

PHASE 1 PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT

4 CLOSE STREET, THIRLMERE NSW 2572

PREPARED FOR:

Devine Drafting

REFERENCE:

REF-6931-A

DATE:

7 November 2018

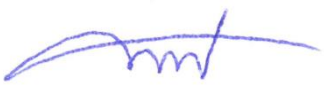

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<u>DOCUMENT HISTORY</u>		
<u>Document No.</u>	<u>Revision No.</u>	<u>Issue Date</u>
REP-6931	A	07/11/2018

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EXECUTIVE SUMMARY

EnviroTech Pty. Ltd. was engaged by Devine Drafting to conduct a Preliminary Phase 1 Environmental Site Assessment at 4 Close Street, Thirlmere, NSW 2572 (hereafter referred to as the site). The investigation will accompany a proposed development application for the construction of a proposed residential property.

The total area of investigation is approximately 2030 m². A site inspection was carried out on 18th October 2018 which involved a visual assessment of the area of investigation and surrounding areas. Details of the findings are presented within the body of this report, as well as an assessment of significance with regards to the findings of the investigation.

This report was completed in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites, NSW EPA, September 2000*.

Based on the data and evidence collected during the site inspection and site history review, the findings of the Environmental Site Assessment are as follows:

Based on the data and evidence collected during the site inspection and site history review, the findings of the Environmental Site Assessment are as follows:

1. At the time of inspection, the majority of the subject site was predominantly cleared displaying well-grassed areas. A small shed was present toward the rear of the property on the eastern boundary.
2. The site is not listed on any EPA records;
3. Based on the PSI, Envirotech considers that the site has a low potential for contamination associated with current and historical site activities. A stage 2 investigation is not required.
4. it is considered that the site does not require any further testing and considered that the site is remediated suitable to the proposed land use.

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1. INTRODUCTION

1.1 Background

EnviroTech Pty. Ltd. was engaged by ADW Johnson to conduct a Preliminary Phase 1 Environmental Site Assessment at 4 Close Street, Thirlmere, NSW 2572 (hereafter referred to as the site). The investigation will accompany a proposed development application for the construction of a proposed residential property.

The total area of investigation is approximately 2030 m². A site inspection was carried out on 18th October 2018 which involved a visual assessment of the area of investigation and surrounding areas. Details of the findings are presented within the body of this report, as well as an assessment of significance with regards to the findings of the investigation.

This report was completed in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites, NSW EPA, September 2000*.

1.2 Objectives

The objectives of this PSI were to:

1. Identify past and present potentially contaminating activities;
2. Identify potential contaminants of concern;
3. Provide a preliminary assessment of the condition of the site and potential for contamination; and
4. Assess the need for further investigation.

1.3 Scope of Works

The scope of works included the following:

1. A desktop search comprising;
 - Cadastre & Topography
 - Aerial Imagery
 - EPA Contaminated Land
 - EPA Records of Notice
 - National Waste
 - Groundwater Bores
 - Geology & Soils
 - Planning Zones
2. A review of past and current site uses;
3. A review of past and current adjacent site uses;
4. An integrity assessment;
5. A site inspection; and
6. Reporting in accordance with the associated legislations and guidelines.

1.4 Legislative Requirements

The legislative framework for the report is based on guidelines that have been set out by the NSW Environmental Protection Agency (EPA) formerly the Office of Environment and Heritage (OEH) in the form of the following Acts/Regulations:

1. *Protection of the Environment Operations Act (1997);*
2. *Protection of the Environment Operations Regulation (2008);*
3. *Contaminated Land Management Act (1998).*

In addition, the following guidelines and technical documents have been reviewed and applied where applicable:

1. *Guidelines for the NSW Site Auditor Scheme (NSW DEC, 2006).*
2. *Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 2000).*
3. *Guidelines on the Investigation Levels for Soil and Groundwater, National Environmental Protection Measure 1999, 2013 Amendment (NEPC, 2013).*
4. *Australian Standard AS 4482.1 Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds.*
5. *Australian Standard AS 4482.2 Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances.*
6. *Sampling Design Guidelines (NSW EPA, 1995).*
7. *Waste Classification Guidelines Part 1: Classifying Waste (NSW DECCW, 2014).*
8. *Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008 (NSW DECCW, 2009).*
9. *Guidelines for the Assessment and Management of Groundwater Contamination (NSW DEC, 2007).*

1.5 Context of report

This report is to be read in its entirety and should not be review in individual section to provide any level of information independently. Each section of the report relates to the rest of the document and as such is to be read in conjunction, including its appendices and attachments.

2. SITE IDENTIFICATION

The study site is 4 Close Street, NSW, 2752 (Figure 1). Figure 2 shows an aerial photograph of the site and the surrounding land.

3. PROPOSED DEVELOPMENT

The investigation will accompany a proposed development application for a proposed construction of a rural residential dwelling.



Figure 1 Area of Investigation map (Six Maps)



Figure 2: Aerial photograph of the area of investigation and surrounding land (PhotoMaps by nearmap)

4. SITE DESCRIPTION

4.1 Site inspection

On the 18th October 2018, a site inspection was conducted by Envirotech consultant Ben Hamilton. Field work was carried out in accordance with the methodology described in AS 4482.1 – 2005 and the NEPM (2013). At the time of inspection, the majority of the subject site was predominantly cleared displaying well-grassed areas. A small shed was present toward the rear of the property on the eastern boundary.

4.2 Surrounding land use

The site is located within a residential setting and bordered by:

- Adjacent residential properties to the north and west
- Vacant land to the west and south
- Railway Museum and railway to the east
- Recreational sporting grounds to the north

4.3 Topography

The site is gently sloping ~ 2.6% to the north with an average elevation of approximately 300 m AHD.

4.4 Geology and Soils

With reference to the Soil Landscapes of the Penrith 1:100,000 Sheet the site is located within the Lucas Heights soil landscape displaying moderately deep (50-150 cm), hard-setting yellowish brown sandy clay loams and clays. Topsoils consist of loose, dark brown to yellowish brown sandy loams.

Geology consists of the Mittagong Formation – interbedded shale, laminite and fine to medium grained quartz sandstone. Minor areas of Hawkesbury Sandstone and Wianamatta Group shale may occur.

4.5 Surface Water Hydrology

No surface water was observed.

4.6 Hydrogeology

A search of the NSW Office of Water 'Continuous Water Monitoring Network' Groundwater Map showed there was eighteen (18) boreholes within a 500m buffer of the site.

- GW113681 – Purpose: Monitoring bore - License Status: Active
- GW113682 – Purpose: Monitoring bore - License Status: Active
- GW113683 – Purpose: Monitoring bore - License Status: Active
- GW113684 – Purpose: Monitoring bore - License Status: Active
- GW113685 – Purpose: Monitoring bore - License Status: Active
- GW113686 – Purpose: Monitoring bore - License Status: Active
- GW113687 – Purpose: Monitoring bore - License Status: Active
- GW113688 – Purpose: Monitoring bore - License Status: Active
- GW113689 – Purpose: Monitoring bore - License Status: Active
- GW113690 – Purpose: Monitoring bore - License Status: Active
- GW113691 – Purpose: Monitoring bore - License Status: Active
- GW113692 – Purpose: Monitoring bore - License Status: Active
- GW113693 – Purpose: Monitoring bore - License Status: Active
- GW113694 – Purpose: Monitoring bore - License Status: Active
- GW113695 – Purpose: Monitoring bore - License Status: Active
- GW113696 – Purpose: Monitoring bore - License Status: Active
- GW113697 – Purpose: Monitoring bore - License Status: Active
- GW113698 – Purpose: Monitoring bore - License Status: Active

4.7 Receptors and Sensitive Environments

Sensitive receptors would include future residents to occupy the proposed. The closest sensitive environmental receptors are Mathews Creek to the west and a several local dams on the west/south west properties.

4.8 Areas of Concern

- Small shed has been constructed onsite within the area of concern from 2009.
- Area present from removal of pre-existing residential dwelling.

5. SITE RECORDS

A search of 85 Wahroonga Road, Kanwal, NSW on the following records was undertaken;

5.1 List of NSW Contaminated Sites - Notified to the EPA

- No records

5.2 List of NSW Contaminated Sites - Record of Notices

- No records

5.3 National Waste Management Site Database

- No records

5.4 List of Current EPA Licensed Activities

- Australian Rail Track Corporation Limited – Activity: Railway systems activities
- John Holland Rail Pty Ltd – Activity: Railway systems activities

5.5 Delicensed Activities still regulated by the EPA

- No records

5.6 Former Licensed Activities under the POEO Act 1997, now surrendered

- Wollondilly Shire Council – Location: Waterways of Wollondilly Shire Council – Contamination activity type: Other activities – Status: Surrendered
- Luhrmann Environment Management Pty Ltd – Location: Waterways throughout NSW – Contamination activity type: Other activities / Non-scheduled activity – application of herbicides – Status: Surrendered
- Robert Orchard – Location: Various waterways throughout NSW, Sydney NSW 2000 – Contamination activity type: Other activities / Non-scheduled activity – application of herbicides – Status: Surrendered
- Sydney Weed & Pest Management Pty Ltd – Location: Waterways Throughout NSW, Prospect, NSW, 2148 – Contamination activity type: Other activities / Non-scheduled activity – application of herbicides – Status: Surrendered

5.7 Historical Business Directories

- No records

6 SITE HISTORY

6.1 Aerial Photographs

A review of historical aerial photographs (Appendix A) was undertaken. The results of which are summarized in Table 1.

Table 1: Findings of the historical photograph review

Year	Description
1955	<ul style="list-style-type: none">• Poor resolution black and white aerial photo• Existing dwelling and infrastructure present on site• Adjacent properties contain various dwellings• Industrial area to the north-west
1965	<ul style="list-style-type: none">• Moderate resolution black and white aerial photo• Adjoining properties display evidence of farming• No significant changes to subject site or surrounding areas
1975	<ul style="list-style-type: none">• Moderate resolution black and whiter aerial photo• Rail infrastructure development to the east (Thirlmere Rail Heritage Centre)• No significant changes to subject site or surrounding areas
1994	<ul style="list-style-type: none">• Moderate resolution colour aerial photo• Extra building added top property adjacent to existing shed• No other significant changes to the subject site• Small market gardens present to the north
2002	<ul style="list-style-type: none">• Moderate resolution aerial colour photo• Significant Increase in residential properties and various infrastructure within surrounding properties• A few mature trees present on the subject site• Industrial area to the north-west appears to have been converted to a residential zoning
2009	<ul style="list-style-type: none">• High resolution aerial colour photo• Increase in residential infrastructure within surrounding areas of the subject site• An addition of a small shed on the eastern boundary of the subject site• Additional building added on to existing rail infrastructure at the southern end
2016	<ul style="list-style-type: none">• High resolution aerial colour photo• No significant changes to subject site and surrounding areas

6.2 Information Gaps

A site history has been established using the various sources as outlined above. However, the following information gaps have been identified:

1. Inferences have been drawn based on 'point in time' aerial photographs;
2. No information pertaining to the site pre-1955 was viewed;

Regarding the information available, it is considered that the quality of the information is consistent with industry standards and that the information is of high integrity with respect to the historical use of the site overall.

7.0 **RESULTS**

7.1. Site Observations

At the time of inspection, the subject site appeared to be mainly cleared with some scattered trees towards the rear (southern end) of the property. A small shed was present along the eastern boundary and appeared to be in good condition. The property was mainly grassed with some bare patches of ground toward the rear of the property.

7.2 Potential Risks to Onsite Receptors

It is considered that:

- There are minimal potential risks onsite.

7.3 Receptors and Pathways

7.3.1 Human Health

Human exposure to the potential contaminants identified is currently considered *LOW* as:

- The site is privately owned;
- Access is limited;

This risk would increase too *High* for any personnel involved in building demolition works or surface excavations without appropriate safe work methods and personal protective equipment.

7.3.2 Sensitive Receptors

Sensitive receptors would include future residents to occupy the proposed. The closest sensitive environmental receptor is a tributary Mathews Creek to the west of the subject site.

7.3.3 Potential for Migration of Contaminants

The potential for contaminants to migrate is currently considered *Low*.

7.4 Recommendations

Should unexpected contamination finds be encountered during proposed works the area of suspected contamination should be isolated to prevent further disturbance. Advice should be sought from a suitably qualified person for further assessment/remediation. No works should be undertaken until the affected area has been cleared by a suitably qualified person.

In the event asbestos like materials be identified onsite the affected area should be isolated to prevent further disturbance and assessed by a NSW licensed asbestos assessor. No works should be undertaken until the affected area has been cleared by a suitably qualified person.

Based on the PSI, Envirotech considers that the site has a low potential for contamination associated with current and historical site activities. A stage investigation is not required.

8 CONCLUSIONS AND RECOMMENDATIONS

Based on the data and evidence collected during the site inspection and site history review, the findings of the Environmental Site Assessment are as follows:

5. At the time of inspection, the majority of the subject site was predominantly cleared displaying well-grassed areas. A small shed was present toward the rear of the property on the eastern boundary.
6. The site is not listed on any EPA records;
7. Based on the PSI, Envirotech considers that the site has a low potential for contamination associated with current and historical site activities. A stage 2 investigation is not required.
8. it is considered that the site does not require any further testing and considered that the site is remediated suitable to the proposed land use.

9 LIMITATIONS STATEMENT

EnviroTech Pty. Ltd. Pty. Ltd. has undertaken the following report in accordance with the scope of works set out between EnviroTech Pty. Ltd. and the client. EnviroTech Pty. Ltd. derived the data in this report primarily from the site and soil assessment conducted on the date of site inspection. The impacts of future events may require future investigation of the site and subsequent data analysis, together with a re-evaluation of the conclusions and recommendations of this report.

In preparing this report, EnviroTech Pty. Ltd has relied upon, and assumed accurate, certain site information provided by the client and other persons. Except as otherwise stated in the report, we have not attempted to verify the accuracy or completeness of any such information. EnviroTech Pty. Ltd. accepts no liability or responsibility whatsoever for or in respect to any use or reliance upon this report by any third party.

The information contained within this report have been prepared exclusively for the client. Envirotech have prepared the report to address the risk associated with scale of the works. The report has been prepared with a degree of care and skill ordinarily exercised in similar investigations by reputable members of the environmental industry in Australia. No other warranty, expressed or implied, is made or intended. This report is to be read in its entirety including attachments and appendices and should not read in individual sections.

A third party should not rely upon the information prior to making an assessment that the scope of work conducted meets their specific needs. Envirotech cannot be held liable for third party reliance on this document.

Envirotech's professional opinions are based upon its professional judgment, experience, training and results from analytical data. In some cases, further testing and analysis may be required, thus producing different results and/or opinions. Envirotech Pty Ltd has limited its investigation to the scope agreed upon with its client.

- *Guidelines for the NSW Site Auditor Scheme* (NSW DEC, 2006).
- *Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2000).
- *Guidelines on the Investigation Levels for Soil and Groundwater*, National Environmental Protection Measure 1999, 2013 Amendment (NEPC, 2013).
- Australian Standard AS 4482.1 *Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds.*
- Australian Standard AS 4482.2 *Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances.*
- *Sampling Design Guidelines* (NSW EPA, 1995).
- *Waste Classification Guidelines Part 1: Classifying Waste* (NSW DECCW, 2014).
- *Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008* (NSW DECCW, 2009).
- *Guidelines for the Assessment and Management of Groundwater Contamination* (NSW DEC, 2007).
- NSW Spatial Information Exchange (<http://maps.six.nsw.gov.au/>)

APPENDIX A: SITE PHOTOS



Shed from front of property looking south



View of front of property (Close St)



Rear view of shed looking north



View of rear of property looking south



Existing underground services on site (water)



View of grassed paddock looking south-west toward neighboring property

APPENDIX B: LOTSEARCH



LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 25 Oct 2018 13:20:19

Reference: LS004465

Address: 4 Close Street, Thirlmere, NSW 2572

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features. You should obtain independent advice before you make any decision based on the information within the report. The detailed terms applicable to use of this report are set out at the end of this report.

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Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	Georeferenced to a network of features

Dataset Listing

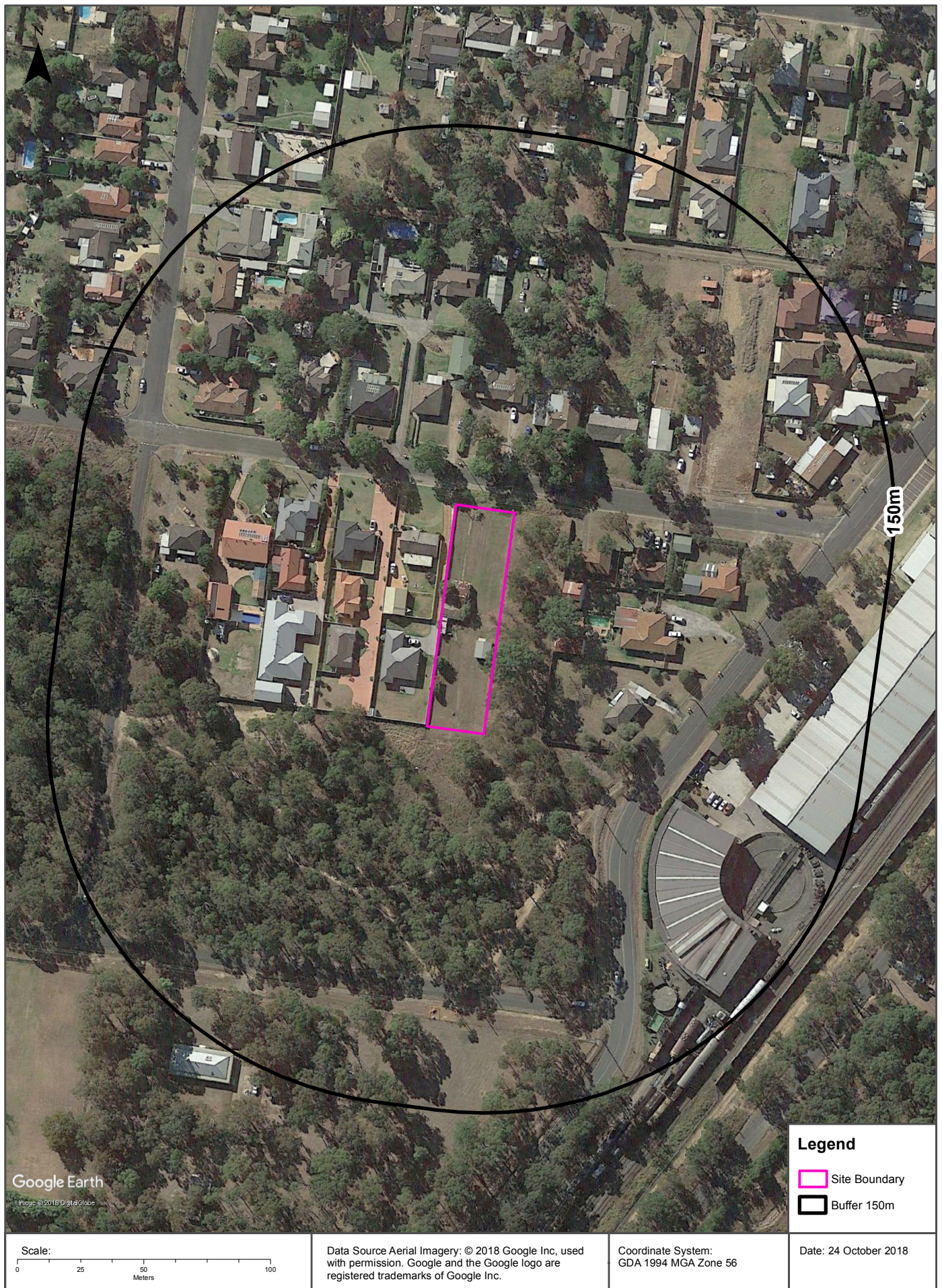
Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Dept. Finance, Services & Innovation	25/10/2018	25/10/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	17/10/2018	17/10/2018	Monthly	1000	0	1	1
Contaminated Land Records of Notice	Environment Protection Authority	10/10/2018	10/10/2018	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	04/10/2018	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	07/08/2018	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	05/10/2018	05/10/2018	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	As required	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	03/10/2018	03/10/2018	Monthly	1000	0	0	2
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	03/10/2018	03/10/2018	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	03/10/2018	03/10/2018	Monthly	1000	0	0	4
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	0	0	0
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	0
Points of Interest	Dept. Finance, Services & Innovation	12/10/2018	12/10/2018	Quarterly	1000	0	0	24
Tanks (Areas)	Dept. Finance, Services & Innovation	15/10/2018	15/10/2018	Quarterly	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	15/10/2018	15/10/2018	Quarterly	1000	0	0	0
Major Easements	Dept. Finance, Services & Innovation	12/10/2018	12/10/2018	Quarterly	1000	0	1	7
State Forest	Dept. Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	18/01/2018	30/09/2017	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	46
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	2
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	2
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	1
Environmental Planning Instrument - Acid Sulfate Soils	NSW Department of Planning and Environment	23/10/2018	12/10/2018	As required	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	1	1	3
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	1
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	1
LEP - Land Zoning	NSW Planning and Environment	23/07/2018	29/06/2018	Quarterly	1000	1	5	21
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	23/07/2018	13/07/2018	Quarterly	0	1	-	-
LEP - Height of Building	NSW Planning and Environment	09/08/2018	22/06/2018	Quarterly	0	1	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	23/07/2018	06/07/2018	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	23/07/2018	29/06/2018	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	23/07/2018	13/07/2018	Quarterly	0	0	-	-
State Heritage Register - Curtilages	NSW Office of Environment & Heritage	18/10/2018	19/01/2018	Quarterly	1000	0	0	1
Environmental Planning Instrument - Heritage	NSW Department of Planning and Environment	10/09/2018	27/07/2018	Quarterly	1000	0	1	11
Bush Fire Prone Land	NSW Rural Fire Service	08/08/2018	31/07/2018	Quarterly	1000	1	2	3
Remnant Vegetation of the Cumberland Plain	NSW Office of Environment & Heritage	07/10/2014	04/08/2011	Unknown	1000	2	4	12
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	2	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	1	5
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	23/10/2018	23/10/2018	Daily	10000	-	-	-

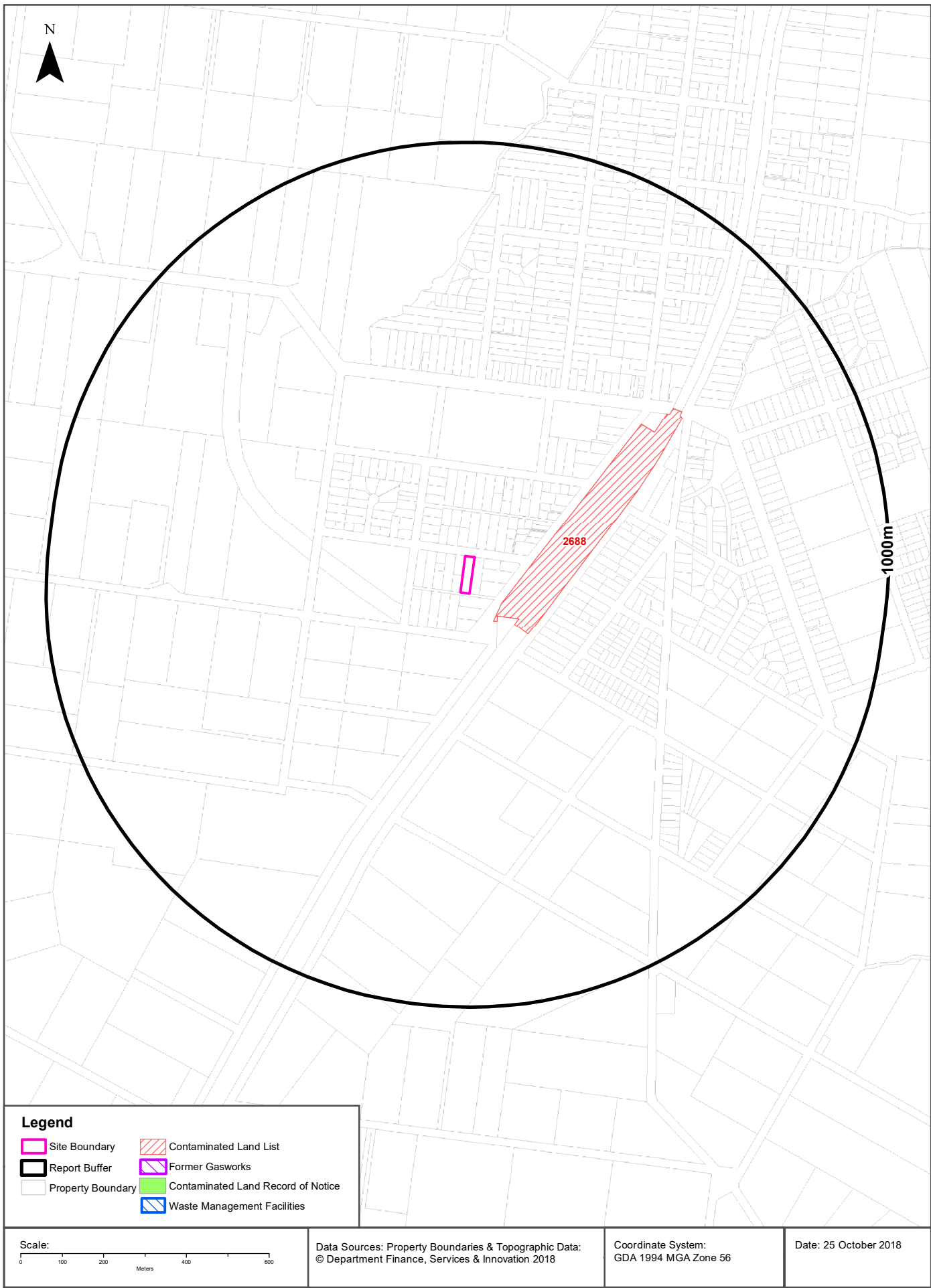
Aerial Imagery 2016

4 Close Street, Thirlmere, NSW 2572



Contaminated Land & Waste Management Facilities

4 Close Street, Thirlmere, NSW 2572



Contaminated Land & Waste Management Facilities

4 Close Street, Thirlmere, NSW 2572

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
2688	Thirlmere Rail Heritage Museum	10 Barbour Road	Thirlmere	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	79m	North East

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land & Waste Management Facilities

4 Close Street, Thirlmere, NSW 2572

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit
<http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia
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EPA PFAS Investigation Program

4 Close Street, Thirlmere, NSW 2572

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Id	Site	Address	Location Confidence	Distance	Direction
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

EPA Other Sites with Contamination Issues

4 Close Street, Thirlmere, NSW 2572

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill

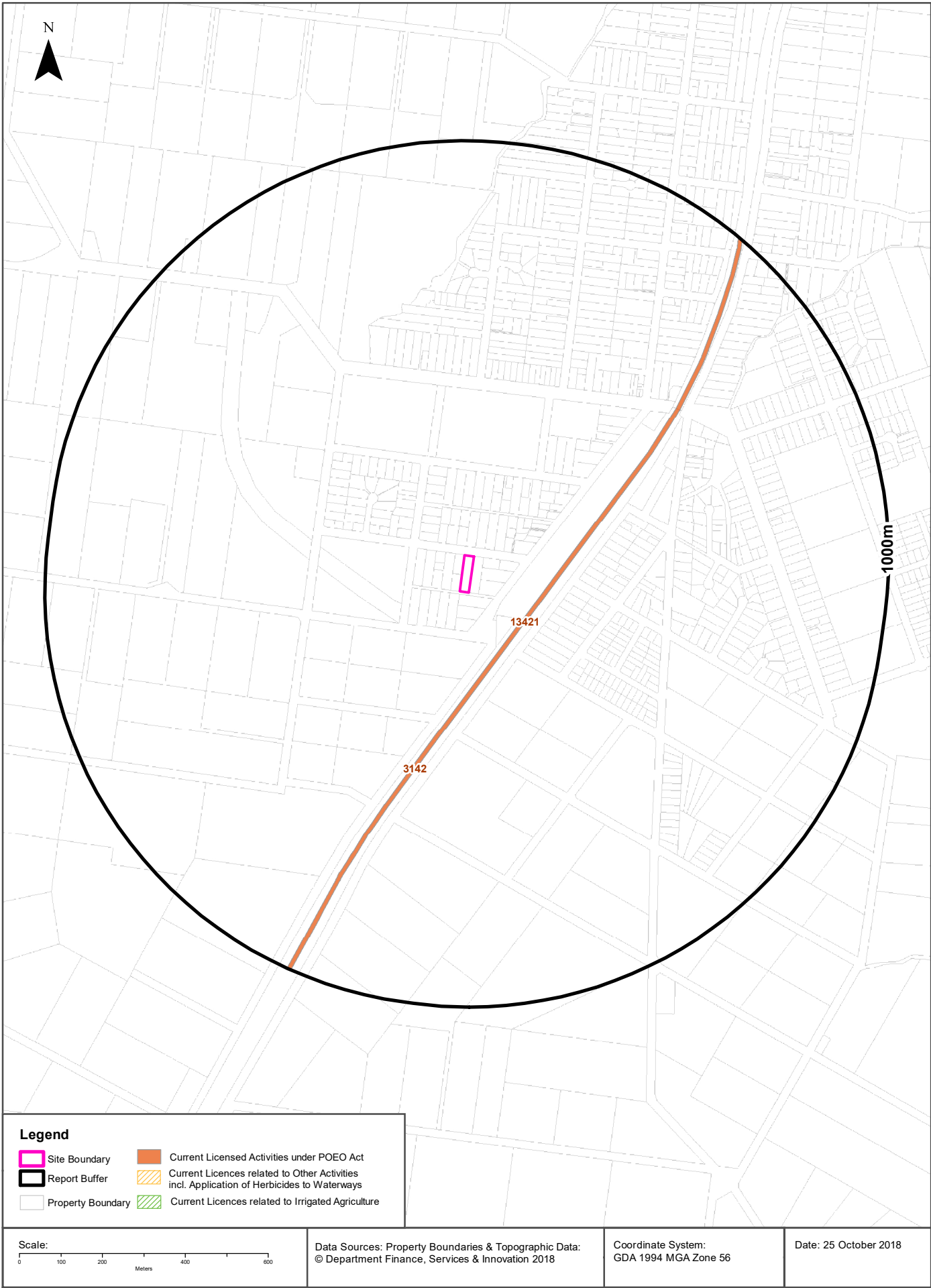
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

4 Close Street, Thirlmere, NSW 2572



EPA Activities

4 Close Street, Thirlmere, NSW 2572

Licensed Activities under the POEO Act 1997

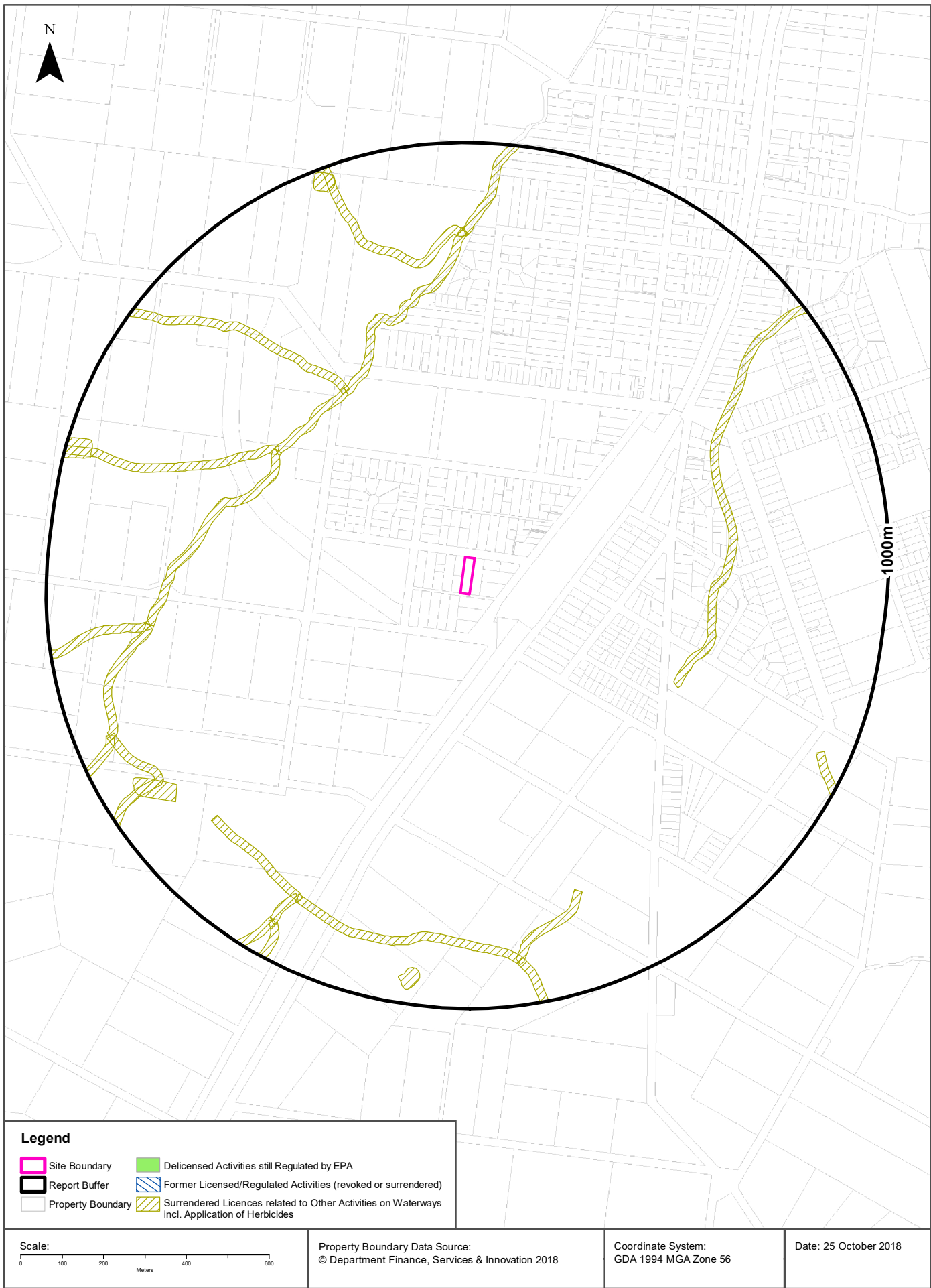
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		GPO BOX 14, SYDNEY, NSW 2001		Railway systems activities	Network of Features	140m	South East
13421	JOHN HOLLAND RAIL PTY LTD		PO Box 215 , PARRAMATTA, NSW 2124		Railway systems activities	Network of Features	140m	South East

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities
4 Close Street, Thirlmere, NSW 2572



EPA Activities

4 Close Street, Thirlmere, NSW 2572

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

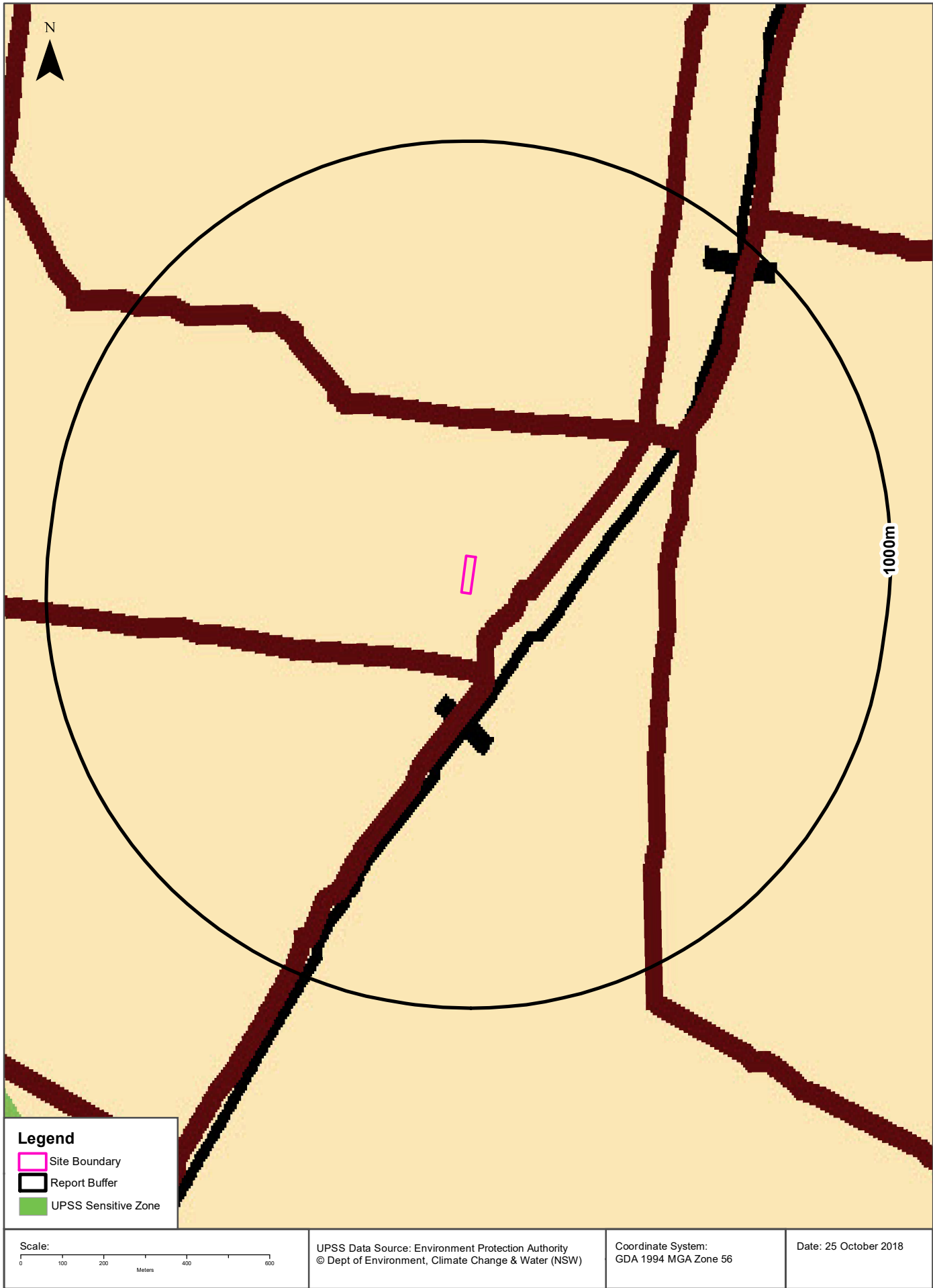
Delicensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4390	WOLLONDILLY SHIRE COUNCIL	WATERWAYS OF WOLLONDILLY SHIRE COUNCIL	Surrendered		Other Activities	Network of Features	478m	-
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	478m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	478m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	478m	-

Former Licensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority



Historical Business Directories

4 Close Street, Thirlmere, NSW 2572

1982 Business Directory Records Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Business Directory Records Road or Area Matches

Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

4 Close Street, Thirlmere, NSW 2572

1970 Business Directory Records Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Business Directory Records Road or Area Matches

Records from the 1970 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

4 Close Street, Thirlmere, NSW 2572

1961 Business Directory Records Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Business Directory Records Road or Area Matches

Records from the 1961 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

4 Close Street, Thirlmere, NSW 2572

1950 Business Directory Records Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Business Directory Records Road or Area Matches

Records from the 1950 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

4 Close Street, Thirlmere, NSW 2572

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

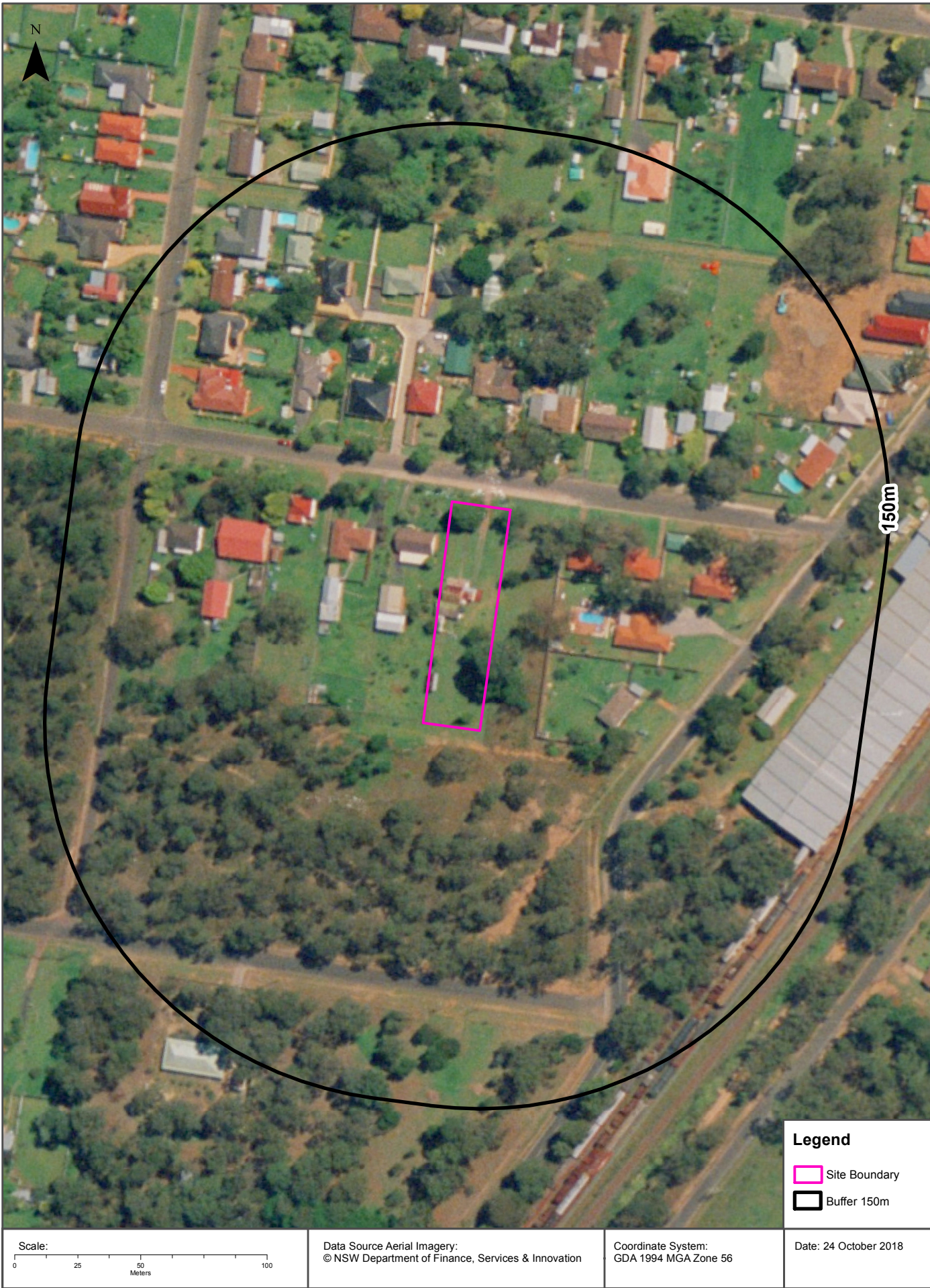
Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant





<p>Scale:</p> <p>0 25 50 100</p> <p>Meters</p>	<p>Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.</p>	<p>Coordinate System:</p> <p>GDA 1994 MGA Zone 56</p>	<p>Date: 24 October 2018</p>
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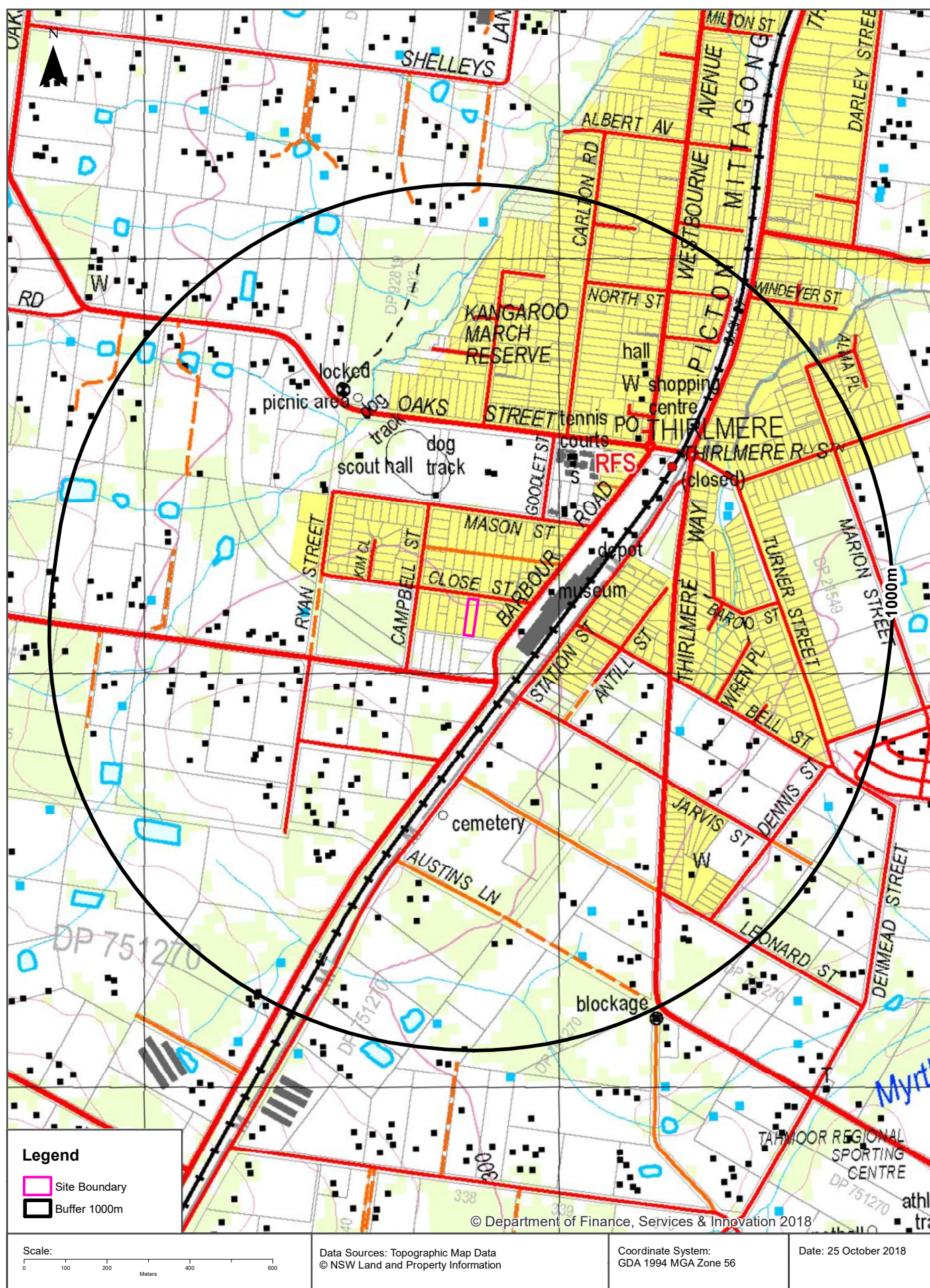


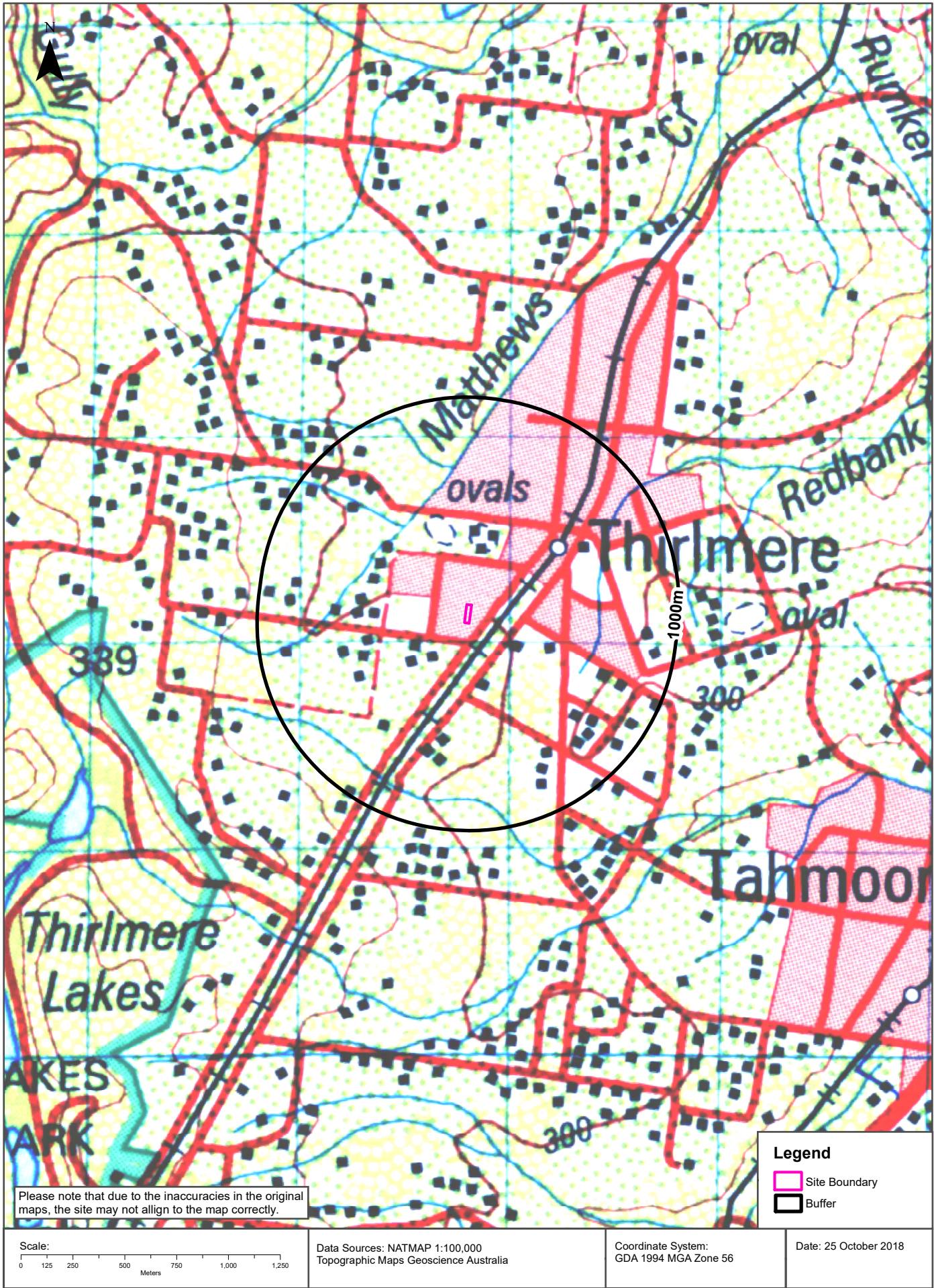


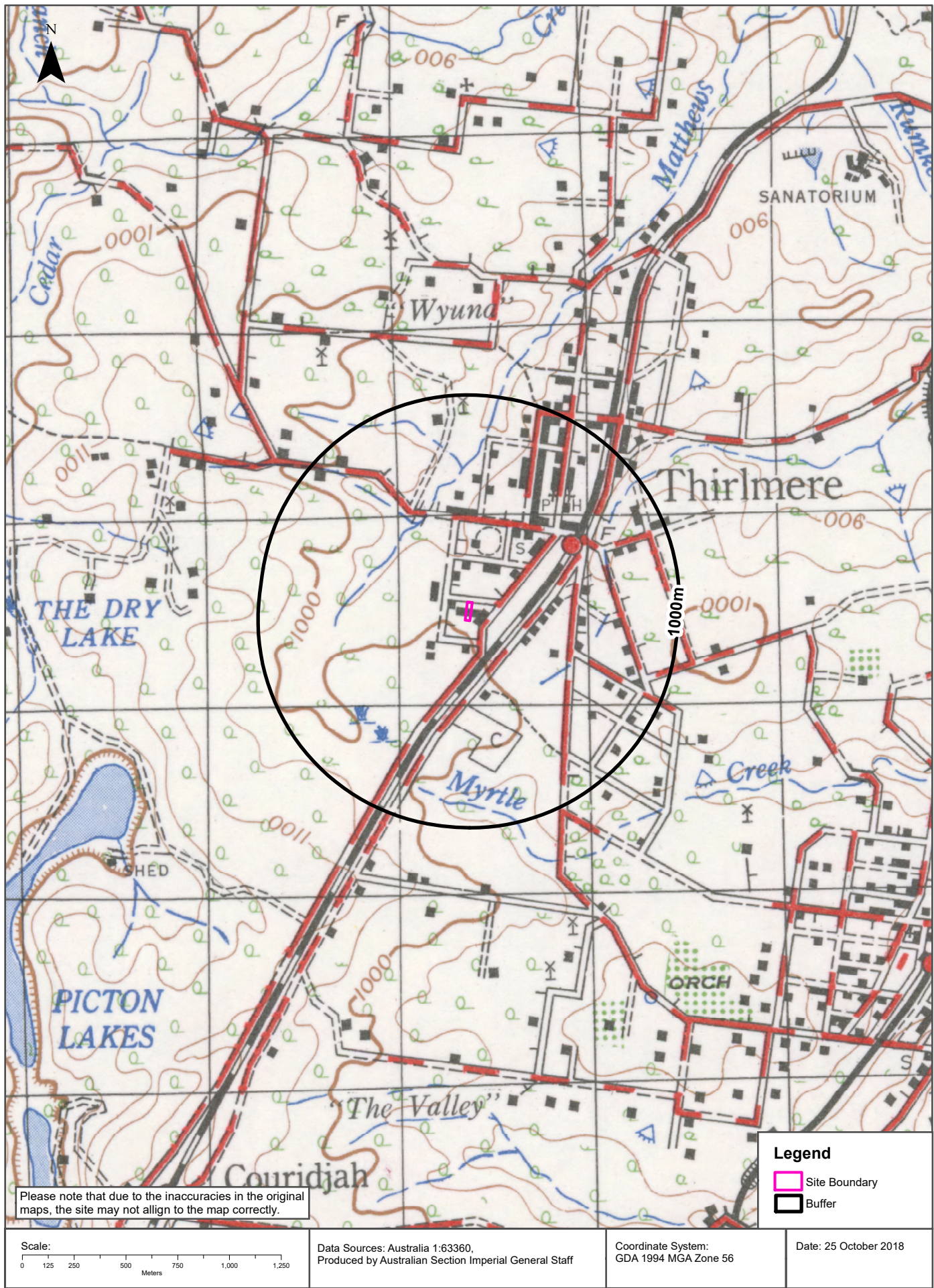


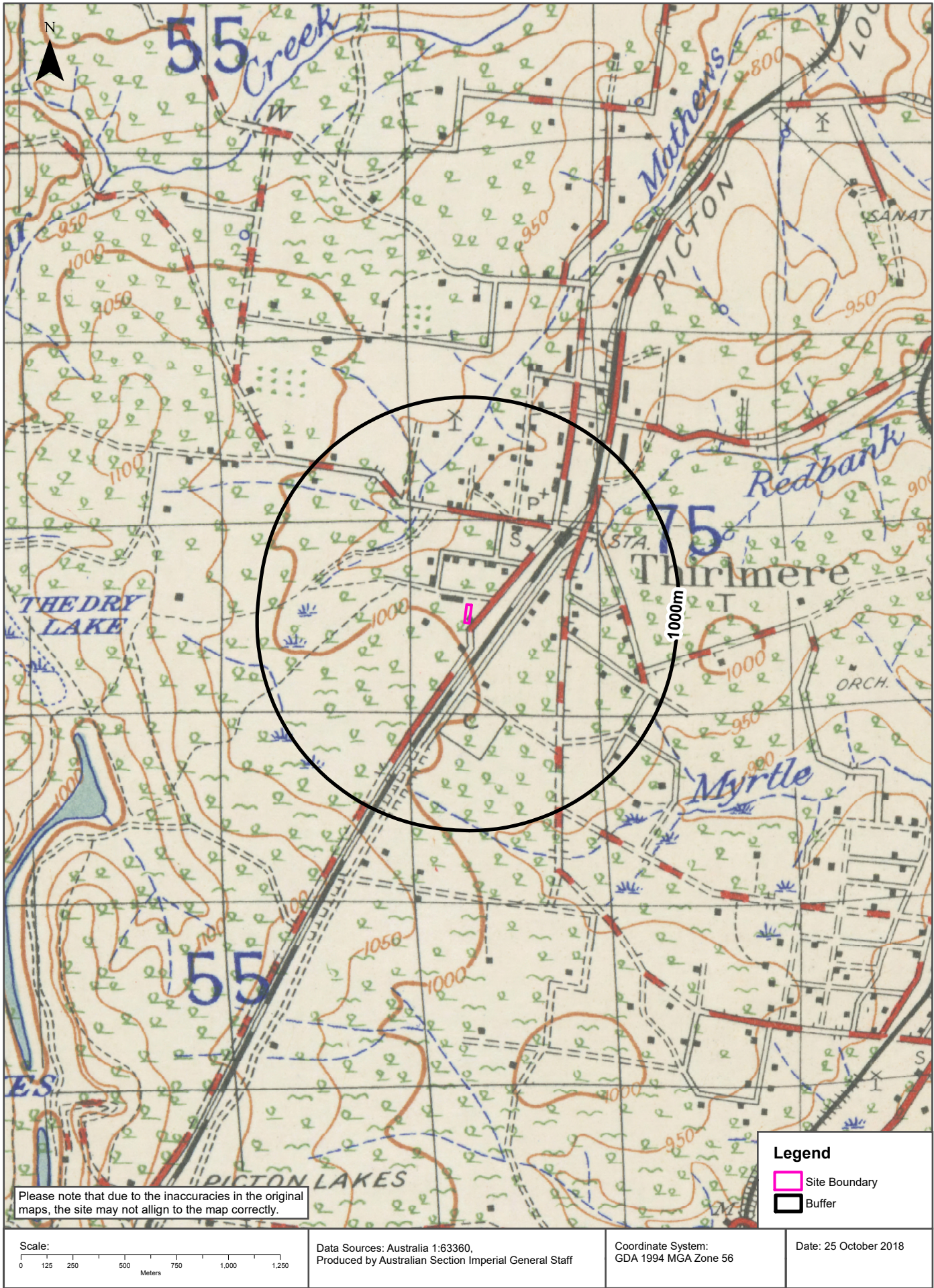


4 Close Street, Thirlmere, NSW 2572



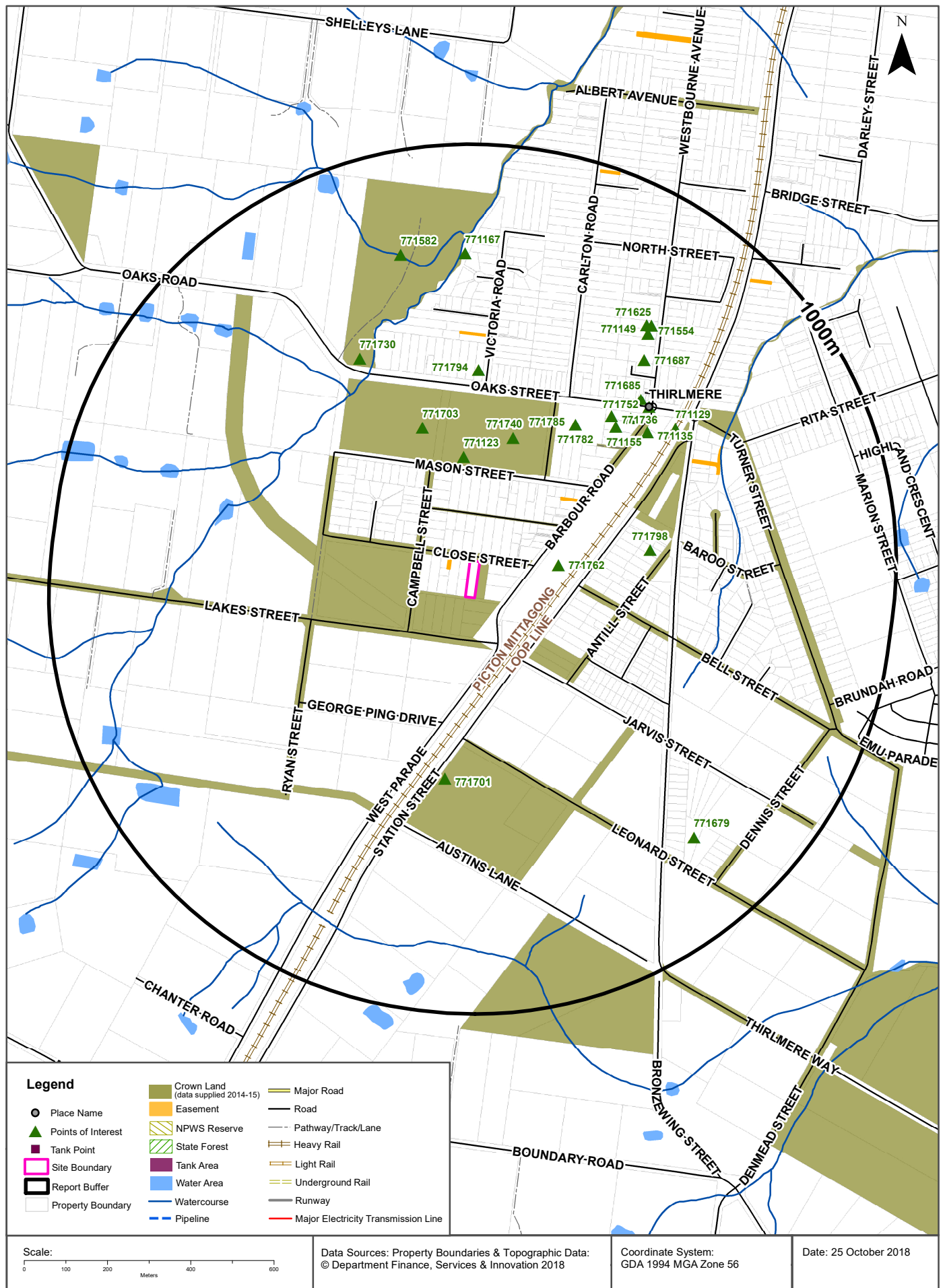






Topographic Features

4 Close Street, Thirlmere, NSW 2572



Topographic Features

4 Close Street, Thirlmere, NSW 2572

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
771762	Museum	THIRLMERE RAIL HERITAGE CENTRE	189m	East
771123	Sports Centre	Sports Centre	249m	North
771740	Sports Field	THIRLMERE SPORTSGROUND	308m	North
771703	Dog Track	THIRLMERE TRIAL TRACK	339m	North
771782	Medical Centre	THIRLMERE EARLY CHILDHOOD HEALTH CENTRE	401m	North East
771785	Primary School	THIRLMERE PUBLIC SCHOOL	401m	North East
771798	Child Care Centre	THIRLMERE PEGASUS EARLY EDUCATION CENTRE	410m	East
771701	Cemetery	THIRLMERE CEMETERY	439m	South
771794	Child Care Centre	FRIENDLY FROG PRE-SCHOOL	458m	North
771155	Community Facility	THIRLMERE TENNIS CLUB	460m	North East
771736	Sports Court	TENNIS COURTS	471m	North East
771705	Park	MEMORIAL PARK	500m	North East
771135	Firestation - Bush	THIRLMERE RFB	508m	North East
771685	Post Office	THIRLMERE POST OFFICE	549m	North East
771752	Suburb	THIRLMERE	550m	North East
771730	Picnic Area	Picnic Area	553m	North West
771129	Railway Station	THIRLMERE RAILWAY STATION	568m	North East
771687	Shopping Centre	THIRLMERE SHOPPING CENTRE	625m	North East
771554	Place Of Worship	ANGLICAN CHURCH	680m	North East
771149	Community Facility	THIRLMERE COMMUNITY HALL	695m	North East
771625	Child Care Centre	THIRLMERE PLAYGROUP	701m	North East
771167	Park	KANGAROO MARCH RESERVE	738m	North
771582	Park	LIN GORDON RESERVE	753m	North
771679	Place Of Worship	JEHOVAHS WITNESSES CHURCH	779m	South East

Topographic Data Source: © Land and Property Information (2015)

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Topographic Features

4 Close Street, Thirlmere, NSW 2572

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)

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Major Easements

What Major Easements exist within the dataset buffer?

Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
155895871	Primary	Right of way		46m	North West
120122342	Primary	Undefined		246m	North East
120110685	Primary	Undefined		540m	North
120114538	Primary	Undefined		564m	North East
120118397	Primary	Undefined		565m	North East
120114530	Primary	Undefined		936m	North East
120118353	Primary	Undefined		981m	North

Easements Data Source: © Land and Property Information (2015)

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Topographic Features

4 Close Street, Thirlmere, NSW 2572

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © Land and Property Information (2015)

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National Parks and Wildlife Service Reserves

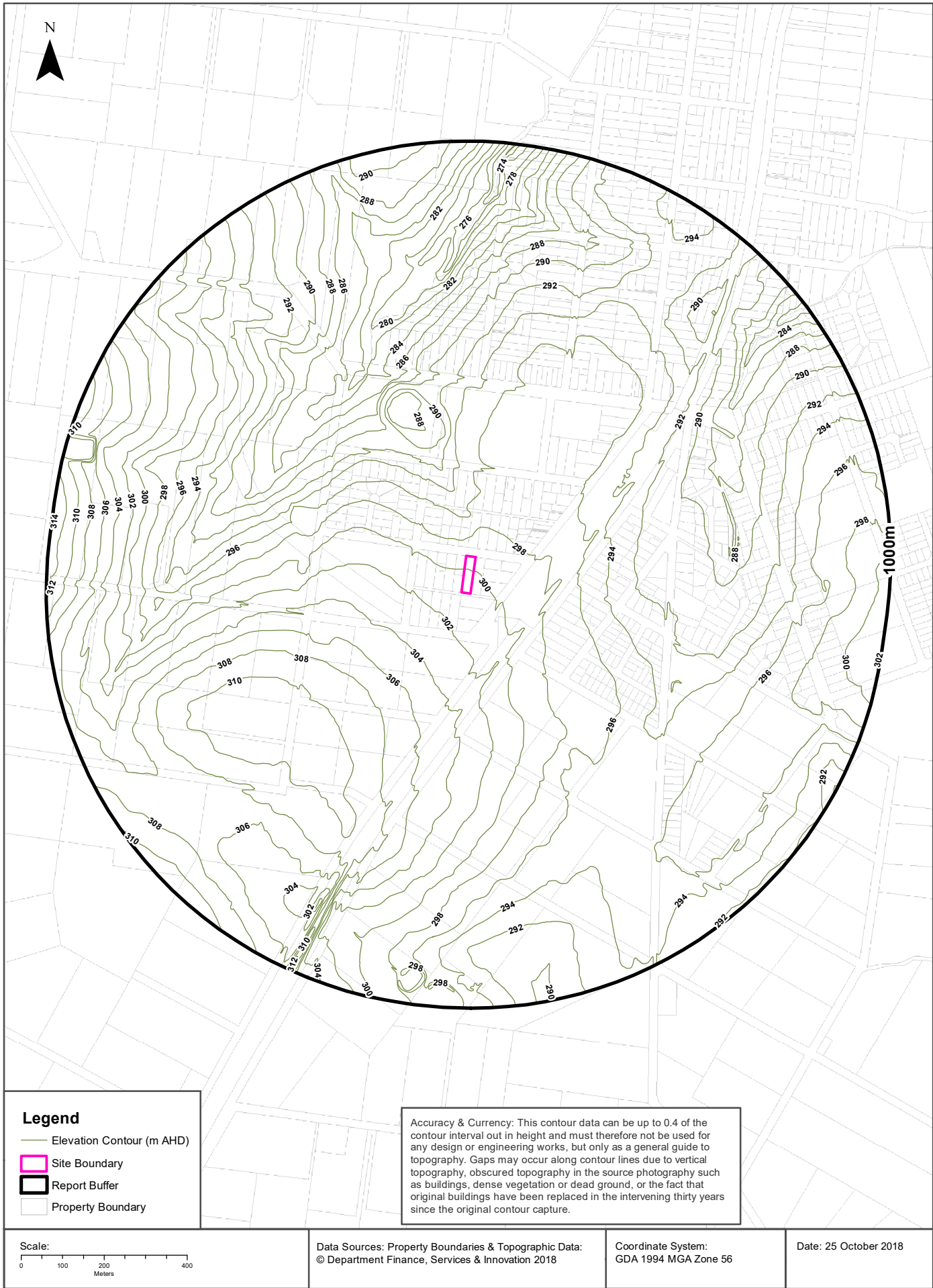
What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

NPWS Data Source: © Land and Property Information (2015)

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Elevation Contours (m AHD)
4 Close Street, Thirlmere, NSW 2572



Hydrogeology & Groundwater

4 Close Street, Thirlmere, NSW 2572

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Porous, extensive aquifers of low to moderate productivity

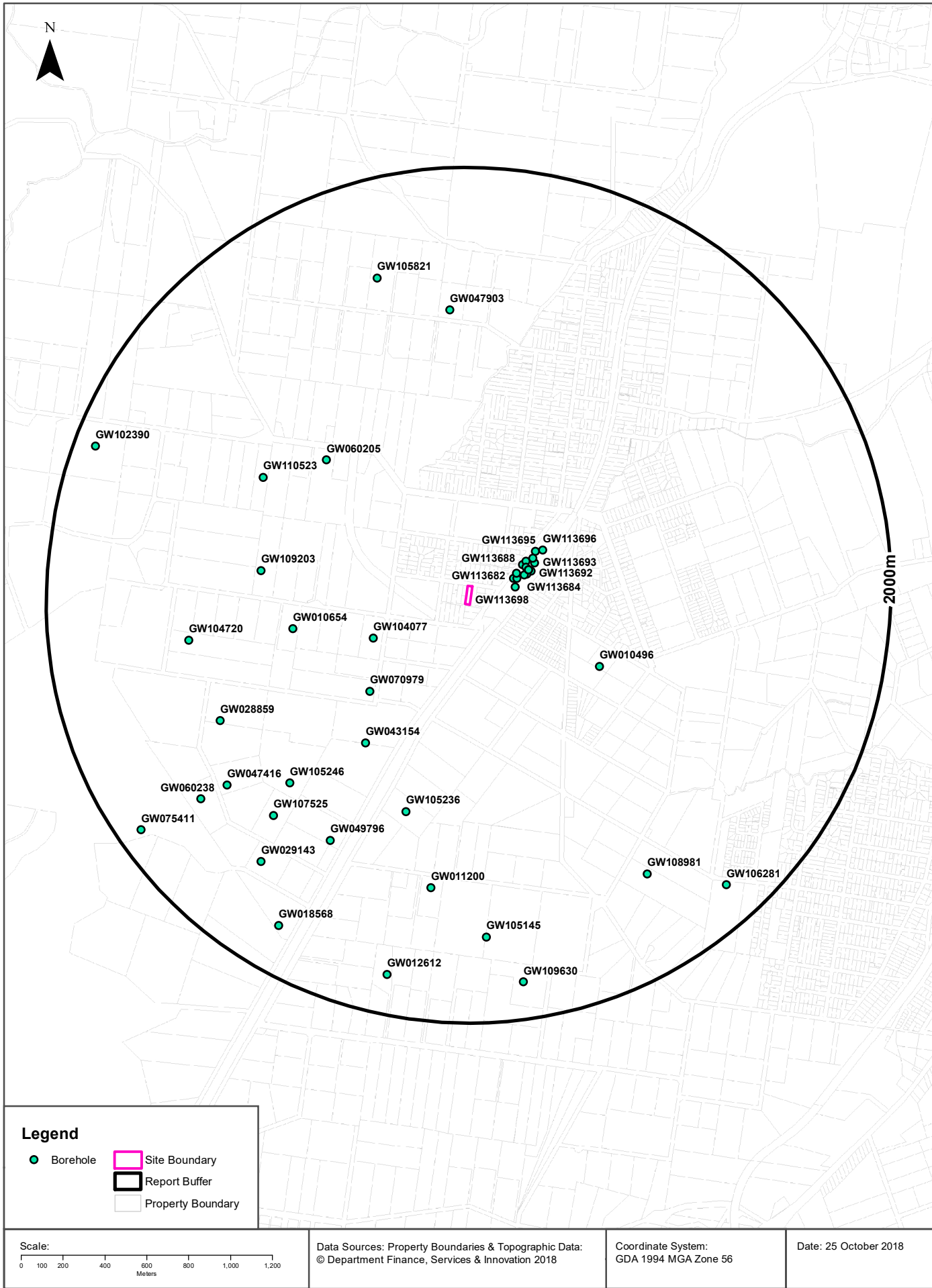
Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Botany Groundwater Management Zones

Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries



Hydrogeology & Groundwater

4 Close Street, Thirlmere, NSW 2572

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW113 682	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	3.40	3.40					201m	East
GW113 698	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		04/03/2009	3.60	3.60					205m	East
GW113 681	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.70	2.70					217m	East
GW113 687	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	3.60	3.60					221m	North East
GW113 689	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		03/02/2014	1.90	1.90					254m	East
GW113 688	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	3.60	3.60					262m	North East
GW113 684	10BL602 696	Bore	Private	Monitoring Bore	Monitoring Bore		30/07/2008	3.00	3.00					268m	East
GW113 690	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.30	2.30					271m	North East
GW113 683	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	3.20	3.20					281m	North East
GW113 691	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	3.10	3.10					281m	North East
GW113 685	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.90	2.90					281m	North East
GW113 686	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.10	2.10					281m	North East
GW113 697	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		04/03/2009	4.45	4.45					283m	North East
GW113 692	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	5.50	5.50					290m	East
GW113 693	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.90	2.90					318m	North East
GW113 694	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	4.20	4.20					318m	North East
GW113 695	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	2.20	2.20					345m	North East
GW113 696	10BL602 696	Bore	Other Govt	Monitoring Bore	Monitoring Bore		30/07/2008	6.00	6.00					379m	North East
GW104 077	10BL160 370, 10WA11 0722	Bore		Domestic, Stock	Domestic, Stock		27/11/2001	48.00	48.00	70				466m	South West
GW070 979		Bore						48.00	48.00		10.0 0	2.000	312.0 0	617m	South West
GW010 496		Bore open thru rock	Private		Irrigation		01/02/1954	40.60	40.70					688m	South East
GW043 154	10BL100 445, 10WA10 9754	Bore open thru rock	Private	Domestic	Domestic		01/10/1968	48.70	48.80					816m	South West
GW010 654		Bore open thru rock	Private		Irrigation		01/06/1954	39.60	39.60	0-500 ppm				829m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW060 205	10BL132 681, 10CA111 738	Bore open thru rock	Private	Irrigation	Irrigation		01/10/1985	50.00	50.00	Fresh				901m	North West
GW109 203	10BL602 318, 10BL602 438, 10CA11 2246	Bore	Private	Domestic, Irrigation, Test Bore	Domestic, Irrigation		12/08/2008	91.00	91.00	0.23	30.0 0	0.200		985m	West
GW105 236	10BL160 397, 10WA11 0729	Bore	Private	Domestic, Stock	Domestic, Stock		10/12/2001	73.00	73.00	Good	14.0 0	2.200		1032m	South
GW110 523	10BL600 965, 10WA11 1375	Bore	Private	Domestic, Stock	Domestic, Stock		13/10/2009	85.00	85.00	0.27		4.000		1103m	North West
GW105 246	10BL162 110, 10WA11 1032	Bore		Domestic, Stock	Domestic, Stock		03/10/2003	120.00	120.00	203	71.0 0	0.200		1195m	South West
GW028 859	10BL023 205, 10WA10 9685	Bore open thru rock	Private	Domestic	Domestic, Stock		01/10/1968	45.70	45.70					1295m	South West
GW049 796	10BL107 520, 10WA10 9779	Bore open thru rock	Private	Domestic, Farming, Stock	Domestic, Stock		01/02/1980	61.00	61.00	Good				1300m	South West
GW047 903	10BL110 241, 10CA111 664	Bore	Private	Domestic, Irrigation, Stock	Domestic, Irrigation, Stock			92.30	92.30	Good				1320m	North
GW104 720	10BL161 464, 10WA11 0941	Bore	Private	Domestic, Stock	Domestic, Stock		06/03/2003	91.00	91.00	110	54.0 0	1.700		1330m	West
GW107 525	10BL165 563, 10CA11 2142	Bore		Domestic, Irrigation	Domestic, Irrigation		01/01/1950	145.00	145.00			0.500		1363m	South West
GW011 200	10BL004 309, 10BL602 381, 10WA11 1462	Bore	Private	Domestic, Farming, Irrigation, Stock	Domestic, Farming, Stock		15/02/2008	60.90	61.00	130	30.0 0	3.000		1366m	South
GW047 416	10BL110 963, 10BL159 306, 10WA11 0566	Bore open thru rock	Private	Domestic, Irrigation, Stock	Domestic, Stock		01/11/1979	64.00	64.00	Good	24.4 0	1.500		1427m	South West
GW105 821	10BL162 966, 10WA11 1098	Bore	Private	Domestic, Stock	Domestic, Stock		01/03/2004	145.00	145.00		35.0 0	7.000		1532m	North
GW108 981	10BL165 703, 10BL602 105, 10WA11 2240	Bore	Other Govt	Recreation (groundwater), Test Bore	Recreation (groundwater)		27/06/2008	174.00	174.00	170	48.0 0	0.500		1542m	South East
GW029 143	10BL023 286, 10WA11 2254	Bore open thru rock	Private	Domestic, Industrial	General Use		01/10/1968	73.10	73.20					1569m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW060238	10BL132358, 10BL162914, 10BL163272, 10BL600598, 10WA111356	Bore	Private	Domestic, Irrigation, Stock	Domestic, Stock		01/02/2004	48.00	48.00		27.00	1.700		1569m	South West
GW105145	10BL157150, 10WA110367	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1952	67.00	67.00		45.00			1591m	South
GW018568	10BL012007, 10WA109635	Bore	Private	Domestic, Stock	Irrigation		01/11/1961	63.30	63.40	0-500 ppm				1776m	South West
GW012612	10BL005324	Bore	Private	Domestic, Irrigation, Stock	General Use			57.90						1810m	South
GW106281	10BL163582	Bore		Monitoring Bore	Monitoring Bore		04/06/2004	48.00	48.00		11.00	0.250		1816m	South East
GW109630	10BL600960, 10BL602627, 10CA112250	Battery Spears, Filter Pac	Private	Irrigation, Test Bore	Irrigation		01/06/2007	102.00	102.00	Fresh	30.00	1.000		1822m	South
GW075411		Bore	NSW Office of Water		Monitoring Bore	LAKE GANDANG ARRA AT THIRLMERE LAKES	22/06/2011	27.50	27.50				306.99	1886m	South West
GW102390	10BL159030, 10WA110523	Bore		Domestic, Stock	Domestic, Stock		04/03/1999	114.50	114.50	156				1896m	West

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Hydrogeology & Groundwater

4 Close Street, Thirlmere, NSW 2572

Driller's Logs

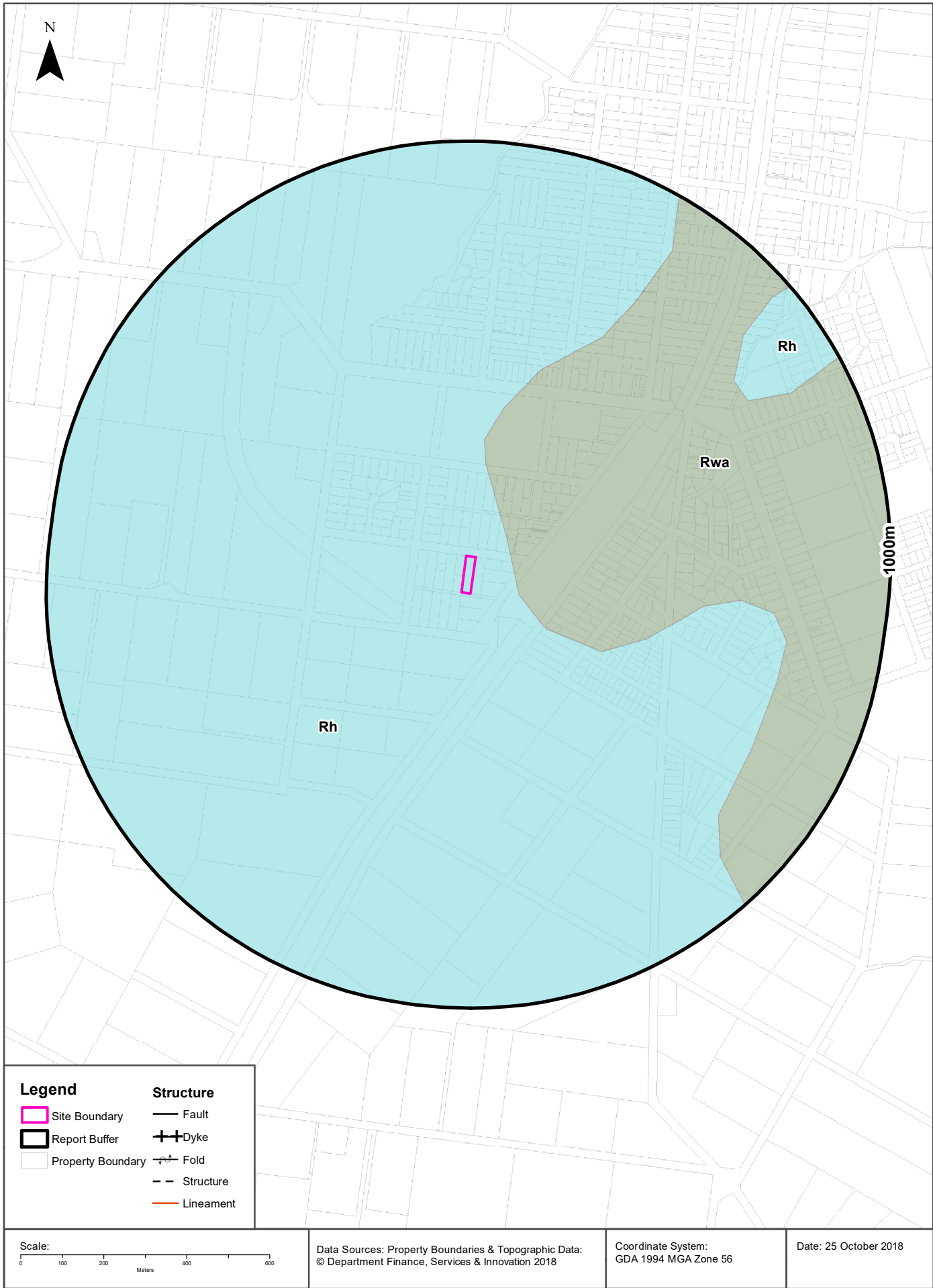
Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW104077	0.00m-0.50m SANDY TOPSOIL 0.50m-36.00m SANDSTONE FINE 36.00m-48.00m SANDSTONE OFF WHITE COARSE	466m	South West
GW010496	0.00m-0.61m Soil 0.61m-1.52m Soil Stones 1.52m-28.04m Sandstone 28.04m-29.57m Shale 29.57m-33.22m Sandstone 33.22m-35.97m Sandstone Soft Friable Very Coarse Water Supply 35.97m-40.69m Sandstone	688m	South East
GW043154	0.00m-0.60m Sand White 0.60m-2.28m Clay Red Sandy 2.28m-6.40m Clay White Red White Sandy 6.40m-8.22m Clay White 8.22m-8.53m Clay Cream 8.53m-13.71m Sandstone 13.71m-18.89m Sandstone 18.89m-29.56m Sandstone Cream Water Supply 29.56m-42.67m Sandstone Grey White 42.67m-45.11m Sandstone 45.11m-48.76m Sandstone Grey White	816m	South West
GW010654	0.00m-0.91m Soil 0.91m-11.58m Sandstone Yellow 11.58m-11.89m Sandstone Grey Water Supply 11.89m-16.76m Sandstone Yellow 16.76m-17.68m Sandstone Grey 17.68m-18.59m Sandstone Grey 18.59m-21.18m Sandstone White 21.18m-22.25m Sandstone Red 22.25m-26.21m Sandstone Yellow Soft Water Supply 26.21m-32.31m Sandstone Grey 32.31m-35.97m Sandstone Yellow Water Supply 35.97m-38.40m Sandstone Dark Some Shale 38.40m-39.62m Sandstone White	829m	West
GW060205	0.00m-1.10m Topsoil Dark 1.10m-2.20m Shale Gravel 2.20m-17.60m Sandstone Yellow 17.60m-19.80m Sandstone Grey 19.80m-26.50m Sandstone Dark Grey 26.50m-28.90m Sandstone 28.90m-29.60m Sandstone Yellow Coarse Water Supply 29.60m-50.00m Sandstone Grey Water Supply	901m	North West
GW109203	0.00m-48.00m YELLOW GREY FINE SANDSTONE 48.00m-66.00m SHALE 66.00m-91.00m COARSE GREY SANDSTONE	985m	West
GW105236	0.00m-1.00m DIRT/SAND 1.00m-33.00m SAND/RED CLAY 33.00m-73.00m SANDSTONE	1032m	South
GW110523	0.00m-1.50m CLAY 1.50m-36.00m SANDSTONE ORANGE 36.00m-60.00m SANDSTONE FINE GREY 60.00m-85.00m SANDSTONE GREY COARSE	1103m	North West

Groundwater No	Drillers Log	Distance	Direction
GW105246	0.00m-3.00m SILTY SAND 3.00m-26.00m SANDSTONE L/ BROWN 26.00m-27.00m SHALE SOFT 27.00m-32.00m SANDSTONE L/ BROWN 32.00m-48.50m SANDSTONE GREY 48.50m-49.00m SANDSTONE QUARTZ 49.00m-53.00m SANDSTONE SMALL IRONSTONE BANDS 53.00m-53.50m SHALE 53.50m-61.50m SANDSTONE GREY 61.50m-68.50m SHALE HARD 68.50m-77.50m SANDSTONE GREY 77.50m-79.40m SANDSTONE QUARTZ 79.40m-89.00m SANDSTONE GREY 89.00m-90.20m SANDSTONE QUARTZ FRACTURED 90.20m-99.50m SANDSTONE GREY 99.50m-99.80m SILTSTONE QUARTZ 99.80m-101.60m SANDSTONE QUARTZ 101.60m-106.00m SANDSTONE GREY 106.00m-107.20m SANDSTONE QUARTZ 107.20m-110.00m SANDSTONE GREY 110.00m-114.50m SANDSTONE QUARTZ 114.50m-120.00m SANDSTONE GREY	1195m	South West
GW028859	0.00m-0.60m Topsoil 0.60m-5.48m Clay Coloured 5.48m-45.72m Sandstone Coloured Water Supply	1295m	South West
GW049796	0.00m-1.00m Soil 1.00m-33.60m Sandstone 33.60m-36.60m Shale 36.60m-55.00m Sandstone Water Supply 55.00m-58.00m Shale 58.00m-61.00m Sandstone	1300m	South West
GW047903	0.00m-26.20m Driller 26.20m-92.30m Sandstone Hard Water Supply	1320m	North
GW104720	0.00m-5.00m TOPSOIL 5.00m-72.00m SANDSTONE FINE 72.00m-91.00m SANDSTONE/WHITE/ COARSE	1330m	West
GW011200	0.00m-1.00m SOIL 1.00m-84.00m SANDSTONE	1366m	South
GW047416	0.00m-2.00m Soil 2.00m-64.00m Sandstone Water Supply 2.00m-64.00m Ironstone Layers	1427m	South West
GW105821	0.00m-2.00m clay, red 2.00m-9.00m shale 9.00m-66.00m sandstone 66.00m-78.00m shale 78.00m-90.00m sandstone 90.00m-93.00m shale 93.00m-145.00m sandstone, white	1532m	North
GW108981	0.00m-4.00m CLAY 4.00m-36.00m YELLOW SANDSTONE 36.00m-48.00m GREY SANDSTONE 48.00m-54.00m SHALE 54.00m-138.00m GREY SANDSTONE 138.00m-144.00m SHALE 144.00m-156.00m SANDSTONE GREY C/G 156.00m-174.00m SHALE (BALD HILL CLAYSTONE)	1542m	South East
GW029143	0.00m-0.45m Sand 0.45m-5.18m Sandstone Cream 5.18m-5.63m Sandstone Red 5.63m-37.49m Sandstone White Cream 37.49m-37.79m Driller 37.79m-39.92m Sandstone Grey 39.92m-56.38m Sandstone Cream Water Supply 56.38m-58.21m Sandstone Grey Water Supply 58.21m-65.22m Sandstone Cream 65.22m-73.15m Shale Grey Sandy Water Supply	1569m	South West
GW060238	0.00m-30.00m FINE SANDSTONE 30.00m-48.00m COARSE ORANGE SANDSTONE	1569m	South West

Groundwater No	Drillers Log	Distance	Direction
GW018568	0.00m-0.30m Soil 0.30m-0.91m Clay Yellow Some Gravel 0.91m-1.83m Clay Red Yellow 1.83m-3.05m Clay White Red 3.05m-4.57m Clay Sandy 4.57m-7.01m Sandstone 7.01m-10.97m Sandstone Yellow 10.97m-14.63m Sandstone 14.63m-17.98m Sandstone Grey 17.98m-19.81m Ironstone 19.81m-36.58m Sandstone Yellow Coarse 36.58m-44.81m Sandstone Grey 44.81m-51.82m Sandstone Yellow Coarse Water Supply 51.82m-60.96m Sandstone Grey Water Supply 60.96m-63.40m Sandstone White Water Supply	1776m	South West
GW106281	0.00m-0.20m SOIL 0.20m-2.40m CLAYS 2.40m-48.00m SANDSTONES	1816m	South East
GW109630	0.00m-0.30m TOPSOIL 0.30m-2.00m ORANGE CLAY 2.00m-4.00m WHITE CLAY 4.00m-5.00m CLAY PUGGY 5.00m-40.00m SANDSTONE COLOURED 40.00m-102.00m SANDSTONE WHITE	1822m	South
GW075411	0.00m-1.00m Topsoil 1.00m-4.00m Sandy Clay, grey/orange 4.00m-12.00m Sandy Clay, grey 12.00m-14.00m Sandy Clay, orange/grey 14.00m-15.00m Sandy Clay, red 15.00m-19.00m Sandy Clay, grey 19.00m-26.50m Sandy Clay, red/grey 26.50m-27.50m Sandstone, red, weathered	1886m	South West
GW102390	0.00m-1.00m TOPSOIL 1.00m-3.50m SHALE BROWN 3.50m-6.50m SANDSTONE WEATHERED 6.50m-16.50m SANDSTONE GREY M.G. 16.50m-18.00m IRONSTONE 18.00m-37.00m SANDSTONE WHITE 37.00m-38.00m IRONSTONE 38.00m-42.50m SANDSTONE AND COARSE QUARTZ 42.50m-62.50m SANDSTONE GREY 62.50m-63.50m SANDSTONE AND QUARTZ FRACTURED 63.50m-63.70m SHALE BLACK 63.70m-82.00m SANDSTONE GRE M.G. 82.00m-85.00m SANDSTONE AND QUARTZ FRACTURED 85.00m-90.00m SANDSTONE WHITE M.G. 90.00m-96.00m SANDSTONE AND QUARTZ 96.00m-102.00m SANDSTONE GREY M.G. 102.00m-105.00m SANDSTONE AND QUARTZ FRACTURED 105.00m-109.00m SANDSTONE WHITE M.G. 109.00m-114.50m SANDSTONE AND QUARTZ FRACTURED	1896m	West

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
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Geology

4 Close Street, Thirlmere, NSW 2572

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rh	medium to coarse-grained quartz sandstone, very minor shale and laminite lenses	Hawkesbury Sandstone					Wollongong & Port Hacking	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rh	medium to coarse-grained quartz sandstone, very minor shale and laminite lenses	Hawkesbury Sandstone					Wollongong & Port Hacking	1:100,000
Rwa	laminite and dark-grey siltstone	Ashfield Shale	Wianamatta Group				Wollongong & Port Hacking	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy

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Naturally Occurring Asbestos Potential

4 Close Street, Thirlmere, NSW 2572

Naturally Occurring Asbestos Potential

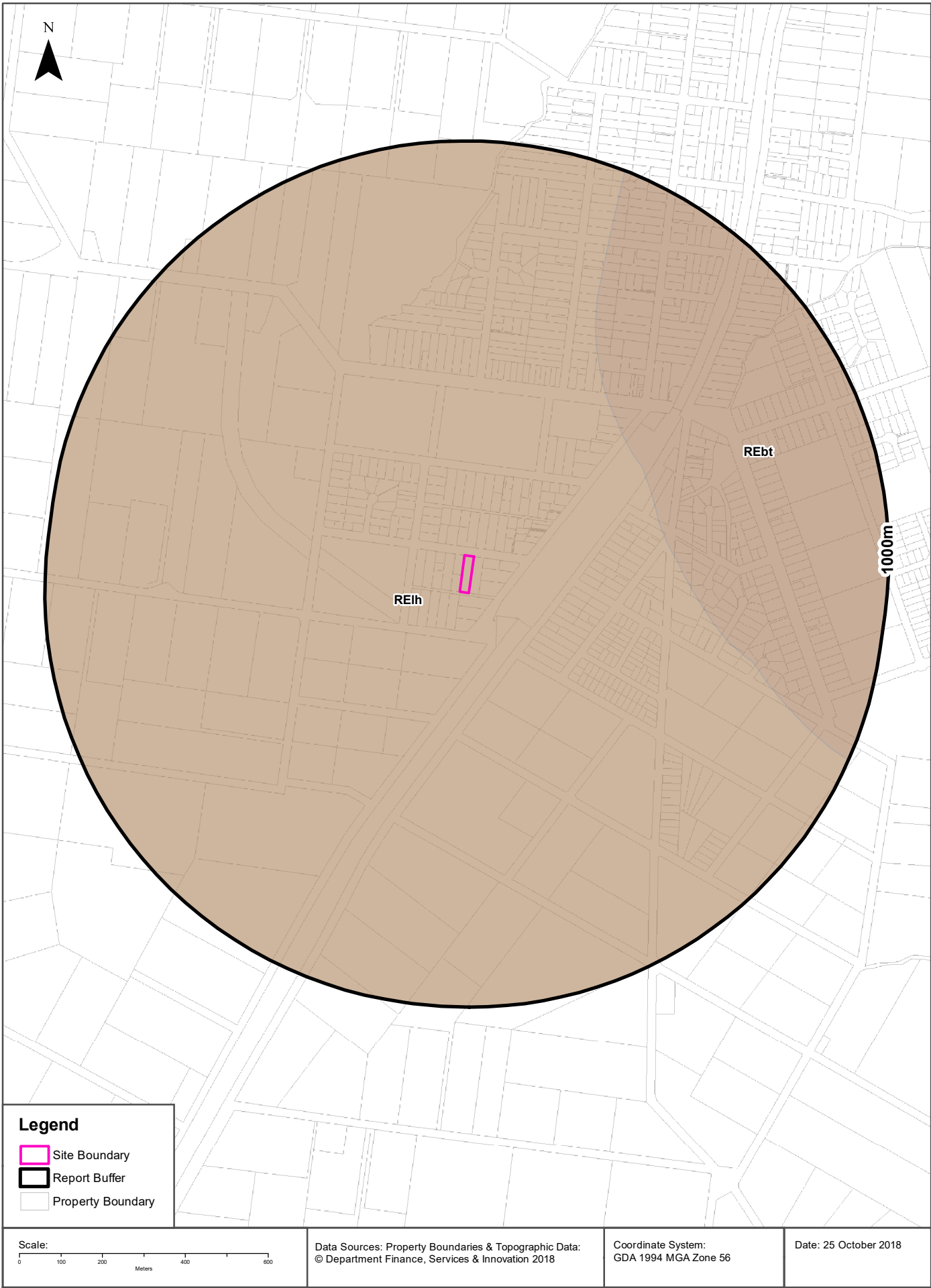
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Soil Landscapes

4 Close Street, Thirlmere, NSW 2572



Soils

4 Close Street, Thirlmere, NSW 2572

Soil Landscapes

What are the onsite Soil Landscapes?

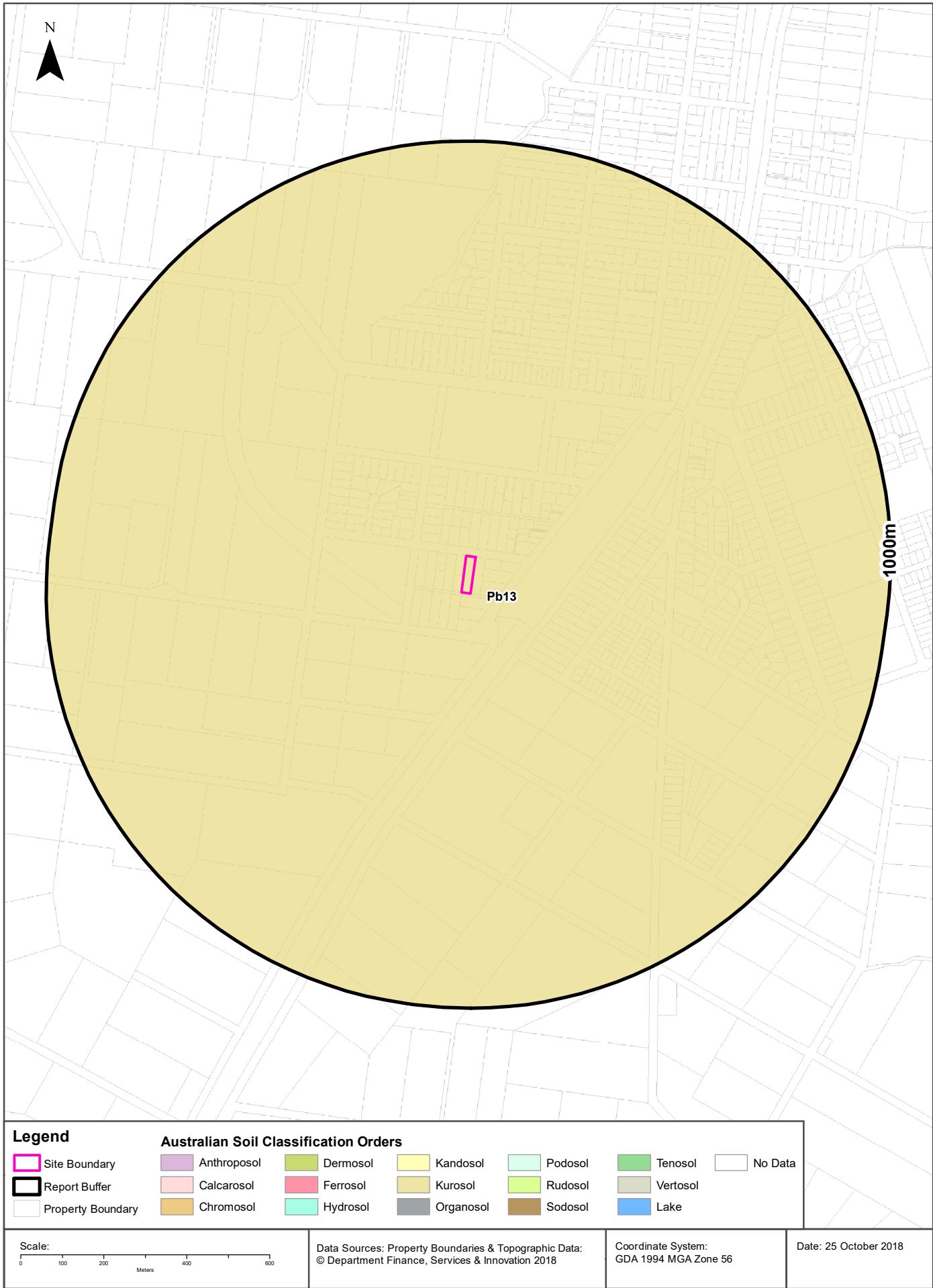
Soil Code	Name	Group	Process	Map Sheet	Scale
RElh	LUCAS HEIGHTS		RESIDUAL	Wollongong & Port Hacking	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
REbt	BLACKTOWN		RESIDUAL	Wollongong & Port Hacking	1:100,000
RElh	LUCAS HEIGHTS		RESIDUAL	Wollongong & Port Hacking	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

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Soils

4 Close Street, Thirlmere, NSW 2572

Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance
Pb13	Kurosol	Ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping, also rounded hilly to steep hilly areas and relatively narrow valleys: chief soils are hard acidic red soils (Dr2.21) with hard acidic yellow mottled soils (Dy3.41); in places some ironstone gravels occur in both these soils. Associated are hard neutral and alkaline red soils (Dr2.22 and Dr2.23) in saddles and some mid-slope positions; (Dy3.42 and Dy3.43) soils, usually in depressions; and small areas of undescribed soils in wet soaks and valley areas. Small areas of other soils are likely throughout.	0m

Atlas of Australian Soils Data Source: CSIRO

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Acid Sulfate Soils

4 Close Street, Thirlmere, NSW 2572

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI
N/A		

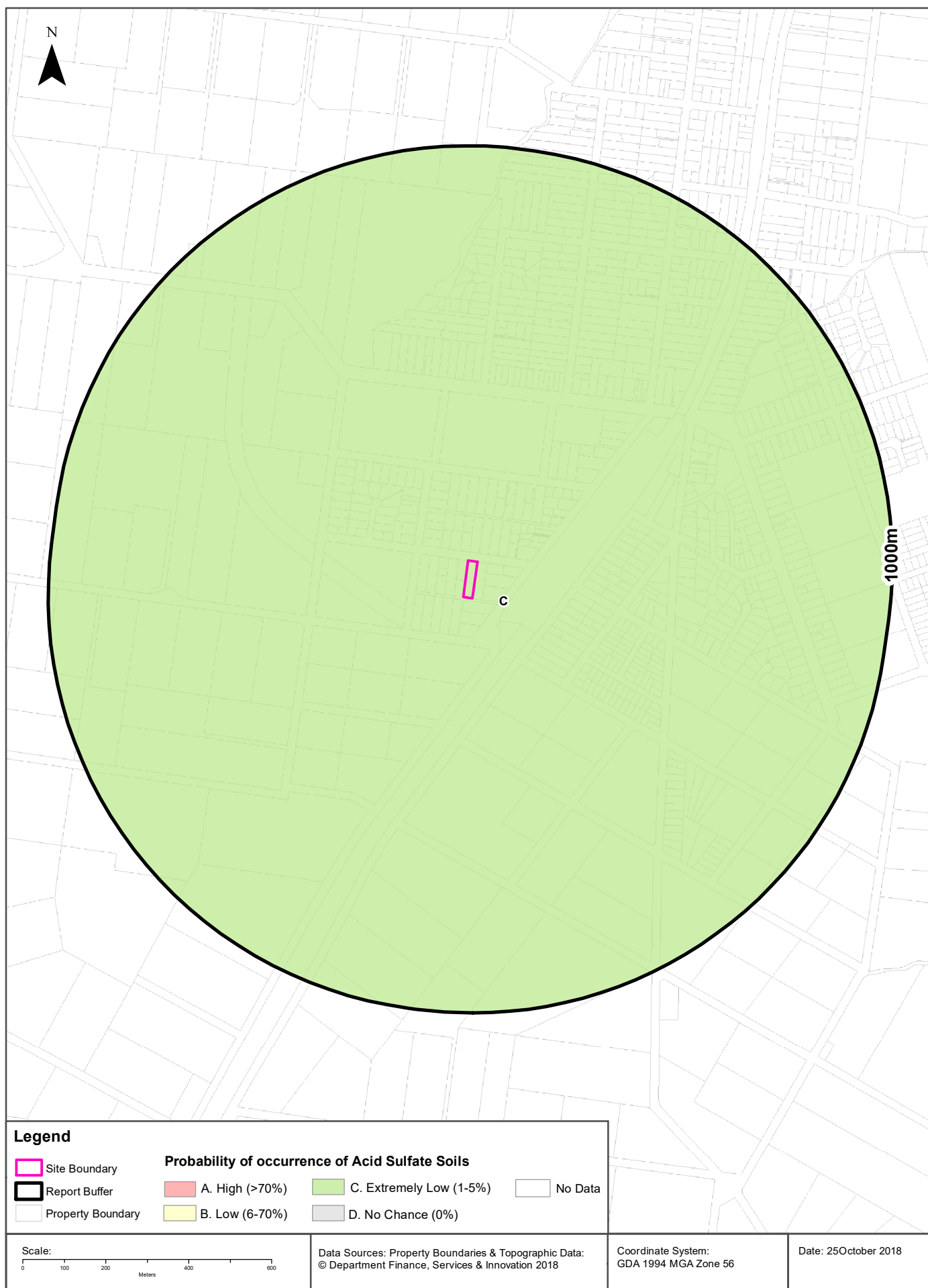
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 23/10/2018: NSW Crown Copyright - Planning and Environment
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Atlas of Australian Acid Sulfate Soils

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Acid Sulfate Soils

4 Close Street, Thirlmere, NSW 2572

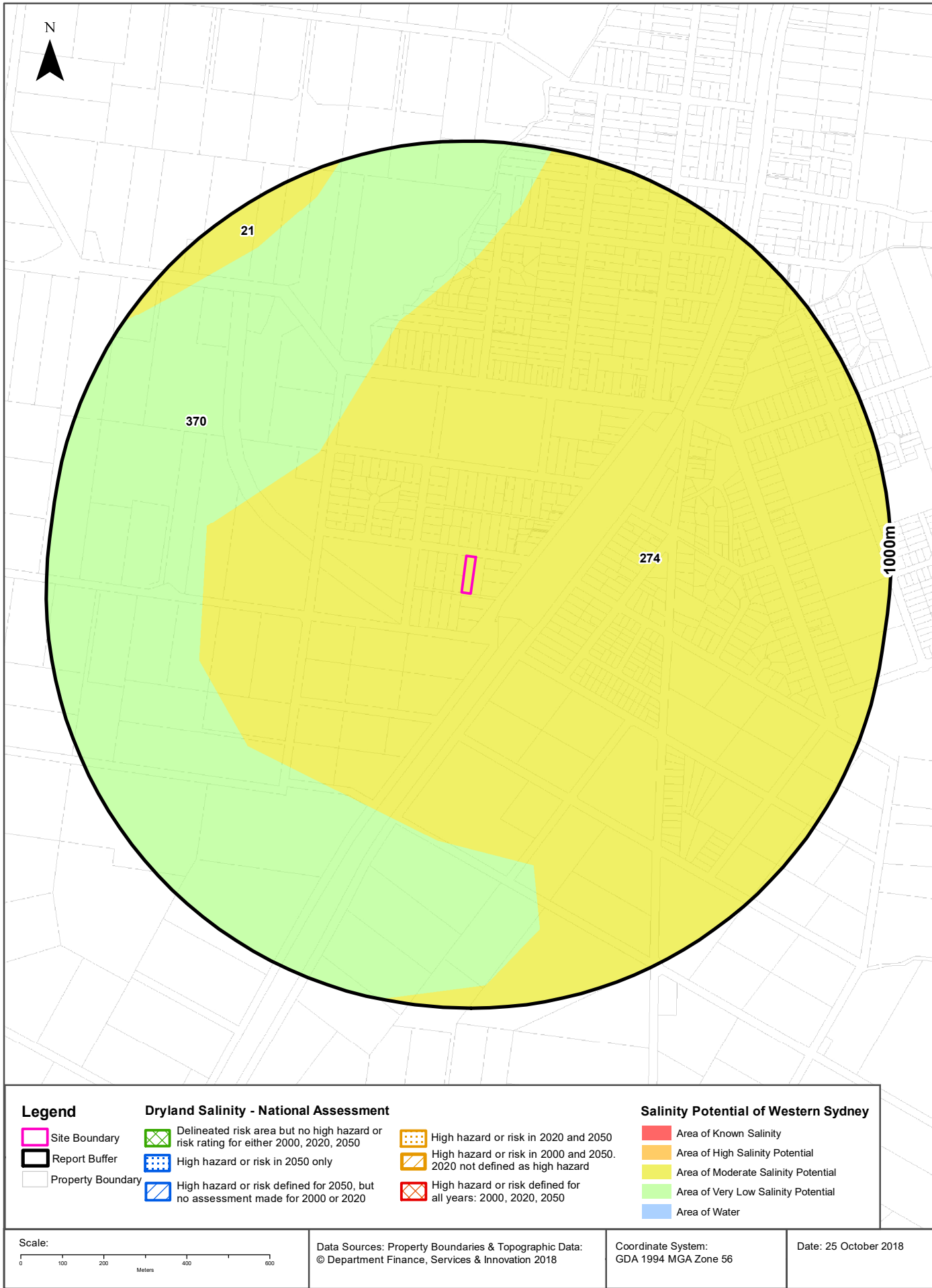
Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

4 Close Street, Thirlmere, NSW 2572

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A	N/A	N/A

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

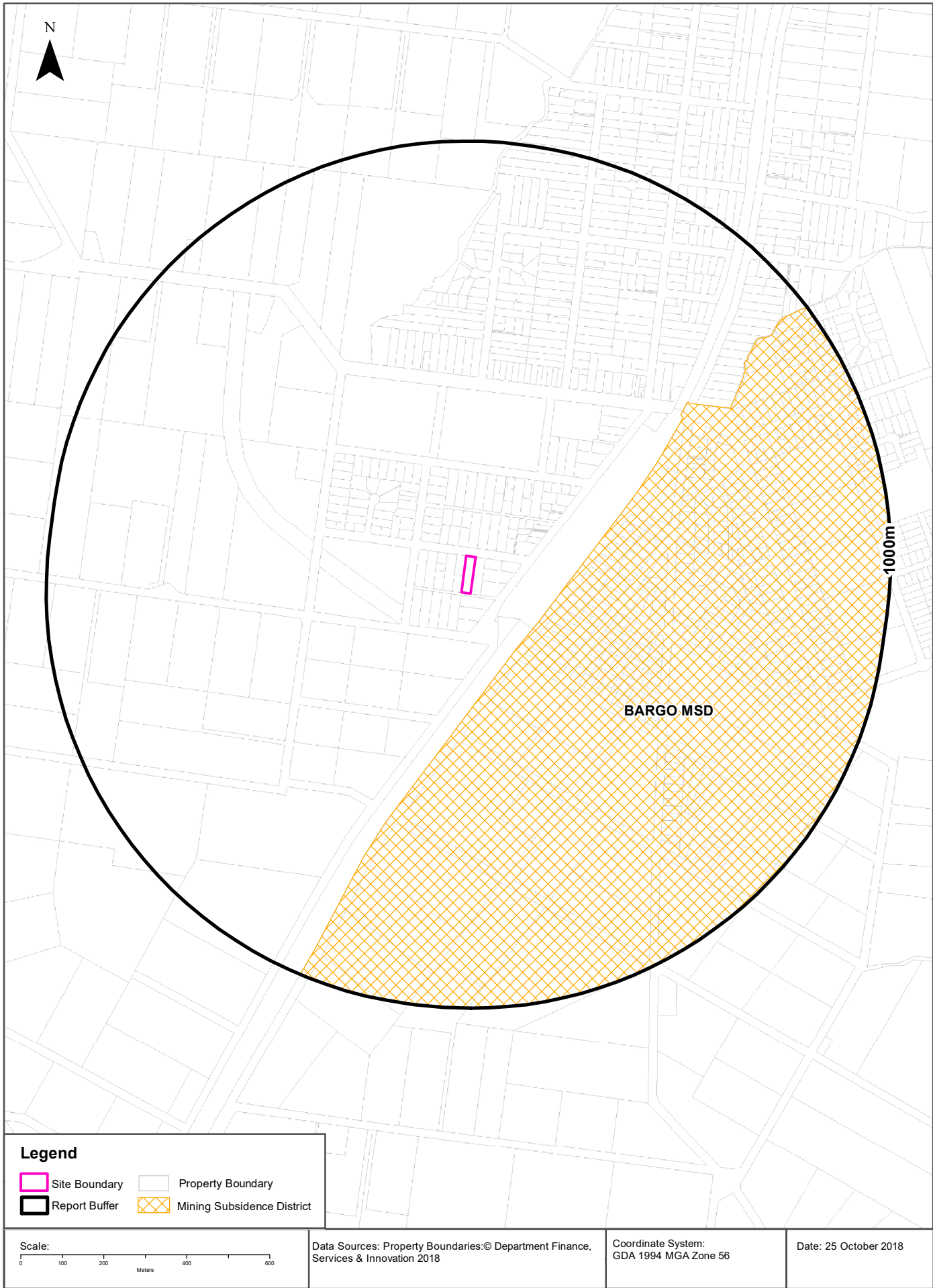
Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	Onsite
370	LOW	Area of Very Low Salinity Potential	434m	North East
21	MODERATE	Area of Moderate Salinity Potential	898m	North

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

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Mining Subsidence Districts

4 Close Street, Thirlmere, NSW 2572

Mining Subsidence Districts

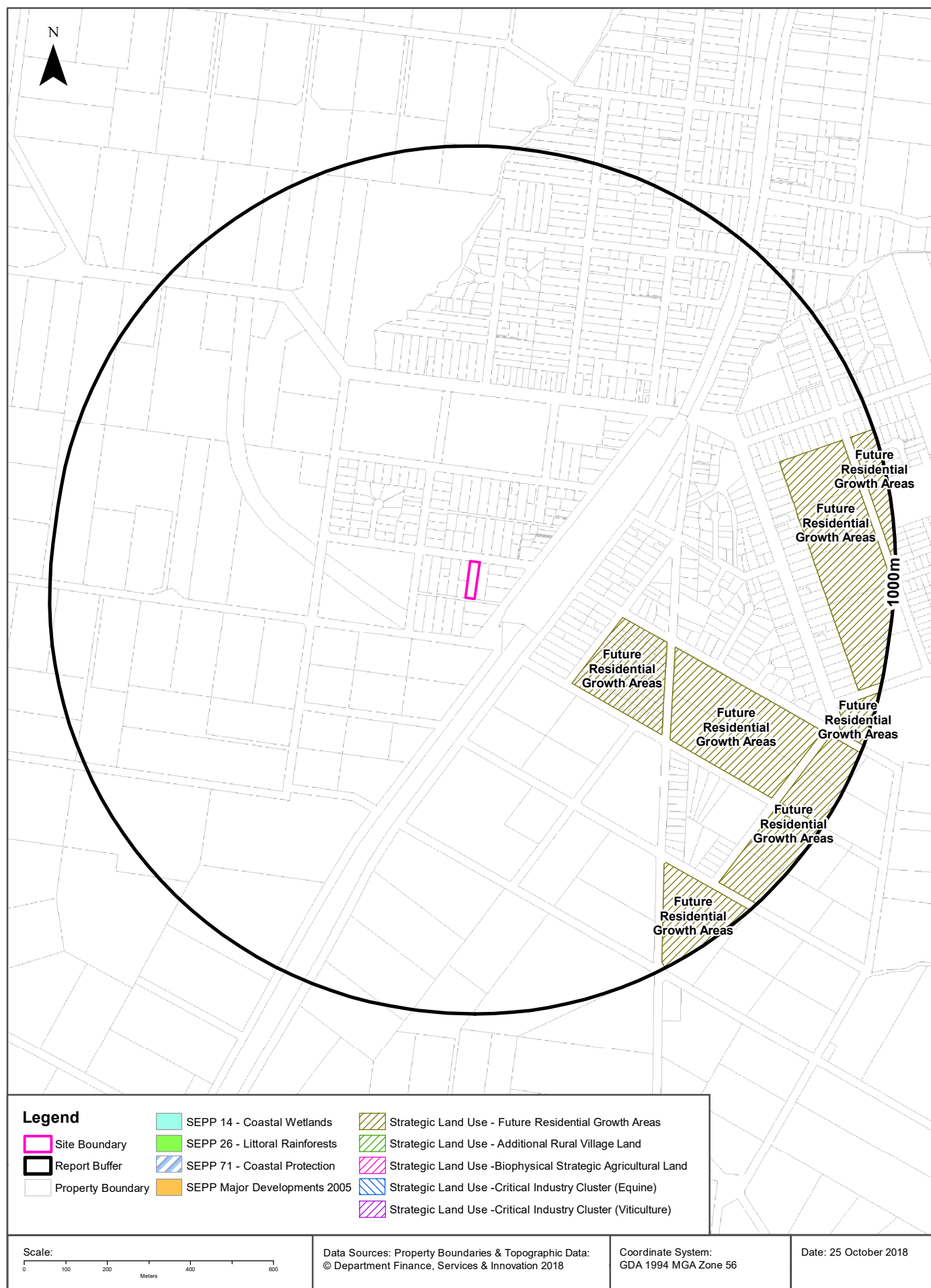
Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
BARGO	170m	South

Mining Subsidence District Data Source: © Land and Property Information (2016)
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State Environmental Planning Policy

4 Close Street, Thirlmere, NSW 2572



Environmental Zoning

4 Close Street, Thirlmere, NSW 2572

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

SEPP Protected Areas Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
N/A	No records within buffer			

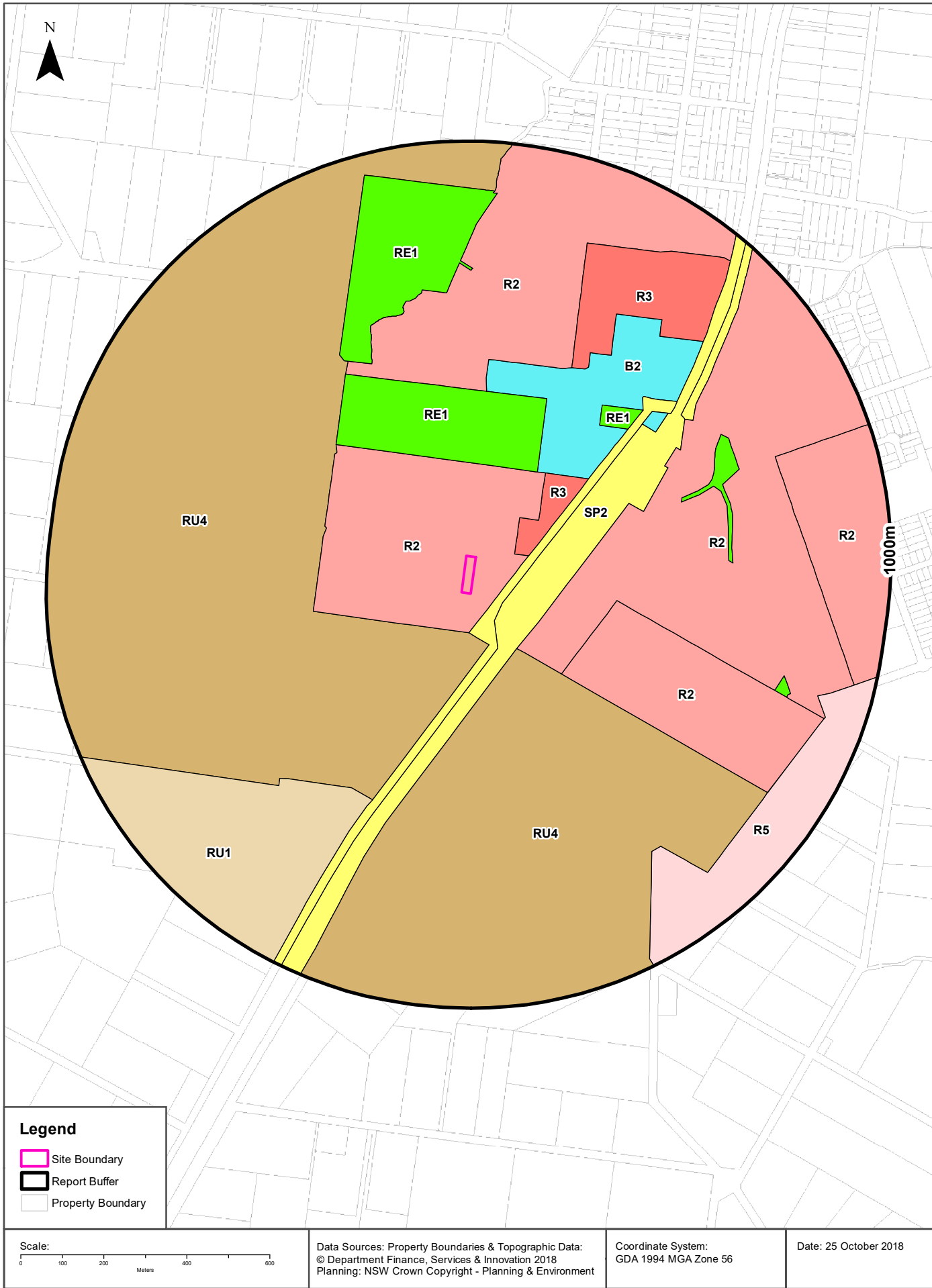
SEPP Major Development Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Strategic Land Use Areas

State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
Future Residential Growth Areas	2007	28/01/2014	Coal Seam Gas	2014	310m	South East

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
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Local Environmental Plan

4 Close Street, Thirlmere, NSW 2572

Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R2	Low Density Residential		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		0m	Onsite
SP2	Infrastructure	Road	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		55m	South West
SP2	Infrastructure	Railway	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		79m	North East
R3	Medium Density Residential		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		94m	North East
RU4	Primary Production Small Lots		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		95m	North West
R2	Low Density Residential		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		170m	North East
RU4	Primary Production Small Lots		Wollondilly Local Environmental Plan 2011	21/07/2017	21/07/2017	20/04/2018	Amendment No 25	173m	South
RE1	Public Recreation		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		224m	North
B2	Local Centre		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		253m	North East
R2	Low Density Residential		Wollondilly Local Environmental Plan 2011	31/01/2014	31/01/2014	20/04/2018	Amendment No 3	291m	South East
R2	Low Density Residential		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		400m	North
RE1	Public Recreation		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		436m	North East
R3	Medium Density Residential		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		512m	North East
RE1	Public Recreation		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		512m	East
B2	Local Centre		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		514m	North East
RE1	Public Recreation		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		515m	North
RU1	Primary Production		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		541m	North West
SP2	Infrastructure	Road	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		601m	North East
R5	Large Lot Residential		Wollondilly Local Environmental Plan 2011	19/06/2015	19/06/2015	20/04/2018	Amendment No 12	759m	East
R2	Low Density Residential		Wollondilly Local Environmental Plan 2011	31/01/2014	31/01/2014	20/04/2018	Amendment No 3	760m	East
RE1	Public Recreation		Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		768m	East

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment

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Local Environmental Plan

4 Close Street, Thirlmere, NSW 2572

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Q	700 m ²	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		100

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
10	9.00 m	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018		100

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Wollondilly Local Environmental Plan 2011	20/04/2018	20/04/2018	20/04/2018	State Environmental Planning Policy (Sydney Region Growth Centres) Amendment (South East Wilton Precinct) 2018	100

Land Reservation Acquisition

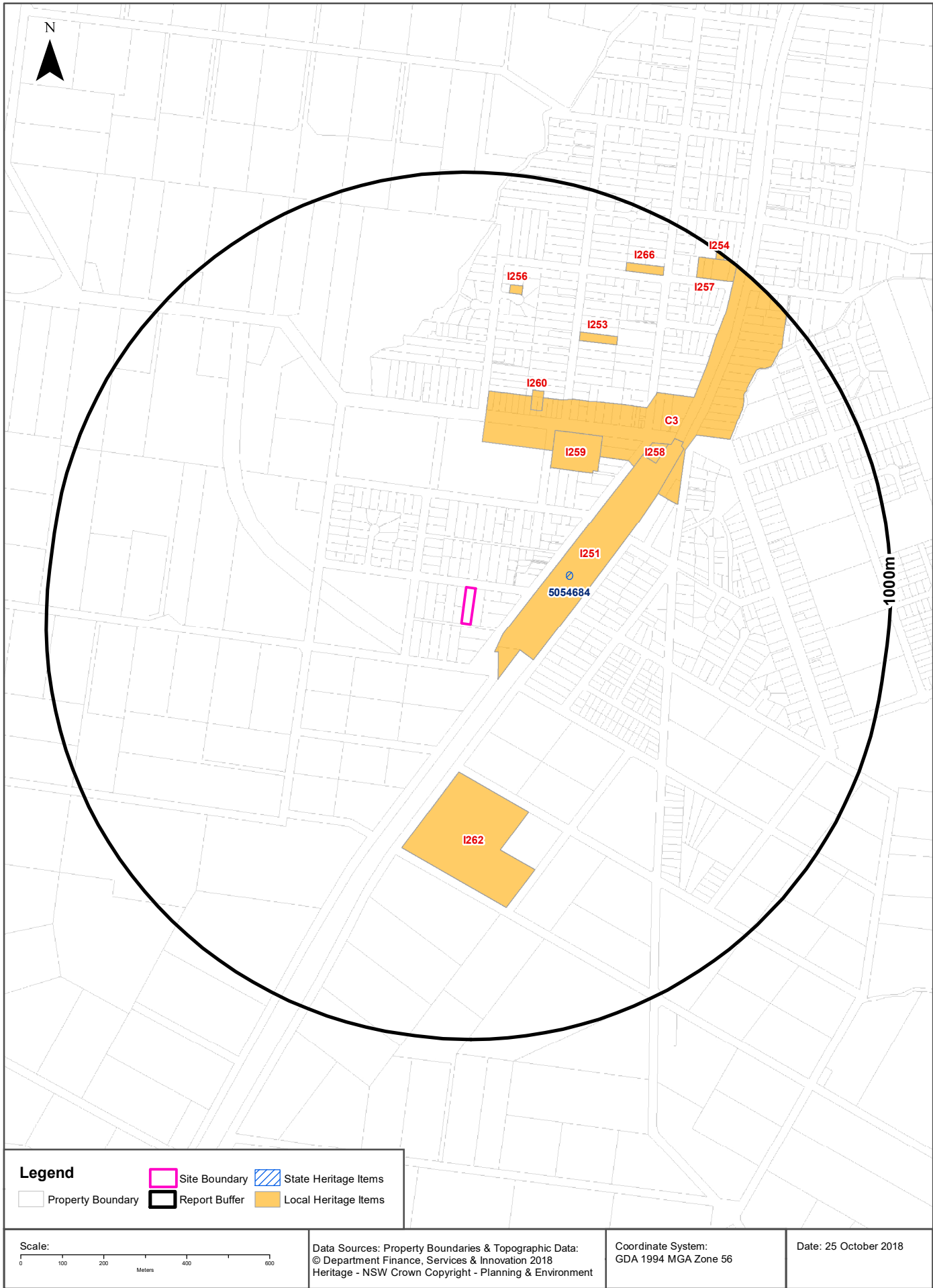
What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

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Heritage Items

4 Close Street, Thirlmere, NSW 2572



Heritage

4 Close Street, Thirlmere, NSW 2572

State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5054684	Rail Paybus FP1	NSW Rail Transport Museum Barbour Road Thirlmere	Wollondilly	26/09/2003	01673	3037	220m	East

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
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Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI	Published Date	Commenced Date	Currency Date	Distance	Direction
I251	Thirlmere Railway Precinct and Heritage Centre	Item - General	State	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	79m	East
I259	Thirlmere Public School & Residence	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	342m	North East
C3	Thirlmere Conservation Area	Conservation Area - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	352m	North East
I262	Thirlmere Cemetery, including Estonian Cemetery	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	356m	South
I260	Kungla Supermarket Sign	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	452m	North
I258	Stationmasters House	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	514m	North East
I253	Cottage	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	647m	North East
I256	Cottage	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	716m	North
I266	Railway Cottage	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	847m	North East
I257	House	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	919m	North East
I254	Cottage	Item - General	Local	Wollondilly Local Environmental Plan 2011	23/02/2011	23/02/2011	20/04/2018	981m	North East

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Natural Hazards

4 Close Street, Thirlmere, NSW 2572

Bush Fire Prone Land

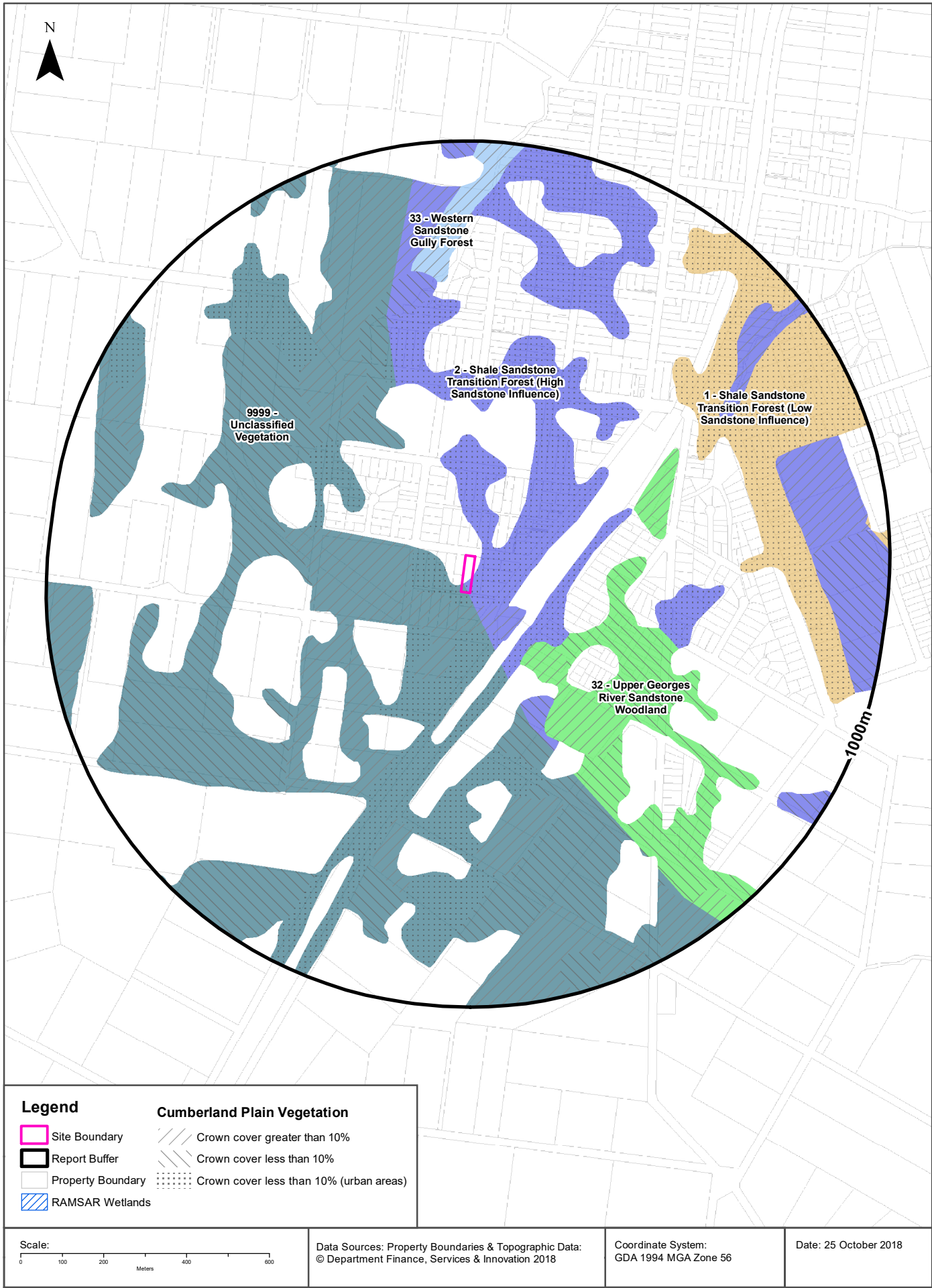
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	0m	Onsite
Vegetation Category 1	27m	South West
Vegetation Category 2	299m	North West

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Remnant Vegetation of the Cumberland Plain

4 Close Street, Thirlmere, NSW 2572



Ecological Constraints

4 Close Street, Thirlmere, NSW 2572

Remnant Vegetation of the Cumberland Plain

What remnant vegetation of the Cumberland Plain exists within the dataset buffer?

Description	Crown Cover	Distance	Direction
2 - Shale Sandstone Transition Forest (High Sandstone Influence)	Crown cover less than 10% (urban areas)	0m	Onsite
9999 - Unclassified Vegetation	Crown cover less than 10% (urban areas)	0m	Onsite
9999 - Unclassified Vegetation	Crown cover greater than 10%	28m	South West
2 - Shale Sandstone Transition Forest (High Sandstone Influence)	Crown cover greater than 10%	29m	South East
32 - Upper Georges River Sandstone Woodland	Crown cover greater than 10%	192m	South East
32 - Upper Georges River Sandstone Woodland	Crown cover less than 10%	241m	South East
2 - Shale Sandstone Transition Forest (High Sandstone Influence)	Crown cover less than 10%	288m	South East
9999 - Unclassified Vegetation	Crown cover less than 10%	292m	South
1 - Shale Sandstone Transition Forest (Low Sandstone Influence)	Crown cover less than 10% (urban areas)	585m	North East
33 - Western Sandstone Gully Forest	Crown cover greater than 10%	661m	North
1 - Shale Sandstone Transition Forest (Low Sandstone Influence)	Crown cover greater than 10%	942m	East
1 - Shale Sandstone Transition Forest (Low Sandstone Influence)	Crown cover less than 10%	956m	East

Remnant Vegetation of the Cumberland Plain : NSW Office of Environment and Heritage

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RAMSAR Wetlands

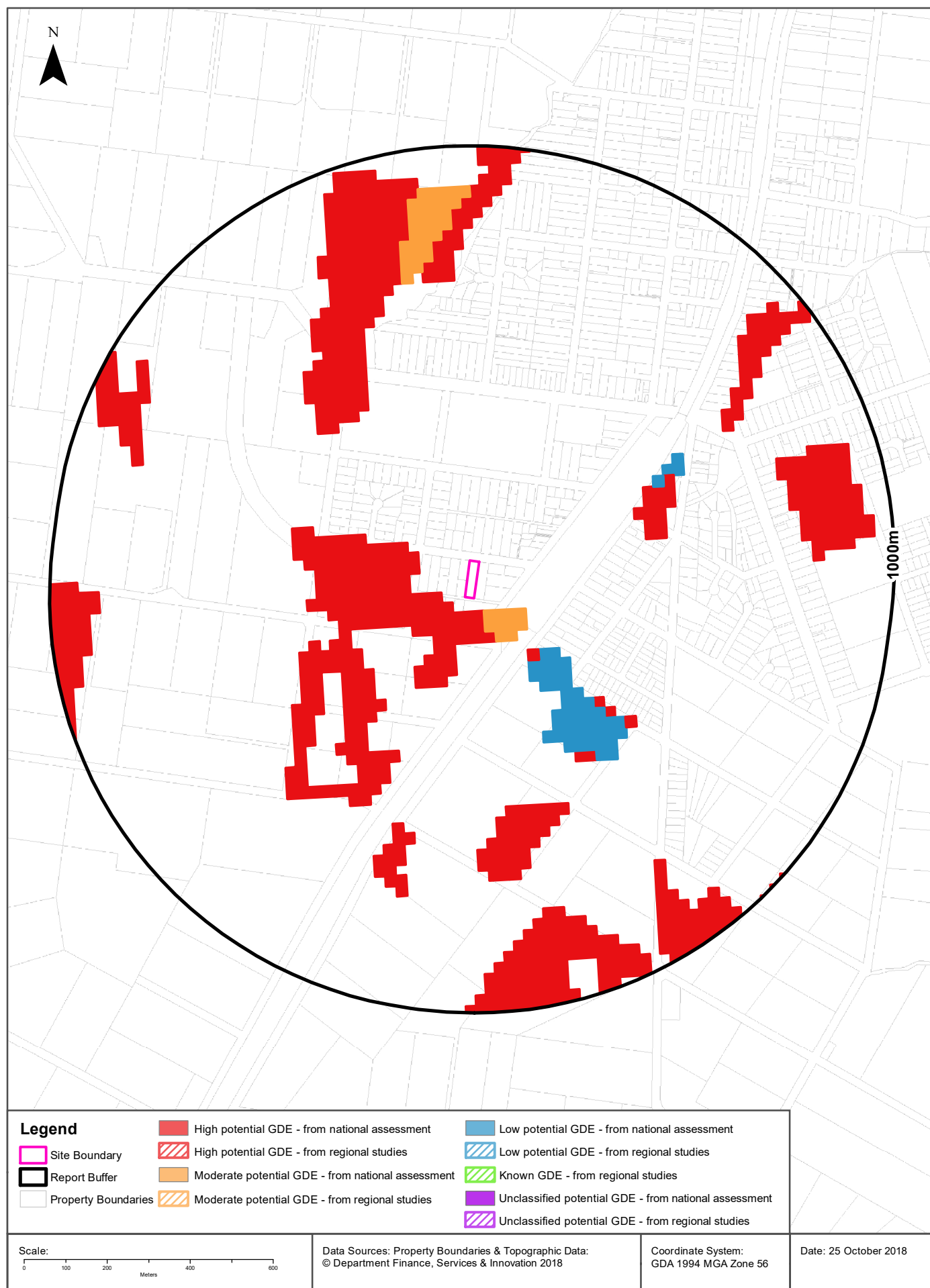
What RAMSAR Wetland areas exist within the dataset buffer?

Map Id	RAMSAR Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

RAMSAR Wetlands Data Source: © Commonwealth of Australia - Department of Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

4 Close Street, Thirlmere, NSW 2572



Ecological Constraints

4 Close Street, Thirlmere, NSW 2572

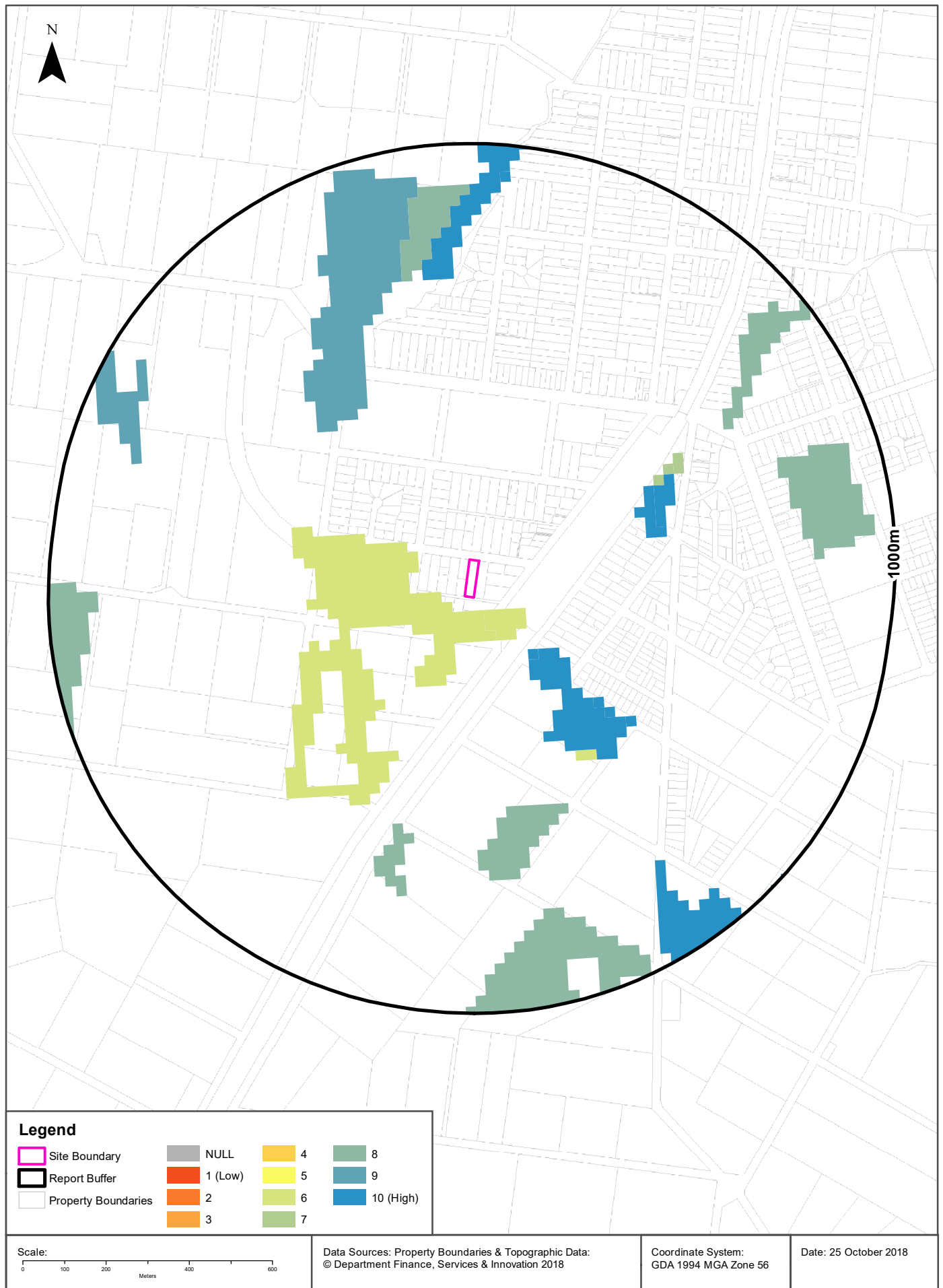
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	31m
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	38m
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	196m

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

4 Close Street, Thirlmere, NSW 2572



Ecological Constraints

4 Close Street, Thirlmere, NSW 2572

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	31m
Terrestrial	10	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	179m
Terrestrial	9	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	429m
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	456m
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	508m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

4 Close Street, Thirlmere, NSW 2572

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needle-tail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Melanodryas cucullata cucullata	Hooded Robin (south-eastern form)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebrosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Bettongia penicillata penicillata	Brush-tailed Bettong (South-East Mainland)	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolkensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petrogale penicillata	Brush-tailed Rock-wallaby	Endangered	Not Sensitive	Vulnerable	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus trouhoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Cheilanthes sieberi subsp. pseudovellea		Endangered	Category 3	Not Listed	
Plantae	Flora	Commersonia prostrata	Dwarf Kerrawang	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Cynanchum elegans	White-flowered Wax Plant	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Darwinia peduncularis		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Epacris purpurascens subsp. purpurascens		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus benthamii	Camden White Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus macarthurii	Paddys River Box, Camden Woollybutt	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Lepidium hyssopifolium	Aromatic Peppercress	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Leucopogon exolasius	Woronora Beard-heath	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Persicaria elatior	Tall Knotweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia bargoensis	Bargo Geebung	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia glaucescens	Mittagong Geebung	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Pomaderris brunnea	Brown Pomaderris	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Pomaderris cotoneaster	Cotoneaster Pomaderris	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

NSW BioNet: © State of NSW and Office of Environment and Heritage

Data obtained 24/10/2018

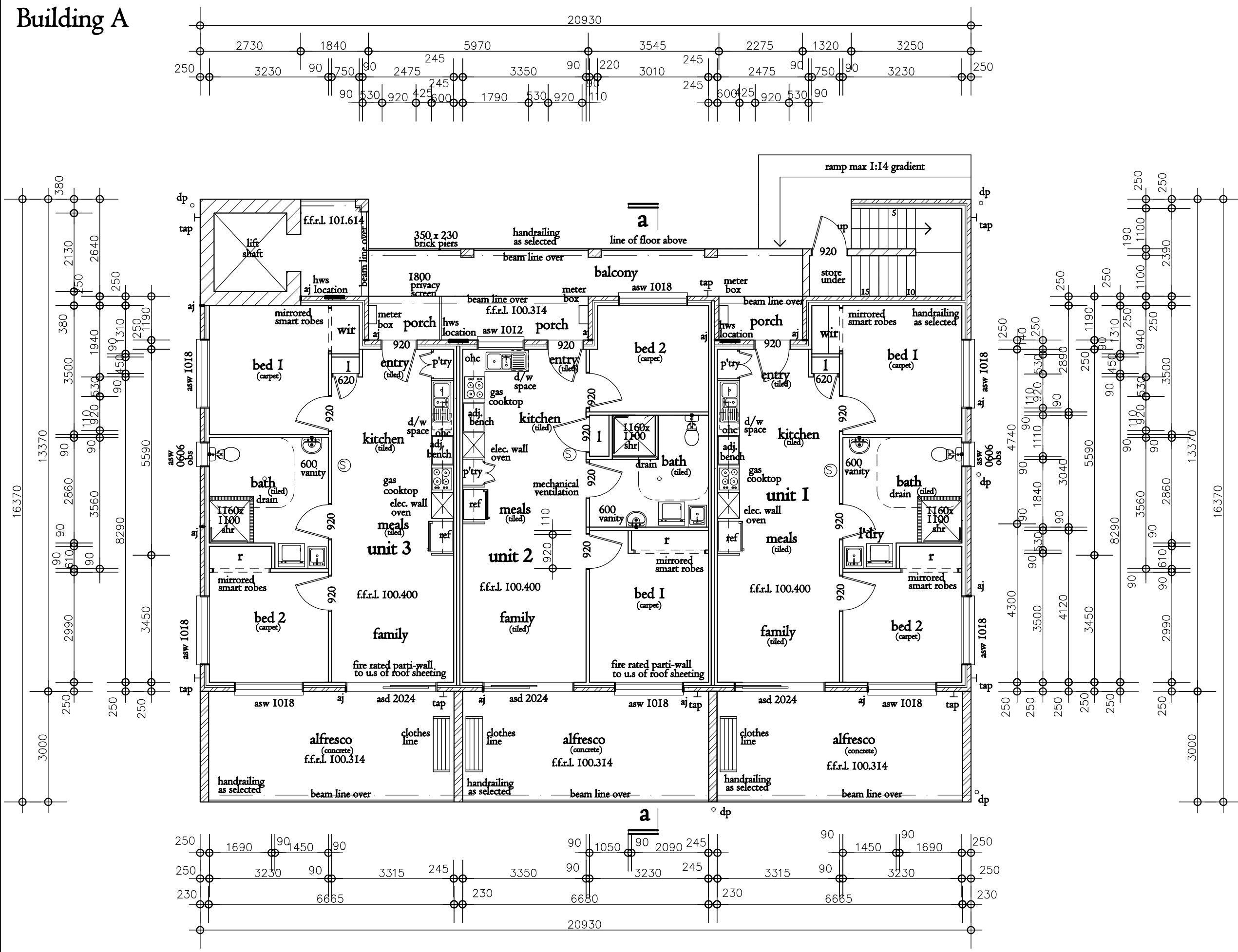
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Building A



unit 1
floor areas :

living	: 72.29m
alfresco	: 21.02m
porch	: 2.71m
total	: 96.02m

unit 2
floor areas :

living	: 70.17m
alfresco	: 20.74m
porch	: 4.75m
total	: 95.66m

unit 3
floor areas :

living	: 71.62m
alfresco	: 21.03m
porch	: 2.36m
total	: 95.01m

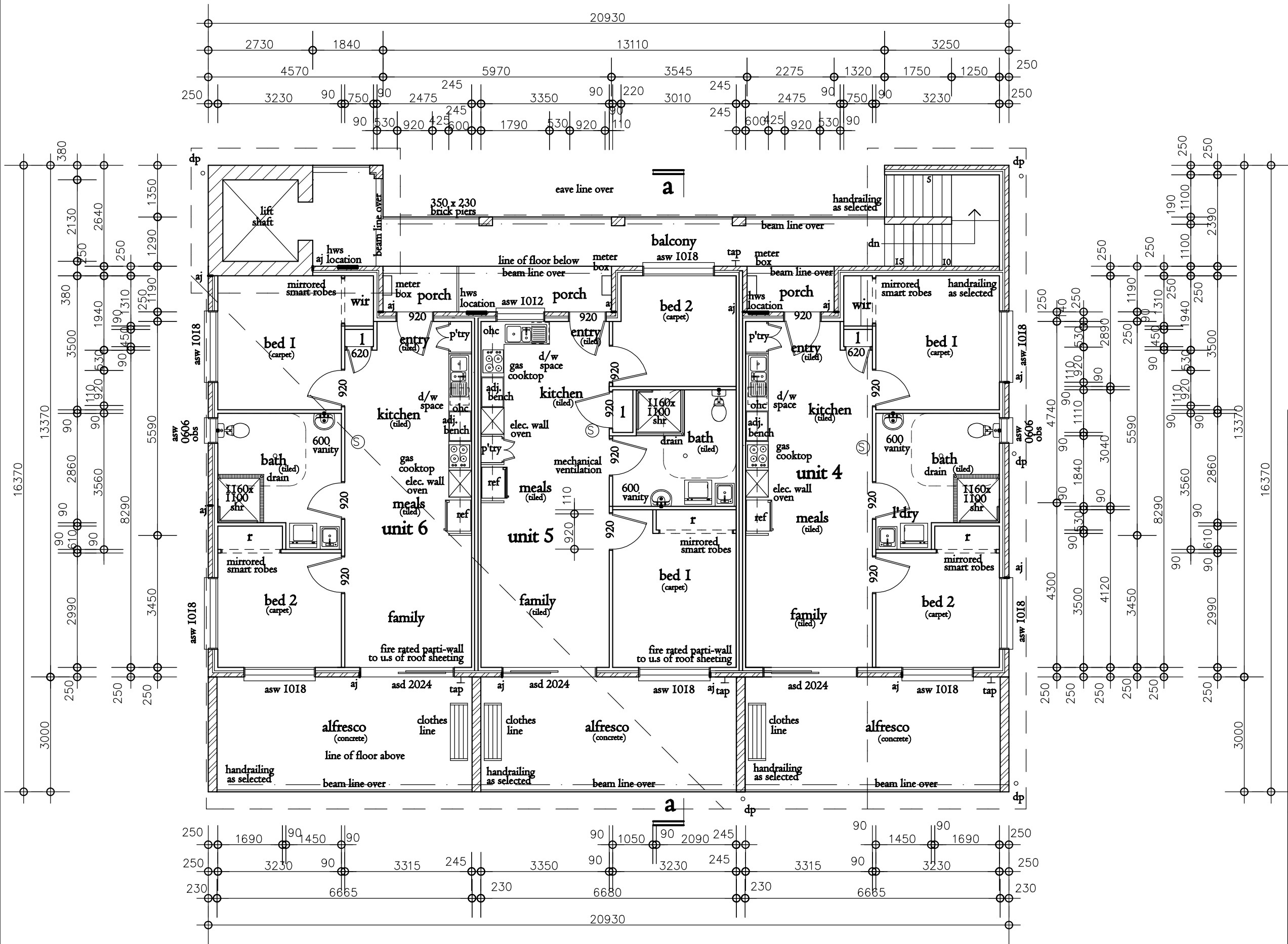
balcony: 38.24m
total lower: 324.93m

Issue	Amendment	Date
Approval from client		Date
Client: S & H Kadir Pty Ltd		
Job: Proposed Senior Housing Residence		
4 Close Street, Thirlmere		
Drawing: Ground Floor Plan		
Scale: 1:100		
Date: 12-9-18		
Drawing No: 2234-3 r.mcq	Sheet: 1	ISSUE: D
house design		
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Ground Floor Plan
Scale 1:100

Ⓢ- Smoke Detectors

Building A



unit 4	
floor areas :	
living	: 72.29m
alfresco	: 21.02m
porch	: 2.71m
total	: 96.02m

unit 5	
floor areas :	
living	: 70.17m
alfresco	: 20.74m
porch	: 4.75m
total	: 95.66m

unit 6	
floor areas :	
living	: 71.62m
alfresco	: 21.03m
porch	: 2.36m
total	: 95.01m

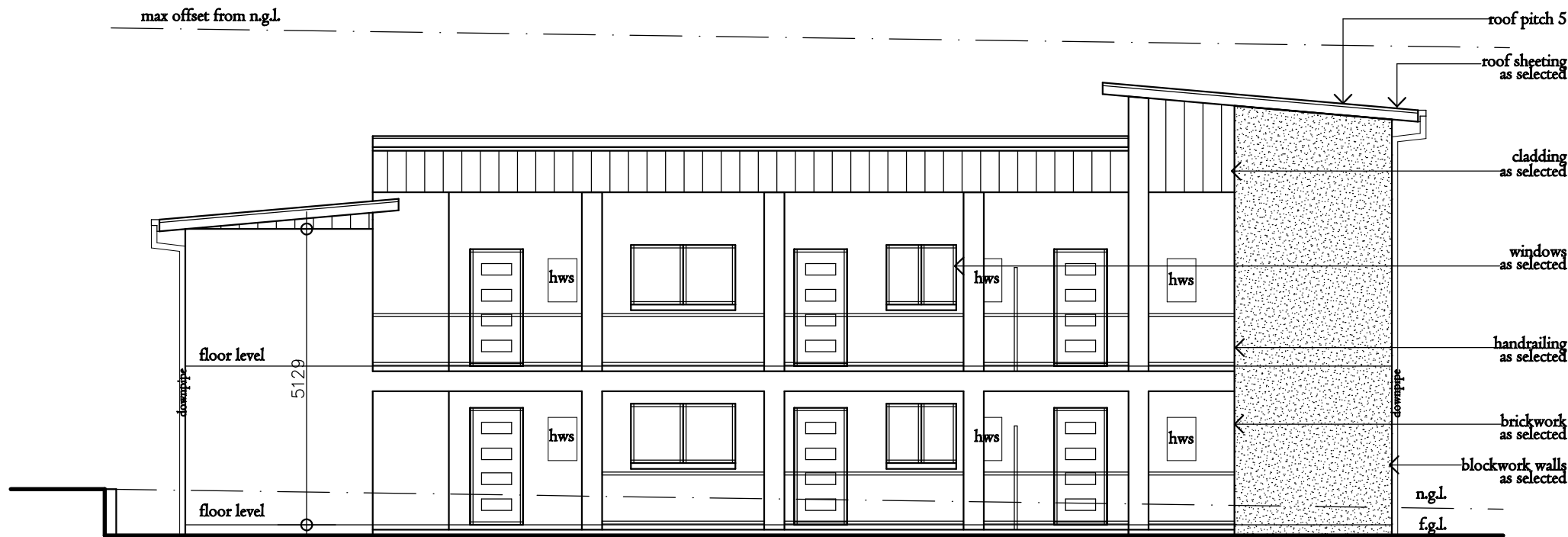
balcony: 38.24m
total lower: 324.93m

Issue	Amendment	Date
Approval from client		Date
Client: S & H Kadir Pty Ltd		
Job: Proposed Senior Housing Residence		
4 Close Street, Thirlmere		
Drawing: First Floor Plan		
Scale: 1:100		
Date: 12-9-18		
Drawing No: 2234-3 r.mcq		Sheet: 2
		ISSUE: D
house design		
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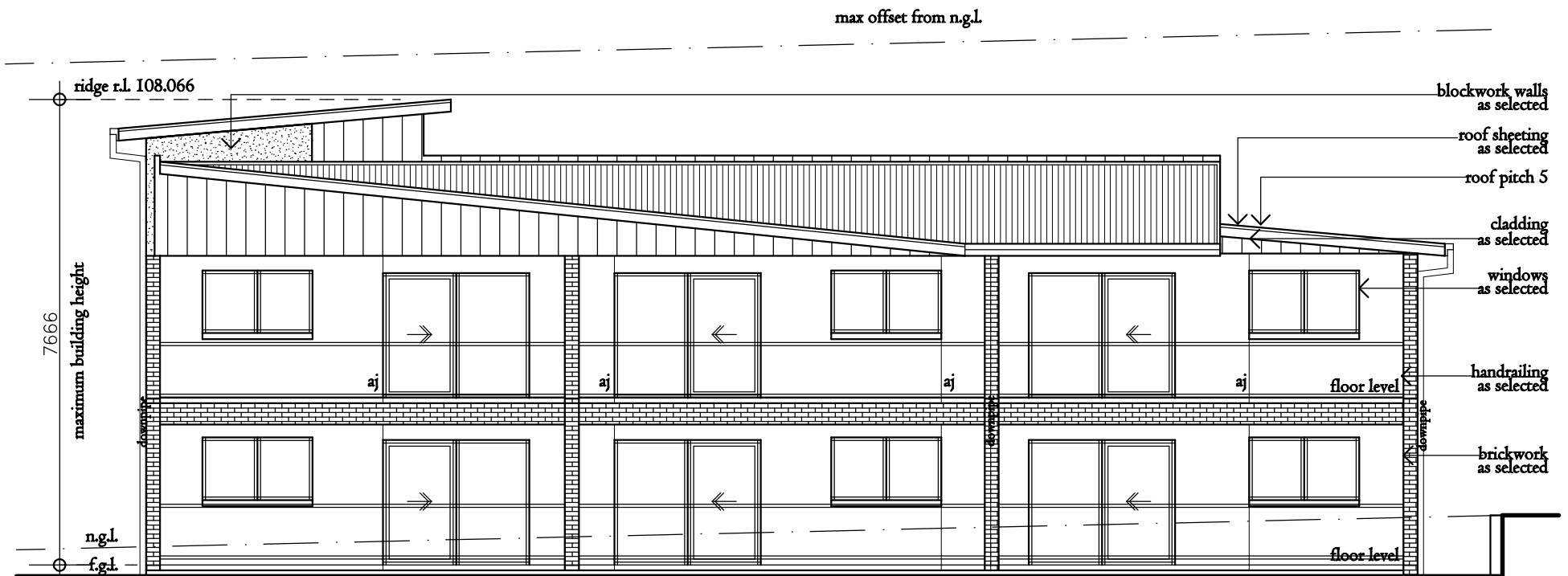
First Floor Plan
Scale 1:100

⑤- Smoke Detectors

Building A



Front Elevation



Rear Elevation

- NOTES:
1. Levels shown are approx only and should be verified on site
 2. Figured dimensions are to be taken in preference to scaling
 3. All measurements are in mm unless otherwise stated
 4. Window sizes are nominal only. Final window sizes by builder.
 5. Dimensions are to be verified on site by builder before commencement of work.
 6. Any items shown or drawn on the enclosed plans but not listed as an inclusion will be deemed an exclusion

Issue	Amendment	Date
Approval from client		Date

Client:
S & H Kadir Pty Ltd

Job:
Proposed Senior Housing Residence

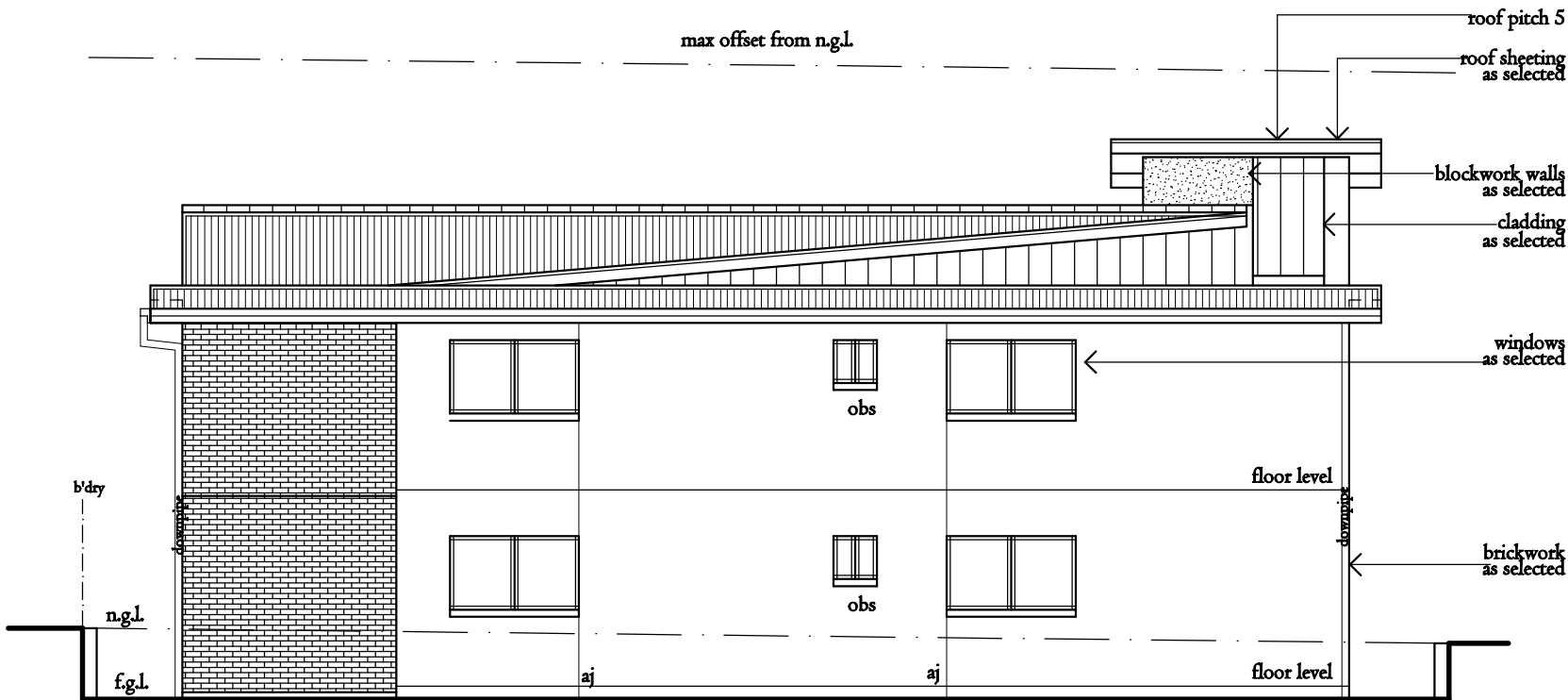
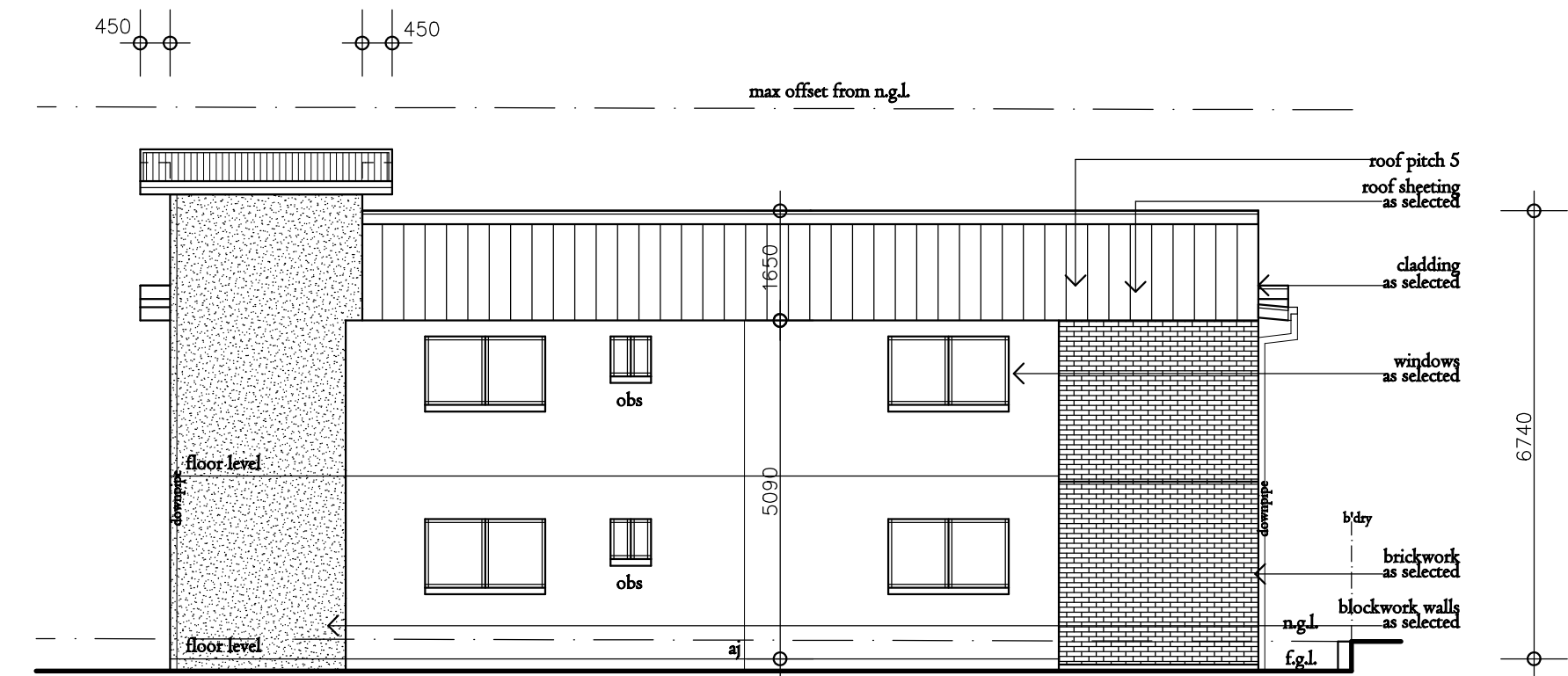
4 Close Street, Thirlmere
Drawing:
Elevations

Scale: 1:100	Date: 12-9-18	
Drawing No: 2234-3 r.mcq	Sheet: 3	ISSUE: D

house design

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Building A



- NOTES:
1. Levels shown are approx only and should be verified on site
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Issue	Amendment	Date
Approval from client		Date

Client:
S & H Kadir Pty Ltd

Job:
Proposed Senior Housing Residence

4 Close Street, Thirlmere

Drawing:
Elevations

Scale:
1:100

Date:
12-9-18

Drawing No:
2234-3 r.mcq

Sheet:
4

ISSUE:
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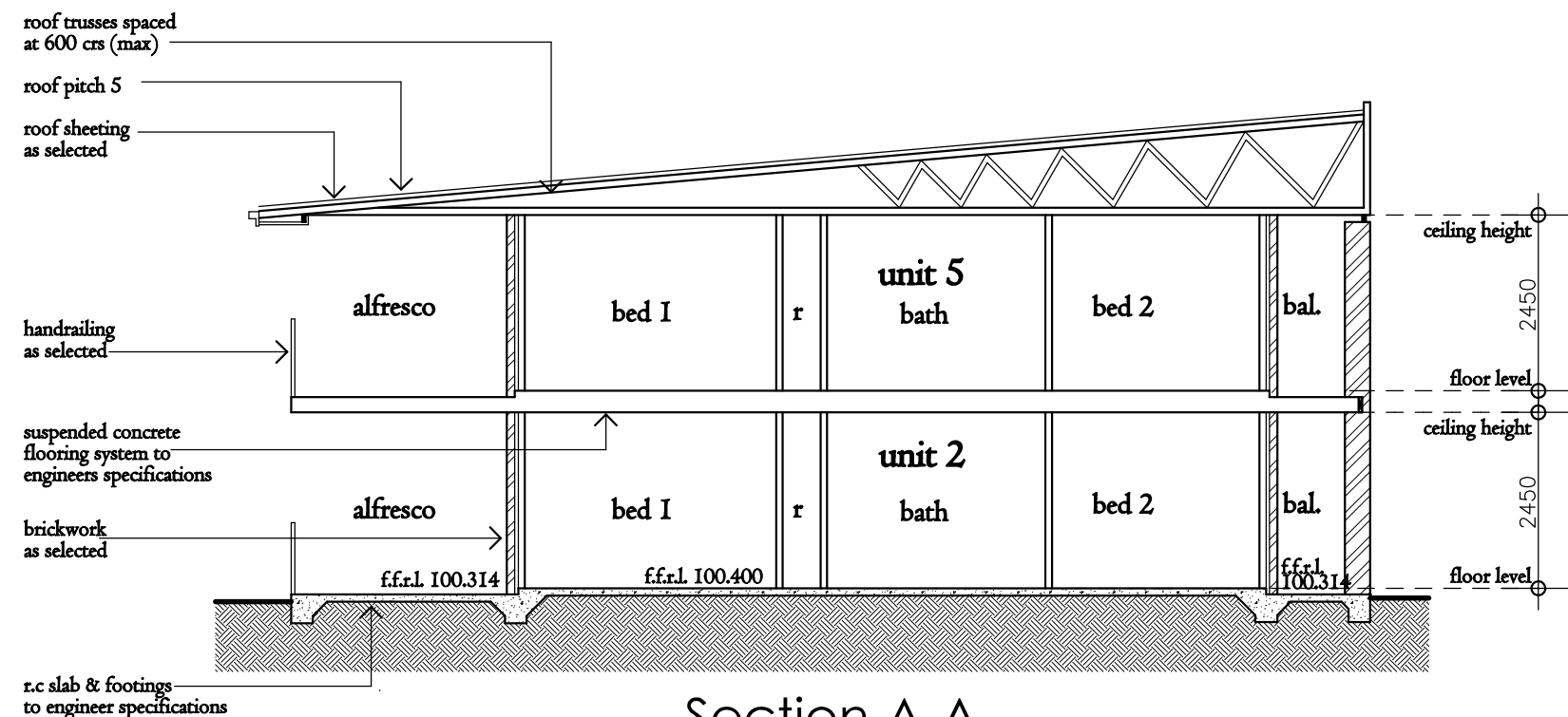
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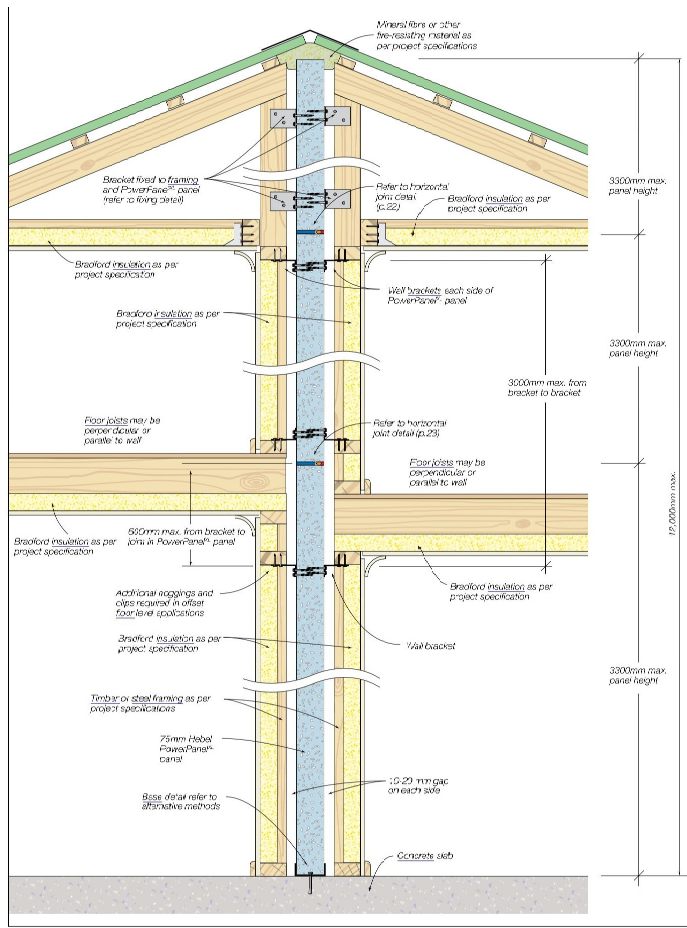
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Building A



Section A-A
Scale 1:100

BAL 12.5	Construction requirements
5.4.1	no ext. wall is >400mm from n.g.l.
5.4.2	all joints to be >3mm
5.4.3	weephole mesh to have 2mm aperture corrosive resistant steel when weepholes are < 3mm
5.5.1A	screens for doors/windows will have mesh with 2mm aperture of corrosive resistant steel & frames to be made from metal
5.5.3	ext. hung doors to be solid timber and to have bushfire shutters and are to tight fitted and are to have weather strips to the base
5.5.4	Sliding Doors to have Grade A safety glass to AS 1288 and to be metal framed
5.5.5	lower part of vehicle access to be made from non combustible material and have weather strips and have no ventilation slots
5.6.1	sheeting to be non combustible, roof/wall junction to be sealed gable vents to be fitted with non combustible materials
5.6.2	sheeting to be full sarked & have a flame index <5 under battens & to cover entire roof area & have no gaps where sarking meet
5.6.4	porch to comply with clause 5.6.2
5.6.5	all penetrations to be sealed and have no gap >3mm
5.6.6	gables to comply with clause 5.4 eave penetrations to comply with clause 5.6.5
5.7.1	concrete patio complies
5.8	above ground pipes to be metal



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Approval from client		Date

Client:
S & H Kadir Pty Ltd

Job:
Proposed Senior Housing Residence

4 Close Street, Thirlmere

Drawing:
Section A-A

Scale:
1:100

Date:
12-9-18

Drawing No:
2234-3 r.mcq

Sheet:
5

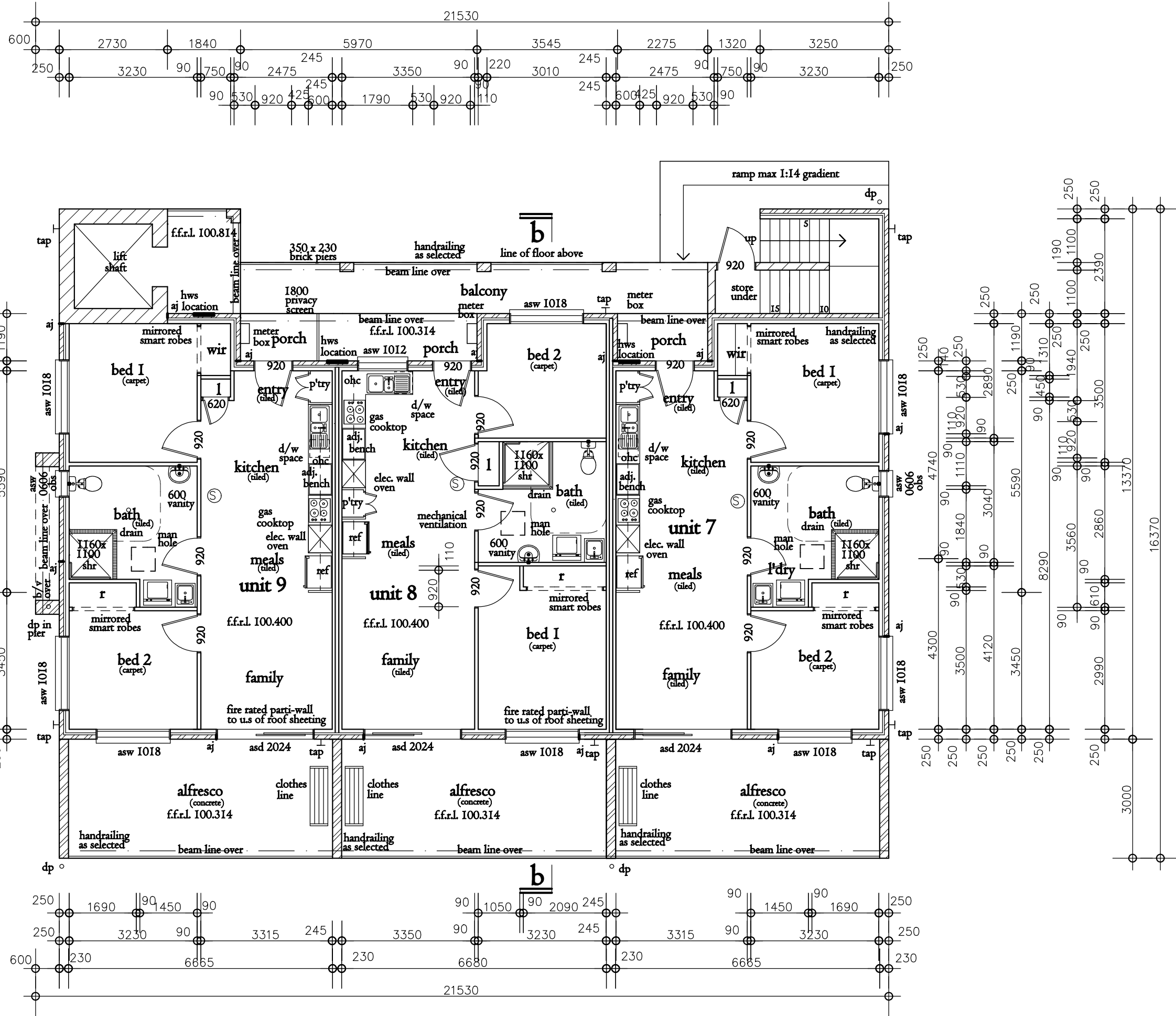
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Building B



unit 7	
floor areas :	
living	: 72.29m
alfresco	: 21.02m
porch	: 2.71m
total	: 96.02m

unit 8	
floor areas :	
living	: 70.17m
alfresco	: 20.74m
porch	: 4.75m
total	: 95.66m

unit 9	
floor areas :	
living	: 71.62m
alfresco	: 21.03m
porch	: 2.36m
total	: 95.01m

balcony: 38.24m
total lower: 324.93m

Issue	Amendment	Date
Approval from client		Date
Client:		
S & H Kadir Pty Ltd		
Job:		
Proposed Senior Housing Residence		
4 Close Street, Thirlmere		
Drawing:		
Ground Floor Plan		
.		
Scale:	Date:	
1:100	12-9-18	
Drawing No:	Sheet:	ISSUE:
2234-3 r.mcq	6	D

house design



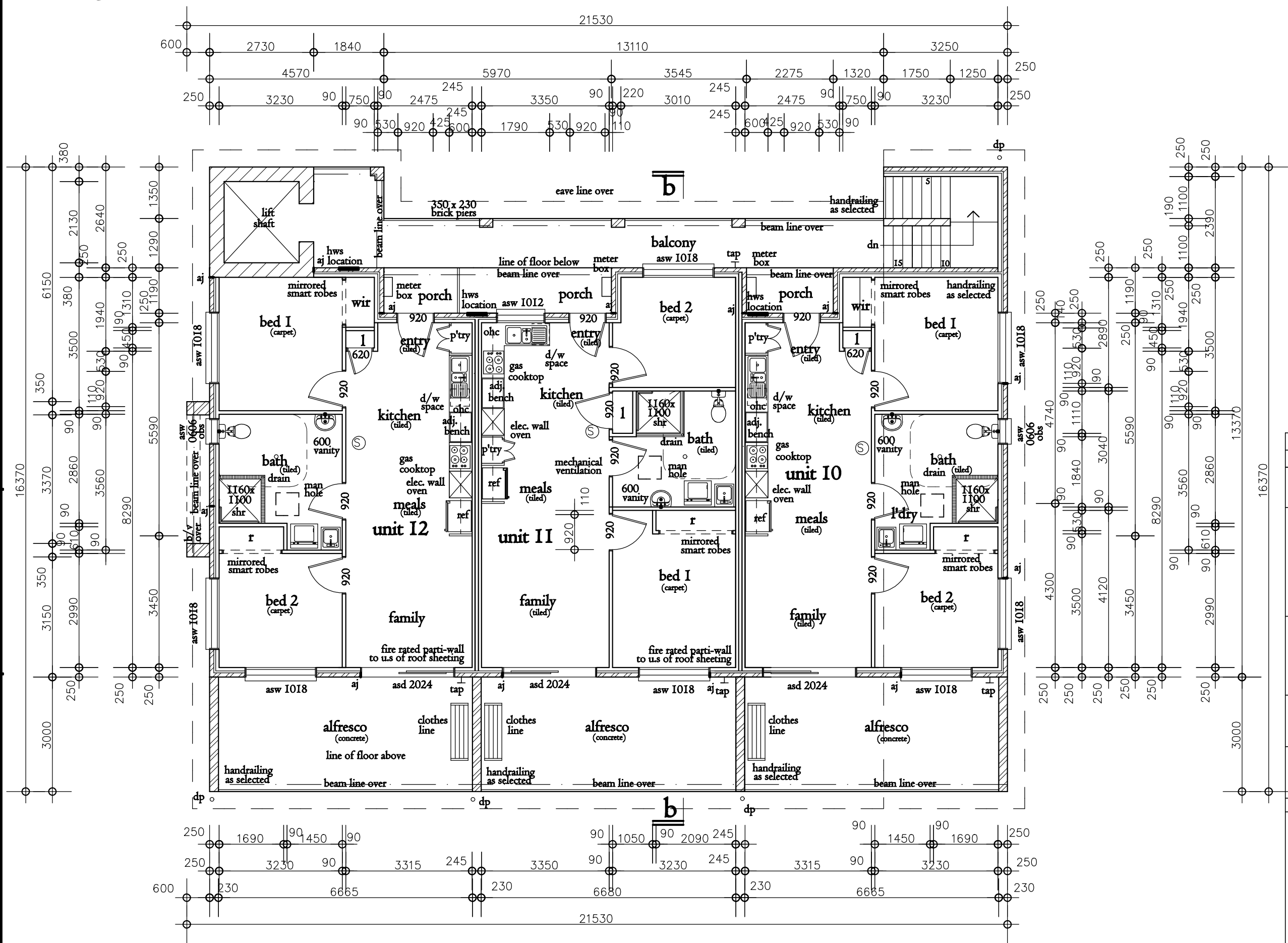
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Ground Floor Plan
Scale 1:100

Ⓢ- Smoke Detectors

Building B



unit 10
floor areas :

living	: 72.29m
alfresco	: 21.02m
porch	: 2.71m
total	: 96.02m


unit 11
floor areas :

living	: 70.17m
alfresco	: 20.74m
porch	: 4.75m
total	: 95.66m

unit 12
floor areas :

living	: 71.62m
alfresco	: 21.03m
porch	: 2.36m
total	: 95.01m

balcony: 38.24m
total lower: 324.93m

Issue	Amendment	Date
Approval from client		Date
Client: S & H Kadir Pty Ltd		
Job: Proposed Senior Housing Residence		
4 Close Street, Thirlmere		
Drawing: First Floor Plan		
Scale: 1:100	Date: 12-9-18	
Drawing No: 2234-3 r.mcq	Sheet: 7	ISSUE: D
house design		
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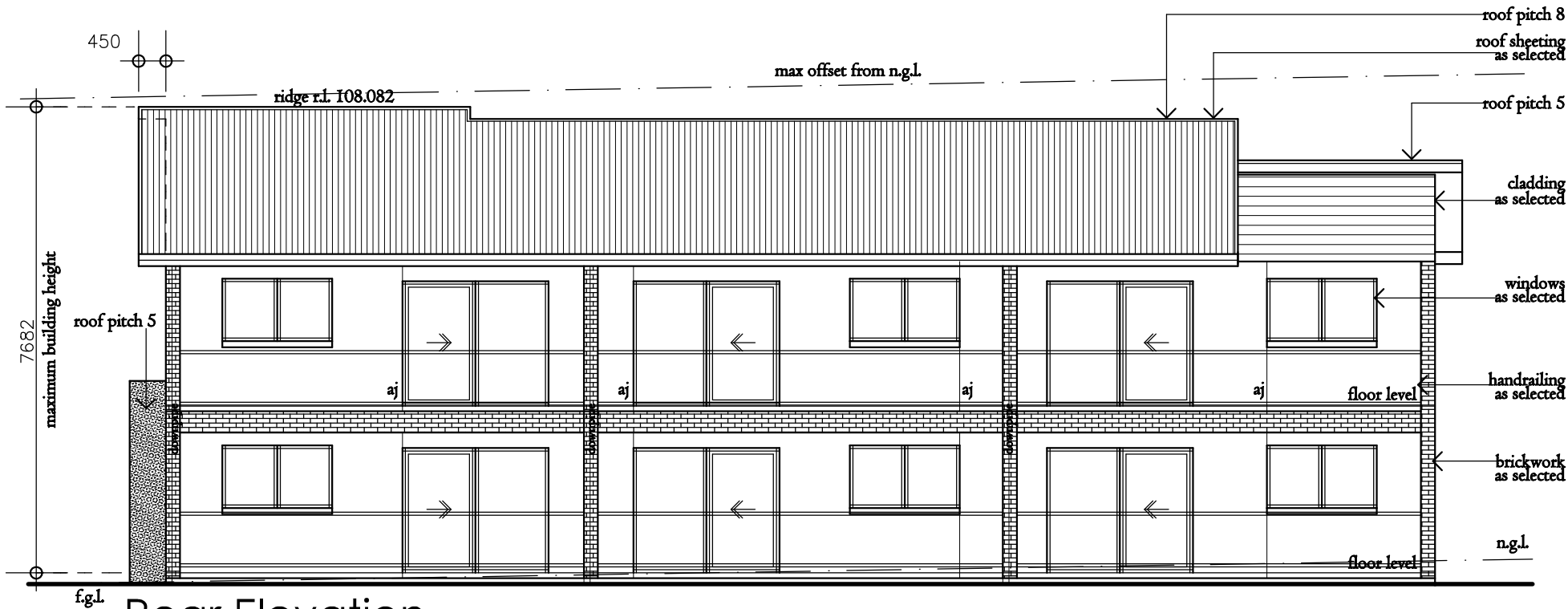
First Floor Plan
Scale 1:100

Smoke Detectors

Building B



Front Elevation



Rear Elevation

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Approval from client		Date

Client:
S & H Kadir Pty Ltd

Job:
Proposed Senior Housing Residence

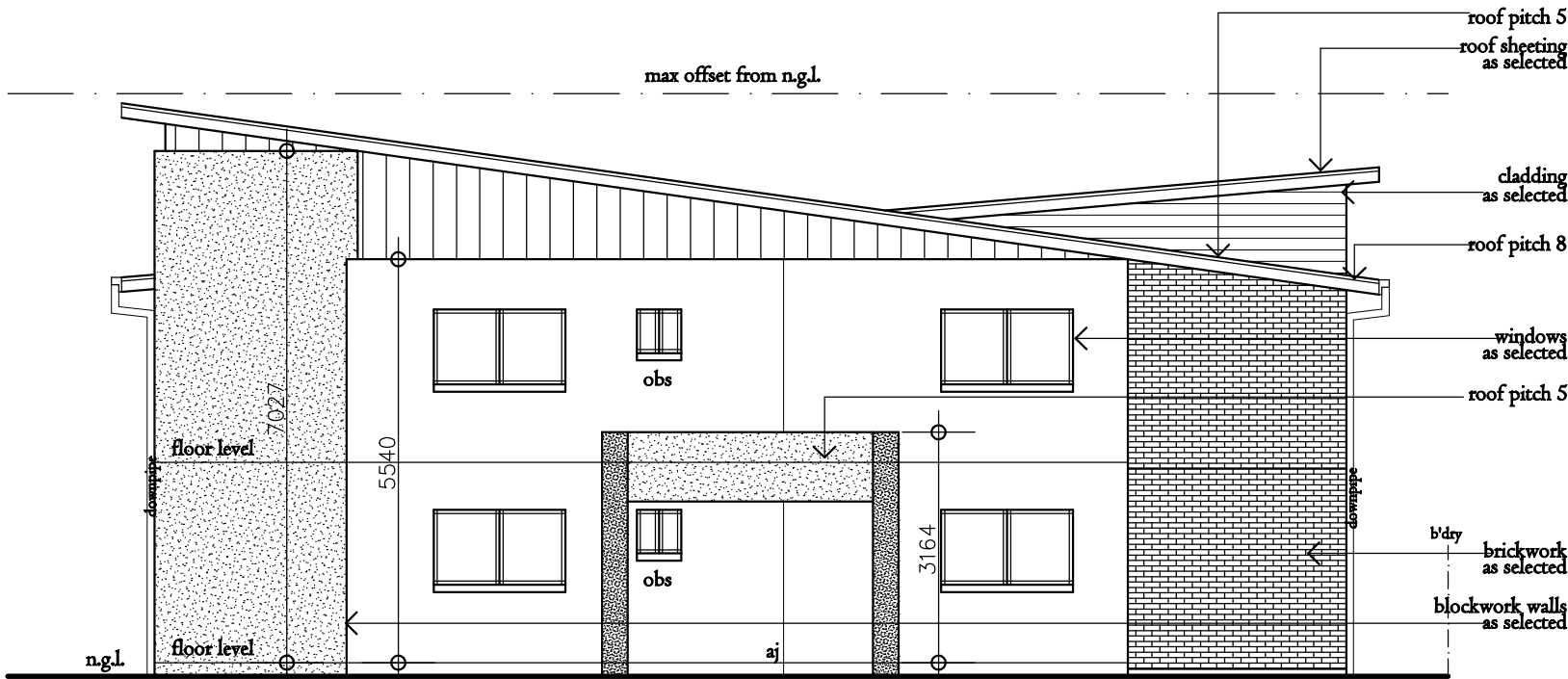
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Drawing:
Elevations

Scale:	Date:
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Drawing No:	Sheet:
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	ISSUE:
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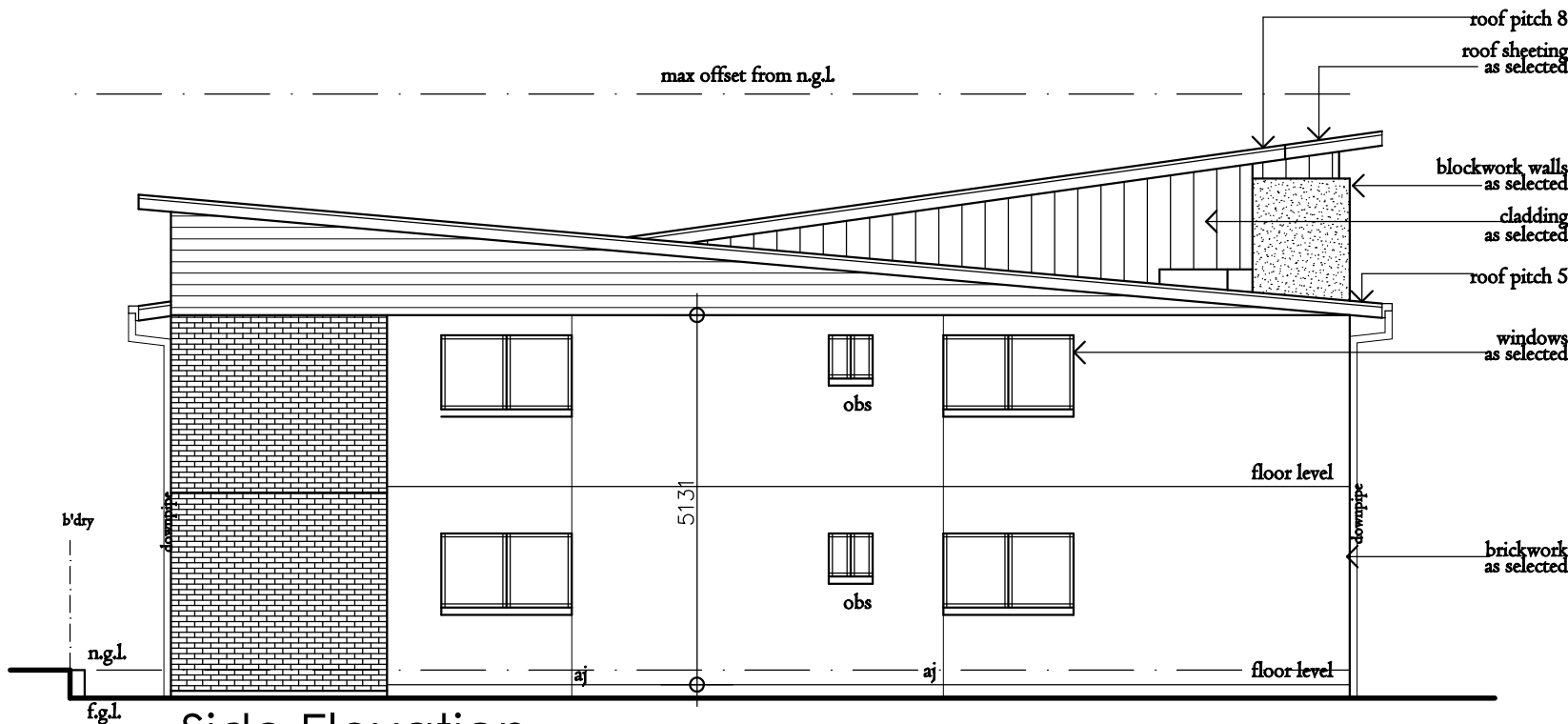
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Building B



Side Elevation



Side Elevation

- NOTES:
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Issue	Amendment	Date
Approval from client		Date

Client:
S & H Kadir Pty Ltd
.

Job:
Proposed Senior Housing Residence
4 Close Street, Thirlmere

Drawing:
Elevations
.

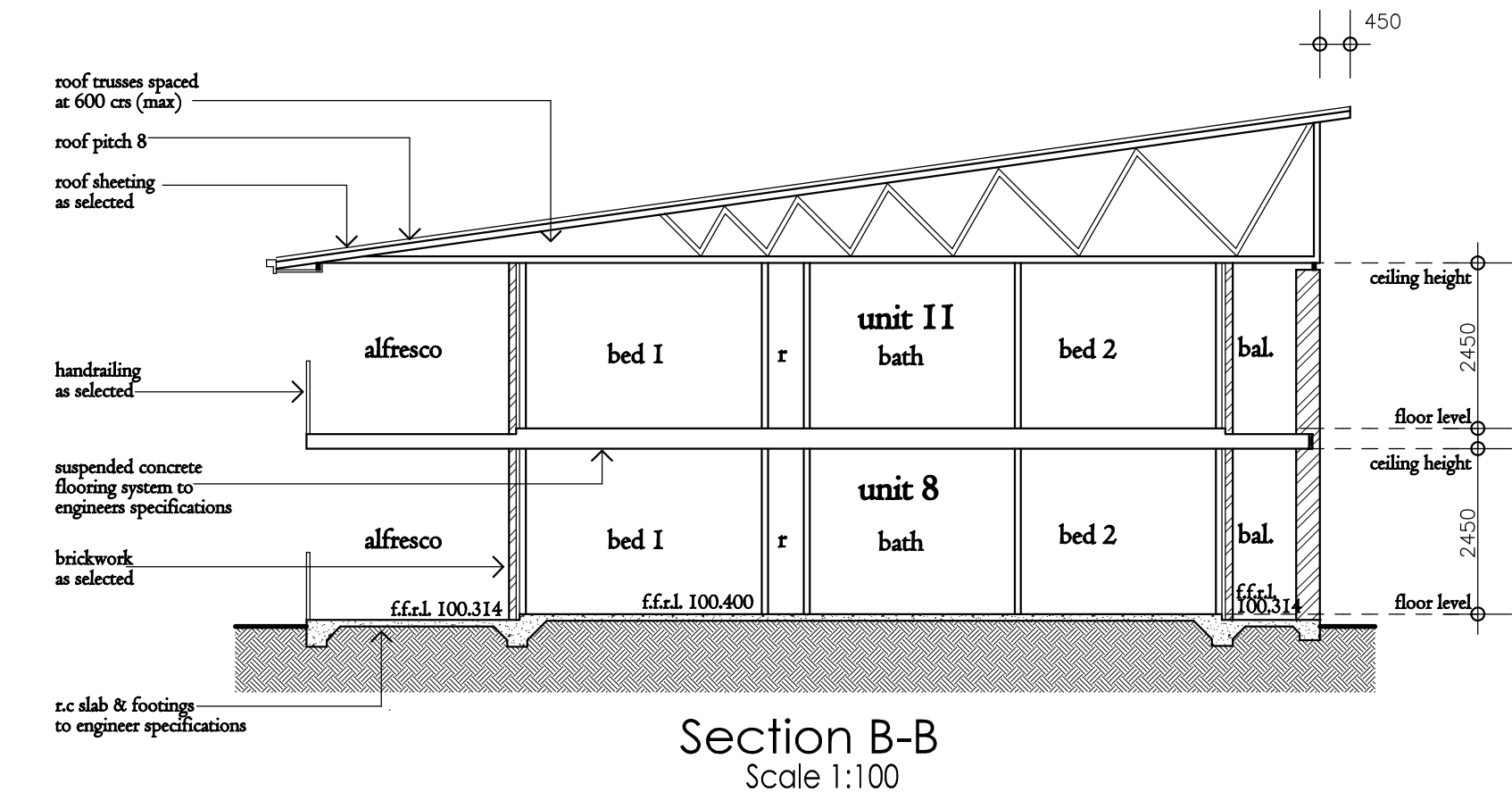
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Drawing No:	Sheet:	ISSUE:
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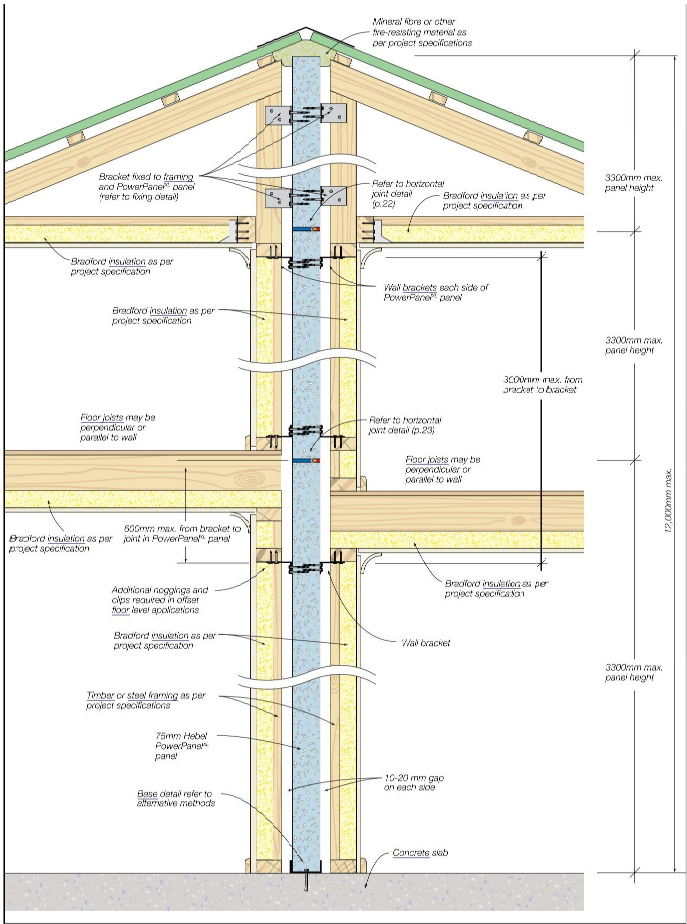
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Building B



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Approval from client		Date

Client:
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Job:
Proposed Senior Housing Residence

4 Close Street, Thirlmere
Drawing:
Section B-B
.

Scale: 1:100	Date: 12-9-18	
Drawing No: 2234-3 r.mcq	Sheet: 10	ISSUE: D

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LOT 17
SEC 3
DP 758972
2028.1m²

STREET
CLOSE

Existing Site Plan

Scale 1:400

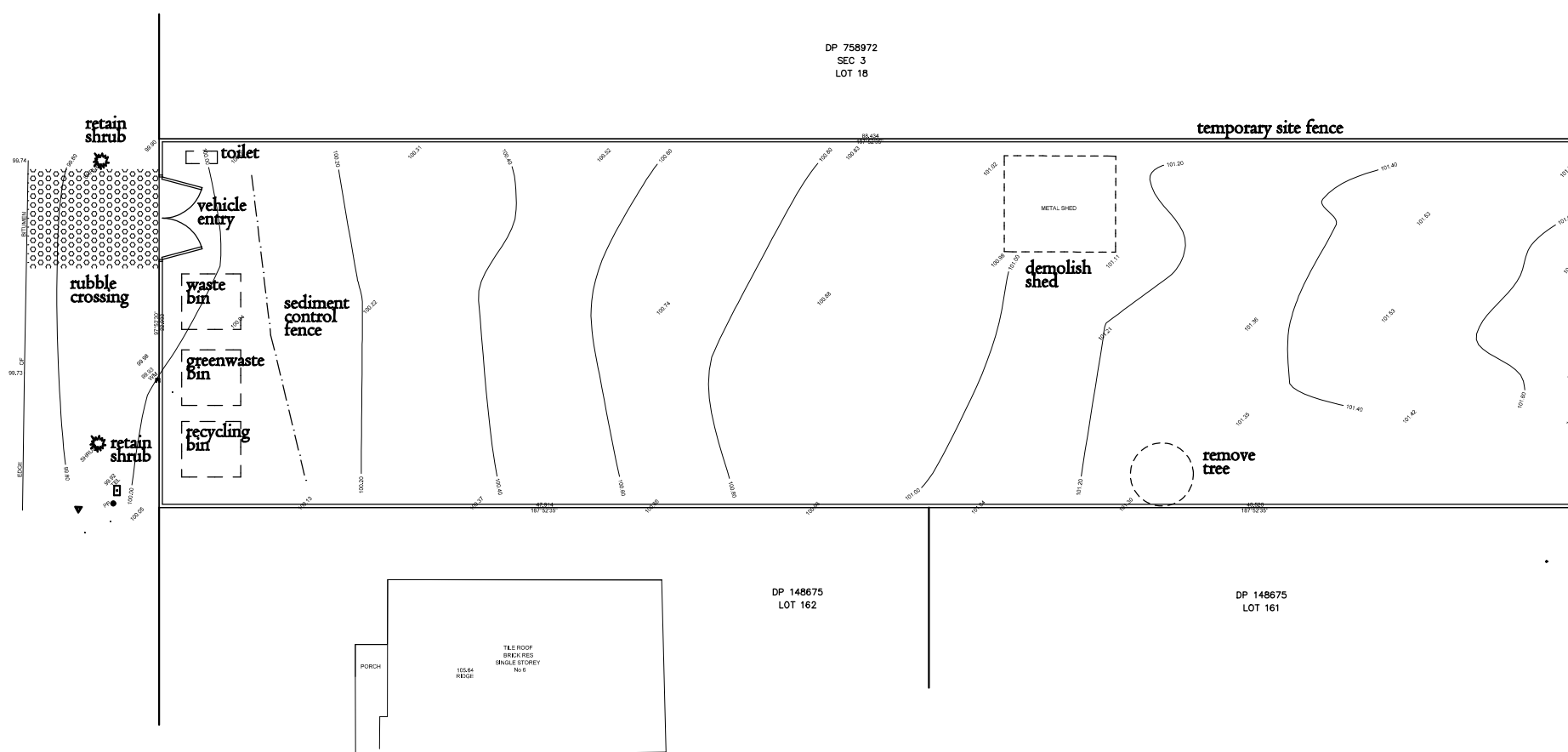
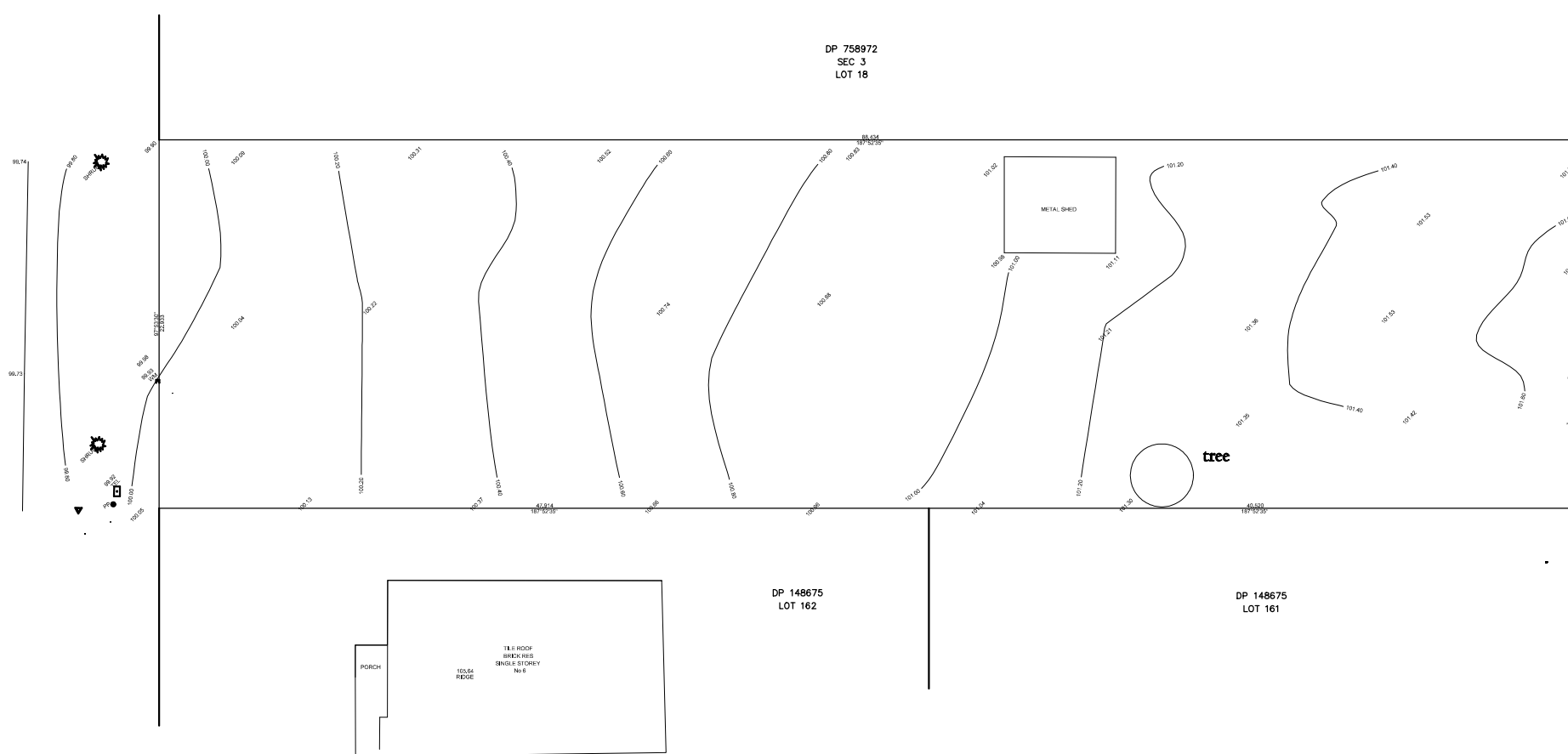


LOT 17
SEC 3
DP 758972
2028.1m²

STREET
CLOSE

Demolition Plan

Scale 1:400



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Issue	Amendment	Date
Approval from client		Date

Client:
S & H Kadir Pty Ltd
.

Job:
Proposed Senior Housing Residence
4 Close Street, Thirlmere

Drawing:
Existing Site Plan & Demolition Plan

Scale:
1:400

Date:
12-9-18

Drawing No:
2234-3 r.mcq

Sheet:
11

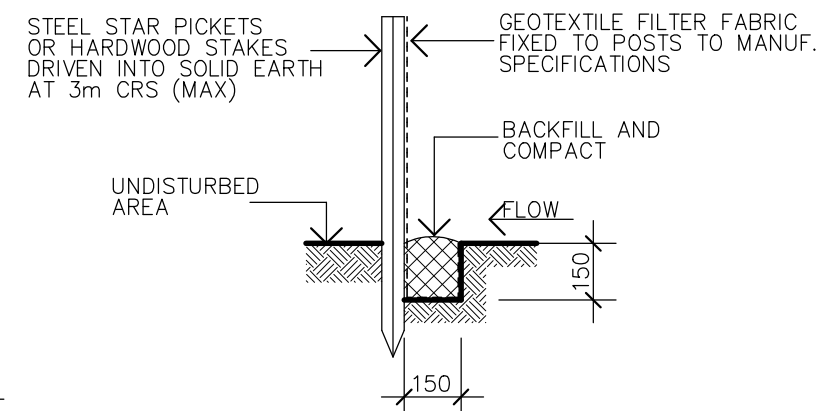
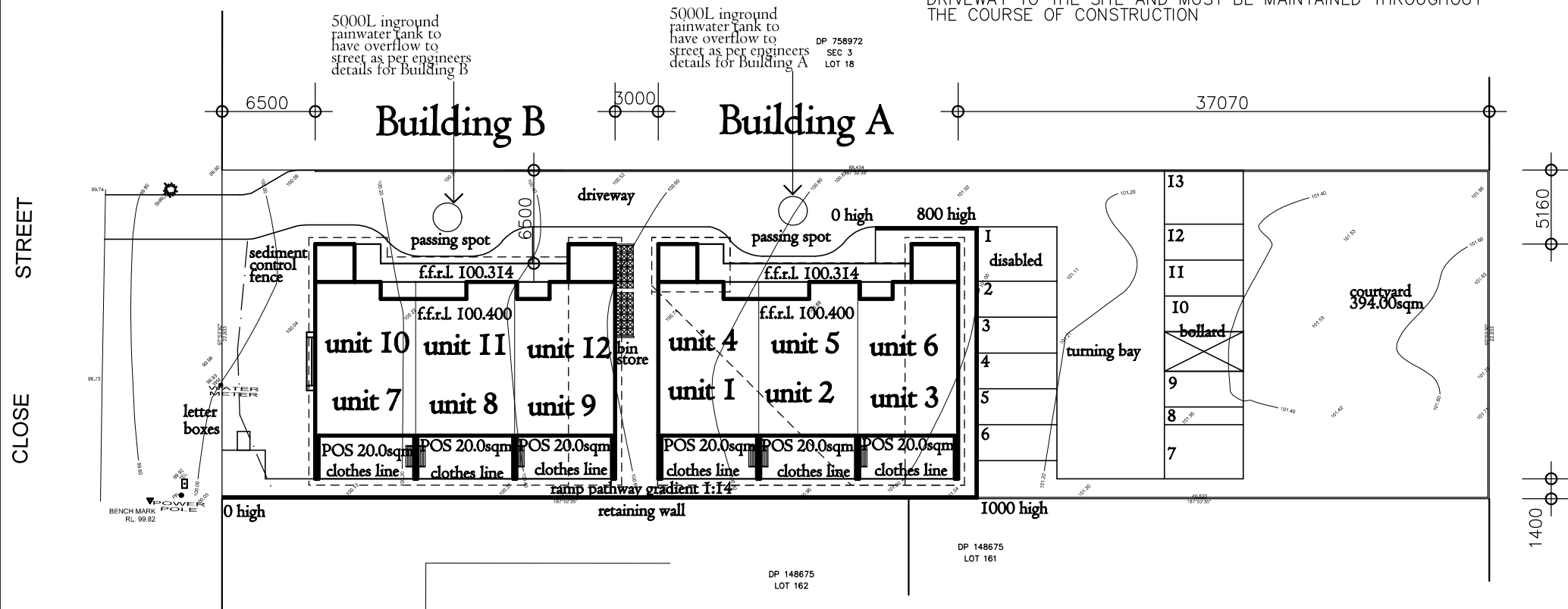
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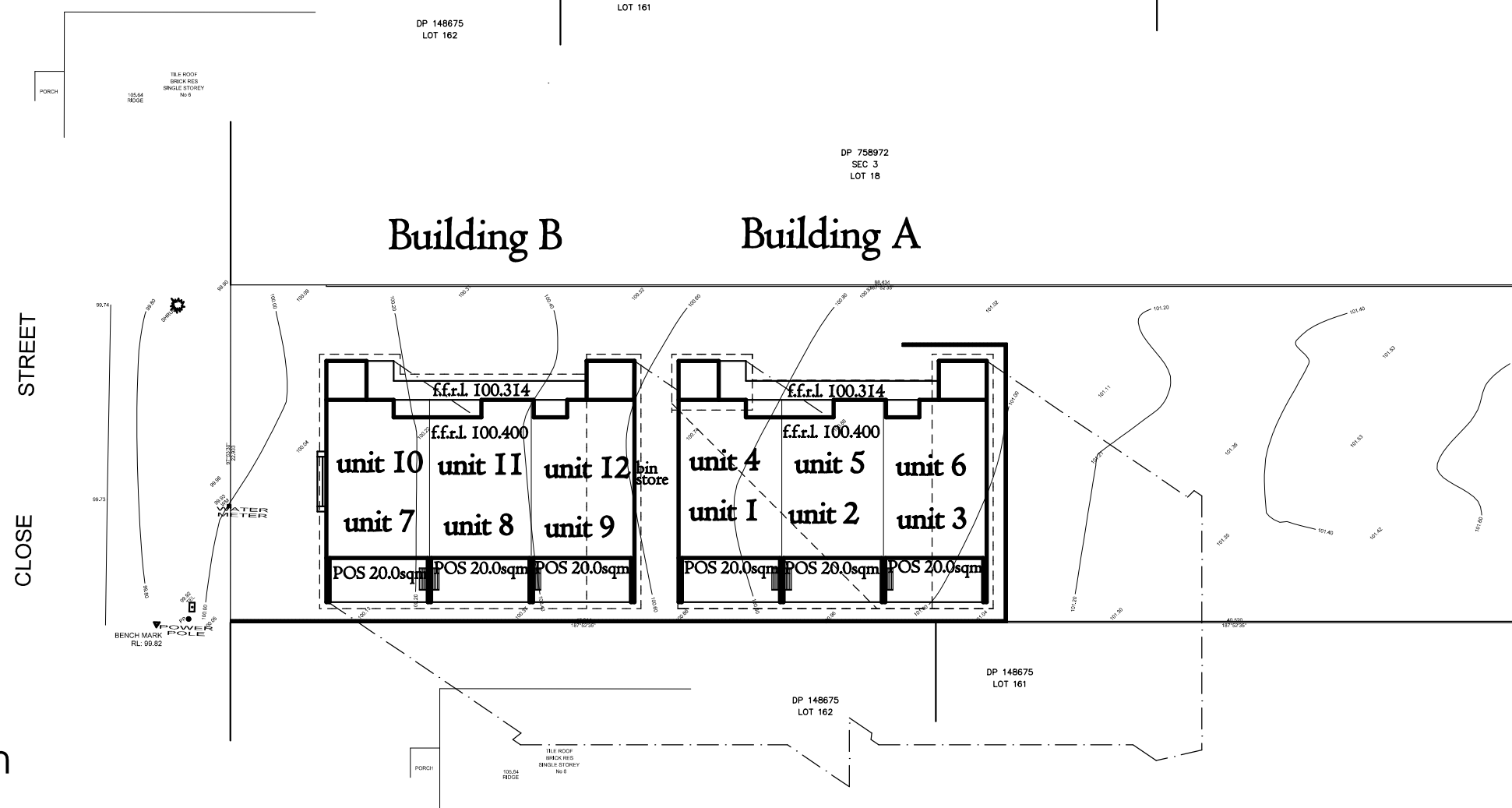
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Typical Silt Fence
Scale 1:20

Site Plan

Scale 1:400



Shadow Diagram

June 21st - 9am
Scale 1:400

Issue	Amendment	Date
Approval from client		Date

Client:
S & H Kadir Pty Ltd

Job: Proposed Senior Housing Residence

4 Close Street, Thirlmere

Drawing:
**Site Plan &
Shadow Diagram 9am**

Scale: 1:400	Date: 12-9-18
Drawing No: 2234-3 r.mcq	Sheet: 12
	ISSUE: D

house design



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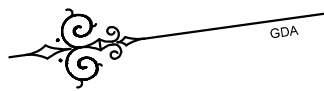
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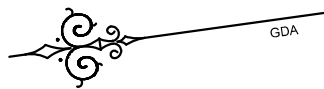
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LOT 17
SEC 3
DP 758972
2028.1m²

Shadow Diagram

June 21st - 12pm
Scale 1:400



LOT 17
SEC 3
DP 758972
2028.1m²

Shadow Diagram

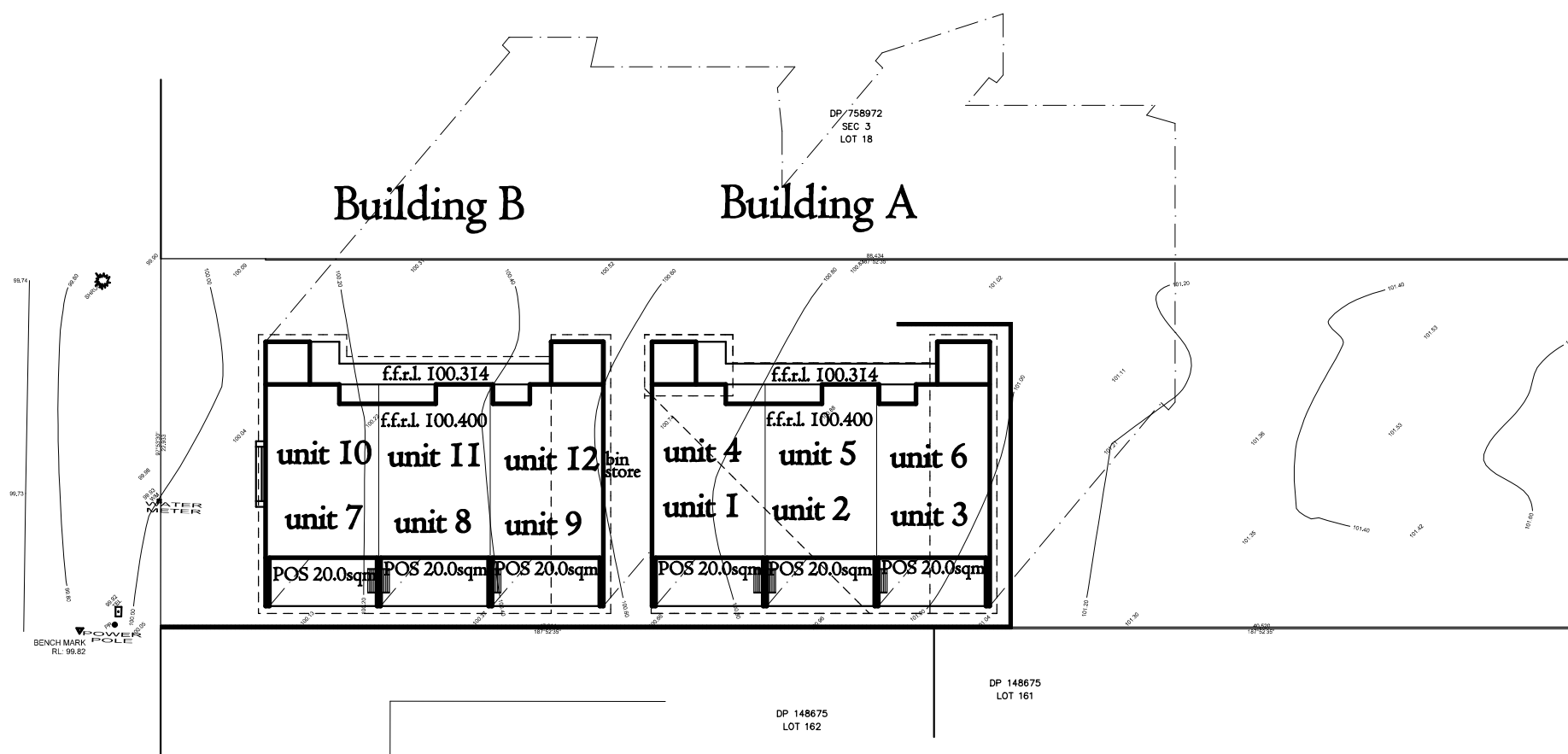
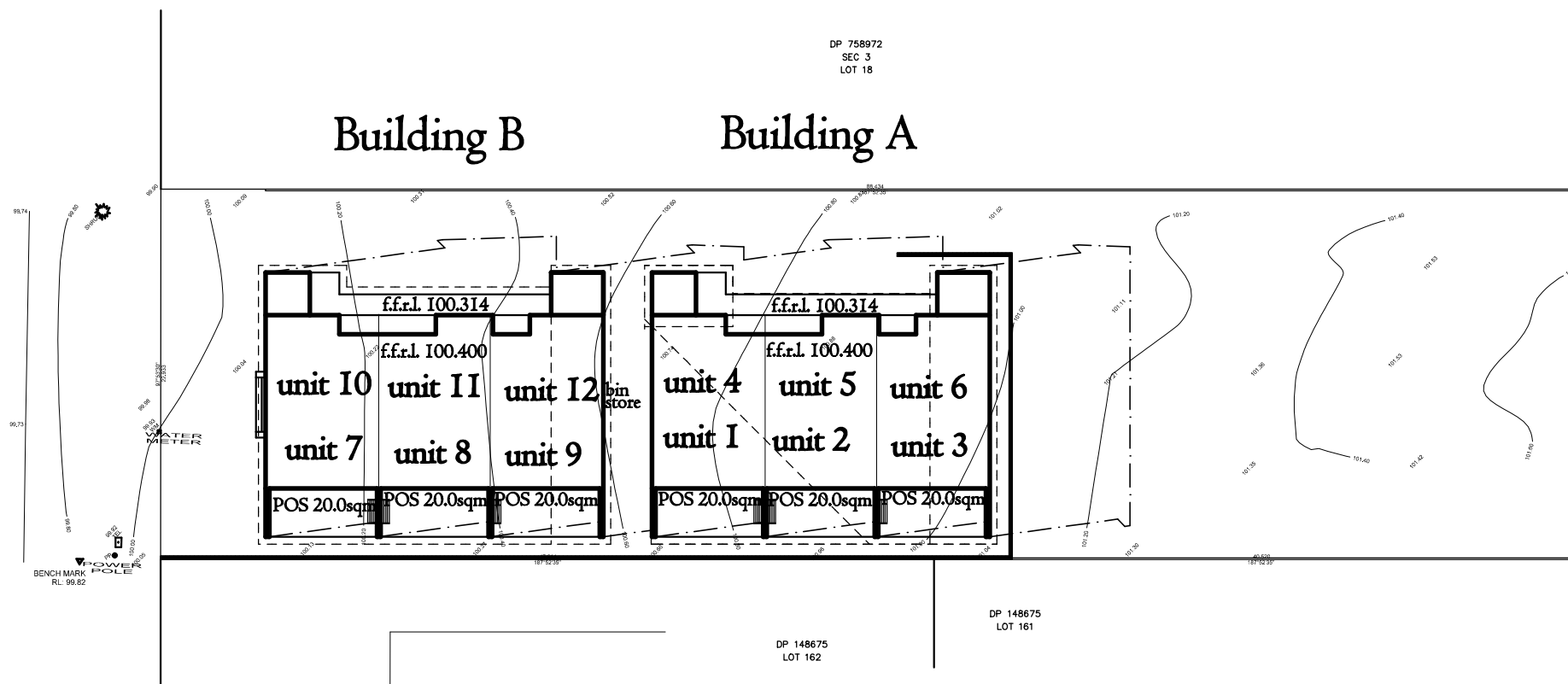
June 21st - 3pm
Scale 1:400

STREET

CLOSE

STREET

CLOSE



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Approval from client		Date

Client:

S & H Kadir Pty Ltd

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Job:

Proposed Senior Housing
Residence

4 Close Street, Thirlmere

Drawing:

Shadow Diagram
12pm & 3pm

Scale: 1:400	Date: 12-9-18	
Drawing No: 2234-3 r.mcq	Sheet: 13	ISSUE: D

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BASIX NOTES

Pathway lighting:

- (a) must be designed and located so as to avoid glare for pedestrians and adjacent dwellings, and
- (b) must provide at least 20 lux at ground level.

Bedroom

At least one bedroom within each dwelling must have;

- (a) an area sufficient to accommodate a wardrobe and a bed sized as follows:

- (i) in the case of a dwelling in a hostel—a single-size bed,
- (ii) in the case of a self-contained dwelling—a queen-size bed, and
- (b) a clear area for the bed of at least:
 - (i) 1,200 millimetres wide at the foot of the bed, and
 - (ii) 1,000 millimetres wide beside the bed between it and the wall, wardrobe or any other obstruction, and
- (c) 2 double general power outlets on the wall where the head of the bed is likely to be, and
- (d) at least one general power outlet on the wall opposite the wall where the head of the bed is likely to be, and
- (e) a telephone outlet next to the bed on the side closest to the door and a general power outlet beside the telephone outlet, and
- (f) wiring to allow a potential illumination level of at least 300 lux.

Surface finishes

Balconies and external paved areas must have slip-resistant surfaces.

Door hardware

Door handles and hardware for all doors (including entry doors and other external doors) must be provided in accordance with AS 4299.

13. Ancillary items

Switches and power points must be provided in accordance with AS 4299.

Living room and dining room

- (1) A living room in a self-contained dwelling must have:
 - (a) a circulation space in accordance with clause 4.7.1 of AS 4299, and
 - (b) a telephone adjacent to a general power outlet.
- (2) A living room and dining room must have wiring to allow a potential illumination level of at least 300 lux.

Lifts in multi-storey buildings

In a multi-storey building containing separate self-contained dwellings on different storeys, lift access must be provided to dwellings above the ground level of the building by way of a lift complying with clause E3.6 of the Building Code of Australia.

TO APPLY TO EACH UNIT unless otherwise indicated

WATER

1. Minimum 5000 litre rainwater tank collecting 100% of roof water with connections to toilets & Laundry(building A)
2. Minimum 5000 litre rainwater tank collecting 100% of roof water with connections to toilets & Laundry(building B)
3. 3 star rated showerheads - 7.5 - 9.0 L/min
4. 4 star rated toilets & taps

THERMAL COMFORT

5. Waffle pod slab
6. Minimum R1.5 insulation to external walls
7. R5.0 insulation to ceilings (units 4,5,6,10,11 & 12)
8. Sarking to underside of roof
9. Medium wall & Dark roof colour
10. Weatherseals to all external doors & windows
11. Floor tiling as per detail on floor plan
12. Insulation must be installed in accordance with NCC and relevant Australian Standards.
13. Recessed downlights have been included in the NatHERS rating(to be sealed LED downlights)
14. All other windows & glazed doors to be single glazed clear with aluminium frame(Less than U 6.70, within 10% of SHGC 0.70)

ENERGY

15. Gas instantaneous 5 star HWS
16. No permanent active heating or cooling systems to be installed
17. Recirculating rangehood to kitchen with manual on/off switch
18. Ducted exhaust fan to bathroom with manual on/off switches(sealed)
19. Gas cooktop & electric oven
20. Well ventilated fridge space
21. Permanent outdoors clothesline
22. Compact fluorescent, florescent or LED lights throughout(excluding bathrooms & toilets)
23. Minimum 3.5 star rated dishwasher to be installed

COMMON

24. Hydraulic lift to each building to have fluorescent lighting connected to lift call button
25. Minimum 1.5 peak kilowatt photovoltaic system to be installed

Note - All Dimensions to be verified on site before commencement of work

bathroom tiling as per tender and bathroom details

Construction to be in accordance with BCA and other relevant Australian Standards


Quick release hinges to be fitted to WC door

waffle pod slab design

Granite guard termite barrier

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Approval from client		Date
Client: S & H Kadir Pty Ltd		
Job: Proposed Senior Housing Residence		
4 Close Street, Thirlmere		
Drawing: BASIX NOTES		
Scale: NTS	Date: 12-9-18	
Drawing No: 2234-3 r.mcq	Sheet: 14	ISSUE: D
house design		
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