ENVIRONMENTAL MANAGEMENT PLAN

243-261 Forrester Road

North St Marys, NSW 2760

Home Co. – April 2021

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DOCUMENT CONTROL

ENVIRONMENT MANAGEMENT PLAN

243–261 Forrester Road
North St Marys, NSW 2760

PREPARED FOR

Home Co.
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PO Box 19
Double Bay NSW 2028

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1. INTRODUCTION

Geo-Logix Pty Ltd (Geo-Logix) was engaged by Home Co. (client) to prepare an Environmental Management Plan (EMP) of the property located at 243–261 Forrester Road, North St Marys NSW (Figure 1).

Geo-Logix understands that Home Co. proposes to redevelop the site as a Health and Wellness Precinct including medical centres, health services, a pharmacy, gym, childcare centre, children's recreation facilities, specialised retail, convenience shopping, restaurants/cafes and a residential aged care facility.

This EMP has been prepared for use by the client and relates to the management of an asbestos containment cell that exists beneath the north eastern corner of the site (Attachment A). It is understood that the cell is covered by a geofabric marking layer and at least 1 m of crushed shale fill. Geo-Logix understands that no penetrations of the cell are planned during construction or site operations. Proposed utility connections, including new sewer connections (Attachment B) are to be above the top elevation of the cell.

This EMP specifically relates to the development of, and continued operation of the site as a Health and Wellness Precinct, and includes provision for accidental and other unplanned breaches of the containment cell. This EMP may not be suitable for other land uses or development proposals.

1.1 Contamination

Bonded asbestos containing material (ACM) were encountered onsite in the location of the former football field during development of the site into a bulky goods store building with associated carpark.

The bonded ACM were remediated by onsite containment, which entailed placing a grey geo-fabric liner over the area of asbestos contaminated soil (containment cell) and placement of 1 m thick layer of clean fill over the top. The containment cell is beneath the current paved carpark and northern portion of the bulky goods store.

The bonded asbestos inside the containment cell does not present unacceptable health risks to construction workers or site users whilst it is left undisturbed.

1.2 EMP Objectives

The objective of the EMP is to manage site contamination in a manner that protects construction workers and users of the proposed Health and Wellness Precinct. Specific objectives of the EMP include:

- Describe the nature and location of the asbestos containment cell;
- Define the hierarchy of responsibilities for asbestos related works;
- Define safe work procedures for asbestos related works; and
- Define incident response and reporting requirements.

1.3 Key Stakeholders and Responsibilities

Stakeholder	Responsibility	Actions
Penrith City Council	Planning Approvals EMP Enforceability Planning Certificate	Update 10.7 Planning Certificate to identify the land as Contaminated Land and identify existence of the EMP
Site Owner Home Co.	Covenant on title Implement EMP	Ensure the EMP is readily available, up to date and relevant for those who may come in contact with site contamination. Provide council updated land title certificate with covenant on title binding the current owners and future owners to be responsible for management of existing asbestos containment cell.

1.4 Definitions

Asbestos Related Works: Any activities that may disturb the asbestos containment cell in any way.

Property Owner: Person conducting a business or undertaking.

Construction Foreman: Person with management or control of a construction workplace.

Facility Manager: Person with management or control of the proposed Health and Wellness Precinct.

Contractor: Other persons at the workplace.

Qualified Person: Licensed Asbestos Assessor.

2. SITE INFORMATION

2.1 Site Identification

Street Address	Lot and Deposited Plan (DP)	Approximate Area (m^2)
243-261 Forrester Road, North St Marys NSW 2760	Lot 12 DP 1192443	32,500

2.2 Site Zoning and Land Use

Under the Penrith Local Environmental Plan 2010 (PLEP 2010), the site is zoned as Light Industrial (IN2).
Surrounding Land Use

At the time of the investigation, the surrounding land use comprised the following:

- **North** – Forrester Road with large undeveloped land beyond;
- **South** – St Marys Rugby League Club with Boronia Road beyond;
- **East** – St Marys Rugby League Stadium, large dam and undeveloped land beyond; and
- **West** – Forrester Road and industrial properties beyond.

3. ENVIRONMENTAL BACKGROUND

3.1 Phase I ESA, Geo-Logix 2010

Geo-Logix previously completed a Phase I Environmental Site Assessment (ESA) in April 2010, prior to construction of a bulky goods store at the site. The scope of works included review of historical data, site inspection and limited soil sampling. Geo-Logix concluded that the site was suitable for redevelopment as a bulky goods store.

Historical information gathered for that report was incorporated into the Geo-Logix PSI (2020).

3.2 Asbestos Management Plan, GETEX 2013

GETEX prepared an Asbestos Management Plan (AMP) for the Masters Home Improvement Store in May 2013. The asbestos management approach entailed placing a grey geo-fabric liner over the area of contaminated soil and placement of 1 m thick layer of clean fill over the top. The plan further defined methodologies and control measures to be adhered to in the event future subsurface excavation encounters the contain asbestos impacted soils. The encapsulated asbestos was identified as Non-Friable (Bonded) Asbestos. The frequency and/or concentration of bonded asbestos in the impacted soil was not discussed in the AMP.

3.3 Preliminary Site Investigation, Geo-Logix 2020

Geo-Logix prepared a Preliminary Site Investigation (PSI) in August 2020 to establish whether activities have occurred on site which may have resulted in contamination of the land. The PSI found that the site has been subject to uncontrolled filling and identified a number of contaminants of potential concern (COPCs) associated with this.

Geo-Logix concluded that the site can be made suitable for the proposed development as a health and wellness precinct subject to the implementation of a site-specific Environmental Management Plan (EMP) and completion of a detailed site investigation (DS).

3.4 Detailed Site Investigation, Geo-Logix 2021

Geo-Logix prepared a DSI in April 2021. The DSI comprised completion of 20 borings on a 40 m grid through fill to native soil. The DSI concluded that the site was suitable for the proposed health and wellness precinct subject to the implementation of this EMP.

4. ASBESTOS

Asbestos is the generic term for a number of fibrous silicate minerals. There are two major groups of asbestos: the serpentine group (i.e. chrysotile) and the amphibole group (i.e. amosite, crocidolite, tremolite, actinolite and anthophyllite). Asbestos has widely been used in building products due to its insulation and fire-resistant properties. The toxic effects of asbestos are well recognised and primarily result from the inhalation of free fibres. If fibres are inhaled into the lungs, they can initiate diseases that take many years to produce major health effects. These effects include asbestosis, lung cancer and mesothelioma (WA DOH, 2009).

The National Environmental Protection Council (NEPC) recognises the following forms of asbestos contamination:

- Asbestos-containing material (ACM) which is in sound condition and the asbestos is bound in a matrix (cement sheeting, tiles). This is also restricted to ACM that cannot pass through a 7mm x 7mm sieve. ACM represents a low human health risk;
- Fibrous Asbestos (FA) encompasses asbestos in the form of loose fibrous material such as insulation and severely weathered ACM defined by its crumbly nature under hand pressure; and
- Asbestos Fines (AF) includes free fibres of asbestos, small fibre bundles and ACM fragments that pass through a 7mm x 7mm sieve.

Both FA and AF have the potential to generate airborne fibres and can pose a considerable inhalation risk if made airborne.

The remaining pipework is comprised of bonded ACM in good condition and does not pose a risk to human health whilst left undisturbed.

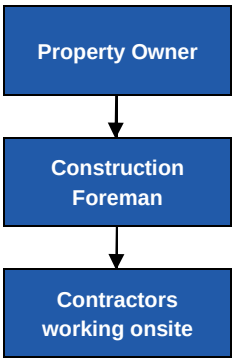
5. RELEVANT LEGISLATION

Where applicable, the following legislation, codes of practice and guidance documents provide the framework for the management of site contamination:

- NSW Work Health and Safety Act 2011;
- NSW Work Health and Safety Regulation 2017;
- Protection of Environment Operations Act 1997
- Contaminated Land Management Act 1997
- National Environment Protection (Assessment of Site Contamination) Measure 2013 Amendment (NEPC, 1999);
- Managing asbestos in or on soil (WorkCover NSW, 2020);
- How to Safely Remove Asbestos Code of Practice (NSW Government, 2019a);
- Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005));
- How to Manage and Control Asbestos in the Workplace Code of Practice (NSW Government, 2019b);
- Code of Practice for the Management and Control of Asbestos in Workplaces (NOHSC: 2018 (2005));
- Waste Classification Guidelines (NSW EPA, 2014); and
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition, (NOHSC: 3003 (2005)).

6. SUBSURFACE WORKS MANAGEMENT – CONSTRUCTION

The below measures are to be put in place for the management of asbestos during the construction phase of the site.



6.1 Induction

The Construction Foreman is to ensure all employees and sub-contractors undertaking work on the site have completed a site-specific induction in relation to the asbestos containment cell location.

The induction program is to include the following:

- Information about the nature of the hazards arising from exposure to asbestos (Section 4);
- Identification of the location of bonded asbestos (Section 1.1);
- Procedures to be followed in the event the bonded asbestos is disturbed or to be removed to facilitate construction (Section 7 and 9);
- Exposure monitoring that may be required for working with asbestos (Section 9); and
- Incident reporting.

Records of all inductions must be kept for 5 years after the day the worker stops carrying out the Asbestos Related Works. These records must also be made available for inspection by the Property Owner or Safe Work regulator (SafeWork NSW) as required.

An example induction register is included as Attachment C.

6.2 Accessing the EMP

The Construction Foreman must ensure the EMP is retained on the site and is readily accessible to:

- Any worker (and their employers and/or health and safety representatives) who has carried out, carries out, or intends to carry out Asbestos Related Works.

6.3 Containment Cell Breaches

If the cell is breached during construction, work in the affected area is to be stopped and a Qualified Person engaged to determine specific procedures for asbestos related works in accordance with Section 8 below.

All breaches of containment cells, whether intentional or incidental, must be rectified to maintain integrity of containment system and verified by a Qualified Person.

Rectification is to include the isolation and re-placement or offsite disposal of any material removed from the cell and the repair of the cell marker layer (geofabric).

At completion of construction the record of containment rectifications is to be prepared by a Qualified Person verifying the containment system has been repaired correctly. The verification report is to be held onsite with the EMP Records.

7. ENVIRONMENTAL MANAGEMENT PLAN – SITE OPERATION

The EMP procedures defined in this section below are to ensure the following:

- There will be appropriate public notification of the contamination condition that applies to the land so that potential purchasers or other interested individuals are aware of the restrictions; and
- Outline hierarchy of responsible parties for implementation of the EMP during commercial operation.

7.1 Environmental Management Plan Public Notification

The Site owner is to register a covenant on title of the land binding the owners and future owners to the following:

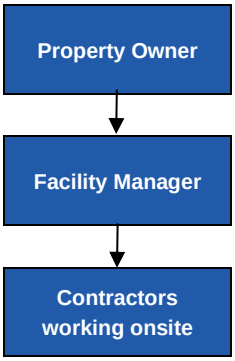
- Responsibility for ongoing maintenance of the asbestos containment cell in accordance with the EMP; and
- Responsibility for any future management of site contamination that may be required by NSW Environment Protection Authority to ensure that the site remains suitable for present or proposed land uses and to ensure risks to human health remain low and acceptable.

Penrith City Council is to amend the Section 10.7 Planning Certificate to include the following notations:

- The site is identified as Contaminated Land; and
- The existence of the Environmental Management Plan.

7.2 Hierarchy of EMP Responsibilities

The Property Owner is to ensure that a hierarchy of responsibilities is established between individuals identified within each level of control, and those individuals are made responsible for the effective implementation of the EMP.



A responsible person for the EMP should be appointed by the Property Owner to ensure that the EMP is effectively implemented, typically that would include the facility manager.

A register of responsible persons has been included in Attachment D and must be completed by the person appointed by the Property Owner.

The responsible person is accountable for the following:

- Ensure sub-surface workers are made aware of this EMP and the location of the asbestos containment cell by reference to Section 1.1 of the EMP.

In the event sub-surface workers are required to disturb locations of bonded asbestos ensure they are aware of and adhere to the following:

- Information about the nature of the hazards arising from exposure to asbestos (Section 4);
- Identification of the location of bonded asbestos (Section 1.1);
- Record induction and maintain induction register (Section 7.3);
- Procedures to be followed in the event the bonded asbestos is disturbed (Section 8);
- Exposure monitoring that may be required for working with asbestos (Section 8); and
- Incident reporting (Section 8).

7.3 Induction

The responsible person for the on-going management of the site is required to ensure all contractors undertaking work at the location of the asbestos containment cell have undergone an appropriate site-specific induction. The induction program is to be inclusive of the following:

- Information about the nature of the hazards, identifying ACM and the risks to health arising from exposure to asbestos;
- Details of the asbestos onsite, including processes and safe work procedures to be followed to prevent exposure; and
- Incident reporting procedures to be followed in case of disturbance of the asbestos containment cell.

Records of all inductions must be kept for 5 years after the day the worker stops carrying out the Contamination Related Works. These records must also be available for inspection by property owner or the regulator (WorkCover NSW). An induction register is included as Attachment C.

7.4 Accessing the Environmental Management Plan

The responsible person must ensure the EMP is provided and readily accessible to:

- All users of the site; and
- Any contractor or subcontractor (and their employees and/or health and safety representatives) undertaking subsurface works at the Site.

Records of the individuals supplied with the EMP must be kept by the Facility Manager for 5 years.

7.5 Review of the Environmental Management Plan

The responsible person must ensure the EMP is kept up to date and a copy is readily accessible on the Site. The EMP must be reviewed by a Qualified Person when either of the following occurs:

- The site use has changed;
- The asbestos containment cell has been disturbed; and
- The plan is no longer adequate for managing risks to human health and/or the environment.

8. PROCEDURE FOR ASBESTOS RELATED WORKS

In the event of a breach of the containment cell the following general procedure is to be followed. Additional situation-specific procedures are to be provided by a Qualified Person and adhered to:

- Construction Foreman / Facility Manager to provide information to contractors regarding the requirements of compliance with this EMP;
- Contractors to prepare and provide to the Project/Property Manager, a Health and Safety Plan including Safe Work Method Statements and an Environmental Works Plan. Plans are to be developed in accordance with the regulatory framework and guidance documents presented in Section 5 and feature steps detailed in this section;
- Construction Foreman / Facility Manager to review contractors plans prior to providing approval for works to commence;
- Construction Foreman / Facility Manager to ensure all persons working on the site are inducted into the requirements of the EMP, the contractor's Health and Safety Plan and the contractor's Environmental Works Plan;
- All Asbestos Related Works (i.e. works involving breach of the containment cell) is to be undertaken by a Class B licensed asbestos removal contractor for bonded asbestos. The contractor is to notify WorkCover of the removal works 7 days prior to commencement;
- An exclusion zone from the work areas is to be established, barricaded and access restricted;
- Establish area for decontamination facilities (area for wetting down and disposal of PPE);
- All appropriate signage is to be erected, including appropriate asbestos warning signs;

- All workers to wear appropriate PPE (in accordance with Health and Safety Plan) while working in the exclusion zone, including respiratory protection using a half face mask equipped with P2 (or higher) particulate filter, gloves, disposable overalls and safety shoes;
- When leaving the exclusion zone all workers are to use the decontamination facilities. All used PPE is to be placed in 200um thick plastic bags and disposed of as asbestos contaminated waste;
- Material to be disposed offsite should be disposed of to an appropriately licensed facility;
- Water spray to be used during earthmoving to suppress dust and potential generation of airborne asbestos fibres;
- NATA accredited asbestos air monitoring is to be undertaken during all asbestos related works by a licensed Asbestos Assessor. The method to be used for asbestos air monitoring is that detailed in Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition, (NOHSC: 3003(2005));
- All disturbance of the bonded asbestos in the containment cell and details of any material disposed off-site is to be recorded in the Contamination Related Works Activity Register (Attachment E); and
- All complaints and environmental incidents are to be recorded in the Complaints and Environmental Incidents Register (Attachment F).

9. LIMITATIONS

This report should be read in full, and no executive summary, conclusion or other section of the report may be used or relied on in isolation, or taken as representative of the report as a whole. No responsibility is accepted by Geo-Logix, and any duty of care that may arise but for this statement is excluded, in relation to any use of any part of this report other than on this basis.

This document is limited to providing general Environmental Management Procedures for management of subsurface contamination beneath the site for a proposed Health and Wellness Precinct. This document may not be suitable for other land uses or development proposals. The Client indemnifies Geo-Logix against all loss, including without limitation consequential loss, damage and/or liability, howsoever arising in connection, with any use or reliance on this document for land uses or developments other than the proposed Health and Wellness Precinct.

It is the responsibility of any party using this report to fully check to their satisfaction if this report is suitable for their intended use.

10. REFERENCES

Contaminated Land Management Act 1997.

NEPC (1999) *Amended National Environmental Protection Measure (2013)*, National Environmental Protection Council.

NSW EPA (2014*) Waste Classification Guidelines*, NSW Environment Protection Authority, Sydney, 2014.

Protection of the Environment Operations Act 1997 (NSW).

Safe Work Australia (2020a) *How to Safely Remove Asbestos Code of Practice*, Safe Work Australia, July 2020.

Safe Work Australia (2020b) *How to Manage and Control Asbestos in the Workplace Code of Practice*, Safe Work Australia. Safe Work Australia, July 2020.

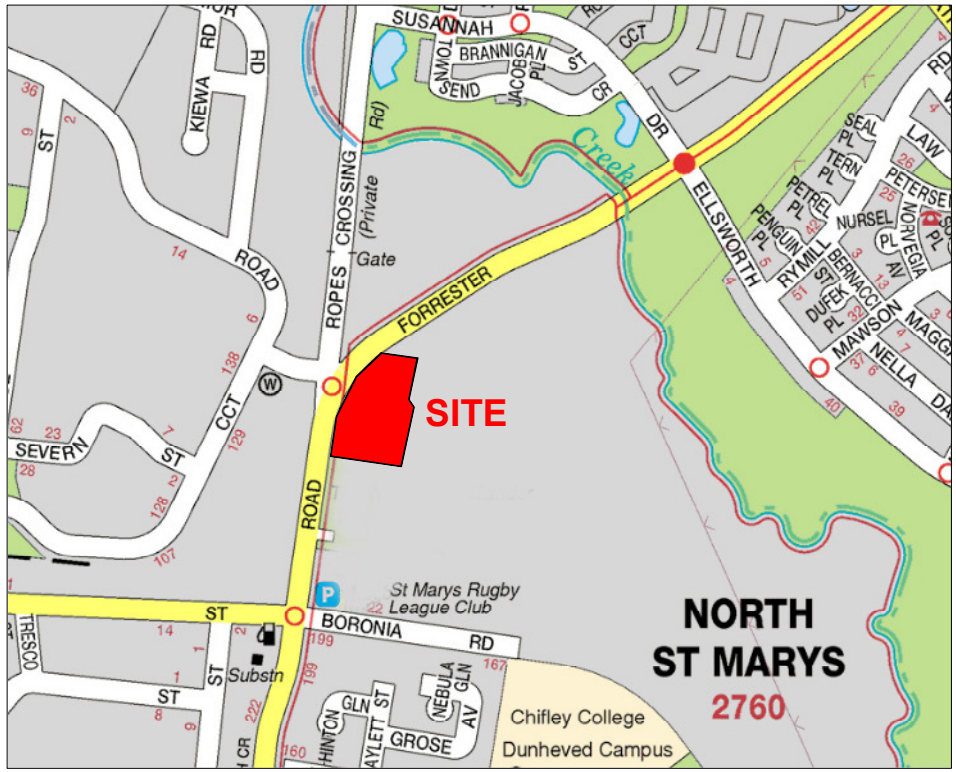
Safe Work Australia (2019) *Workplace Exposure Standards for Airborne Contaminants*, Safe Work Australia, 16 December 2019.

WorkCover NSW (2020) *Managing Asbestos in or on Soil*, WorkCover, NSW Government, 2020.

Work Health and Safety Act 2011 (NSW).

Work Health and Safety Regulation 2017 (NSW)

FIGURES



PART MAP ST MARYS

PART MAP NSW

ISSUE	DATE	AMENDMENTS	DRAWN	CHECKED
01		ORIGINAL ISSUE		

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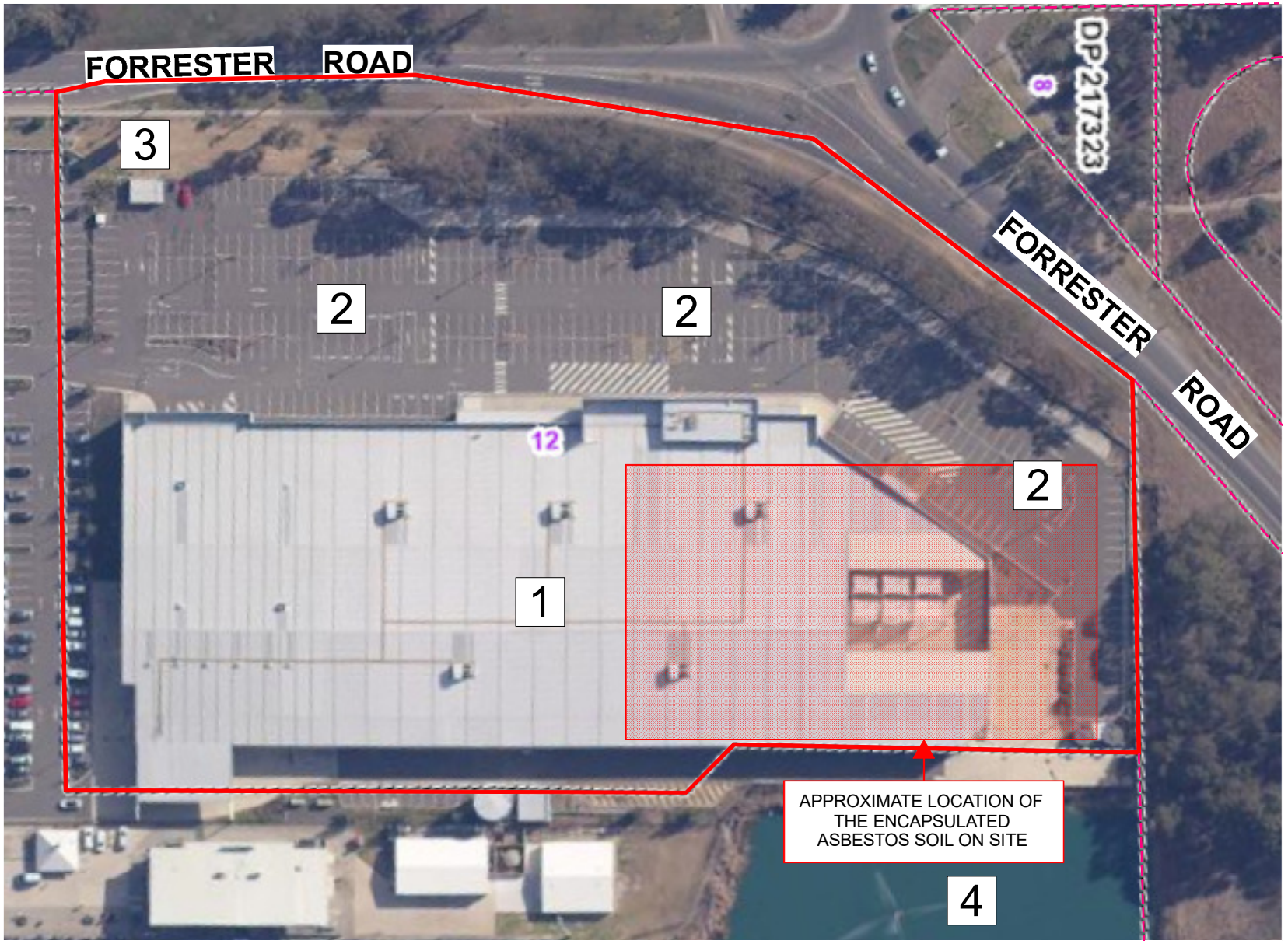
DRAWN:	CHECKED:
J.E.D.	J.I.
APPROVED:	B.P.
DATE:	23/03/2021

SITE LOCATION MAP
ENVIRONMENTAL MANAGEMENT PLAN
243-261 FORRESTER ROAD, NORTH ST MARYS NSW 2760

SHEET SIZE:	PROJECT No.	REV:	
A4	**2101028**	01	FIGURE 1



N

SITE BOUNDARY

ADJACENT BOUNDARY

1 FORMER BULKY GOODS STORE

2 CARPARK

3 REVERSE VENDING MACHINE (BOTTLES, CANS, CARTONS RECYCLING)

4 OFF-SITE DAM

LEGEND

10 0 10 20 30 40 50m

SCALE (SIX MAP)

ISSUE	DATE	AMENDMENTS	DRAWN	CHECKED
01		ORIGINAL ISSUE		

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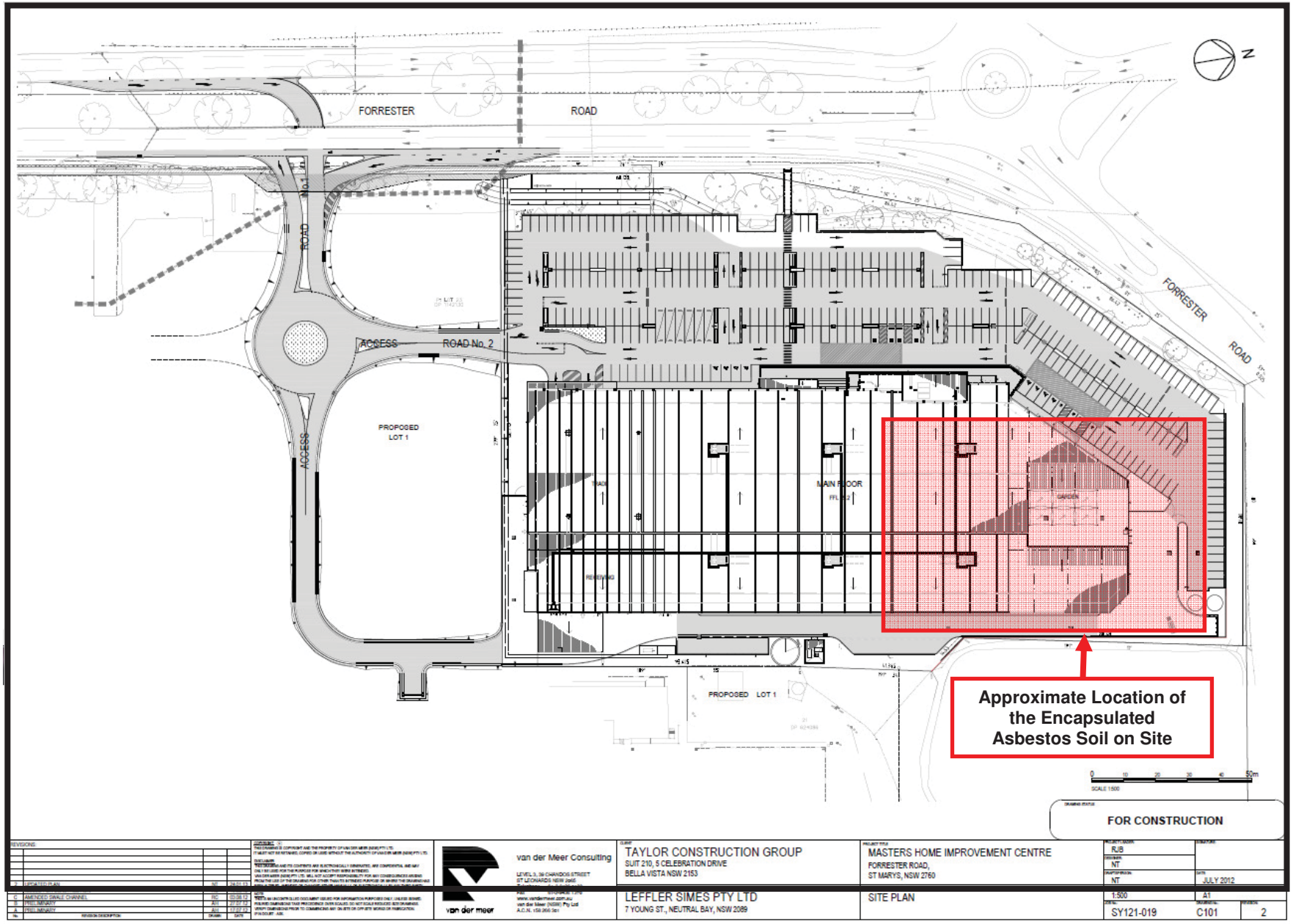
DRAWN: J.E.D. CHECKED: J.I.
APPROVED: B.P.
DATE: 15/06/2020

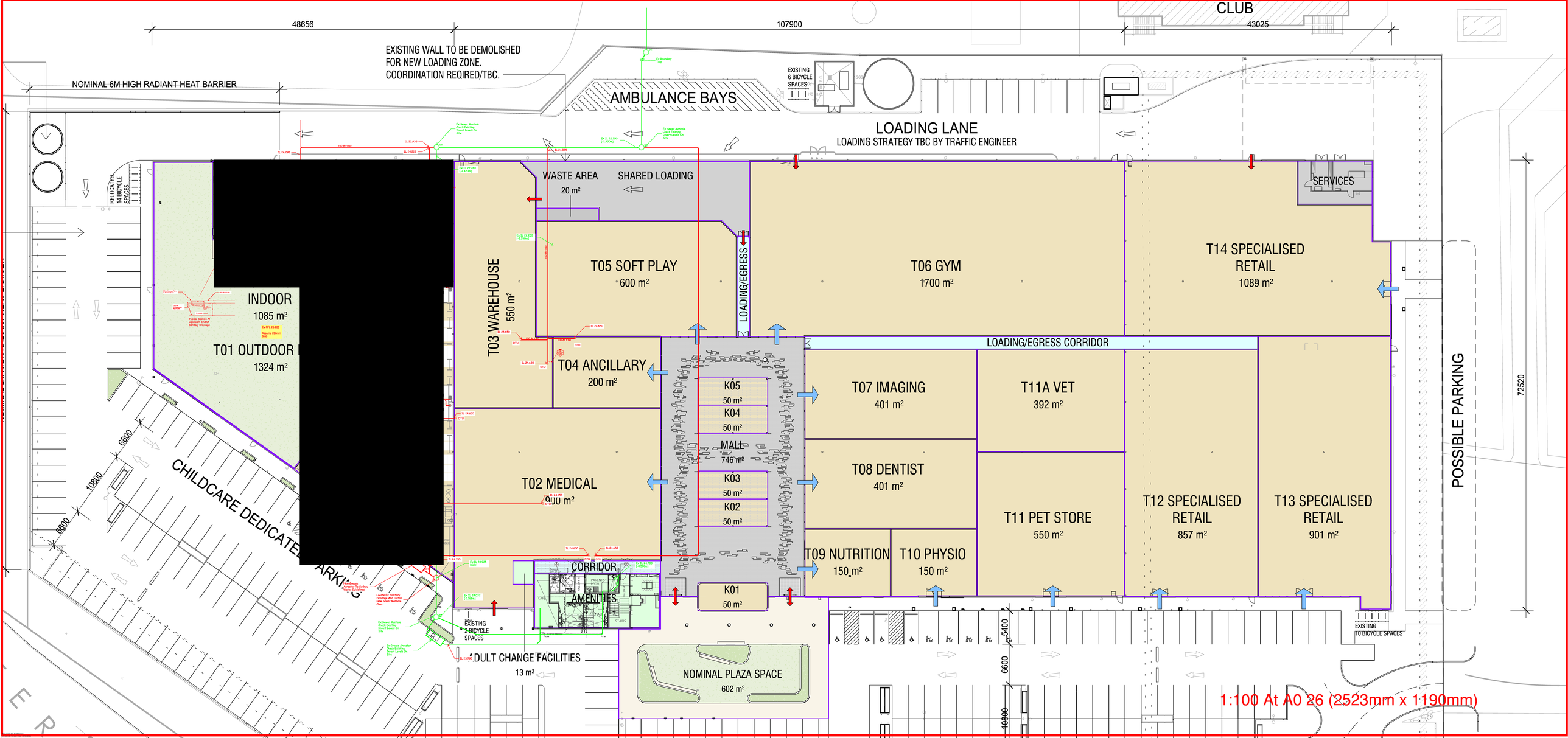
SITE MAP
ENVIRONMENTAL MANAGEMENT PLAN
LOT 12 DP1192443, 243-261 FORRESTER ROAD, NORTH ST MARYS NSW 2760

SHEET SIZE: A4 | PROJECT No. 2101028 | REV: 01 | FIGURE 2

ATTACHMENT A



ATTACHMENT B


48656
107900
43025
CLUB
EXISTING WALL TO BE DEMOLISHED
FOR NEW LOADING ZONE.
COORDINATION REQIRED/TBC.
NOMINAL 6M HIGH RADIANT HEAT BARRIER
AMBULANCE BAYS
EXISTING
6 BICYCLE
SPACES
LOADING LANE
LOADING STRATEGY TBC BY TRAFFIC ENGINEER
RELOCATED
14 BICYCLE
SPACES
WASTE AREA
20 m²
SHARED LOADING
SERVICES
INDOOR
1085 m²
T01 OUTDOOR
1324 m²
T03 WAREHOUSE
550 m²
T05 SOFT PLAY
600 m²
LOADING/EGRESS
T06 GYM
1700 m²
T14 SPECIALISED
RETAIL
1089 m²
LOADING/EGRESS CORRIDOR
T04 ANCILLARY
200 m²
K05
50 m²
K04
50 m²
MALL
746 m²
K03
50 m²
K02
50 m²
K01
50 m²
T07 IMAGING
401 m²
T11A VET
392 m²
T08 DENTIST
401 m²
T02 MEDICAL
400 m²
T11 PET STORE
550 m²
T12 SPECIALISED
RETAIL
857 m²
T13 SPECIALISED
RETAIL
901 m²
T09 NUTRITION
150 m²
T10 PHYSIO
150 m²
POSSIBLE PARKING
72520
6600
10800
6600
CHILDCARE DEDICATED PARKING
CORRIDOR
AMENITIES
EXISTING
2 BICYCLE
SPACES
ADULT CHANGE FACILITIES
13 m²
NOMINAL PLAZA SPACE
602 m²
EXISTING
10 BICYCLE SPACES
5400
6600
10800
1:100 At A0 26 (2523mm x 1190mm)

ATTACHMENT C

Environmental Management Plan Induction Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date Inducted	Inductee			Inducted By	
	Inductee Name	Company Name	Company Contact Details	Name	Company Name

Environmental Management Plan Induction Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date Inducted	Inductee			Inducted By	
	Inductee Name	Company Name	Company Contact Details	Name	Company Name

Environmental Management Plan Induction Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date Inducted	Inductee			Inducted By	
	Inductee Name	Company Name	Company Contact Details	Name	Company Name

ATTACHMENT D

Person Responsible Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Name	Company	Position	Phone Number	Signature

Person Responsible Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Name	Company	Position	Phone Number	Signature

ATTACHMENT E

Contamination Related Works Activity Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Contamination Related Works	Location on site	Actions taken to manage contaminated material	Approved By

Contamination Related Works Activity Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Contamination Related Works	Location on site	Actions taken to manage bonded asbestos impacted material	Approved By

Contamination Related Works Activity Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Contamination Related Works	Location on site	Actions taken to manage bonded asbestos impacted material	Approved By

ATTACHMENT F

Complaints and Environmental Incidents Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Complaint / Environmental Incident	Location on site	Actions Taken to Resolve	Personnel Involved

Complaints and Environmental Incidents Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Complaint / Environmental Incident	Location on site	Actions Taken to Resolve	Personnel Involved

Complaints and Environmental Incidents Register

243 – 261 Forrester Road, North St Marys, NSW 2760

Date	Complaint / Environmental Incident	Location on site	Actions Taken to Resolve	Personnel Involved

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