development consent is required for any development on land to which Clause 7.2 of PLEP 2010 applies.

Additional information relating to Penrith Local Environmental Plan 2010
Note 1: Under the terms of Clause 2.4 of Penrith Local Environmental Plan 2010 development may be carried out on unzoned land only with development consent.

Note 2: Under the terms of Clause 2.6 of Penrith Local Environmental Plan 2010 land may be subdivided but only with development consent, except for the exclusions detailed in the clause.

Note 3: Under the terms of Clause 2.7 of Penrith Local Environmental Plan 2010 the demolition of a building or work may be carried out only with development consent.

Note 4: A temporary use may be permitted with development consent subject to the requirements of Clause 2.8 of Penrith Local Environmental Plan 2010.

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Note 5: Under the terms of Clause 4.1A of Penrith Local Environmental Plan 2010, despite any other provision of this plan, development consent must not be granted for dual occupancy on an internal lot in Zone R2 Low Density Residential.

Note 6: Under the terms of Clause 5.1 of Penrith Local Environmental Plan 2010 development on land acquired by an authority of the State under the owner-initiated acquisition provisions may, before it is used for the purpose for which it is reserved, be carried out, with development consent, for any purpose.

Note 7: Under the terms of Clause 5.3 of Penrith Local Environmental Plan 2010 development consent may be granted to development of certain land for any purpose that may be carried out in an adjoining zone.

Note 8: Under the terms of Clause 5.9 of Penrith Local Environmental Plan 2010 trees or other vegetation subject to relevant sections of Penrith Development Control Plan 2014 must not be ringbarked, cut down, topped, lopped, removed, injured or wilfully destroyed without the authority conferred by a development consent or a Council permit.

Note 9: Under the terms of Clause 5.9AA of Penrith Local Environmental Plan 2010 (PLEP 2010) any tree or other vegetation that is not of a species or kind prescribed for the purposes of Clause 5.9 of PLEP 2010 by Penrith Development Control Plan 2014 may be ringbarked, cut down, topped, lopped, removed, injured or destroyed without development consent.

Note 10: Clause 5.10 of Penrith Local Environmental Plan 2010 details when development consent is required/not required in relation to heritage conservation.

Note 11: Under the terms of Clause 5.11 of Penrith Local Environmental Plan 2010 bush fire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent.

Note 12: Under the terms of Clause 7.1 of Penrith Local Environmental Plan 2010 (PLEP 2010) development consent is required for earthworks unless the work is exempt development under PLEP 2010 or another applicable environmental planning instrument, or the work is ancillary to other development for which development consent has been given.

Note 13: Sex services premises and restricted premises may only be permitted subject to the requirements of Clause 7.23 of Penrith Local Environmental Plan 2010.

2(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed:

(Information is provided in this section only if any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.)

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

2(f) whether the land includes or comprises critical habitat:

(Information is provided in this section only if the land includes or comprises critical habitat.)

2(g) whether the land is in a conservation area (however described):

(Information is provided in this section only if the land is in a conservation area (however described).)

2(h) whether an item of environmental heritage (however described) is situated on the land:

(Information is provided in this section only if an item of environmental heritage (however described) is situated on the land.)

2A ZONING AND LAND USE UNDER STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

(Information is provided in this section only if the land is within any zone under State Environmental Planning Policy (Sydney Region Growth Centres) 2006.)

3 COMPLYING DEVELOPMENT

GENERAL HOUSING CODE

(The General Housing Code only applies if the land is within Zones R1, R2, R3, R4 or RU5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the General Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

RURAL HOUSING CODE

(The Rural Housing Code only applies if the land is within Zones RU1, RU2, RU3, RU4, RU6 or R5 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Rural Housing Code **may** be carried out on the land if the land is within one of the abovementioned zones.

HOUSING ALTERATIONS CODE

Complying development under the Housing Alterations Code **may** be carried out on the land.

GENERAL DEVELOPMENT CODE

Complying development under the General Development Code **may** be carried out on the land.

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

COMMERCIAL AND INDUSTRIAL ALTERATIONS CODE

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

SUBDIVISIONS CODE

Complying development under the Subdivisions Code **may** be carried out on the land.

DEMOLITION CODE

Complying development under the Demolition Code **may** be carried out on the land.

COMMERCIAL AND INDUSTRIAL (NEW BUILDINGS AND ADDITIONS) CODE

(The Commercial and Industrial (New Buildings and Additions) Code only applies if the land is within Zones B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3 under Penrith Local Environmental Plan 2010 or an equivalent zone in a non standard template planning instrument.)

Complying development under the Commercial and Industrial (New Buildings and Alterations) Code **may** be carried out on the land if the land is within one of the abovementioned zones.

FIRE SAFETY CODE

Complying development under the Fire Safety Code **may** be carried out on the land.

(NOTE: (1) Council has relied on Planning and Infrastructure Circulars and Fact Sheets in the preparation of this information. Applicants should seek their own legal advice in relation to this matter with particular reference to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(2) Penrith Local Environmental Plan 2010 (if it applies to the land) contains additional complying development not specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.)

4 COASTAL PROTECTION

The land is not affected by the operation of sections 38 or 39 of the Coastal Protection Act 1979, to the extent that council has been so notified by the Department of Public Works.

5 MINE SUBSIDENCE

The land is not proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

6 ROAD WIDENING AND ROAD REALIGNMENT

The land is not affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the Roads Act 1993, or
(b) an environmental planning instrument, or
(c) a resolution of council.

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

7 *COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS*

(a) Council Policies

The land is affected by the Asbestos Policy adopted by Council.
The land is not affected by any other policy adopted by the council that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(b) Other Public Authority Policies

The Bush Fire Co-ordinating Committee has adopted a Bush Fire Risk Management Plan that covers the local government area of Penrith City Council, and includes public, private and Commonwealth lands.
The land is not affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council, that restricts the development of the land because of the likelihood of land slip, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

7A *FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION*

(1) Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) (if such uses are permissible on the land) is subject to flood related development controls.

(2) Development on the land or part of the land for industrial or commercial purposes (if such uses are permissible on the land) is subject to flood related development controls.
Development on the land or part of the land for purposes other than industrial or commercial, or for purposes other than those referred to in (1) above, will be considered on a merits based approach and flood related development controls may apply.

Note: The land is subject to Penrith Development Control Plan 2014 Section C3.5 Flood Planning. On application and payment of the prescribed fee Council may be able to provide in writing a range of advice in regard to the extent of flooding affecting the property.

8 *LAND RESERVED FOR ACQUISITION*

No environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

9 *CONTRIBUTIONS PLANS*

The Cultural Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith.

The Penrith City Local Open Space Development Contributions Plan 2007 applies anywhere residential development is permitted within the City of Penrith, excluding industrial areas and the

release areas identified in Appendix B of the Plan (Penrith Lakes, Cranebrook, Sydney Regional Environmental Plan No. 30 - St Marys, Waterside, Thornton, the WELL Precinct, Glenmore Park and Erskine Park). See
<http://www.penrithcity.nsw.gov.au/uploadedFiles/Content/Website/Our_Services/Planning_and_Development/Planning_Zoning_Information/Local_Planning_Documents/LocalOpenSpaceDCP(1).pdf>

The Penrith City District Open Space Facilities Development Contributions Plan applies anywhere residential development is permitted within the City of Penrith, with the exclusion of industrial lands and the Penrith Lakes development site.

9A BIODIVERSITY CERTIFIED LAND

(Information is provided in this section only if the land is biodiversity certified land (within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*).)

10 BIOBANKING AGREEMENTS

(Information is provided in this section only if Council has been notified by the Director-General of the Department of Environment, Climate Change and Water that the land is land to which a biobanking agreement under Part 7A of the *Threatened Species Conservation Act 1995* relates.)

11 BUSH FIRE PRONE LAND

The land is not identified as bush fire prone land according to Council records.

12 PROPERTY VEGETATION PLANS

(Information is provided in this section only if Council has been notified that the land is land to which a property vegetation plan under the Native Vegetation Act 2003 applies.)

13 ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

(Information is provided in this section only if Council has been notified that an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.)

14 DIRECTIONS UNDER PART 3A

(Information is provided in this section only if there is a direction by the Minister in force under section 75P(2)(c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.)

15 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS AFFECTING SENIORS HOUSING

(Information is provided in this section only if:

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

(a) there is a current site compatibility certificate (seniors housing), of which the council is aware, issued under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 in respect of proposed development on the land; and/or

(b) any terms of a kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.)

16 SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

(Information is provided in this section only if there is a valid site compatibility certificate (infrastructure), of which council is aware, in respect of proposed development on the land.)

17 SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(Information is provided in this section only if:

(a) there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land; and/or

(b) any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed as a condition of consent to a development application in respect of the land.)

18 PAPER SUBDIVISION INFORMATION

(Information is provided in this section only if a development plan adopted by a relevant authority applies to the land or is proposed to be subject to a consent ballot, or a subdivision order applies to the land.)

19 SITE VERIFICATION CERTIFICATES

(Information is provided in this section only if there is a current site verification certificate, of which council is aware, in respect of the land.)

NOTE: The following matters are prescribed by section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate

(a) (Information is provided in this section only if, as at the date of this certificate, the land (or part of the land) is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.)

(b) (Information is provided in this section only if, as at the date of this certificate, the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.)

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PLANNING CERTIFICATE UNDER SECTION 149

Environmental Planning and Assessment Act, 1979

(c) (Information is provided in this section only if, as at the date of this certificate, the land is the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.)

(d) (Information is provided in this section only if, at the date of this certificate, the land subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.)

(e) (Information is provided in this section only if the land is the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 – a copy of which has been provided to Council.)

Note: Section 149(5) information for this property may contain additional information regarding contamination issues.

Note: The Environmental Planning and Assessment Amendment Act 1997 commenced operation on the 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998 and Environmental Planning and Assessment Regulation 2000.

Information is provided only to the extent that Council has been notified by the relevant government departments.

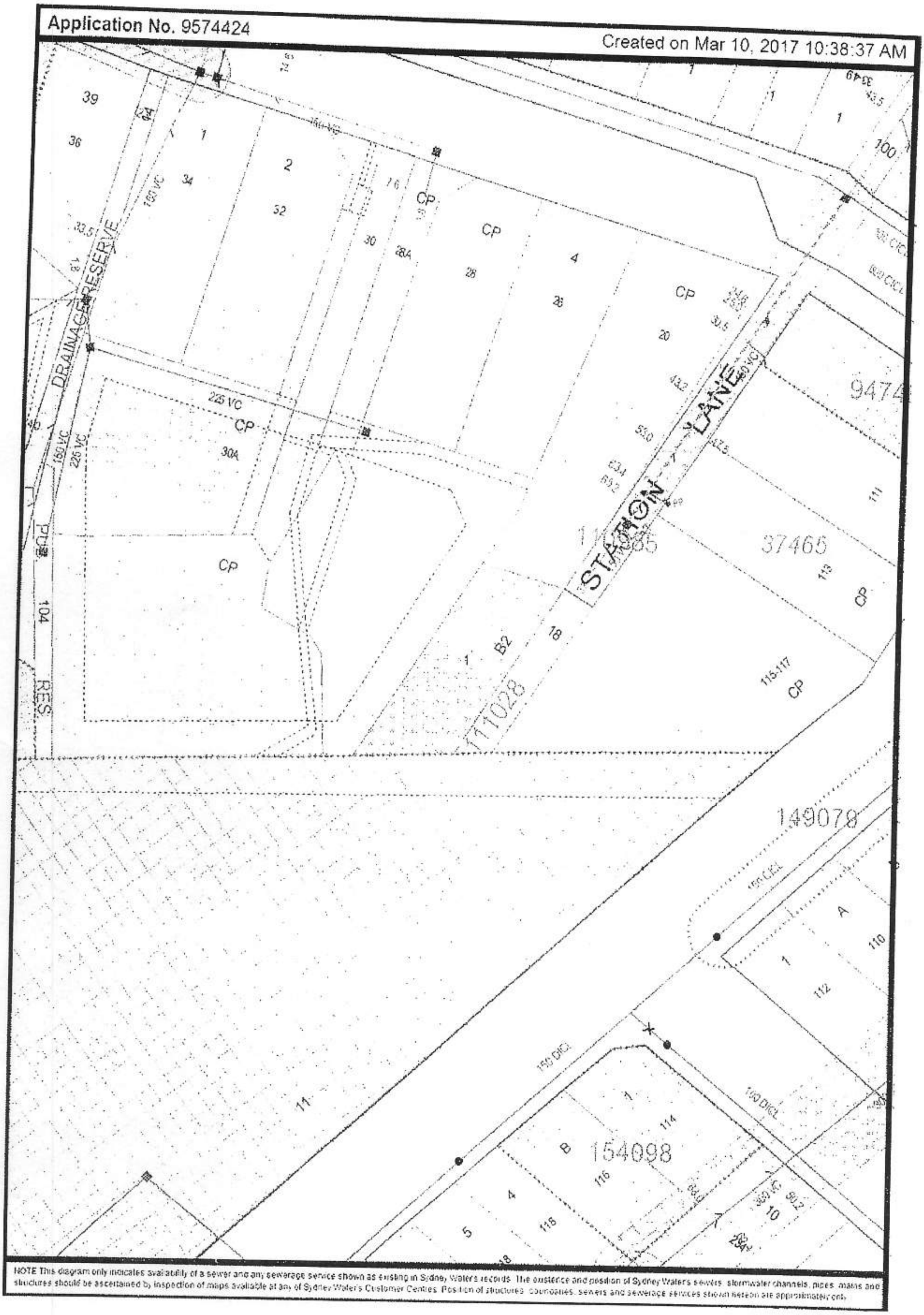
Note: This is a certificate under section 149(2) of the Environmental Planning and Assessment Act, 1979 and is only provided in accordance with that section of the Act.
Further information relating to the subject property can be provided under section 149(5) of the Act. If such further information is required Council indicates that a full certificate under sections 149(2) **and** 149(5) should be applied for.
Contact Council for details as to obtaining the additional information.

Alan Stoneham
General Manager

Per

Application No. 9574424

Created on Mar 10, 2017 10:38:37 AM



NOTE This diagram only indicates availability of a sewer and any sewerage service shown as existing in Sydney Water's records. The existence and position of Sydney Water's sewers, stormwater channels, pipes, mains and structures should be ascertained by inspection of maps available at any of Sydney Water's Customer Centres. Position of structures, boundaries, sewers and sewerage services shown hereon are approximate only.

APPENDIX F: SITE PHOTOGRAPHS

SITE PHOTOGRAPHS

Client:	Station Lane Pty Ltd ATF The Station Lane Trust
Project:	PSI
Site Location:	1 Station Lane, Penrith NSW
Job No.:	E1857

Benviron group
simple sustainable solutions

Photo 1

View of the front of the site
Looking northwest
Inspected 05.06.2018

Photo 2

View of the front yard of the the site
Looking northeast
Inspected 05.06.2018

Photo 3

View of the southern side of the property
Looking west
Inspected 05.06.2018

Photo 4

View of the backyard of the property
Looking southwest
Inspected 05.06.2018

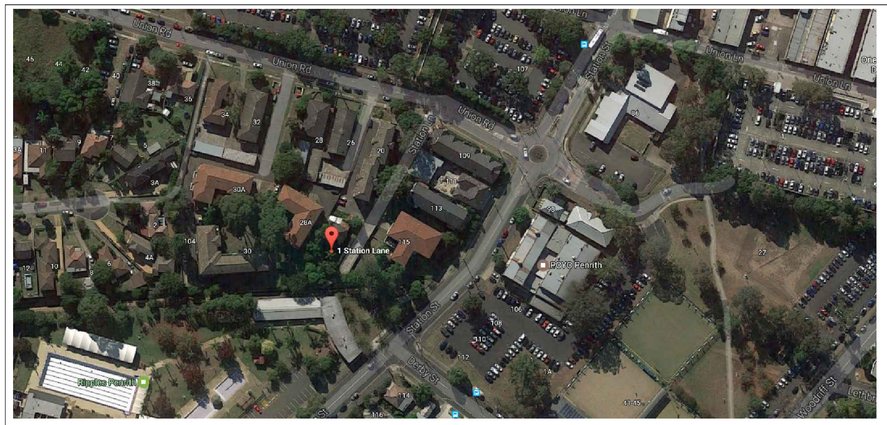
Photo 5

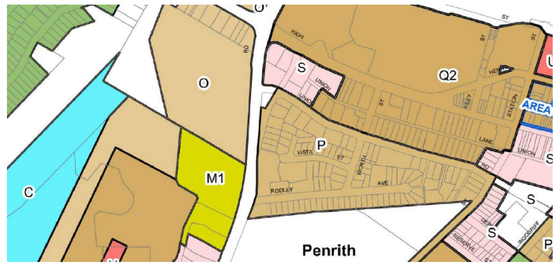
View of the western side of the property
Looking northeast
Inspected 05.06.2018

Photo 6

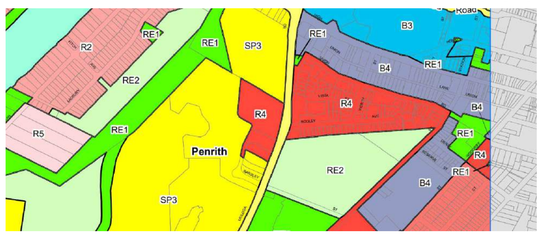
View of the courtyard at the rear of the property
Looking north
Inspected 05.06.2018

APPENDIX G: PROPOSED DEVELOPMENT PLANS



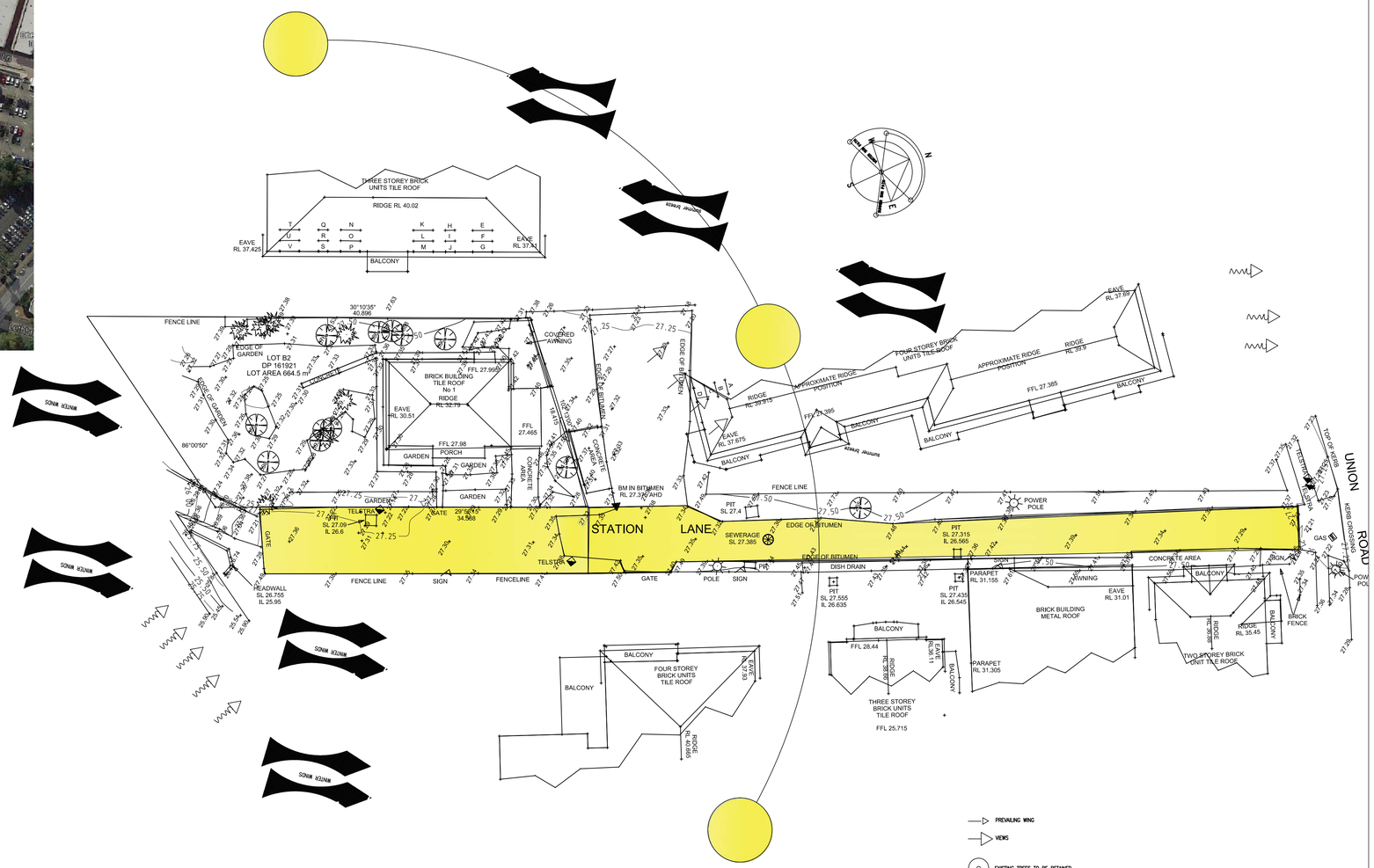


PLEP HEIGHT MAP



PLEP ZONING MAP

PLEP LOT SIZE MAP



GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

Do not scale from drawings
All dimensions are to be checked on site before commencement of work
All discrepancies to be brought to the attention of the project manager
Larger scale drawings and written dimensions take preference.

DATE	REV	AMENDMENTS
22/09/2017	A	PRELIMINARY DRAWINGS

ANTOINE J. SAOUMA
Architect 7412
MEMBER
THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

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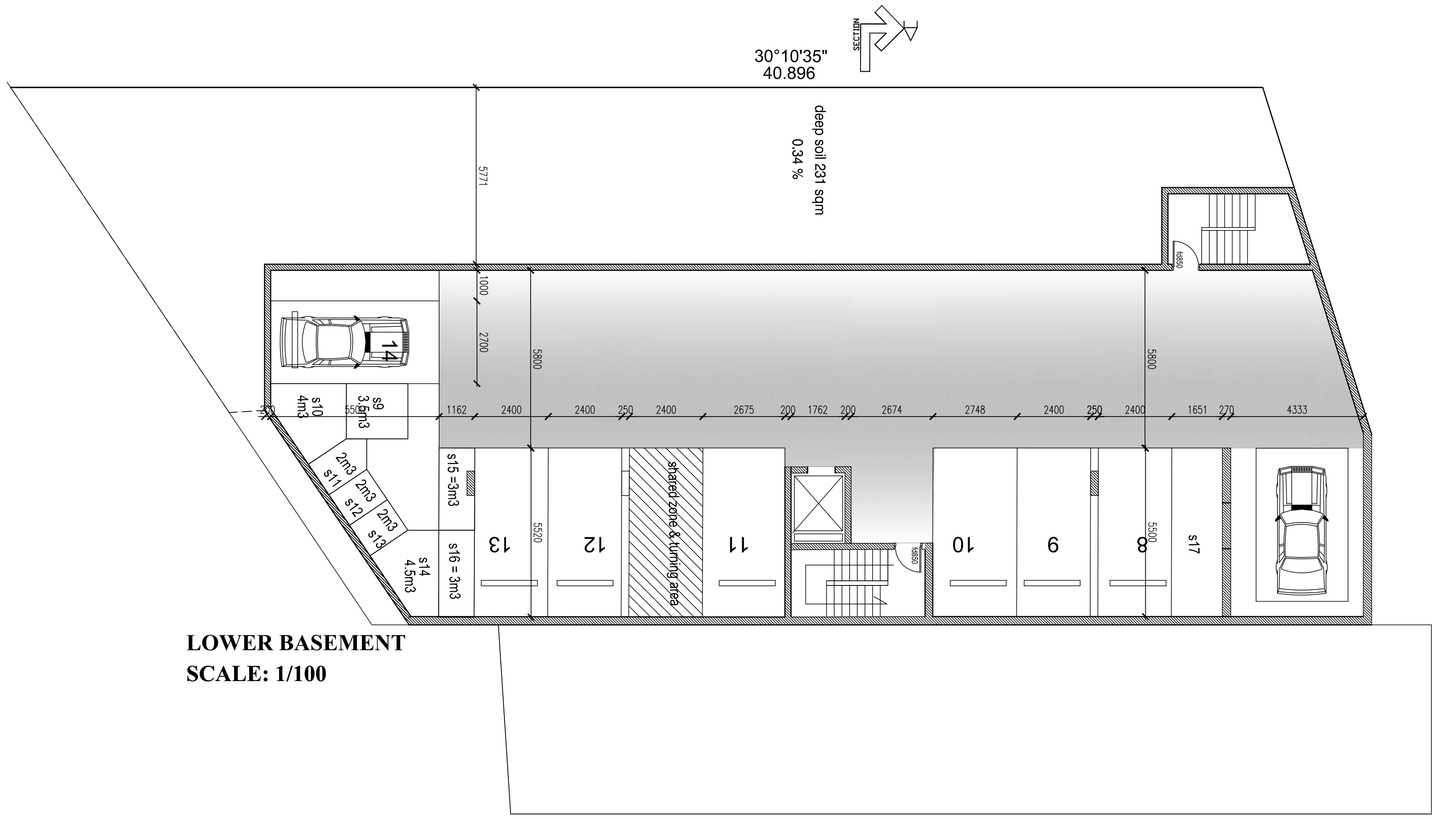
CLIENT

STATION LANE PTY LTD
ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	SITE ANALYSIS
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	APRIL 2018

true north

JOB NO	TYPE	DWG NO	REV
03717	DA	01	A



LOWER BASEMENT
SCALE: 1/100

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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This drawing is copyright and the property of the author, it must not be retained, copied or used without the express authority of Antoine Saouma.

DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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CLIENT
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ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	LOWER BASEMENT PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N true north

JOB NO	TYPE	DWG NO	REV
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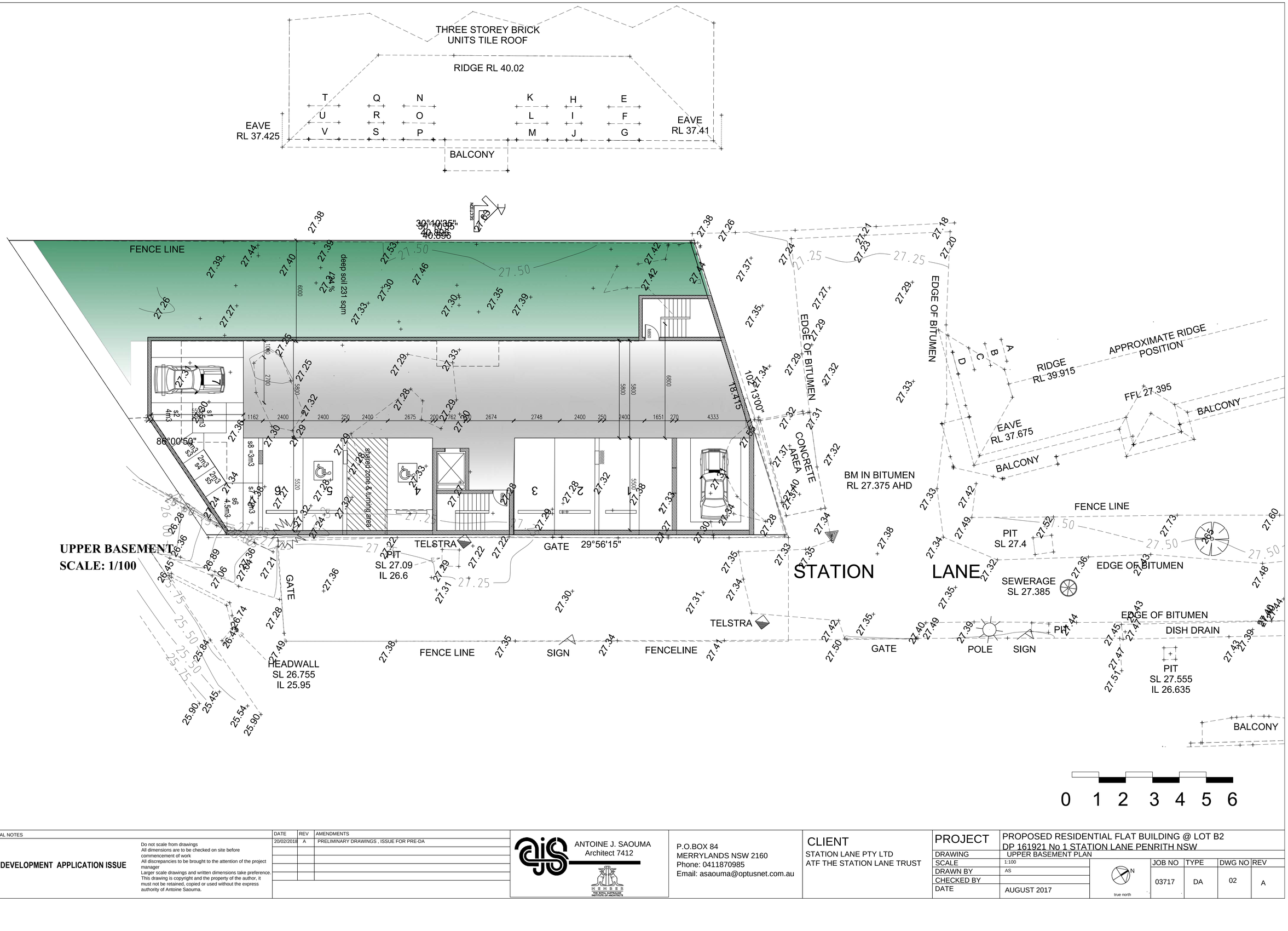

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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STATION LANE PTY LTD
ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	UPPER BASEMENT PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
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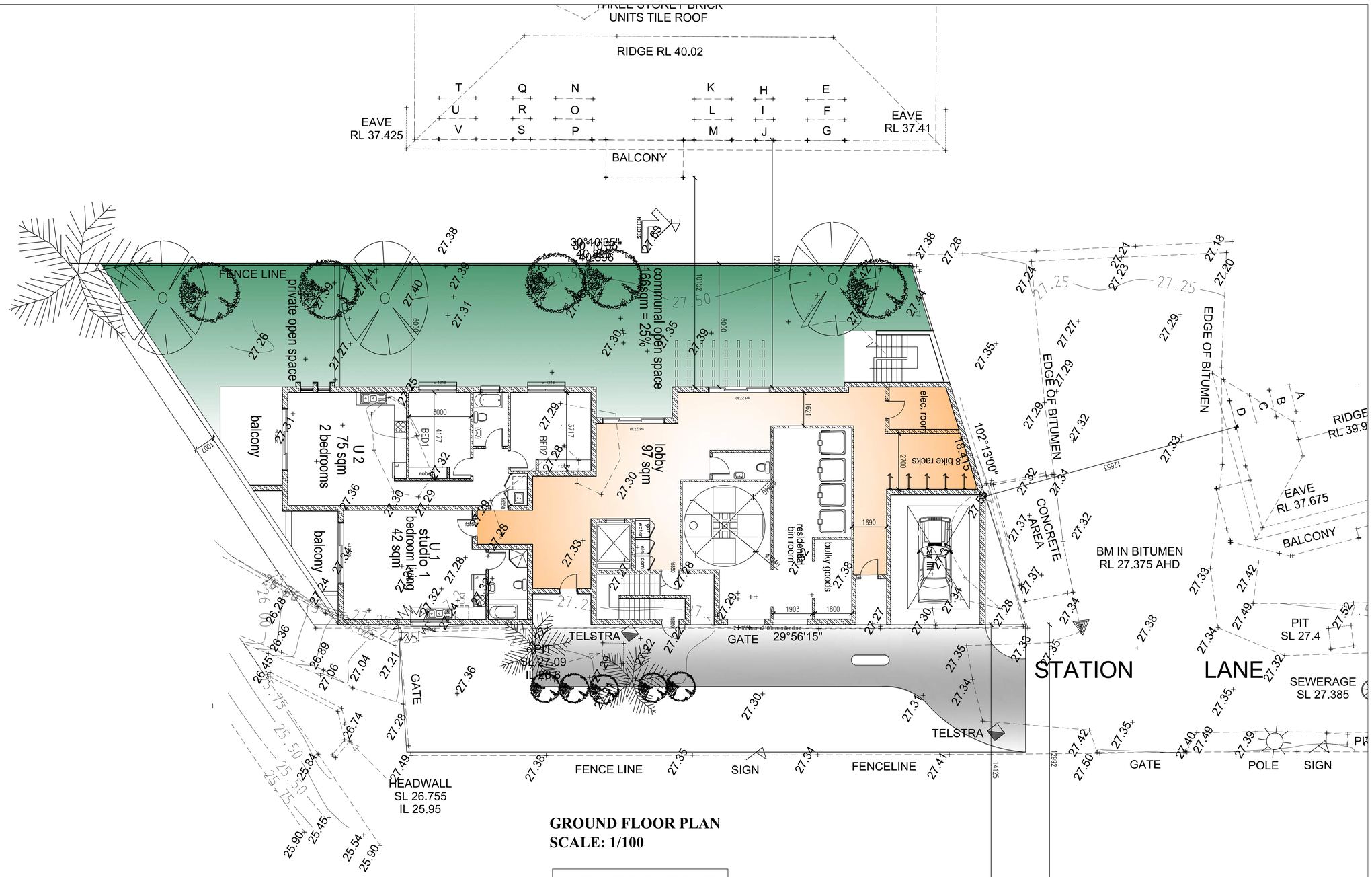

GROUND FLOOR PLAN
SCALE: 1/100

1- HANDRAILS TO COMPLY WITH CLAUSE 12 OF AS 1428.1-2009 (TERMINATION AND EXTENSION) AND ALSO TO COMPLY WITH CLAUSE 12b,g AND h OF AS 1428.2-2009
2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

Do not scale from drawings
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20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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CLIENT
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ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	GROUND FLOOR PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
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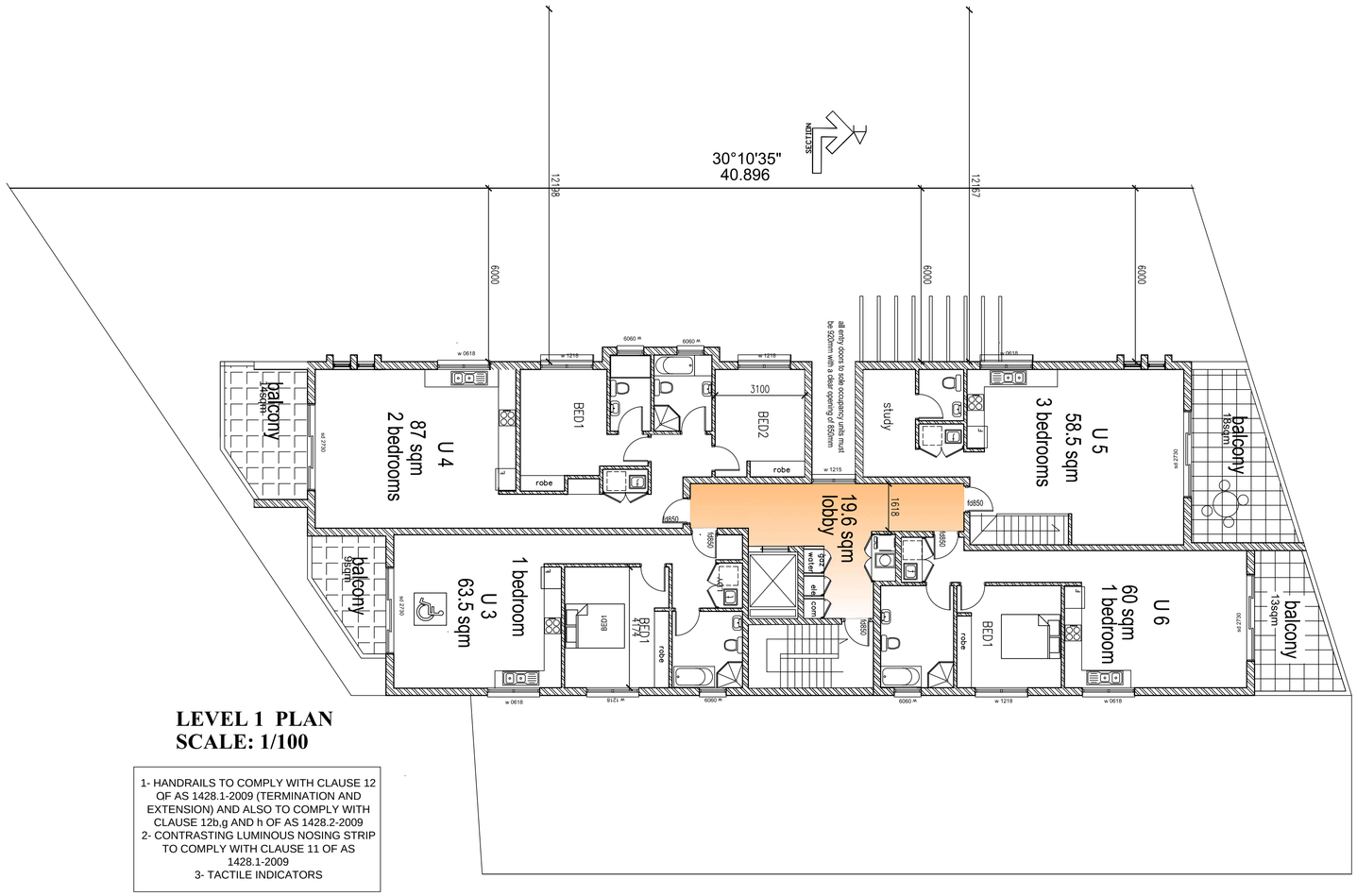

LEVEL 1 PLAN
SCALE: 1/100

1- HANDRAILS TO COMPLY WITH CLAUSE 12 OF AS 1428.1-2009 (TERMINATION AND EXTENSION) AND ALSO TO COMPLY WITH CLAUSE 12b,g AND h OF AS 1428.2-2009
2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

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0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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CLIENT
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PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	LEVEL 1 PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

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true north

JOB NO	TYPE	DWG NO	REV
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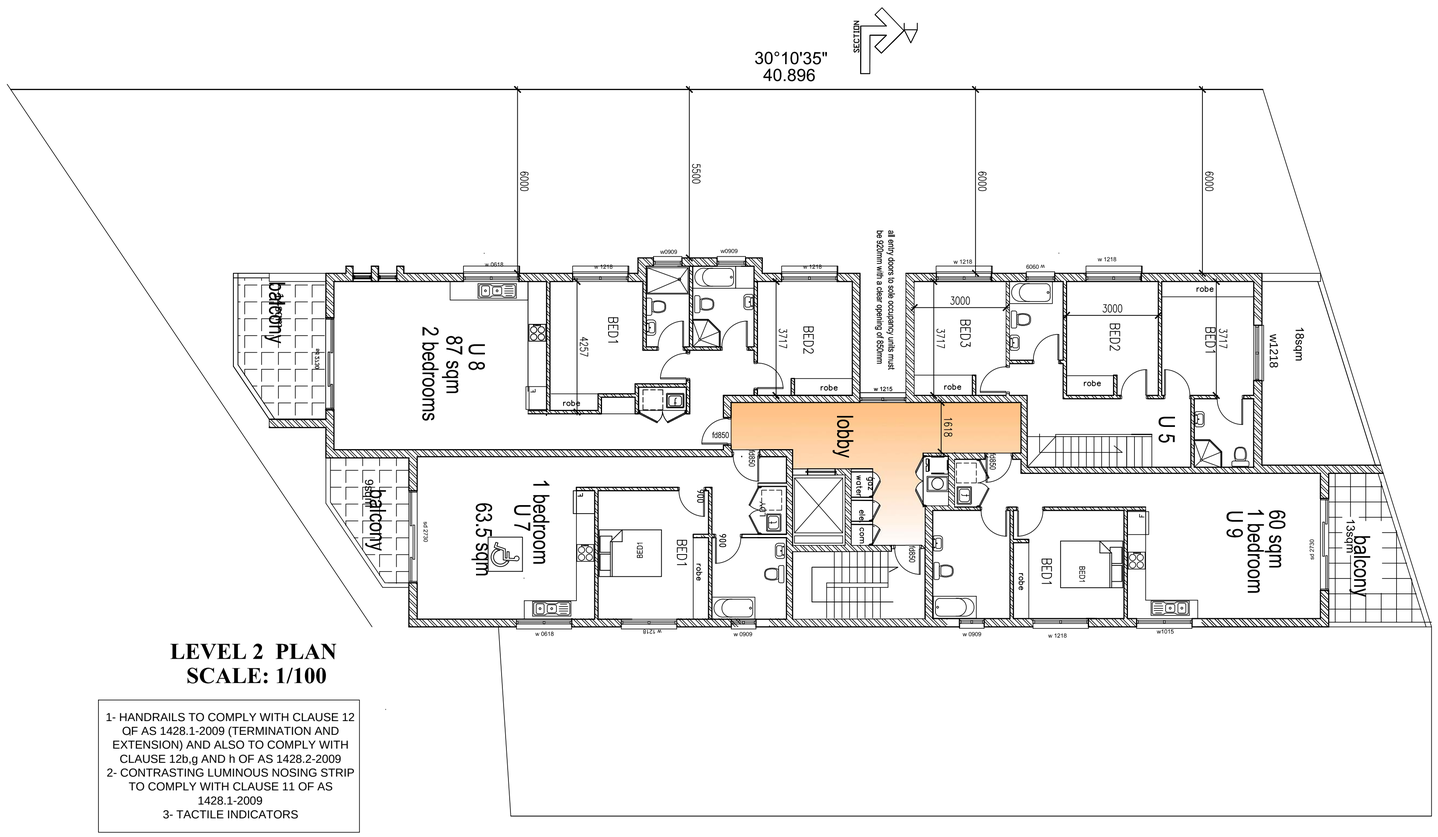

LEVEL 2 PLAN
SCALE: 1/100

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2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW

		JOB NO	TYPE	DWG NO	REV
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SCALE	1:100	03717	DA	05	A
DRAWN BY	AS				
CHECKED BY					
DATE	AUGUST 2017				

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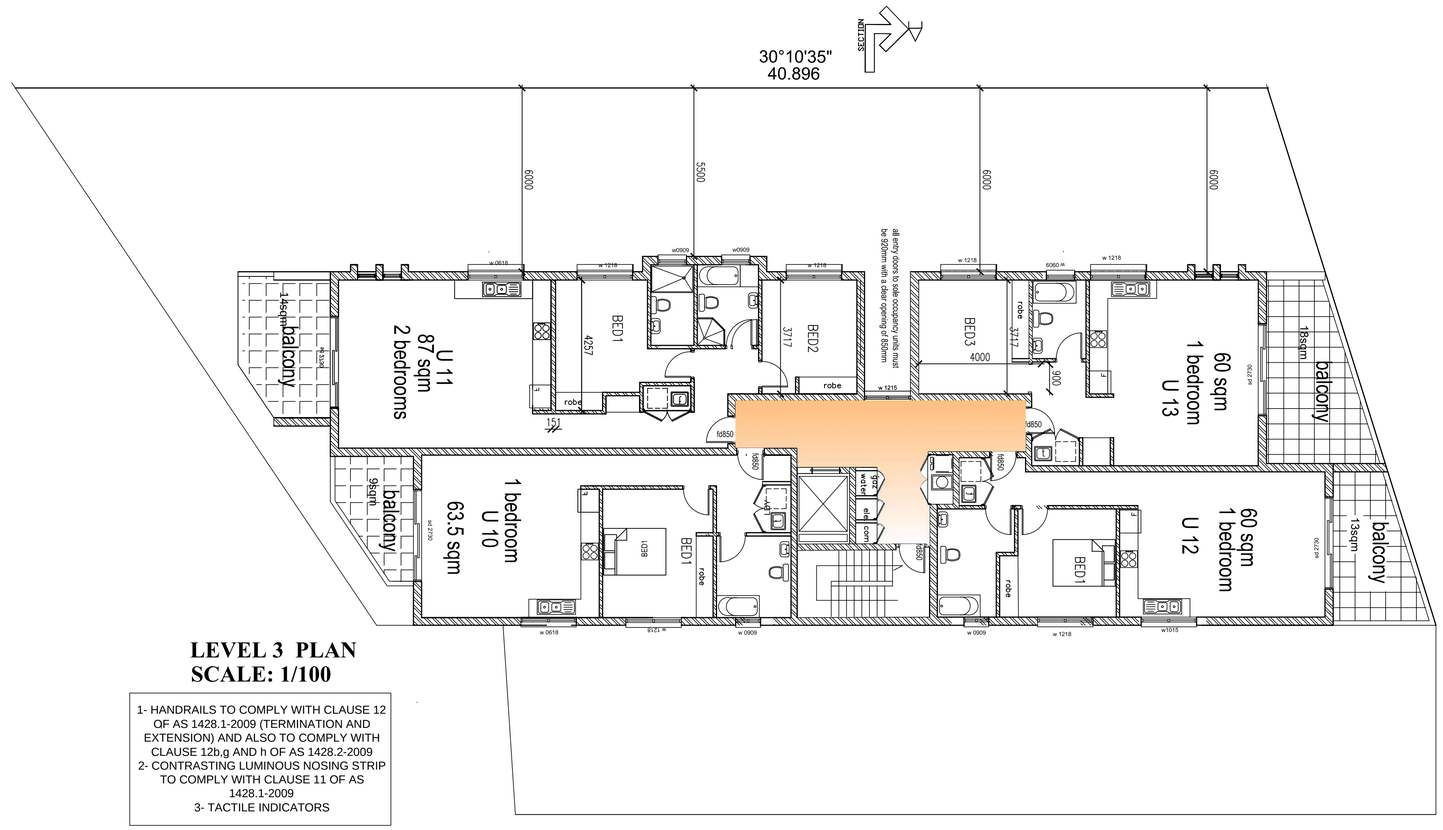
true north



LEVEL 3 PLAN
SCALE: 1/100

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2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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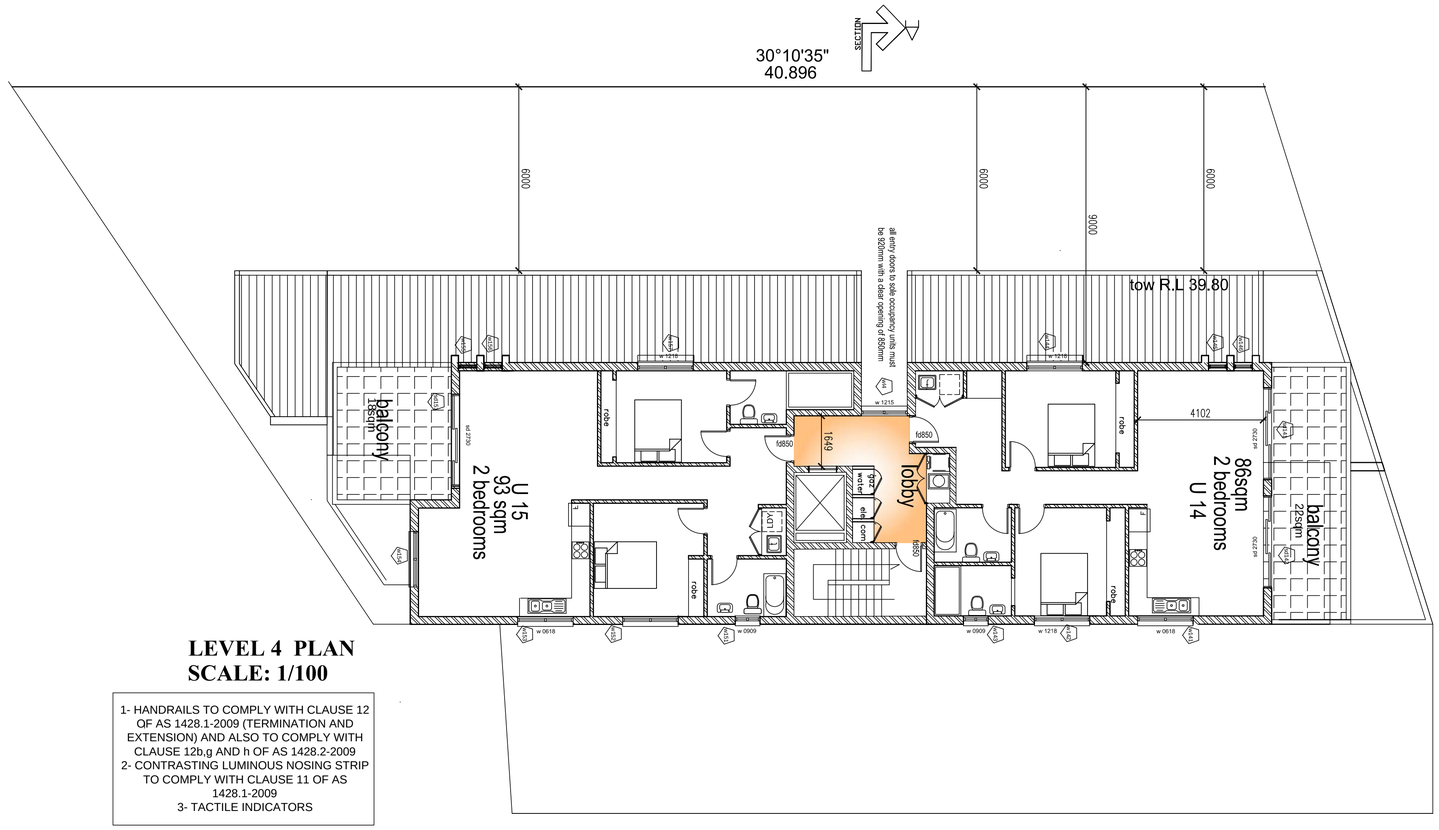
ATF THE STATION LANE TRUST

PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW

DRAWING	LEVEL 3 PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
03717	DA	06	A



LEVEL 4 PLAN
SCALE: 1/100

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2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

Do not scale from drawings
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DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

ANTOINE J. SAOUMA
Architect 7412
NSW
THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

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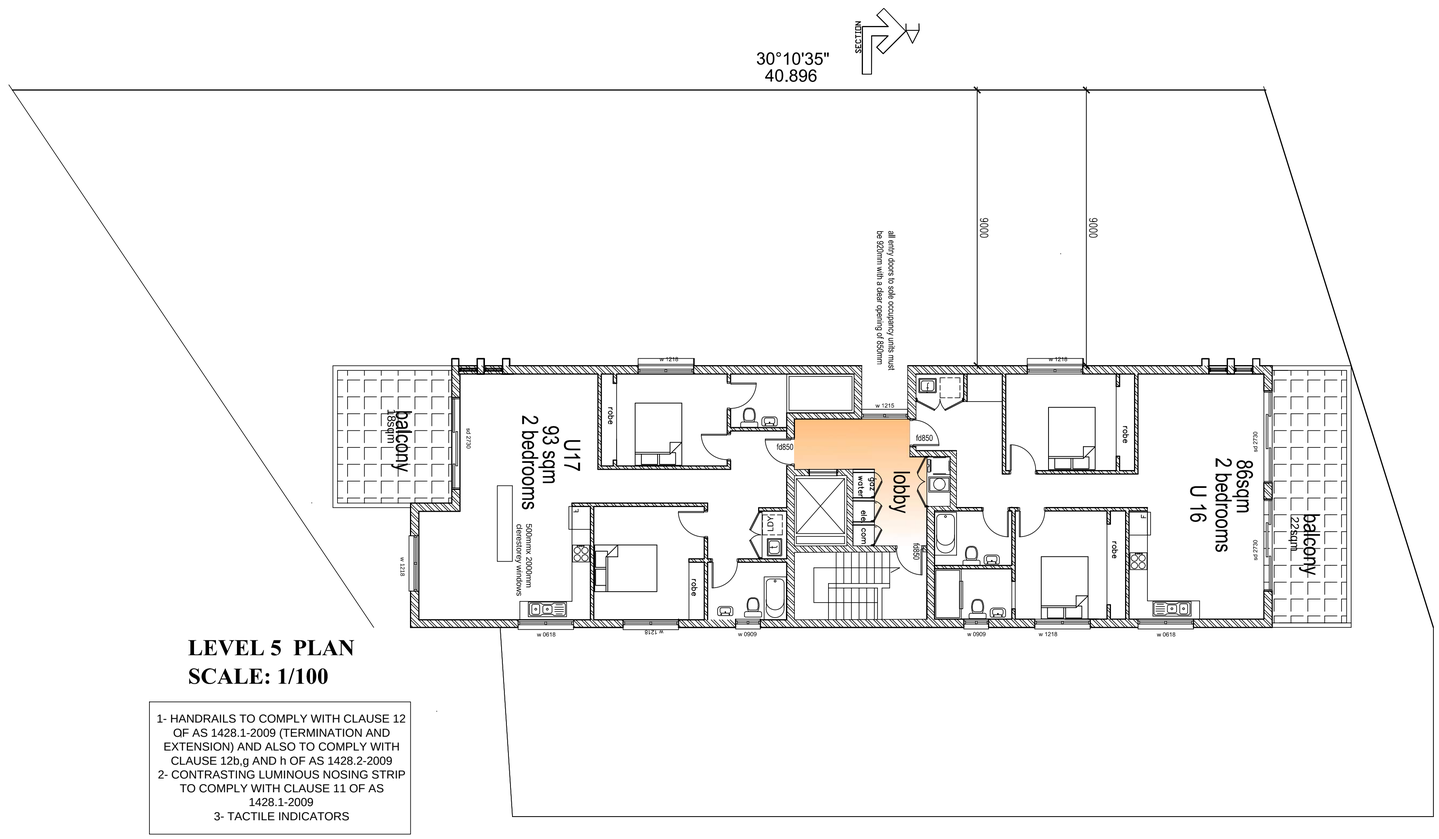
Phone: 0411870985
Email: asaouma@optusnet.com.au

CLIENT
STATION LANE PTY LTD
ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	LEVEL 4 PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	07	A



LEVEL 5 PLAN
SCALE: 1/100

1- HANDRAILS TO COMPLY WITH CLAUSE 12 OF AS 1428.1-2009 (TERMINATION AND EXTENSION) AND ALSO TO COMPLY WITH CLAUSE 12b,g AND h OF AS 1428.2-2009
2- CONTRASTING LUMINOUS NOSING STRIP TO COMPLY WITH CLAUSE 11 OF AS 1428.1-2009
3- TACTILE INDICATORS

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW

		JOB NO	TYPE	DWG NO	REV
DRAWING	LEVEL 5 PLAN				
SCALE	1:100	03717	DA	08	A
DRAWN BY	AS				
CHECKED BY					
DATE	AUGUST 2017				

true north

ROOF PLAN
SCALE: 1:100

THREE STOREY BRICK UNITS TILE ROOF

RIDGE RL 40.02

T U V Q R S N O P K L M H I J E F G

EAVE RL 37.425

EAVE RL 37.41

BALCONY

FENCE LINE

private open space

communal open space

gravel ballast

tow R.L 39.80

tow R.L 45.90

lift overrun R.L 45.90

anchor point to WHS regulations

30°10'35" 40.890

86°00'55"

102°13'00"

18.415

12653

14125

12392

TELSTRA

PIT SL 27.09 IL 26.6

GATE 29°56'15"

GATE

HEADWALL SL 26.755 IL 25.95

FENCE LINE

SIGN

FENCELINE

EDGE OF BITUMEN

RIDGE RL 39.915

APPROXIMATE RIDGE POSITION

FFL 27.395

BALCONY

EAVE RL 37.675

CONCRETE AREA

BM IN BITUMEN RL 27.375 AHD

FENCE LINE

PIT SL 27.4

STATION LANE

SEWERAGE SL 27.385

EDGE OF BITUMEN

DISH DRAIN

PIT SL 27.555 IL 26.635

POLE

SIGN

GATE

FFL 28.44

FOUR STOREY BRICK UNITS

EAVE RL 38.36

RIDGE RL 38.66

0 1 2 3 4 5 6

GENERAL NOTES

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This drawing is copyright and the property of the author, it must not be retained, copied or used without the express authority of Antoine Saouma.

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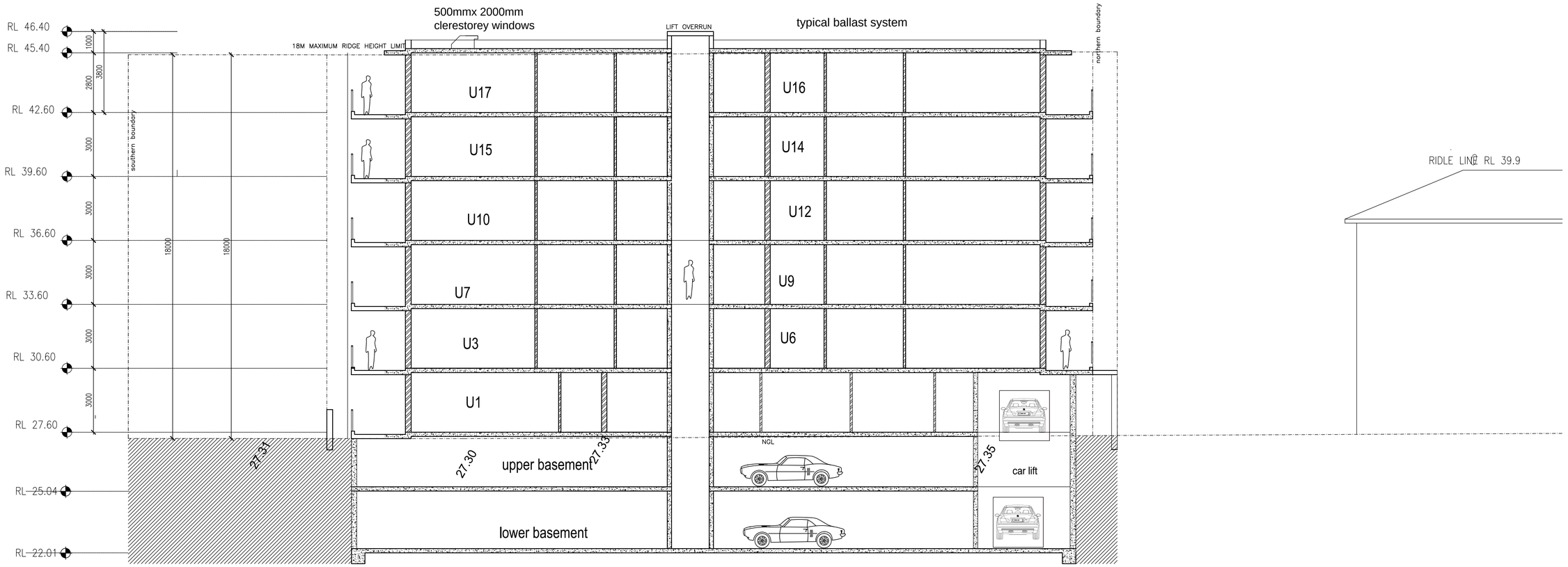
CLIENT
STATION LANE PTY LTD
ATF THE STATION LANE TRUST

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 1201921 No 1 STATION LANE PENRITH NSW

DRAWING	ROOF & SITE PLAN
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
03717	DA	09	A



SECTION BB
SCALE: 1/100

0 1 2 3 4 5 6

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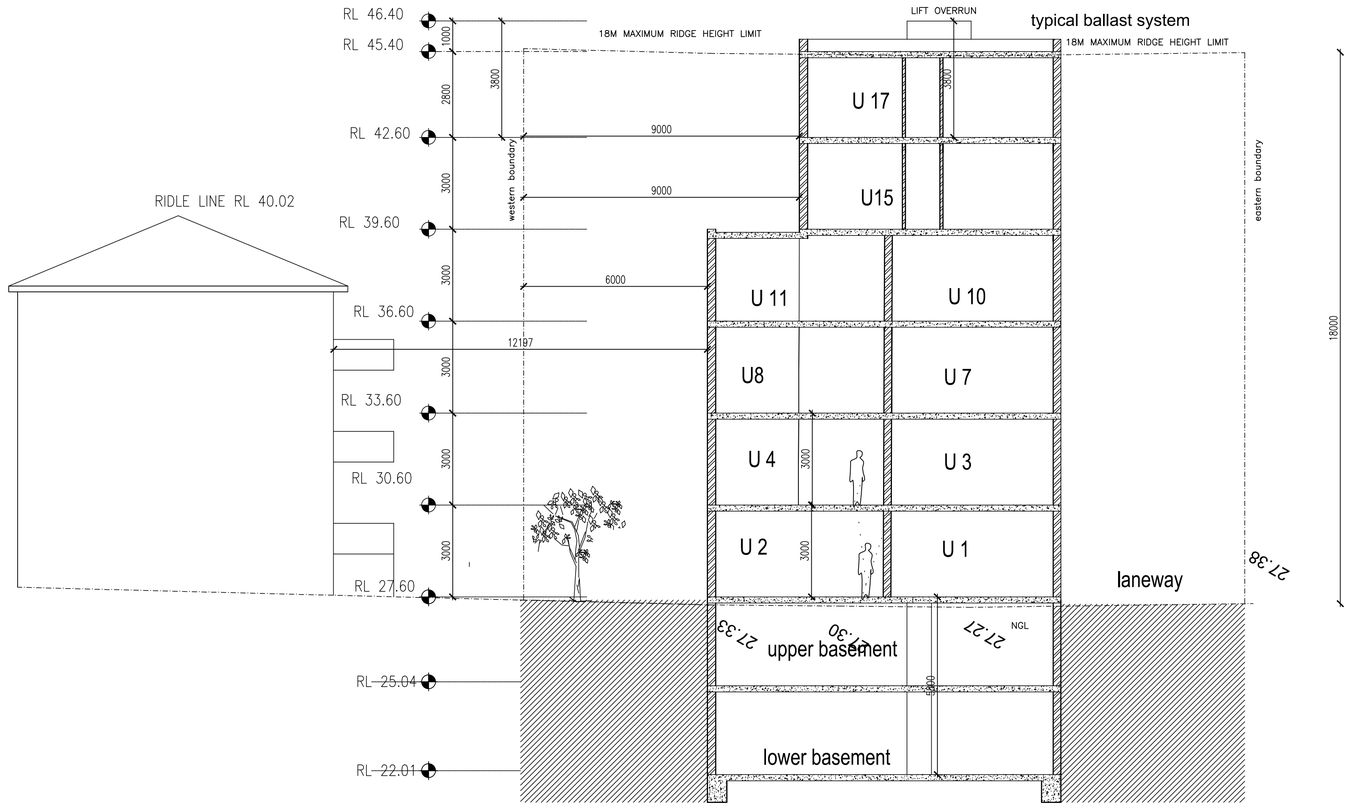
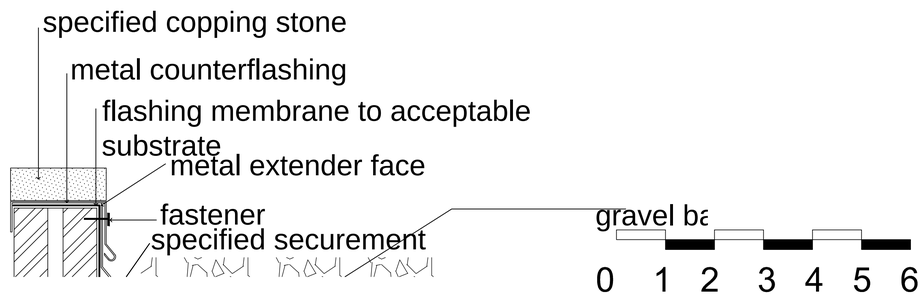
DRAWING	SECTION BB
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
03717	DA	10	A



SECTION AA
SCALE: 1/100



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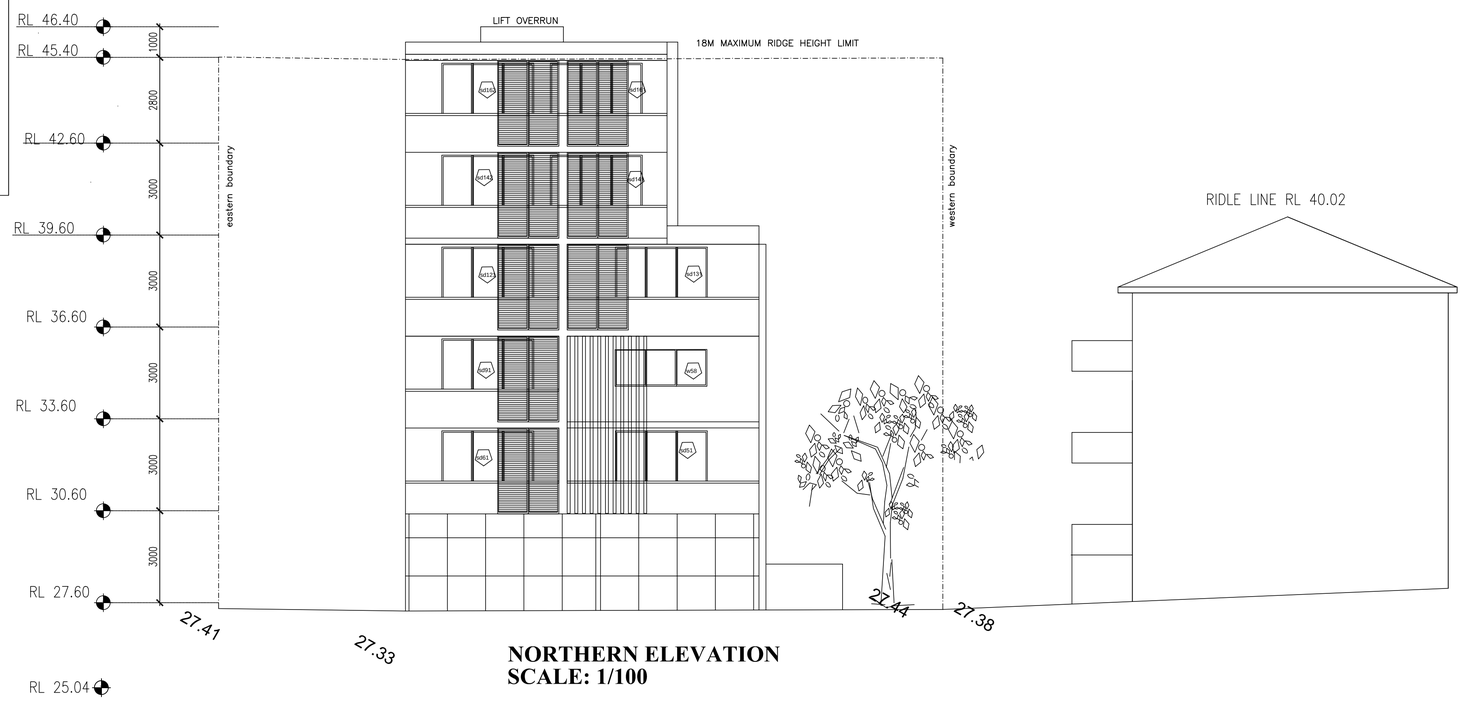
DRAWING	SECTION AA
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	11	A

AREA	COLOUR	PRODUCT
①	BRICK FACE : BORAL ESCURA SMOOTH FACE PEARL GREY	
②	RENDER AND PAINT WALLS : Dulux white Duck W A216	Weather shield (low sheen)
③	WALL LINING : ALUIMINIUM COPMPOSITE ALUCOBOND METALLIC COPPER	
④	WINDOW FRAMES & PERGOLAS: Anotel natural matt 89119	Powdercoated Aluminmium Dulux
⑤	CONCRETE DRIVEWAY : Ironstone	Berger Jet Dry
⑥	ALUCOBOND CLADDING : Indiana Copper	Alucobond
⑦	SUNSHADES / LOUVRES : Anotel natural matt 89119	Powdercoated Aluminmium Dulux
⑧	UNDERSIDE of balconies Ceilings : Dulux white Duck W A216	Weather Shield (low sheen)
⑨	BALCONIES : Frameless glass : pilkington optifloat grey	
⑩	RENDER AND PAINT WALLS : Dulux timeless Grey W GR 23	Weather shield (low sheen)
⑪	WALL LINING : ALUMINIUM COMPOPSITE ALUCOBOND METALLIC BRONZE	



NORTHERN ELEVATION
SCALE: 1/100

WESTERN ELEVATION
SCALE: 1/100

0 1 2 3 4 5 6

A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in:
the openable portion of the window must be protected with :
1– A device to restrict the window opening or
2– A screen with secure fitting
A device or screen required must not permit a 125mm sphere to pass through the window or screen and resist an outward horizontal action 250N against the
– window restrained by a device or
– screen protecting the opening
– have a child resistant release mechanism if the screen or device is able to be removed unlocked or overridden.
A barrier with a height not less than 865mm above the floor is required to an openable window
– in addition to window protection when a child resistant screen release mechanism is required
– for openable windows 4m or more above the surface beneath if the window is not covered by
A barrier covered must not
– permit a 125mm sphere to pass through
– have any horizontal bar near horizontal elements between 150mm and 760mm above the floor that facilitate climbing

GENERAL NOTES

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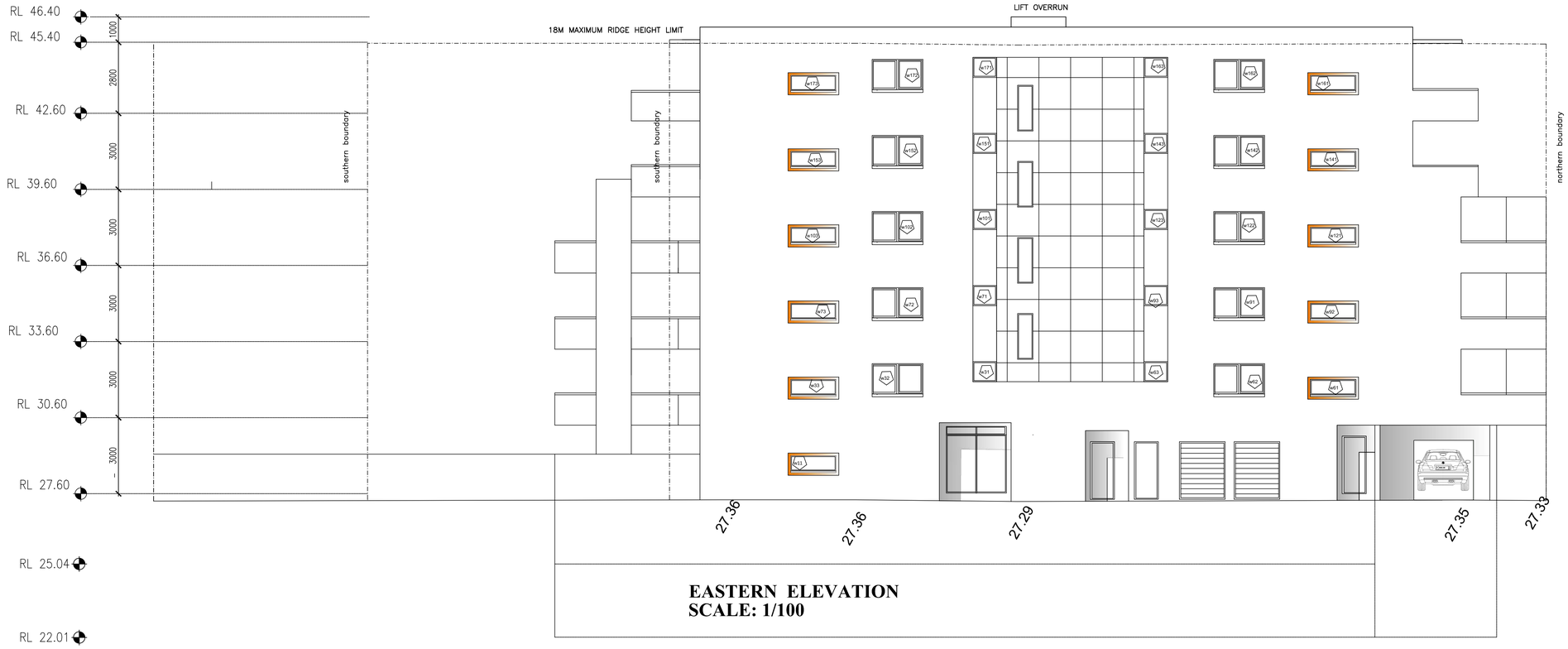
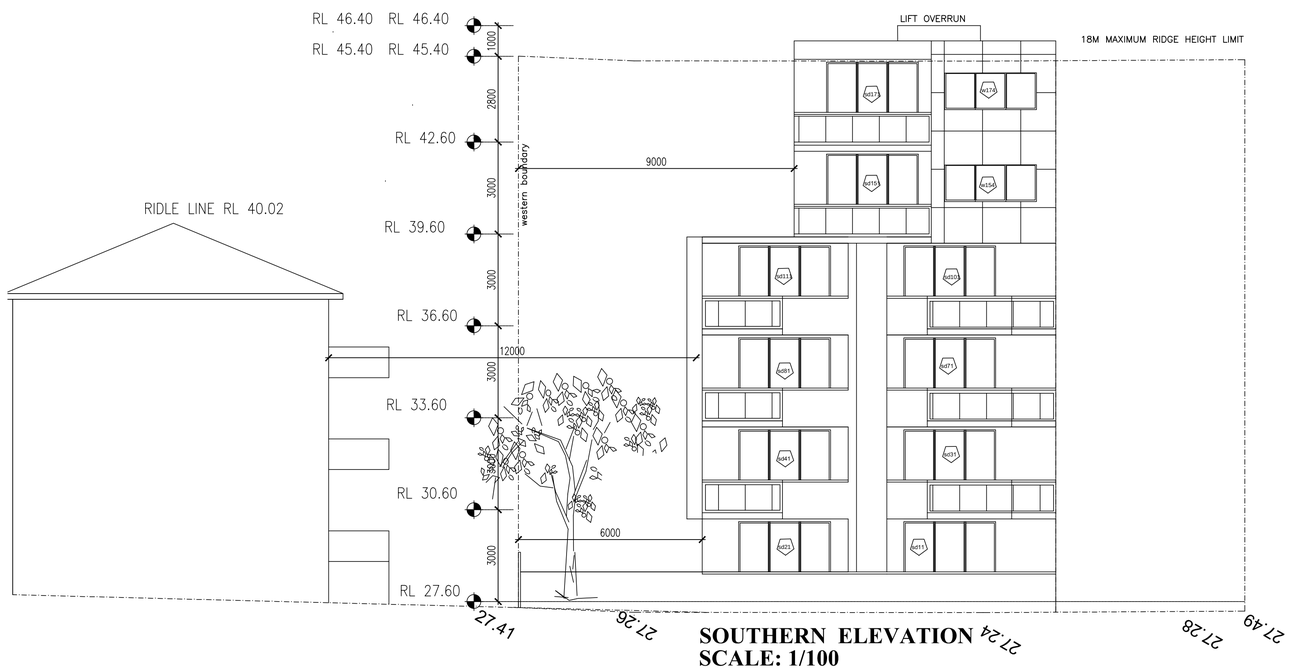
DRAWING	NORTH & WEST ELEVATION
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

true north

JOB NO	TYPE	DWG NO	REV
03717	DA	12	A



EASTERN ELEVATION
SCALE: 1/100



SOUTHERN ELEVATION
SCALE: 1/100

AREA	COLOUR	PRODUCT
1	BRICK FACE : BORAL ESCURA SMOOTH FACE PEARL GREY	
2	RENDER AND PAINT WALLS : Dulux white Duck W A216	Weather shield (low sheen)
3	WALL LINING : ALUIMINIUM COPMPOSITE ALUCOBOND METALLIC COPPER	
4	WINDOW FRAMES & PERGOLAS: Anotel natural matt 89119	Powdercoated Aluminmium Dulux
5	CONCRETE DRIVEWAY : Ironstone	Berger Jet Dry
6	ALUCOBOND CLADDING : Indiana Copper	Alucobond
7	SUNSHADES / LOUVRES : Anotel natural matt 89119	Powdercoated Aluminmium Dulux
8	UNDERSIDE of balconies Ceilings : Dulux white Duck W A216	Weather Shield (low sheen)
9	BALCONIES : Frameless glass : pilkington optifloat grey	
10	RENDER AND PAINT WALLS : Dulux timeless Grey W GR 23	Weather shield (low sheen)
11	WALL LINING : ALUMINIUM COMPOPSITE ALUCOBOND METALLIC BRONZE	

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0 1 2 3 4 5 6

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PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	SOUTH & EAST ELEVATIONS
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

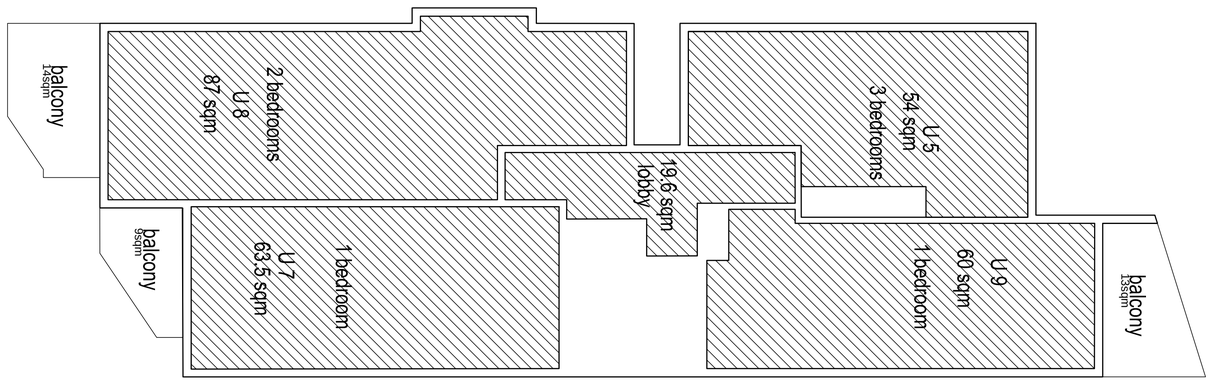
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	13	A

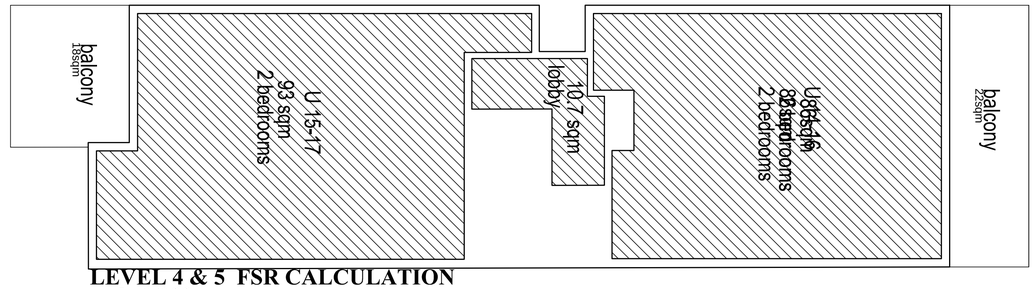
PROPOSED 17 UNITS @ No 1 STATION LANE PENRITH
COMPRISING 1X3 bedrooms + 8X2 bedrooms + 8x1 bedrooms

STORAGE AREAS			UNITS AREAS & LAYOUT						
UNIT	Basement	unit space	cross flow	orientation	unit areas	balconies	layout	single orientation	adaptable
GROUND FLOOR									
U 1	2.0m³	4.0m3		south east	40m²	9m²	1 bed studio		
U 2	3.5m³	5.0m3		south west	75m2	66m2	2 beds		
FIRST FLOOR									
U 3	2.0m³	3.0m3		south east	63.5m2	9m2	1 bed		
U 4	4.4m³	4.0m3		south west	87m2	14m2	2 beds		
U5	4.5m³	5.0m3		north west	112.5m2	18m2	3 beds		
U6	2m³	4.0m3		north east	60m2	13m2	1 bed		
SECOND FLOOR									
U7	2m³	4.0m3		south east	63.5m2	9m2	1 bed		
U8	4.0m³	3.0m3		south west	87m2	14m2	2 beds		
U9	2m³	4.5m3		north east	60m2	13m2	1 bed		
THIRD FLOOR									
U10	2.0m³	5.0m3		south east	63.5m2	9m2	1 bed		
U11	4.0m³	5.0m3		south west	87m2	14sqm	2 beds		
U12	2m³	4.0m3		north east	60m2	13m2	1 bed		
U13	2m³	4.0m3		north west	60m2	18m2	1 bed		
FOURTH FLOOR									
U14	3.5m³	3.0m3		north west	86m2	22m2	2 beds		
U15	4.0m³	4.4m3		south west	93m2	18m2	2 beds		
FIFTH FLOOR									
U16	4.5m³	5.0m3		north west	86m2	22m2	2 beds		
U17	4.0m³	5.0m3		south west	93m2	18m2	2 beds		

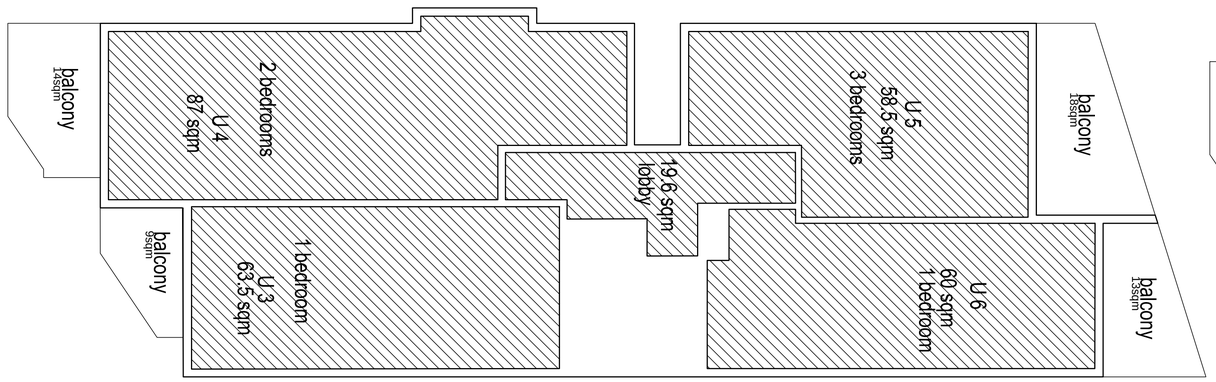
SITE AREA	664.5
TOTAL	919m²
FSR	919+177.2 hallways = 1096.2sqm = 1.649/1
CROSS VENTILATION 17 UNITS OUT OF 17 = 100%	
3 HOURS SUN 21 st JUNE = 17 UNITS = 100%	
TOTAL COMMUNAL OPEN SPACE = 25% OF THE SITE AREA = 166sqm	
TOTAL DEEP SOIL = 231sqm = 34%	
ADAPTABLE UNITS = 2	
UNIT MIX = 1X3 BEDS = 5%	
8X1 BED = 47%	
8X2 BEDS = 47%	



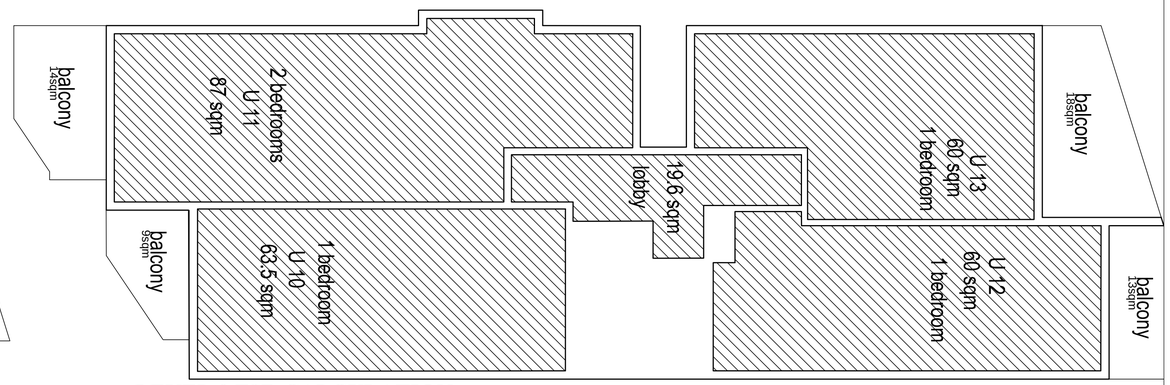
LEVEL 2 FSR CALCULATION
scale 1/100
TOTAL UNIT AREAS = 264.5 SQM
TOTAL CIRCULATION AREAS = 19.6 SQM
TOTAL = 284.1SQM



LEVEL 4 & 5 FSR CALCULATION
scale 1/100
TOTAL UNIT AREAS = 179 X 2 = 358sqm
TOTAL CIRCULATION AREAS = 10.7X 2 = 21.4SQM
TOTAL = 379.4 SQM



LEVEL 1 FSR CALCULATION
scale 1/100
TOTAL UNIT AREAS = 269 SQM
TOTAL CIRCULATION AREAS = 19.6 SQM
TOTAL = 288.6SQM



LEVEL 3 FSR CALCULATION
scale 1/100
TOTAL UNIT AREAS = 270.5 SQM
TOTAL CIRCULATION AREAS = 19.6 SQM
TOTAL = 290.1SQM

0 1 2 3 4 5 6

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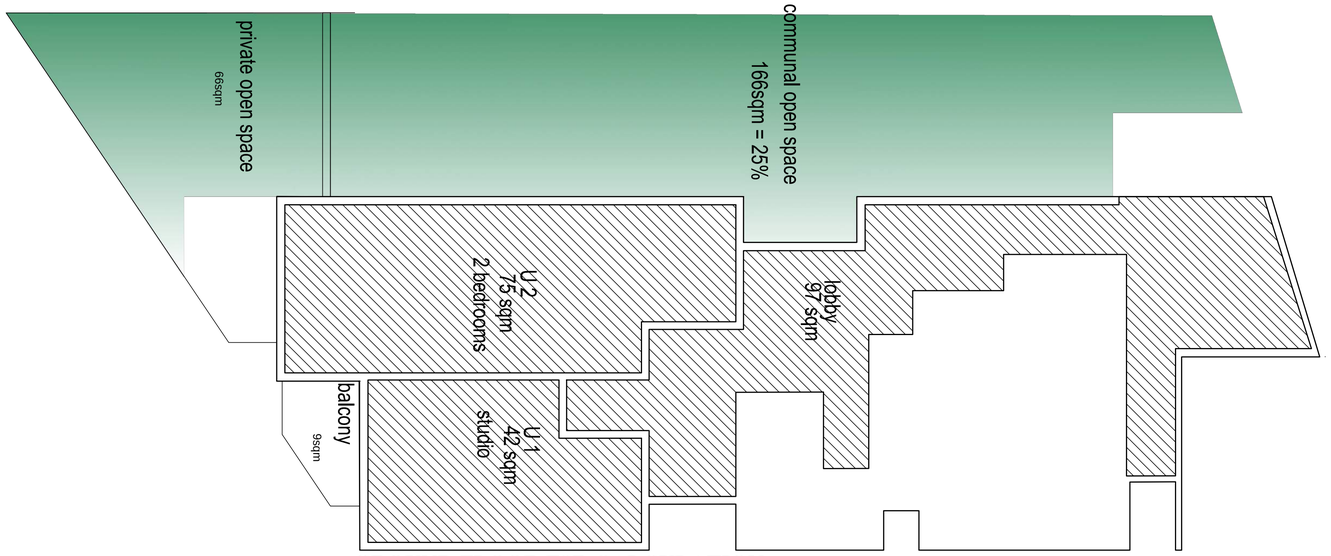
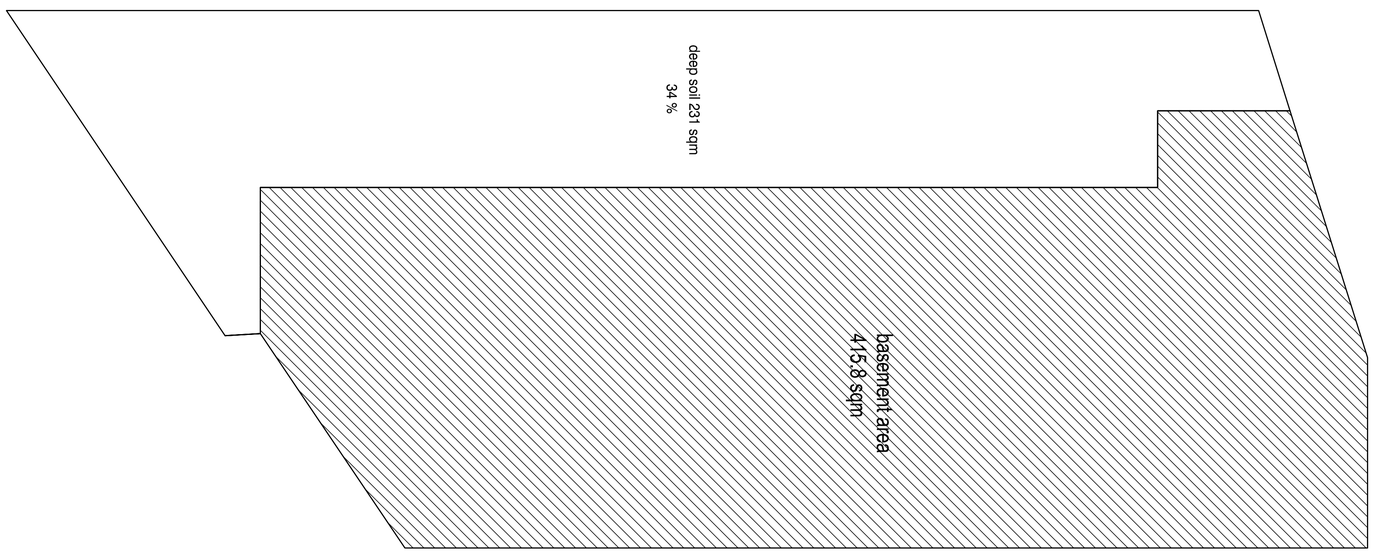
DRAWING	CALCULATIONS
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	14	A



GROUND FLOOR FSR CALCULATION
scale 1/100
TOTAL UNIT AREAS = 117 SQM
TOTAL CIRCULATION AREAS = 97SQM
TOTAL = 214SQM



BASEMENT FLOOR CALCULATION
scale 1/100

DATA & CALCULATIONS

	REQUIRED	PROPOSED	COMPLIANCE
Site Area	-- 664.5 m²+ 186 sqm laneway = 850.5sqm		
Minimum front width	20m	34.558m	yes
Zoning	R4	R4	yes
Minimum ceiling height	2.7m	2.7 m	yes
maximum height	18m	18 clause 4.6	yes
Setbacks- Front Primary	4.0m	0.0m	yes
- Sides	6000- 9000	6000	yes
Total deep soil area	664.5m²x7% =47sqm	32%	yes
Car Parking	1x3bedx1.2 + 8x1bedx0.4 +8x2bedx0.7 +17/5 visitors = 13.4 cars	14	yes
Building separation	----------		
Balconies	SEPP 65 10m²	10 m²	yes

	U 1	U 2	U 3	U 4	U5	U6	U7	U8	U9	U10	U11	U12
AREAS	42	75	63.5	87	112.5	60	63.5	87	60	63.5	87	60

U13	U14	U15	U16	U17
60	86	93	86	93

Total area of units = 1279m²
Total area of hallways = 177.2sqm

Total number of storage =	17	17	yes
FSR =	1456.2 m² /664.5	2.19/1	
Adaptable housing	2 units have layout adaptable to a range of family types	yes	
Access to sunlight	70% of units to receive 3 hours of sun on 21st june = 15 units		yes
	50% of required open space of proposed dwellings and adjoining properties to receive 3 hours on 21st june		yes

0 1 2 3 4 5 6

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DRAWING	CALCULATIONS
SCALE	1:100
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CHECKED BY	
DATE	AUGUST 2017

N true north

JOB NO	TYPE	DWG NO	REV
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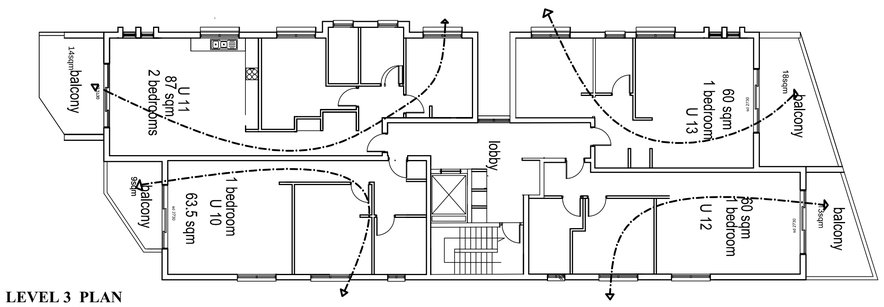
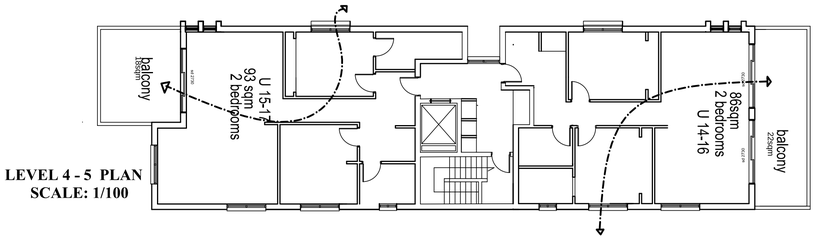
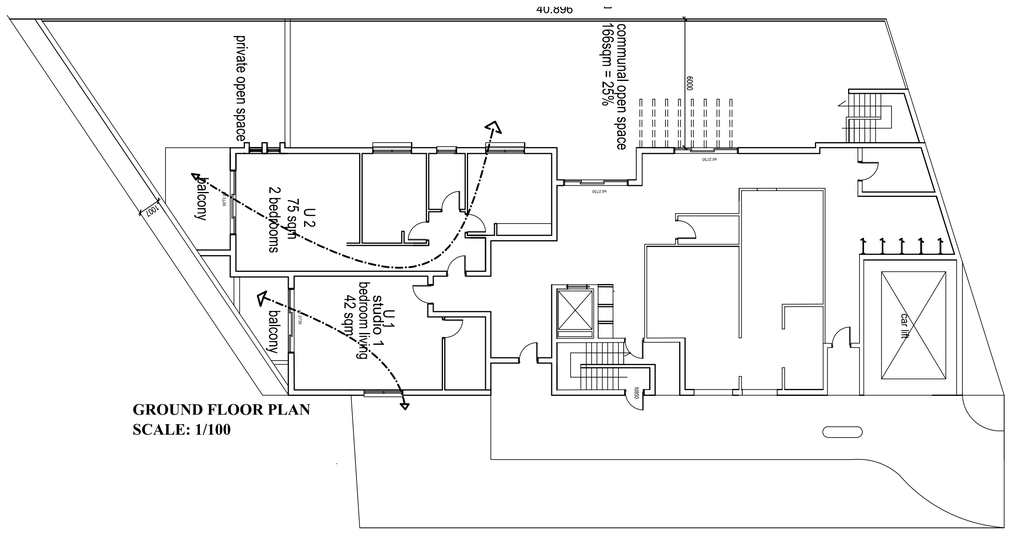


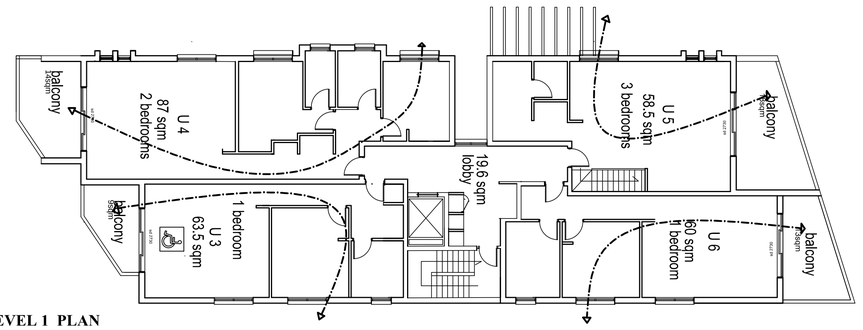
LEVEL 3 PLAN
SCALE: 1/100



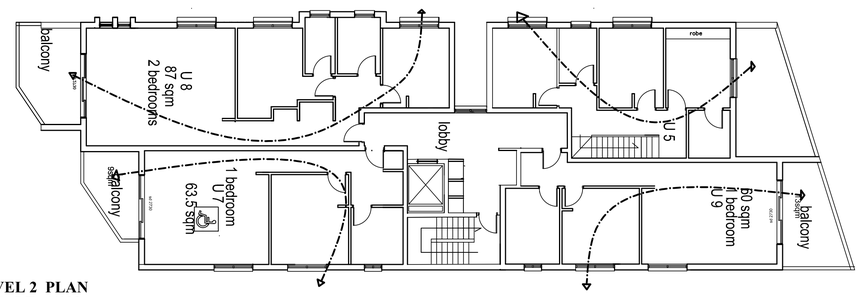
LEVEL 4 - 5 PLAN
SCALE: 1/100



GROUND FLOOR PLAN
SCALE: 1/100



LEVEL 1 PLAN
SCALE: 1/100



LEVEL 2 PLAN
SCALE: 1/100

0 1 2 3 4 5 6

PROPOSED 17 UNITS @ No 1 STATION LANE PENRITH COMPRISING 1X3 bedrooms + 8X2 bedrooms + 8x1 bedrooms									
STORAGE AREAS			UNITS AREAS & LAYOUT						
UNIT	Basement	unit space	cross flow	orientation	unit areas	balconies	layout	single orientation	adaptable
GROUND FLOOR									
U 1	2.0m³	4.0m3		south east	40m²	9m²	1 bed studio		
U 2	3.5m³	5.0m3		south west	75m2	66m2	2 beds		
FIRST FLOOR									
U 3	2.0m³	3.0m3		south east	63.5m2	9m2	1 bed		yes
U 4	4.4m³	4.0m3		south west	87m2	14m2	2 beds		
U5	4.5m³	5.0m3		north west	112.5m2	18m2	3 beds		
U6	2m³	4.0m3		north east	60m2	13m2	1 bed		
SECOND FLOOR									
U7	2m³	4.0m3		south east	63.5m2	9m2	1 bed		yes
U8	4.0m³	3.0m3		south west	87m2	14m2	2 beds		
U9	2m³	4.5m3		north east	60m2	13m2	1 bed		
THIRD FLOOR									
U10	2.0m³	5.0m3		south east	63.5m2	9m2	1 bed		
U11	4.0m³	5.0m3		south west	87m2	14sqm	2 beds		
U12	2m³	4.0m3		north east	60m2	13m2	1 bed		
U13	2m³	4.0m3		north west	60m2	18m2	1 bed		
FOURTH FLOOR									
U14	3.5m³	3.0m3		north west	86m2	22m2	2 beds		
U15	4.0m³	4.4m3		south west	93m2	18m2	2 beds		
FIFTH FLOOR									
U16	4.5m³	5.0m3		north west	86m2	22m2	2 beds		
U17	4.0m³	5.0m3		south west	93m2	18m2	2 beds		
SITE AREA					664.5				
TOTAL					919m²				
FSR					919+177.2 hallways = 1096.2sqm = 1.649/1				
CROSS VENTILATION 17 UNITS OUT OF 17 = 100%									
3 HOURS SUN 21 st JUNE = 17 UNITS = 100%									
TOTAL COMMUNAL OPEN SPACE = 25% OF THE SITE AREA = 166sqm									
TOTAL DEEP SOIL = 231sqm = 34%									
ADAPTABLE UNITS = 2									
UNIT MIX = 1X3 BEDS = 5% 8X1 BED = 47% 8X2 BEDS = 47%									

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA

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CLIENT
STATION LANE PTY LTD
ATF THE STATION LANE TRUST

PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW				
DRAWING	SEPP 65 COMPLIANCE TABLE				
SCALE	1:100	JOB NO	TYPE	DWG NO	REV
DRAWN BY	AS	03717	DA	16	A
CHECKED BY					
DATE	AUGUST 2017				

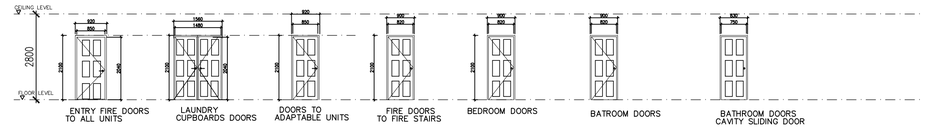
N
true north

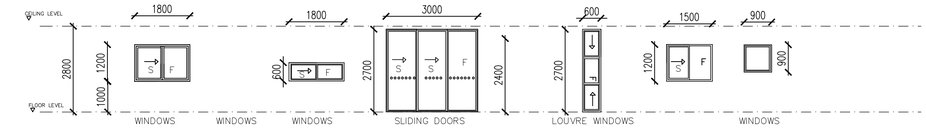
POWDERCOATED ALUMINIUM FRAME WINDOWS & DOORS SCHEDULE		
	Height	Width
UNIT 1		
W11	600	1800
SD11	2700	3000
UNIT 2		
W21	2700	600
W22	2700	600
W23	1200	1800
W24	900	900
W25	1200	1800
SD22	2700	3000
UNIT 3		
W31	900	900
W32	1200	1800
W33	600	1800
SD31	2700	30000
UNIT 4		
W41	2700	600
W42	2700	600
W43	600	1800
W44	1200	1800
W45	900	900
W46	900	900
W47	1200	1800
SD41	2700	3000
UNIT 5		
W51	1200	1200
W52	600	1800
W53	2700	600
W54	2700	600
W55	1200	1800
W56	1200	1800
W57	1200	1200
W58	1200	1800
SD51	2700	3000
UNIT 6		
W61	600	1800
W62	1200	1800
W63	900	900
SD61	2700	3000
UNIT 7		
W71	900	900
W72	1200	1800
W73	600	1800
SD71	2700	3000

POWDERCOATED ALUMINIUM FRAME WINDOWS & DOORS SCHEDULE		
	Height	Width
UNIT 8		
W81	2700	600
W82	2700	600
W83	600	1800
W84	1200	1800
W85	900	900
W86	900	900
W87	1200	1800
SD81	2700	3000
UNIT 9		
W91	600	1800
W92	1200	1800
W93	900	900
SD91	2700	3000
UNIT 10		
W101	900	900
W102	1200	1800
W103	600	1800
SD101	2700	3000
UNIT 11		
W111	2700	600
W112	2700	600
W113	600	1800
W114	1200	1800
W115	900	900
W116	900	900
W117	1200	1800
SD111	2700	3000
UNIT 12		
W121	600	1800
W122	1200	1800
W123	900	900
SD121	2700	3000
UNIT 13		
W131	2700	600
W132	2700	600
W133	600	1800
W134	900	900
W135	1200	1800
SD131	2700	3000

POWDERCOATED ALUMINIUM FRAME WINDOWS & DOORS SCHEDULE		
	Height	Width
UNIT 14		
W141	600	1800
W142	1200	1800
W143	900	900
W144	1200	1800
W145	2700	600
W146	2700	600
SD141	2700	3000
SD142	2700	3000
UNIT 15		
W151	900	900
W152	1200	1800
W153	600	1800
W154	1200	1800
W155	2700	600
W156	2700	600
W157	1200	1800
SD151	2700	3000
UNIT 16		
W161	600	1800
W162	1200	1200
W163	900	900
W164	1200	1800
W165	2700	600
W166	2700	600
SD101	2700	3000
SD162	2700	3000
UNIT 17		
W171	900	900
W172	1200	1800
W173	600	1800
W174	1200	2700
W175	2700	600
W176	2700	600
SD171	2700	3000
LOBBY		
WL1	1200	1500
WL2	1200	1500
WL3	1200	1500
WL4	1200	1500
WL5	1200	1500
SDL1	2700	3000
SDL2	2700	3000

A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in:
the openable portion of the window must be protected with :
1– A device to restrict the window opening or
2– A screen with secure fitting
A device or screen required must not permit a 125mm sphere to pass through the window or screen and resist an outward horizontal action 250N against the
– window restrained by a device or
– screen protecting the opening
– have a child resistant release mechanism if the screen or device is able to be removed unlocked or overridden.
A barrier with a height not less than 865mm above the floor is required to an openable window
– in addition to window protection when a child resistant screen release mechanism is required
– for openable windows 4m or more above the surface beneath if the window is not covered by
A barrier covered must not
– permit a 125mm sphere to pass through
– have any horizontal bar near horizontal elements between 150mm and 760mm above the floor that facilitate climbing





0 1 2 3 4 5 6

GENERAL NOTES	DATE	REV	AMENDMENTS
	20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA
DEVELOPMENT APPLICATION ISSUE	20/05/2018	B	DRAWINGS ISSUED FOR COORDINATION
Do not scale from drawings All dimensions are to be checked on site before commencement of work All discrepancies to be brought to the attention of the project manager Larger scale drawings and written dimensions take preference. This drawing is copyright and the property of the author, it must not be retained, copied or used without the express authority of Antoine Saouma.			

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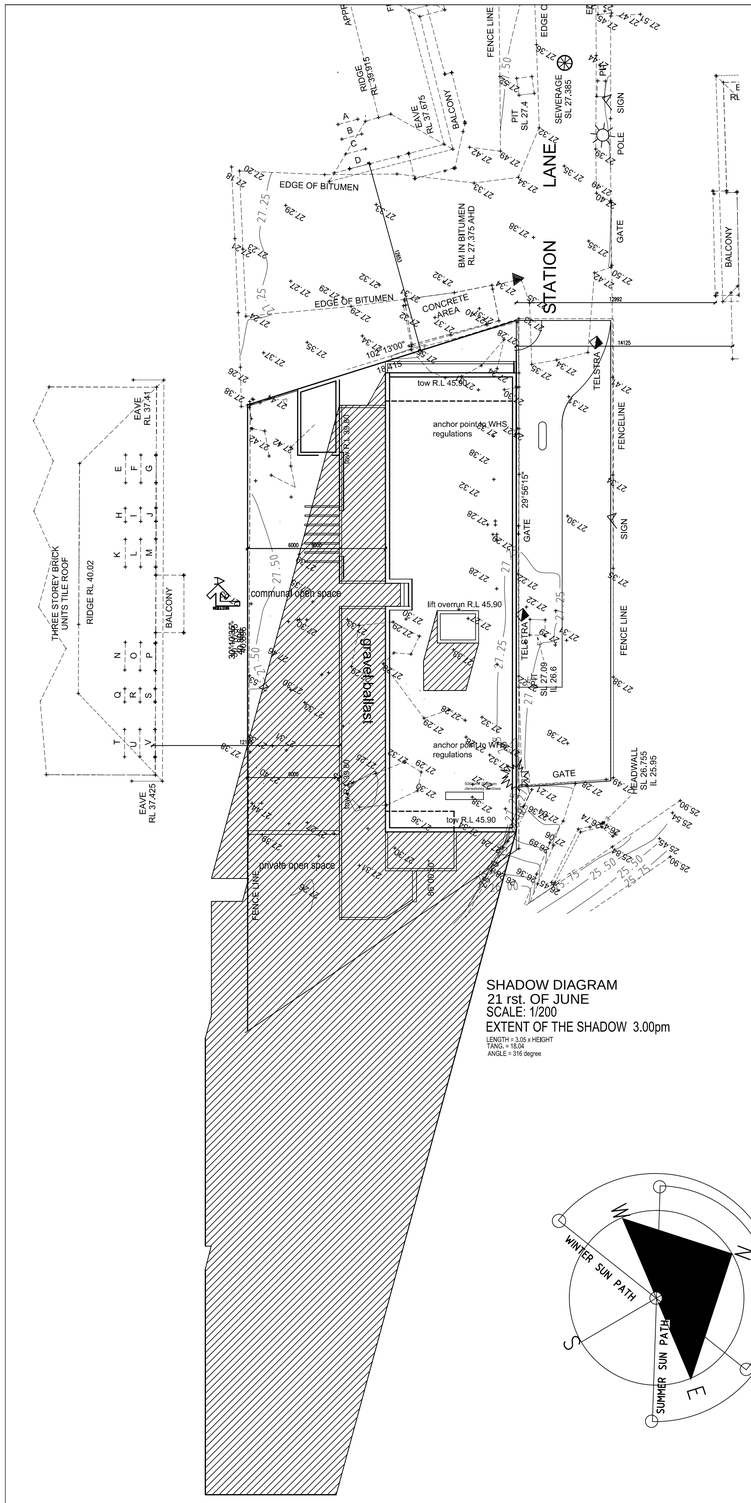
CLIENT
STATION LANE PTY LTD
ATF THE STATION LANE TRUST

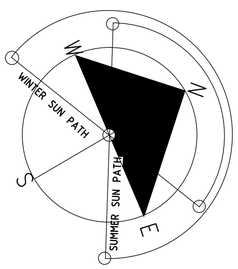
PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW				
DRAWING	WINDOW SCHEDULE				
SCALE	1:100		JOB NO	TYPE	DWG NO	REV
DRAWN BY	AS		03717	DA	17	B
CHECKED BY						
DATE	AUGUST 2017					

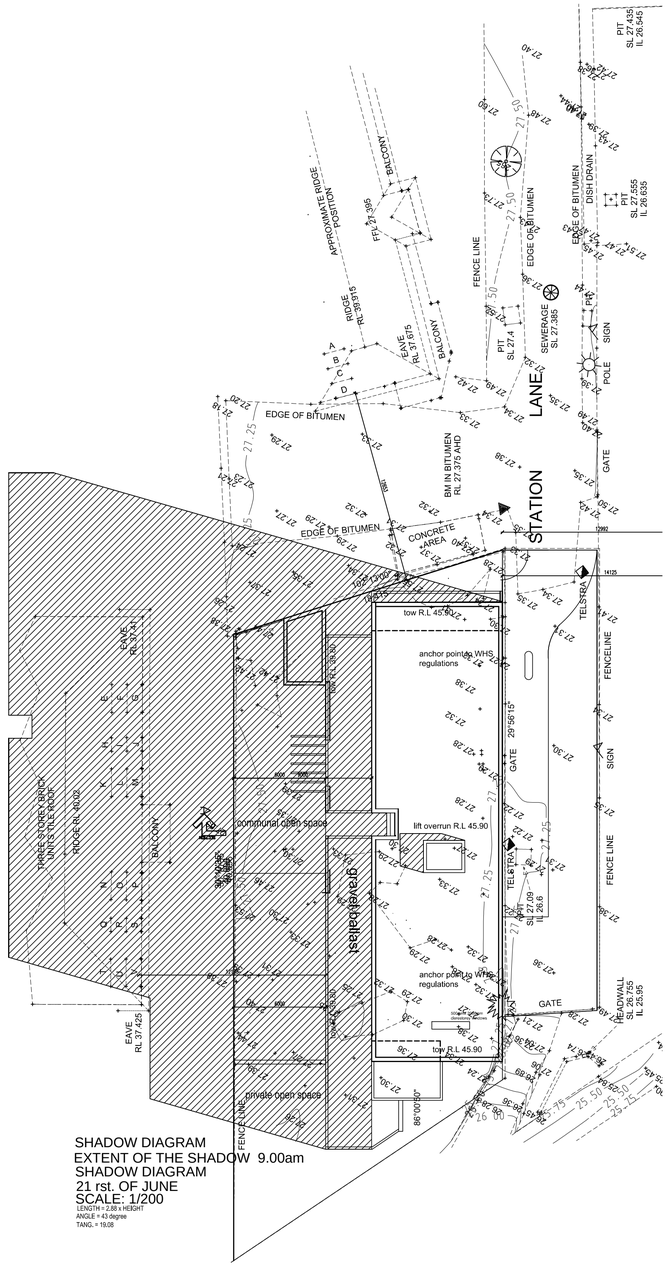
N
true north



SHADOW DIAGRAM
21 rst. OF JUNE
SCALE: 1/200
EXTENT OF THE SHADOW 3.00pm

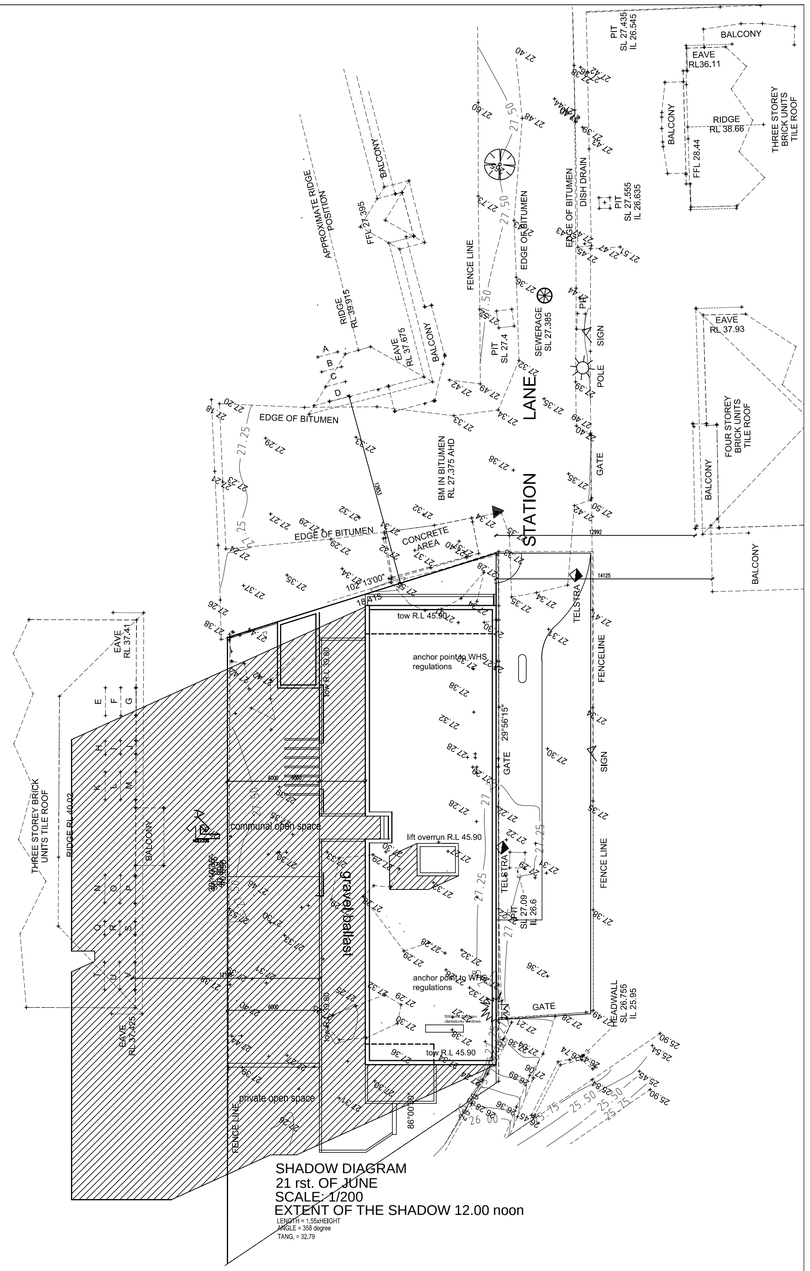
LENGTH = 3.05 x HEIGHT
TANG. = 18.04
ANGLE = 316 degree





SHADOW DIAGRAM
EXTENT OF THE SHADOW 9.00am
SHADOW DIAGRAM
21 rst. OF JUNE
SCALE: 1/200

LENGTH = 2.88 x HEIGHT
ANGLE = 43.degree
TANG. = 19.08



SHADOW DIAGRAM
21 rst. OF JUNE
SCALE: 1/200
EXTENT OF THE SHADOW 12.00 noon

LENGTH = 1.05xHEIGHT
ANGLE = 358 degree
TANG. = 32.79

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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DATE	REV	AMENDMENTS
20/02/2018	A	PRELIMINARY DRAWINGS , ISSUE FOR PRE-DA
10/05/2018	B	DRAWINGS , ISSUE FOR DA

ANTOINE J. SAOUMA
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MEMBER
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CLIENT
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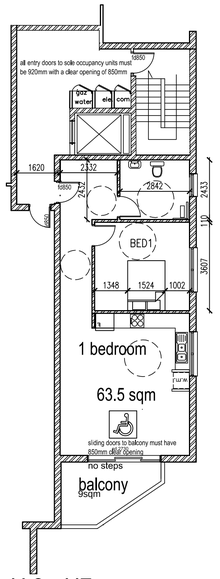
ATF THE STATION LANE TRUST

PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW

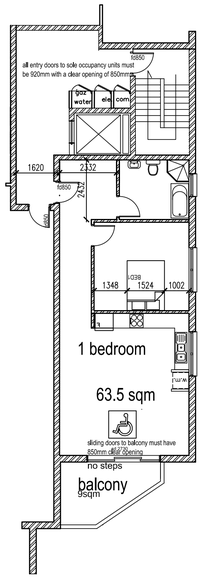
DRAWING	SHADOW DIADRAM
SCALE	1:200
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	18	B



U 3 - U7
POST ADAPTATION UNITS
SCALE 1/100



U 3 - U7
PRE ADAPTATION UNITS
SCALE 1/100

ADAPTABLE HOUSING

To satisfy requirements of AS 4299 -1995 , AS 1428.1 ans AS 2890.6-2009 the adaptable units 3 & 7 shall provide the following :

* Continuous accesiiblev path of travel from the site frontage to the adaptable units
* Common use facilities will be accessible
* Letterboxes are accessible
* External pathway lighting
* Entry porch is covered
* Provision for a microwaven oven 750mm -1200mm AFFL
* Light over kitchen sink
* Potential illumination to 300 lux in the entry , bedroom bathroom living.
* Four double GPO's in living / dining area
* Three double GPO's TV and phone outlets in bedroom
* Sliding door with mirror in bedroom
* Linen Cupboard
* Shelf in laundry 1200mm AFFL
* Accesible garbage bin enclosure
* Electrical distribution sub-board within the unit in an accessible location
* Provision foe external wheelchair storage
* Slip resistant flooring in bathroom , laundry and external private deck terrace
* Kitchen sink 1500mm deep x 800mm off the floor and open under for minimum 820mm wide
* Fittings and fixtures in kitchen to comply with AS 1428.1
* Shower recess in bathroom 1100mm x 1160mm hobless
* Toilet 450mm from side wall , 800mm to front of pan
* Basin to be Caroma Caravelle or similar
* Circulation space to AS 1428.1
* Fittings and fixtures to AS 1428.1
* Installation of grab rails to AS 1428.1
* Car parking to AS 2890.6-2009
* 850mm clear open for entry door 530mm on latch of door inside and outside , 110 mm 0n hinge side
* landing 1350mm in front of door
* circulation space inside entry door 1500mm minimum
* Level handles to AS 1428.1
* All internal doors 820mm clear when open
* 1000mm minimum space each side of the queen bed , 1540mm in front of bed
* 850mm clear open for rear landing door 530mm on latch of door inside and outside , 110 mm 0n hinge side
* landing on top of ramp 1500mm , ramp minimum 1200mm

NOTE : THE PLUMBING IS PROVIDED IN SLAB TO SUIT POST ADAPTATION LAYOUT

0 1 2 3 4 5 6

GENERAL NOTES

DEVELOPMENT APPLICATION ISSUE

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DATE	REV	AMENDMENTS
20/05/2018	A	PRELIMINARY DRAWINGS ISSUE FOR DA

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CLIENT
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ATF THE STATION LANE TRUST

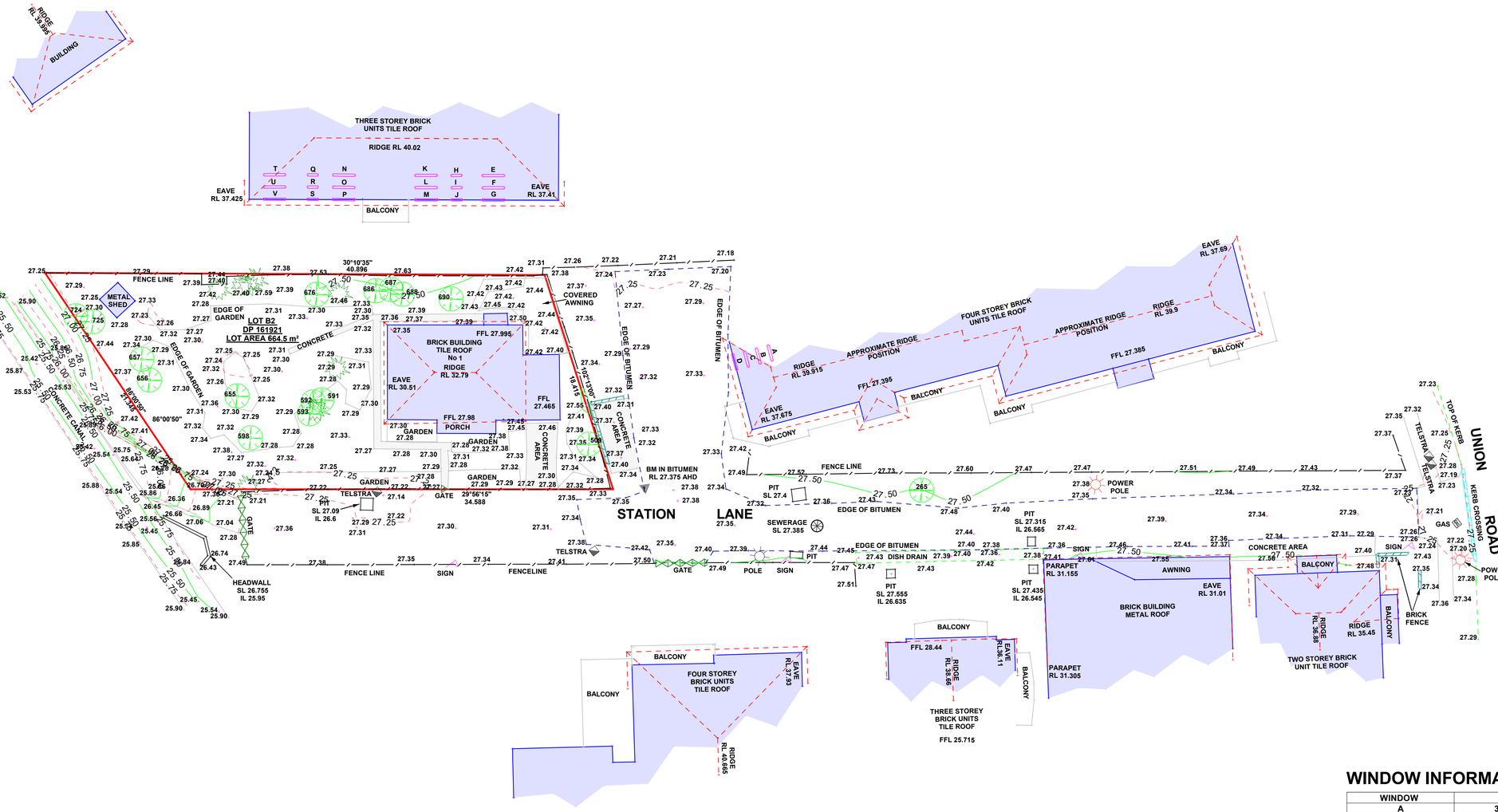
PROJECT	PROPOSED RESIDENTIAL FLAT BUILDING @ LOT B2 DP 161921 No 1 STATION LANE PENRITH NSW
DRAWING	ADAPTABLE UNITS
SCALE	1:100
DRAWN BY	AS
CHECKED BY	
DATE	AUGUST 2017

N
true north

JOB NO	TYPE	DWG NO	REV
03717	DA	19	A

M.G.A

ALL BEARINGS ARE TO M.G.A.
AS PER DP 1220719



TREE INFORMATION TABEL

Point	Code	GIRTH	APPROX HEIGHT	SPREAD RADUIS
265	TREE	2.0	16.0	10.0
509	TREE	0.5	10.0	5.0
591	TREE	0.4	7.0	3.0
592	TREE	0.3	5.0	1.0
593	TREE	0.3	5.0	1.0
598	TREE	0.6	12.0	5.0
655	TREE	0.4	10.0	4.0
656	TREE	0.6	12.0	8.0
657	TREE	0.6	6.0	6.0
676	TREE	0.5	9.0	5.0
686	TREE	0.3	10.0	2.0
687	TREE	0.3	6.0	4.0
688	TREE	0.6	12.0	6.0
690	TREE	0.6	12.0	6.0
724	TREE	0.6	10.0	6.0
725	TREE	0.3	6.0	4.0

WINDOW INFORMATION TABLE

WINDOW	TOP	SILL
A	37.675	36.175
B	35.035	33.56
C	32.395	30.925
D	29.74	28.265
E	37.395	36.05
F	34.745	33.395
G	31.975	30.66
H	37.385	36.66
I	34.745	33.985
J	31.98	31.245
K	37.395	36.065
L	34.745	33.395
M	31.975	30.65
N	37.415	36.085
O	34.760	33.425
P	31.975	30.675
Q	37.42	36.7
R	34.765	34.010
S	31.995	31.305
T	37.415	36.07
U	34.735	33.425
V	32.005	30.655

NOTE-DO NOT SCALE OFF THIS PLAN
ALL LEVELS SHOULD BE TAKEN FROM THE BENCHMARK SHOWN ON PLAN
NO BOUNDARY DEFINITION HAS BEEN MADE
THE LOCATION OF ANY BUILDINGS OR IMPROVEMENTS SHOWN ARE APPROX ONLY
ONLY VISABLE SERVICES HAVE BEEN LOCATED

NO ATTEMPT HAS BEEN MADE TO LOCATE UNDERGROUND SERVICES

DIAL BEFORE YOU DIG 1100

JOB No :96228	**PLOT DATE :11/07/2017**
CLIENT :STATION LANE	**DATE OF SURVEY : 29-6-2017**
LOCATION :PENRITH	**DATUM: AHD SSM 56974**
SCALE : 1:200 A1 SHEET	**DRAWN BY:RHYSE.SMITH**

DETAIL SURVEY
LOT B2
IN DP 161921

CHECKED BY JOHN LOWE/CANDICE LOWE
REGISTERED SURVEYOR UNDER THE SURVEYING ACT 2002

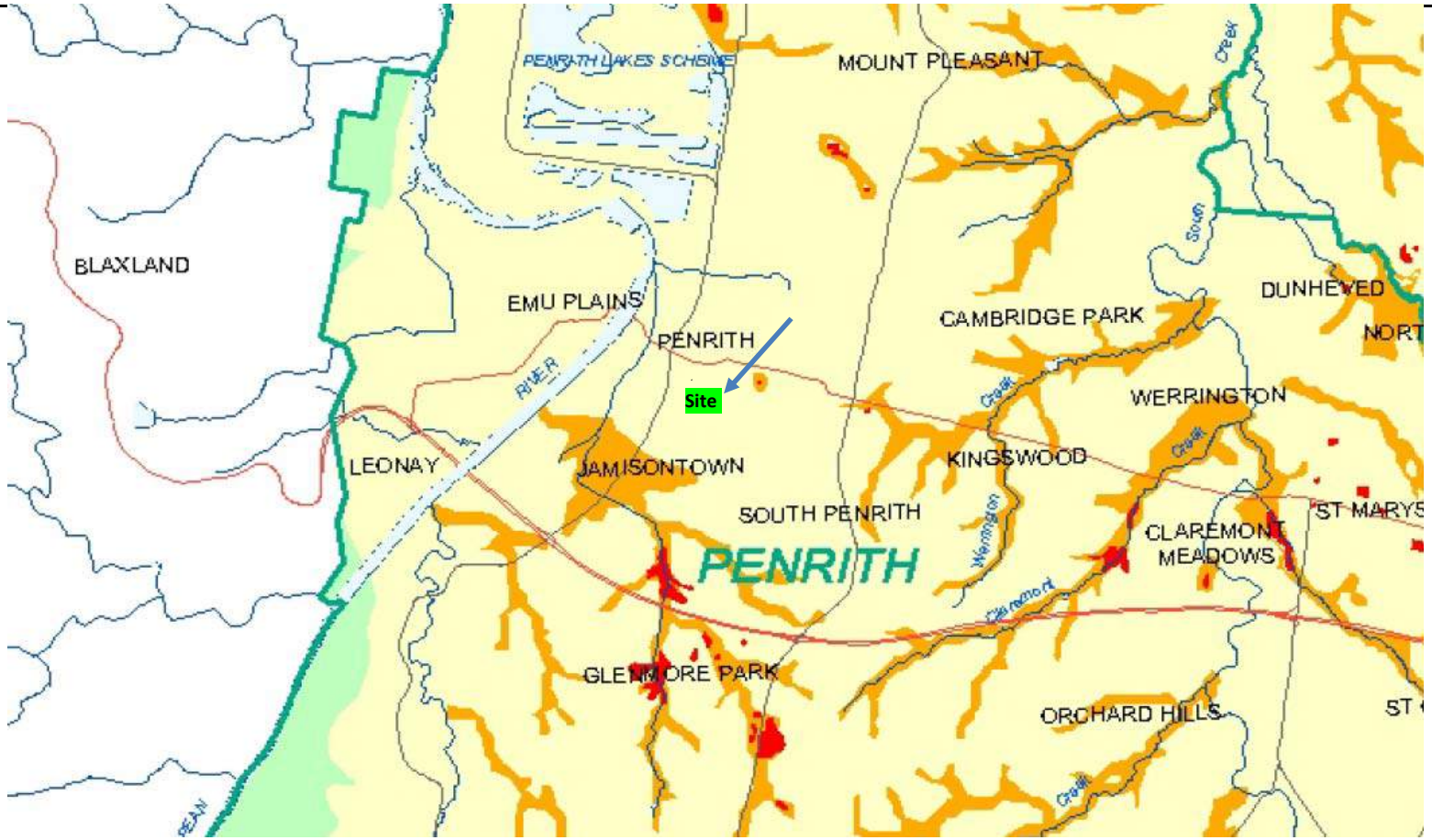
JOHN LOWE AND ASSOCIATES PTY LTD
CONSULTING LAND AND ENGINEERING SURVEYORS

LIVERPOOL
81 ELIZABETH DRIVE, LIVERPOOL
PHONE : 9602-4582, 9602-4010 FAX 9602-8324
PO BOX 465 LIVERPOOL NSW 2170
john@jlsurveys.com.au

A.B.N. 76 071 037 959

TAHMOOR
LYREBIRD RD, PHEASANTS NEST
PHONE : 4684-3227 FAX 4684-3228
PO BOX 42 TAHMOORL NSW 2573
candice@jlsurveys.com.au

APPENDIX H: SALINITY RISK MAP



Salinity Potential

Very Low	Moderate	High	Known Salinity

Key

Site Location →

Benviron group
simple sustainable solutions

DRAWN RL	Salinity Risk Map
	DIPNR NSW 2003
Job # E1857	1 Station Lane, Penrith NSW

APPENDIX I: DPI (OFFICE OF WATER) DATABASE RECORDS

All Groundwater » undefined

GW029710

All data times are Eastern Standard Time

Latest Values | **Work Summary Report** | Prepared Outputs

gw029710.wsr.htm does not exist
Please run DWR.REPORT.WORKSUMMARY.HSC to (re)create the report

All Groundwater » undefined

GW103048

All data times are Eastern Standard Time

Latest Values | **Work Summary Report** | Prepared Outputs

gw103048.wsr.htm does not exist
Please run DWR.REPORT.WORKSUMMARY.HSC to (re)create the report

All Groundwater » undefined

GW111987

All data times are Eastern Standard Time

Latest Values | **Work Summary Report** | Prepared Outputs

gw111987.wsr.htm does not exist
Please run DWR.REPORT.WORKSUMMARY.HSC to (re)create the report

All Groundwater » undefined

GW111987

All data times are Eastern Standard Time

Latest Values | **Work Summary Report** | Prepared Outputs

gw111987.wsr.htm does not exist
Please run DWR.REPORT.WORKSUMMARY.HSC to (re)create the report

All Groundwater » undefined

GW111989

All data times are Eastern Standard Time

Latest Values | **Work Summary Report** | Prepared Outputs

gw111989.wsr.htm does not exist
Please run DWR.REPORT.WORKSUMMARY.HSC to (re)create the report

APPENDIX J: BUREAU OF METEOROLOGY

Monthly Rainfall (millimetres)

PENRITH LAKES AWS

Station Number: 067113 · State: NSW · Opened: 1995 · Status: Open · Latitude: 33.72°S · Longitude: 150.68°E · Elevation: 25 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1995									*30.2*	*16.8*	*141.4*	*51.4*	
1996	*113.4*	*40.6*	*18.4*	*20.0*	*150.2*	*25.6*	*5.6*	*10.4*	*45.0*	*21.2*	*52.6*	42.6	*545.6*
1997	*195.4*	*177.4*	*25.2*	*1.8*	*38.4*	*22.6*	*28.6*	*0.0*	*75.2*	*59.8*	*25.2*	*29.6*	*679.2*
1998	*155.4*	*87.4*	*33.4*	*65.2*	*96.0*	*77.6*	*56.4*	*161.2*	*16.8*	*4.6*	*78.6*	*36.6*	*869.2*
1999	*152.4*	*35.8*	*22.0*	*10.0*	*10.4*	*24.6*	*82.0*	*18.8*	*25.4*	*87.4*	*14.0*	*69.4*	*552.2*
2000	*20.4*	*15.2*	*186.0*	*34.2*	*15.0*	*14.8*	*9.0*	*10.8*	*22.2*	*63.6*	*170.6*	*96.2*	*658.0*
2001	*148.2*	*142.8*	*99.4*	*90.4*	*32.8*	*3.0*	*71.8*	*23.8*	*28.2*	*39.6*	*41.0*	*30.4*	*751.4*
2002	*75.2*	*243.2*	*84.6*	*18.0*	*34.8*	*18.4*	*10.8*	*11.2*	*4.4*	*5.6*	*13.0*	*59.8*	*579.0*
2003	*23.8*	*101.6*	*147.8*	*45.2*	*89.0*	*24.6*	*26.6*	*24.6*	*4.2*	*76.4*	*76.0*	*78.0*	*717.8*
2004	*22.4*	*83.4*	*51.8*	*15.6*	*15.0*	*6.2*	*16.4*	*21.6*	*33.4*	*256.2*	*65.6*	*82.2*	*669.8*
2005	*114.8*	*160.4*	*46.8*	*14.6*	*21.2*	*68.2*	*53.0*	*1.4*	*35.8*	*81.6*	*136.4*	*26.2*	*760.4*
2006	*106.8*	*84.6*	*24.8*	*4.0*	*8.2*	*43.0*	*35.4*	*17.4*	*93.6*	*7.6*	*16.8*	*58.8*	*501.0*
2007	*23.0*	*181.8*	*87.2*	*50.6*	*24.8*	*226.0*	*15.0*	*78.2*	*14.2*	*24.2*	*206.2*	*82.2*	*1013.4*
2008	*112.0*	*228.4*	*48.0*	*84.6*	*4.2*	*98.4*	*16.6*	*23.8*	*39.4*	*79.4*	*62.4*	*70.0*	*867.2*
2009	*19.2*	*136.2*	*46.0*	*89.8*	*83.4*	*28.8*	*15.4*	*8.0*	*13.8*	*52.0*	*13.6*	*31.4*	*537.6*
2010	*43.6*	*274.8*	*30.0*	*15.4*	*50.0*	*51.4*	*56.8*	*23.0*	*26.4*	*61.0*	*142.8*	*39.8*	*815.0*
2011	*27.6*	*21.8*	*121.2*	*35.0*	*40.8*	*45.8*	*27.2*	*28.4*	*68.4*	*46.4*	*153.8*	*88.2*	*704.6*
2012	*138.0*	*266.2*	*149.2*	*93.6*	*15.4*	*65.4*	*19.2*	*5.0*	*24.4*	*34.0*	*67.0*	*28.0*	*905.4*
2013	*149.2*	*150.0*	*67.4*	*60.2*	*27.2*	*100.8*	*4.2*	*0.4*	*19.0*	*6.6*	*141.4*	*36.6*	*763.0*
2014	*27.4*	*68.2*	*100.6*	*54.4*	*4.0*	*35.4*	*12.0*	*103.0*	*18.8*	*65.6*	*40.0*	*164.2*	*693.6*
2015	*140.4*	*47.2*	*46.4*	*258.8*	*47.6*	*67.4*	*33.4*	*40.0*	*15.8*	*31.6*	*141.2*	*109.2*	*979.0*
2016	*307.8*	*1.8*	*16.8*	*12.2*	*7.2*		*48.2*	*48.8*	*50.0*	*12.4*	*16.6*	*65.2*	
2017	*28.2*	*69.8*	*230.2*	*29.4*	*10.2*	*29.0*	*1.4*	*9.8*	*0.2*	*45.2*	*23.4*	*50.6*	*527.4*
2018	*36.4*	*70.4*	*78.6*	*22.6*	*3.2*								

Quality control: 12.3 Done & acceptable, *12.3* Not completed or unknown

Monthly Rainfall (millimetres)

PENRITH LAKES AWS

Station Number: 067113 · State: NSW · Opened: 1995 · Status: Open · Latitude: 33.72°S · Longitude: 150.68°E · Elevation: 25 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	94.8	116.9	76.6	48.9	36.0	51.3	29.3	30.4	30.6	51.3	80.0	62.0	718.6
Lowest	19.2	1.8	16.8	1.8	3.2	3.0	1.4	0.0	0.2	4.6	13.0	26.2	501.0
5th percentile	20.6	15.9	18.8	4.6	4.0	6.2	4.3	0.4	4.2	5.7	13.6	28.2	527.4
10th percentile	22.5	24.6	22.6	10.4	4.8	14.8	5.9	1.8	6.3	6.8	14.5	29.8	537.6
Median	106.8	87.4	51.8	34.2	24.8	35.4	22.9	20.2	25.4	45.2	65.6	58.8	704.6
90th percentile	154.8	240.2	148.9	90.3	87.9	98.4	56.8	75.3	64.7	81.2	151.6	94.6	905.4
95th percentile	191.4	263.9	182.3	93.3	95.3	100.8	71.1	101.8	74.5	86.8	168.9	107.9	979.0
Highest	307.8	274.8	230.2	258.8	150.2	226.0	82.0	161.2	93.6	256.2	206.2	164.2	1013.4

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml.

Product code: IDCJAC0001 reference: 38664740 Created on Mon 18 Jun 2018 11:53:12 AM EST

APPENDIX K: BOREHOLE LOGS

Job No:	E1857
Hole No:	S1
Sheet	1 of 1

ENGINEERING LOG OF DRILLED BOREHOLE

Client:	Station Lane Pty Ltd ATF The Station Lane Trust	Test Location:	Refer to Figure 2
Project:	Preliminary Site Investigation	Test Method:	Hand Auger
Project Location:	1 Station Lane, Penrith NSW	Date:	06.06.2018 Logged by: RL
		Surface Level:	N/A

Groundwater	Samples/ Field Tests	Depth (m)	Graphic Log	Unified Classification	Description	Moisture Condition	Consistency/ Rel. Density	Additional Comments	Depth (m)
		0.1		F	Fill: Silty Sand, fine to medium grained,	D	L	No HC odours, No staining	0.1
		0.2			lightk brown, with grass roots.			No visual fibro cement fragments	0.2
		0.3			End of S1 @0.2m BGL				0.3
		0.4							0.4
		0.5							0.5
		0.6							0.6
		0.7							0.7
		0.8							0.8
		0.9							0.9
		1.0							1.0
		1.1							1.1
		1.2							1.2
		1.3							1.3
		1.4							1.4
		1.5							1.5
		1.6							1.6
		1.7							1.7
		1.8							1.8
		1.9							1.9
		2.0							2.0
		2.1							2.1
		2.2							2.2
		2.3							2.3
		2.4							2.4
		2.5							2.5
		2.6							2.6
		2.7							2.7
		2.8							2.8
		2.9							2.9
		3.0							3.0
		3.1							3.1
		3.2							3.2
		3.3							3.3
		3.4							3.4
		3.5							3.5

Explanatory Notes:

Consistency		Density Index		Samples		Moisture	
VS	Very Soft	**VL**	Very Loose	B	Bulk Sample	**D**	Dry
S	Soft	**L**	Loose	D	Disturbed Sample	**M**	Moist
F	Firm	**MD**	Medium Dense	U50	Undisturbed Sample (50mm diam.)	**W**	Wet
St	Stiff	**D**	Dense			**Wp**	Plastic Limit
VSt	Very Stiff	**VD**	Very Dense	N	S.P.T. Value	**Wl**	Liquid Limit
H	Hard						

Job No:	E1857
Hole No:	S2
Sheet	1 of 1

ENGINEERING LOG OF DRILLED BOREHOLE

Client:	Station Lane Pty Ltd ATF The Station Lane Trust	Test Location:	Refer to Figure 2
Project:	Preliminary Site Investigation	Test Method:	Hand Auger
Project Location:	1 Station Lane, Penrith NSW	Date:	06.06.2018 Logged by: RL
		Surface Level:	N/A

Groundwater	Samples/ Field Tests	Depth (m)	Graphic Log	Unified Classification	Description	Moisture Condition	Consistency/ Rel. Density	Additional Comments	Depth (m)
		0.1		F	Fill: Silty Sand, fine to medium grained,	D	L	No HC odours, No staining	0.1
		0.2			lightk brown, with grass roots.			No visual fibro cement fragments	0.2
		0.3			End of S2 @0.2m BGL				0.3
		0.4							0.4
		0.5							0.5
		0.6							0.6
		0.7							0.7
		0.8							0.8
		0.9							0.9
		1.0							1.0
		1.1							1.1
		1.2							1.2
		1.3							1.3
		1.4							1.4
		1.5							1.5
		1.6							1.6
		1.7							1.7
		1.8							1.8
		1.9							1.9
		2.0							2.0
		2.1							2.1
		2.2							2.2
		2.3							2.3
		2.4							2.4
		2.5							2.5
		2.6							2.6
		2.7							2.7
		2.8							2.8
		2.9							2.9
		3.0							3.0
		3.1							3.1
		3.2							3.2
		3.3							3.3
		3.4							3.4
		3.5							3.5

Explanatory Notes:

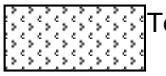
Consistency		Density Index		Samples		Moisture	
VS	Very Soft	**VL**	Very Loose	B	Bulk Sample	**D**	Dry
S	Soft	**L**	Loose	D	Disturbed Sample	**M**	Moist
F	Firm	**MD**	Medium Dense	U50	Undisturbed Sample (50mm diam.)	**W**	Wet
St	Stiff	**D**	Dense			**Wp**	Plastic Limit
VSt	Very Stiff	**VD**	Very Dense	N	S.P.T. Value	**Wl**	Liquid Limit
H	Hard						

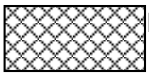
GRAPHIC SYMBOLS FOR SOIL AND ROCK

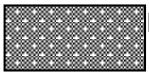
Soil


Bituminous Concrete

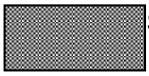

Concrete

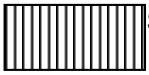

Topsoil

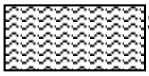

Fill


Peat

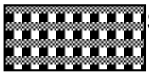

Clay

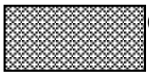

Silty Clay

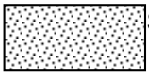

Silt

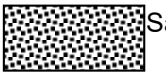

Sandy Clay

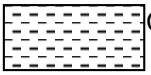

Gravelly Clay


Shaly Clay


Clayey Silt

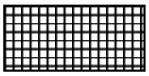

Sandy Silt


Sand

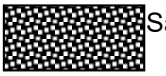

Clayey Sand


Silty Sand

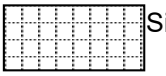

Gravel


Sandy Gravel

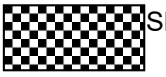
Sedimentary Rock

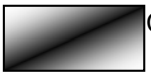

Sandstone Coarse Grained

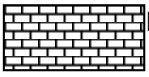

Sandstone Fine Grained


Siltstone


Laminite


Shale


Coal


Limestone

APPENDIX L: NATA ACCREDITED LABORATORY CERTIFICATES

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 193449

Client Details

Client	Benviron Group
Attention	Michael Silk
Address	PO Box 4405, East Gosford, NSW, 2250

Sample Details

Your Reference	**E1857 - Penrith**
Number of Samples	2 soil
Date samples received	06/06/2018
Date completed instructions received	06/06/2018

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	14/06/2018
Date of Issue	13/06/2018

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lucy Zhu, Asbsestos Analyst
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		193449-1	193449-2
Your Reference	UNITS	S1	S2
Depth		0-0.2	0-0.2
Date Sampled		05/06/2018	05/06/2018
Type of sample		soil	soil
Date extracted	-	07/06/2018	07/06/2018
Date analysed	-	08/06/2018	08/06/2018
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	114	127

svTRH (C10-C40) in Soil			
Our Reference		193449-1	193449-2
Your Reference	UNITS	S1	S2
Depth		0-0.2	0-0.2
Date Sampled		05/06/2018	05/06/2018
Type of sample		soil	soil
Date extracted	-	07/06/2018	07/06/2018
Date analysed	-	08/06/2018	08/06/2018
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	104	104

PAHs in Soil			
Our Reference		193449-1	193449-2
Your Reference	UNITS	S1	S2
Depth		0-0.2	0-0.2
Date Sampled		05/06/2018	05/06/2018
Type of sample		soil	soil
Date extracted	-	07/06/2018	07/06/2018
Date analysed	-	08/06/2018	08/06/2018
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	0.3	0.5
Pyrene	mg/kg	0.3	0.5
Benzo(a)anthracene	mg/kg	0.1	0.2
Chrysene	mg/kg	0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	0.2	0.3
Benzo(a)pyrene	mg/kg	0.1	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1
Total +ve PAH's	mg/kg	1.2	2.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	111	106

Organochlorine Pesticides in soil		
Our Reference		193449-2
Your Reference	UNITS	S2
Depth		0-0.2
Date Sampled		05/06/2018
Type of sample		soil
Date extracted	-	07/06/2018
Date analysed	-	07/06/2018
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	%	101

PCBs in Soil		
Our Reference		193449-2
Your Reference	UNITS	S2
Depth		0-0.2
Date Sampled		05/06/2018
Type of sample		soil
Date extracted	-	07/06/2018
Date analysed	-	07/06/2018
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	%	101

Acid Extractable metals in soil			
Our Reference		193449-1	193449-2
Your Reference	UNITS	S1	S2
Depth		0-0.2	0-0.2
Date Sampled		05/06/2018	05/06/2018
Type of sample		soil	soil
Date prepared	-	07/06/2018	07/06/2018
Date analysed	-	08/06/2018	08/06/2018
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	8	12
Copper	mg/kg	13	20
Lead	mg/kg	36	63
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	4	6
Zinc	mg/kg	35	66

Moisture			
Our Reference		193449-1	193449-2
Your Reference	UNITS	S1	S2
Depth		0-0.2	0-0.2
Date Sampled		05/06/2018	05/06/2018
Type of sample		soil	soil
Date prepared	-	07/06/2018	07/06/2018
Date analysed	-	08/06/2018	08/06/2018
Moisture	%	5.5	6.2

Asbestos ID - soils NEPM - ASB-001		
Our Reference		193449-2
Your Reference	UNITS	S2
Depth		0-0.2
Date Sampled		05/06/2018
Type of sample		soil
Date analysed	-	08/06/2018
Sample mass tested	g	671.63
Sample Description	-	Brown fine-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

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.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			08/06/2018	[NT]	[NT]	[NT]	[NT]	08/06/2018	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	123	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	123	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	107	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	121	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	128	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	130	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	126	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	114	[NT]	[NT]	[NT]	[NT]	132	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			08/06/2018	[NT]	[NT]	[NT]	[NT]	08/06/2018	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	122	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	88	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	122	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	88	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate o-Terphenyl	%		Org-003	108	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			08/06/2018	[NT]	[NT]	[NT]	[NT]	08/06/2018	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	101	[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]	95	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	114	[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]	117	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	113	[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]	104	[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]	111	[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	106	[NT]	[NT]	[NT]	[NT]	124	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[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]	83	[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]	82	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[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]	90	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	97	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	74	[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]	71	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	109	[NT]	[NT]	[NT]	[NT]	123	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[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]	122	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	109	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			07/06/2018	[NT]	[NT]	[NT]	[NT]	07/06/2018	[NT]
Date analysed	-			08/06/2018	[NT]	[NT]	[NT]	[NT]	08/06/2018	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	106	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	92	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

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.

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.

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 193449

Date Received: 06.06.2018
Time Received: 10:30
Received By: JE
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Chain of Custody Record

Client Details:	**Benviron Group** **PO Box 4405, East Gosford NSW 2250** ben@benvirongroup.com.au michael@benvirongroup.com.au ray@benvirongroup.com.au ryan@benvirongroup.com.au **ph: +61466 385 221**	**Project Manager:**	Michael Silk
		Sampled By:	RM
Delivery Details:	**Envirolab Pty Ltd - Sydney Office** **12 Ashley Street, Chatswood NSW 2067** **email: ahle@envirolab.com.au** **ph: +612 9910 6200**	**Purchase Order #:**	N/A
		Page #:	1

Project #:	E1857
Project Name:	Penrith
Quote #:	
Turnaround time:	Standard

#	Sample ID	Depth	Date Sampled	Matrix	Analytes													Sample Comments
					TRH	BTEX	PAH	HM	OC	PCB	Asbestos %w/w	pH	EC	Sulphates	Chlorides	Texture Analysis	Envirolab Suites	
1	51	0-0.2	5.6.2018	Soil	x	x	x	x									Combo3	Keep
2	52	0-0.2	5.6.2018	Soil	x	x	x	x	x	x	x						Combo5a	Keep

Special Directions and Comments:

Relinquished by	Ryan Meader	**Received By**	ELS JE
Signature	RMeader	**Signature**	
Date	5.6.2018	**Date**	6.6.18 10:30

courier

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	Benviron Group
Attention	Michael Silk

Sample Login Details

Your reference	E1857 - Penrith
Envirolab Reference	193449
Date Sample Received	06/06/2018
Date Instructions Received	06/06/2018
Date Results Expected to be Reported	14/06/2018

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	2 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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Analysis Underway, details on the following page:

Document Set ID: 8363820
Version: 1, Version Date: 31/08/2018

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Sample ID	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
S1-0-0.2	✓	✓	✓			✓	
S2-0-0.2	✓	✓	✓	✓	✓	✓	✓

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.

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APPENDIX M: SUMMARY TABLE

Table M1

Sample Information				Heavy Metals (mg/kg)								TRH (mg/kg)						BTEX (mg/kg)					PAH (mg/kg)				OCP (mg/kg)											ASBESTOS	
Label	Depth	Date	Soil Type	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC	F1 (C_6-C_{10}) [2]	F2 (>C_{10}-C_{16}) [3]	F1 (C_6-C_{10})	F2 (>C_{10}-C_{16})	F3 (C_{16}-C_{34})	F4 (C_{34}-C_{40})	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	NAPHTHALENE	BENZO(A)PYRENE	CARINOGENIC PAHs (as Bap TEQ)	TOTAL PAH	NAPHTHALENE	DDT + DDD + DDE	ALDRIN + DIELDRIN	CHLORDANE	ENDOSULFAN	HEPTACHLOR	HCB	METHOXYCHLOR	TOXAPHENE	DDT	TOTAL PCB	% w/w (AF /FA)	% w/w (ACM)
S1	0-0.2	05.06.2018	F- Silty Sand	<4	<0.4	8	13	36	<0.1	4	35	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	1.2	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
S2	0-0.2	05.06.2018	F- Silty Sand	<4	<0.4	12	20	63	<0.1	6	66	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.2	<0.5	2.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.001	<0.01
Limit of Resolution (LOR)				4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1	1	1	0.05	0.5	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.01
NEPM (2013) HIL B				**500**	**150**	**500**	**30,000**	**1200**	**120**	**1,200**	**60,000**													**4**	**400**		**600**	**10**	**90**	**400**	**10**	**15**	**500**	**30**		**1**		
NEPM (2013) EIL & ESLs (inc site derived) [1]				100																		170											180				
NEPM (2013) ESLs - (Coarse Grain Soil - Sand / Gravel) [1]												180	120			300	2,800	50	85	70	105		0.7														
NEPM (2013) HSL A & B (SAND)																																					
0m to <1m												45	110					0.5	160	55	40	3															
Soil Saturation Concentration (Csat)												950	560					360	560	64	300	9															
NEPM (2013) Management Limit (Coarse Grain Soil)														700	1,000	2,500	10,000																				
NEPM (2013) HSL - Asbestos																																				0.001%	
%w/w asbestos for FA and AF																																					0.01%
%w/w asbestos for ACM - Residential A																																					

Notes

1 Urban residential / public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.

2 To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.

3 To obtain F2 subtract naphthalene from the >C_{10}-C_{16} fraction.

NL Calculated HSL is Non Limiting per NEPM (2013)