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ATTACHMENTS FOR: COUNCIL MEETING AGENDA NO. 8/18

Meeting Date: **Tuesday 24 July 2018**
Location: **Council Chambers, Level 1A, 1 Pope Street, Ryde**
Time: **7.00pm**

ATTACHMENTS FOR COUNCIL MEETING

Item

4 PLANNING PROPOSAL 2-14 TENNYSON ROAD, GLADESVILLE

Attachment 1 Planning Proposal 2-14 Tennyson Road, Gladesville – 8 June 2017

2-14 Tennyson Road, Gladesville

Planning Proposal for a Mixed Use Development

On behalf of
Darcsol Pty Ltd
January 2017 (amended 8 June 2017)

mecone

Project Director

Adam Coburn

Contributors

Denise Thornton/Michael Hanisch

Revision	Revision Date	Status	Authorised	
			Name	Signature
2	1 December 2016	Draft	A Coburn	
3	23 January 2017	Submission	A Coburn	
4	8 June 2017	Submission	M Hanisch	

* This document is for discussion purposes only unless signed and dated by the persons identified. This document has been reviewed by the Project Director.

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1 Introduction

This report has been prepared by Mecone Pty Ltd (Mecone) on behalf of Darcsol Pty Ltd in support of a Planning Proposal to City of Ryde Council (Council) to rezone and modify the height and floor space ration controls that apply to the subject site located at 2-14 Tennyson Road, Gladesville. The planning proposal will facilitate the eventual redevelopment of the site as mixed-use premises. City of Ryde Council invited the owners to submit a Planning Proposal at its workshop meeting on 12 March 2013.

The land is proposed to be rezoned to B4 Mixed Use zone and see the maximum height and floor space controls increased as they apply to the site. This would repeal the existing controls set out under the current Ryde Local Environmental Plan 2014 (Ryde LEP).

The Planning Proposal pertains to the land described as follows:

- Site A: 2-12 Tennyson Road, Gladesville (Lot 2 in DP 549570); and
- Site B: 14 Tennyson Road, Gladesville (Lot 1 in DP 549570).

The Planning Proposal has been prepared in accordance with:

- Section 55 of the *Environmental Planning and Assessment Act 1979* (the Act);
- NSW Department of Planning and Environment Planning Proposals A guide to preparing planning proposals; and
- Related Section 117 Directions.

Specifically, the Planning Proposal includes the following information:

a) A description of the site in its local and regional context;
b) A statement of the objectives or intended outcomes of the proposed instrument;
c) An explanation of the provisions that are to be included in the proposed instrument; and
d) The justification for those objectives, outcomes and provisions and the process for their implementation including:
    - Whether the proposed instrument will comply with relevant directions under S117;
    - The relationship to the strategic planning framework;
    - Environmental, social and economic impacts;
    - Any relevant State and Commonwealth interests; and
    - Details of the community consultation that is to be undertaken before consideration is given to the making of the proposed instrument.

1.1 Proponent and Project Team

The Planning Proposal has been prepared on behalf of Darcsol Pty Ltd. Table 1 identifies the project team.

Table 1 Project Team	
Urban Planning	Mecone
Architecture	Grimshaw Architects
Landscape Architecture	Aspect Studios
Traffic Impact Assessment	Traffix
Economic Impact Assessment*	Hill PDA*
Environmental Site Assessment	EIS Environmental Investigation Services
Geotechnical Assessment	JK Geotechnics
Stormwater Management	Taylor Thomson Whitting

* An updated Economic Impact Assessment will be provided under separate cover prior to public exhibition.

1.2 Background

The proponents made a submission to the *Draft Ryde Local Environmental Plan 2014* when it was on exhibition and have had a number of meetings with Council and the Department of Planning and Infrastructure (DP&I) (now Department of Planning and Environment) in relation to the potential redevelopment of the site. At its meeting held on 12 March 2013 Council resolved to accept and consider a Planning Proposal for the potential rezoning of the subject site. Refer to the resolution attached at Appendix 1.

Subsequent to the submission of a Planning Proposal a Gateway Determination for the Proposal was issued on 21 April 2016 (Department Ref: PP_2016_RYDEC_002_00) (Appendix 2) for;

> *Planning Proposal to amend the Ryde Local Environmental Plan 2014 for 2-12 and 14 Tennyson Road, Gladesville by rezoning the site from IN2 Light Industrial to B4 Mixed Use and increasing the maximum floor space ratio and maximum building height.*

The Determination supported the Planning Proposal subject to the following conditions, which require the Planning Proposal to be amended and resubmitted to the Department of Planning and Environment prior to public exhibition;

1. *Prior to public exhibition, the planning proposal must be updated to;*
    a. *Apply a maximum floor space ratio of 1.5:1 across the whole site;*
    b. *Amend the maximum building heights in metres to be consistent with 5-6 storeys and 2-3 storeys adjoining low density residential areas;*

c. *Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;*
d. *Demonstrate consistency with A Plan for a Growing Sydney and,*
e. *Include maps prepared to the standards identified in Standard Technical Requirements for Spatial Datasets and Maps (Department of Planning and Environment 2015)*

The Gateway Determination was revised on 11 May 2017 to delete condition 1 (above) for the following;

1. *Prior to public exhibition, the planning proposal must be updated to;*
    a. *Apply a maximum floor space ratio of 1.85:1 at 2-12 Tennyson Road and 1:1 at 14 Tennyson Road;*
    b. *Apply a maximum building height RL66.60 at 2-12 Tennyson Road and RL50.4 at 14 Tennyson Road;*
    c. *Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;*
    d. *Demonstrate consistency with A Plan for a Growing Sydney and,*
    e. *Include maps prepared to the standards identified in Standard Technical Requirements for Spatial Datasets and Maps (Department of Planning and Environment 2015)*

The following Planning Proposal and supporting documents have been amended to comply with the conditions of the Department of Planning and Environment's Gateway Determination P_2016_RYDEC_002_00.

2 The Site

2.1 Site Location

The site is located at 2-14 Tennyson Road, Gladesville as highlighted in Figure 1.

Figure 1 Subject Site

Source: Mecone

Table 2 provides the legal description and a brief summary of the site and surrounding context.

Table 2 Subject Site

Site	2-12 Tennyson Rd (Site A)	14 Tennyson Rd (Site B)
Legal description:	Lot 2 DP 549570	Lot 1 DP549570
Site area	1.4 hectares	0.8 hectares
Street frontage	West - 145 metres to Tennyson Road	
Site location	The site is located approximately 100m to the south of the intersection of Tennyson Road and Victoria Road. It is bounded by Tennyson Road to the west, a commercial/light industrial site to the north and north east and low density residential developments to the south and south east.	
Site description	The site is located towards the crest of a hillside falling away from Victoria Road. The site generally slopes from	

Table 2 Subject Site		
	north to south. Site A is a former quarry site. The topography falls 5-15m towards the centre of the quarry with no natural watercourses or unusual features known, which would preclude redevelopment.	
Current zoning	IN2 - Light Industrial	
Site	2-12 Tennyson Rd (Site A)	14 Tennyson Rd (Site B)
Existing buildings/structures	A brick and metal warehouse and office space at the centre of the quarry with a two storey brick rendered office building to the west of the warehouse, along Tennyson Road.	A two storey brick building used as office and warehouse.
Vehicular access	From Tennyson Road via a driveway along the southern boundary.	From Tennyson Road via a driveway along the northern boundary.

2.2 Site Context

The suburb of Gladesville is located in the City of Ryde LGA within 5km of Ryde Town Centre and 10km west of the Sydney Central Business District (CBD).

Figure 2 Regional context diagram

Source: Mecone

The site is located within 100 metres of Victoria Road, and 400 metres of Gladesville Town Centre. Whilst the site is zoned IN2 (light industrial), it is fragmented from the larger industrial zoned precinct to the north by Victoria Road and is mainly surrounded by residential land.

The site benefits from excellent access to retail, services and public transport. It is also located in close proximity to a range of community facilities including educational establishments, parks, recreational facilities and open spaces (Refer to Figure 3).

Table 3 Surrounding context	
Surrounding context	Predominately low density residential. To the north the site adjoins an office building that is owned and managed by Dexus Property Group. To the south, east and west the site adjoins residential land.
Public transport	Within 100m – Victoria Road Bus services
Services	400m – Gladesville Town Centre 300m – Ryde Aquatic Leisure Centre 650m – Holy Cross College 1.4km – St Charles Primary School 2km – Ryde Secondary College 2.8km – Gladesville Hospital

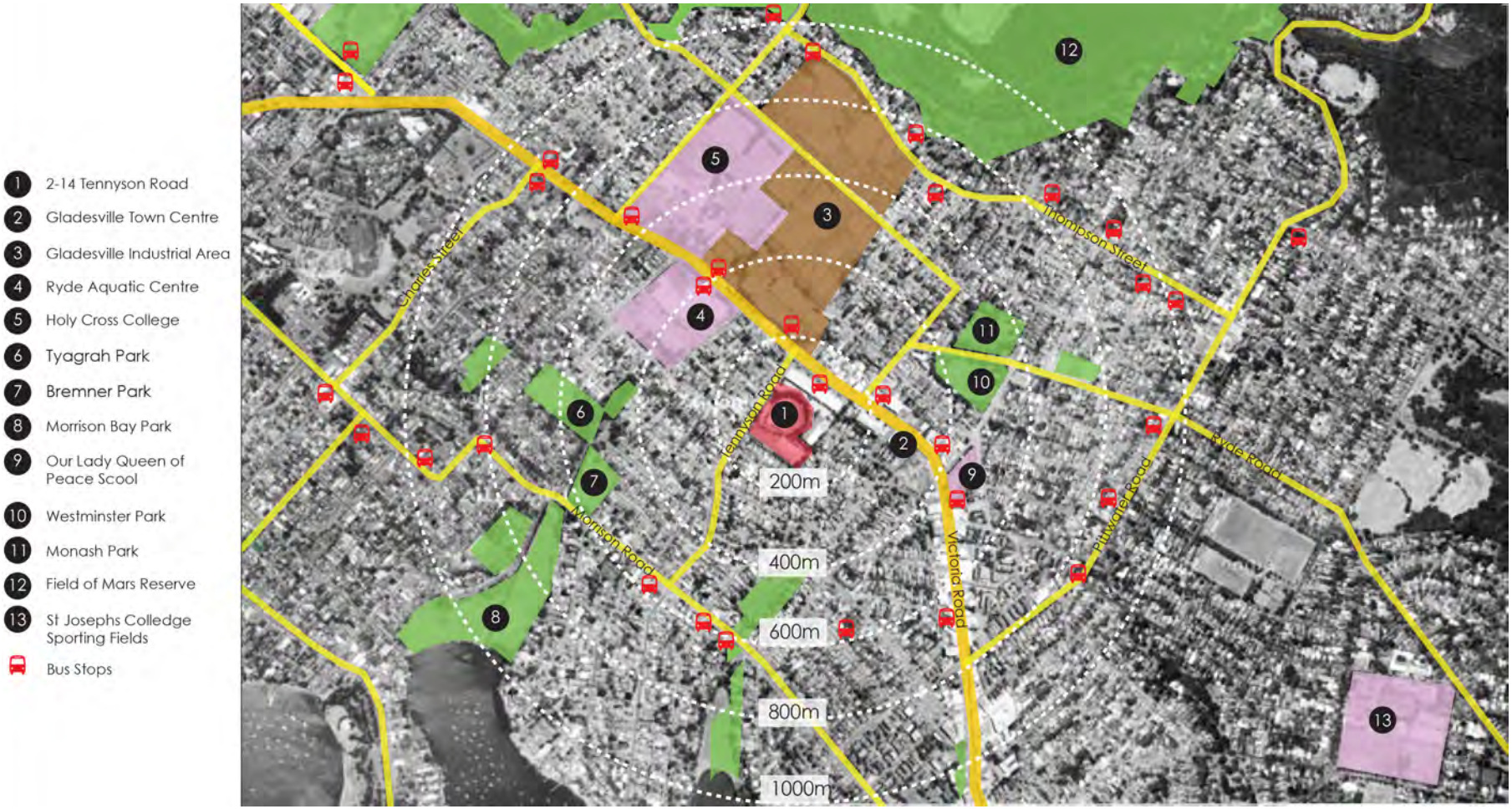


Figure 3 Local context diagram

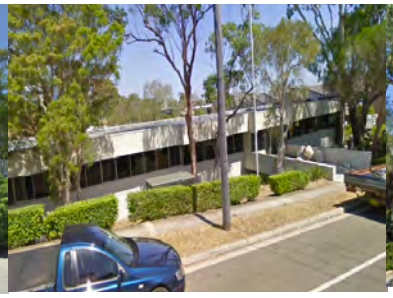
Source: Mecone

A detailed site analysis is provided at Appendix 3, within the Architectural Design Report.

The site's surrounding development context is presented in the following images.

436-484 Victoria Road

2-12 Tennyson Rd



14 Tennyson Road

Rear 436-484 Victoria Road

Residential - Opposite

Residential - South West

Figure 4 Surrounding context

Source: Google maps

2.3 Economic Rationale

The current site is under utilised and provides a low employment density. The site is surplus and does not play a significant role in employment generation in the area. Additionally, the site is isolated from the consolidated industrial area to the north of Victoria Road and has a residential interface to the east and south. The current buildings are difficult to lease and redevelopment of the site with employment uses that better match the Ryde employment profile will maintain an employment activity on the site.

The Gateway Determination issued by the Department of Planning (Appendix 2) required a significant reduction in the amount of Floor Space Ratio to be submitted prior to exhibition. The amended scheme is represented in Appendix 3. The original Economic Impact Assessment prepared to support the Planning Proposal is provided in Appendix 10.

3 Planning Proposal

3.1 Part 1 – Objectives and Intended Outcomes

3.1.1 Objectives

The objectives of the proposal are:

- To facilitate redevelopment of the site in a prime location in close proximity to a range of services and public transport options, which is currently being under utilised;
- To provide high quality residential development, incorporating a range of housing types, including seniors housing, for the Ryde and Gladesville locality; and
- To provide an innovative village hub with a range of commercial and retail employment activities which are compatible with the residential uses in the area.

The planning proposal seeks to achieve these objectives by allowing the redevelopment of the site as mixed-use premises with a range of residential, retail and commercial uses.

3.1.2 Intended Outcomes

The intended outcomes of the planning proposal are to:

- Address the lack of housing availability within the locality;
- Provide appropriate services and employment opportunities that better suit the needs and profile of the area;
- Allow for a proposal that will complement and support the existing Gladesville Town Centre; and
- Allow for public domain upgrading works.

The planning proposal seeks to achieve these intended outcomes by proposing amendments to the LEP and rezoning the site to B4 Mixed Use.

The rezoning of the site to B4 Mixed Use would permit mixed-use premises, including residential, retail and commercial uses on the site.

An Architectural Report is provided at Appendix 3, which includes an analysis of the site and a massing study that forms the basis of the proposed provisions. Based on the findings of the architectural report, a range of buildings can be achieved on site without having any significant adverse environmental impacts on the surrounding developments.

3.2 Part 2 – Explanation of Provisions

3.2.1 Description of Proposal

The objectives of the Planning Proposal shall be achieved through the amendment to the Ryde Local Environmental Plan 2014 to replace the existing controls in force

for the site. An outline of the key controls under the Ryde LEP 2014 and the key controls proposed are provided in Table 5 below:

Table 4 Key planning controls

Control	Ryde LEP	Proposed Controls
Land use zoning	IN2 – Light Industrial	B4 – Mixed Use
FSR	1:1	1.85:1 and 1:1
Height of Buildings	10m	From RL23.07m to RL66.6m

The following maps have been drafted, which relate specifically to the LEP (Appendix 4):

- Land Zoning Map;
- Height of Buildings Map; and
- Floor Space Ratio Map.

In addition, relevant DCP maps support the proposed DCP, which include:

- DCP Application Map;
- Setback Area Map;
- Access Map; and,
- Building Height in Storeys Map.

The proposed site specific DCP is provided at Appendix 5.

In addition, refer to Appendix 3 for the Architectural Design Report, which provides design context and rationale for the approach to establishing the proposed controls and planning maps.

3.3 PART 3 – Justification

3.3.1 Section A – Need for the proposal

Q1. Is the planning proposal a result of any strategic study or report?

In 2012, Mecone undertook an economic and strategic assessment of the site in relation to its local context. The document was prepared in consideration of the relevant State and local strategies as well as studies prepared by a team of specialist consultants including:

- Architectural studies, prepared by Grimshaw Architects;
- An Economic Impact Assessment, prepared by Hill PDA;
- Retail property advice, prepared by Ray White Retail; and
- Aged care and development programming advice, provided by Capital Project Control.

The findings of Mecone's strategic assessment are summarised below:

Providing increased employment that better reflects Ryde's employment profile

Employment trends

There is a clear trend showing the increase in white collar residents and decrease of blue collar residents in the LGA, taken from ABS census data.

Between 2001 and 2006 there was a decline of 20% in blue collar employment in the LGA. This is generally reflective of the changing nature of the workforce and the move away from industrial and manufacturing uses in metropolitan areas. It is clear that the demand for industrial land will lessen as a result of the reduction in blue collar employment.

In 2009, an Employment and Centres Study was undertaken by Mecone for the City of Ryde Council. The report anticipated a reduction in industrial land demand within the LGA, mainly due to adequate supply of cheaper and larger industrial land elsewhere that is closer to labour markets. The report recommends that the Gladesville industrial area should be maintained as an industrial area albeit with some relaxation along Victoria Road to allow a broader range of enterprise in line with the Enterprise corridor.

Future development of the site should aim to provide a suitable range of services and commercial uses that will cater for the changing profile of employment in Ryde LGA.

Increasing employment on the site

The current site is under utilised and provides a low employment density. The surplus site does not play a significant role in employment generation in the area. Additionally, the site is isolated from the consolidated industrial area to the north of Victoria Road and has a residential interface to the east and south. The current buildings are difficult to lease and redevelopment of the site with a range of commercial uses will better match the Ryde employment profile.

An updated Economic Impact Assessment submitted under separate cover, prior to public exhibition.

Industrial Assessment

Hill PDA was engaged to undertake an industrial assessment of the area to identify existing demand for industrial land in the locality. Based on the information provided by Hill PDA, demand for industrial land is being influenced by a number of factors including:

- At the macro level: Globalisation of trade and the wider use of information technology, as a result of which manufacturing now takes place offshore as it is more economically viable. During the past decade, a significant number of former industrial precincts have gone through an urban renewal process and have been transformed into mixed use centres in close proximity to the CBD and established transport links; and
- At the micro level: The Ryde LGA has experienced reduced demand for industrial land due to availability of larger and cheaper industrial parcels elsewhere in close proximity to major infrastructure networks. Further, the growth of Macquarie Park as a major specialised centre with abundant supply of land for commercial office, retail and high technology uses, has resulted in a decline in demand for traditional industrial land elsewhere in the LGA.

Based on the information extracted from Mecone's Employment and Centres Study 2009, demand for industrial land will decline from 49ha in 2006 to 45 ha in 2016 and 41 ha by 2031.

In accordance with the findings of Mecone's Employment and Centres Study 2009 and Hill PDA's economic impact assessment of the area, the following conclusions are made in regards to industrial trends in the Ryde LGA:

- Employment generation on industrial land is declining due to rationalisation with advanced technology allowing the same employment functions to be performed with a reduced number of workers;
- A comparison between the census data and industrial demand forecast indicates that actual ratio of resident blue collar workers is lower than those identified in the Employment and Centres Study forecasts;
- It is acknowledged that the Gladesville Industrial area plays an important role in providing urban support services such as auto repairs, light manufacturing, catering and sporting uses and vital services that support local residents and businesses in the area. However, the subject site is separated from this area with a residential interface and therefore struggles to meet this role;
- A certain 'critical mass' is usually considered necessary for successful operation of industrial and commercial uses. The site is segregated from the main Gladesville Industrial Area and is subject to vulnerabilities of a small business base; and
- It is understood that the existing industrial business on site A (2-12 Tennyson Rd) currently employs 20 staff. Compared to the employment rate benchmark of 1 job per 80m^2 of leasable space as identified by Hill PDA, it is considered that the land is being underutilised and does not play a

significant role in employment generation within the area. Further, it is noted that the adjoining Dexus building has a high vacancy rate.

Retail Assessment

Hill PDA was engaged to undertake an assessment of retail demand within the area to identify potential retail gaps and current demand for additional retail floorspace.

The assessment defines a trade area that includes the suburbs of Putney and Tennyson Point, the western part of the suburb of Gladesville and the southern part of the suburb of Ryde. Hill PDA concludes that the site can be redeveloped without jeopardising the role or function of Gladesville or any other existing centre.

An updated Economic Impact Report, will be provided under separate cover. The updated Economic Impact Report will reflect the revised Floor Space Ratio conditioned by the Department of Planning and Environment in the Gateway Determination in Appendix 2.

Strategic Assessment of Industrial Lands

The land is classified as 'Category 1 Employment Land' under the Draft Metropolitan Strategy for Sydney 2031 (Draft Metro Strategy). The Draft Metro Strategy recognises that some employment and industrial lands are suitable for rezoning due to obsolete building stock and a decline in activity. In such cases, a detailed assessment of the proposal is required against all matters for consideration as identified in the plan. A detailed assessment of the proposal was undertaken by Mecone against all matters for consideration as identified by the strategic assessment checklist, as summarised in Table 5 below.

Table 5 Strategic Assessment Checklist

Matter for Consideration	Comments	
Consistency with state and council strategies	Redevelopment of the site will contribute to achieving both the supply of housing and increased employment, which is consistent with the Inner North Subregional Strategy.	✓
Is the site near existing transport and infrastructure and contributes to a significant industry cluster	The land is not located close to major infrastructure e.g. airport, railway etc. The land is isolated from other industrial land in the LGA. Current activities on the site do not support national or state significant infrastructure. Redevelopment of the site for residential, retail and business purposes is expected to result in a more suitable intensity matching the local profile. The site is located in a predominantly residential area and does not benefit from opportunities for industry clusters. The proposed zoning controls would result in a suitable employment intensity and would be better	✓

Table 5 Strategic Assessment Checklist		
	suited to the employment profile of residents and businesses in the LGA.	
Impact on the industrial land stocks in the region and the ability to meet future demand for industrial land activity	The Ryde Employment and Centres Study identifies an expected decline in demand for industrial land within the LGA by 2031. The site is isolated from the main Gladesville Industrial Area to the north of Victoria Road.	✓
Impact on the achievement of the subregion/region and LGA employment capacity targets and employment objectives	Based on the anticipated decline in demand for traditional industrial land (as identified in Ryde's Employment and Centres Study 2009), it is considered that the LGA has the capacity to cater for future local industrial needs.	✓
Is there an argument that the industrial land cannot be used for an industrial purpose and to redevelop the land to support new forms of industrial land uses (e.g. high-tech or creative industries)	The site is not identified in the City of Ryde Economic Employment Strategy 2009-2014 as having any potential for redevelopment for industrial uses and/or new industrial uses due to its location as a fragmented industrial site within a predominantly residential area. Redevelopment of the site for residential, retail and business purposes is expected to result in a more suitable intensity and will cater for the changing employment characteristics within the area.	✓
Suitability and extent of measures implemented to improve an area's employment lands viability	Redevelopment of the site as mixed use premises could potentially result in higher employment generation for the site.	✓
Is the site critical to meeting the need for land for an alternative purpose identified in other NSW government or endorsed council planning strategies	Based on the anticipated decline in demand for traditional industrial land (as identified in Ryde's Employment and Centres Study 2009), it is considered that the LGA has the capacity to cater for future local industrial needs. Redevelopment of the site as mixed use premises would be consistent with the existing local trends in industrial, residential and retail land use.	✓

As such, Mecone's strategic analysis concluded that current industrial use of the site is no longer strategically important and recommended consideration of a land use concept that could offer an economically and strategically feasible outcome for the site.

Q2 Is the planning proposal the best means of achieving the objectives and outcomes, or is there a better way?

The Planning Proposal is the best means of ensuring an appropriate redevelopment that increases employment on the land that better matches the Ryde labour profile. It is considered to be the best course of action includes the amendment of the existing Ryde LEP 2014. This Planning Proposal is easily integrated into the Ryde LEP 2014 and provides draft DCP controls to the site that generally adopt the framework of the Ryde DCP 2014.

This Proposal will achieve all the outcomes of the Design Report and provide a net community benefit. Any alternative means have been considered to be less economically and socially viable for the development and renewal of the site, and as such has meant that a Planning Proposal is the most efficient means to renew the site.

3.3.2 Section B – Relationship to strategic planning framework

Q3 Is the planning proposal consistent with the objectives and actions of the applicable regional, sub-regional or district plan or strategy (including any exhibited draft plans or strategies)?

The Planning Proposal is consistent with the objectives and actions contained within the following plans and strategies:

A Plan for Growing Sydney

A Plan for Growing Sydney is Sydney's metropolitan strategy outlining the government's strategy for accommodating Sydney's future population growth for the next 20 years. A number of the goals and actions are relevant to this proposal.

- Goal 1 A competitive economy with world class services and transport.
    - Direction 1.7 Grow Strategic Centres – Providing jobs closer to home.
- Goal 2 A city of housing choice, with homes that meet our needs and lifestyles.
    - Direction 2.1: Accelerate housing supply across Sydney
    - Direction 2.2: Accelerate urban renewal across Sydney – providing homes close to jobs.
    - Direction 2.3: Improve housing choice to suit different needs and lifestyles.
    - Direction 2.4: Deliver timely and well planned greenfield precincts and housing
- A great place to live with communities that are strong, healthy and well connected.
    - Direction 3.1 Revitalise existing suburbs
    - Direction 3.3 Create healthy built environments.

The proposal provides the redevelopment of an existing site, which is situated in the established centre of Gladesville. The existing operations provide an inefficient use of the existing site, only generating employment for 50 persons. The proposal provides a solution that will diversify employment opportunities and includes the provision of diverse housing.

As the site is located within an existing urban area, the proposal accelerates the delivery of infill housing in an area that has existing access to urban services. The Planning Proposal is consistent with A Plan for a Growing Sydney.

Draft Towards our Greater Sydney 2056

In November 2016, the Greater Sydney Commission released a draft amendment to the regional plan: *A Plan for Growing Sydney* titled draft *Towards our Greater Sydney* (TGS). The draft TGS introduces the concept of three cities, Eastern City, Central City and Western City. The Eastern City is focused on the existing Sydney City and economic corridors from Macquarie Park in the north through Sydney Airport and Port Botany south to Kogarah, the Central City focuses on Greater Parramatta and the Olympic Peninsula at its core and the Western City will focus on the Western Sydney Airport.

The draft TGS recognises that there is a need to accommodate new housing growth and a need to accelerate housing supply across Greater Sydney. The need for urban renewal opportunities is greatest in the North and Central Districts.

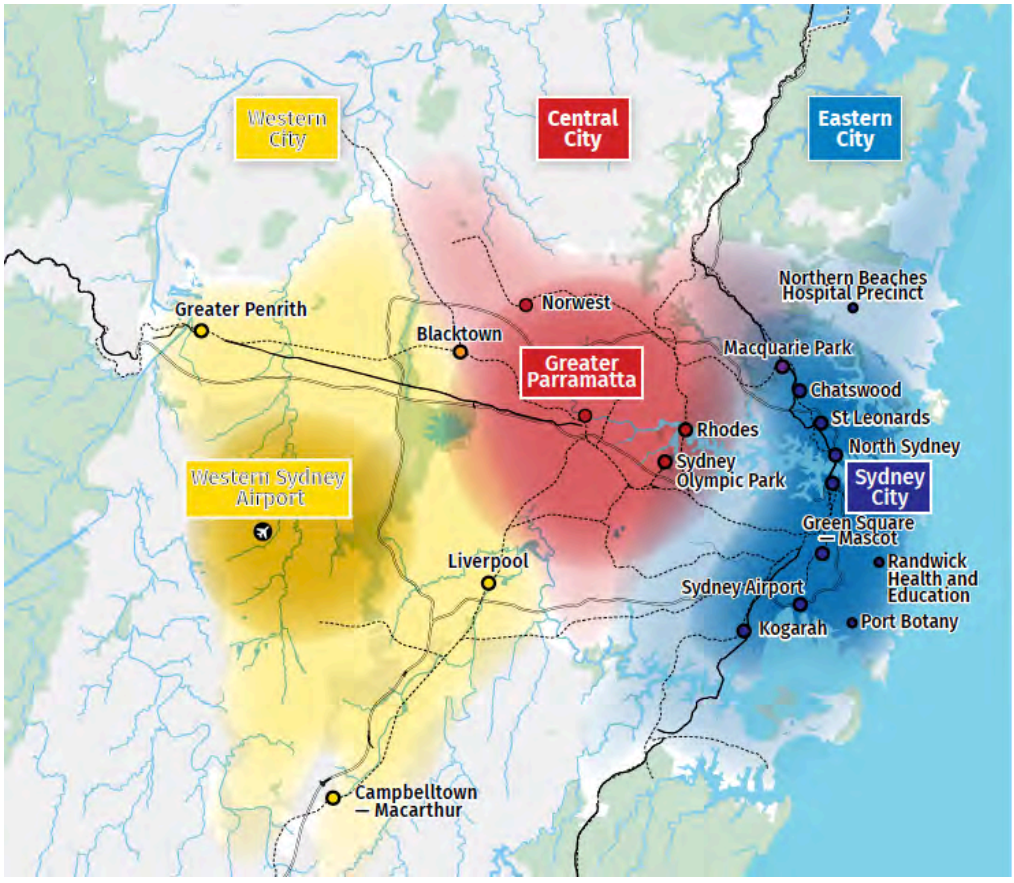


Figure 5 Location of Three Cities

Source: Greater Sydney Commission, November 2016

Draft North District Plan

Concurrently with the release of the draft *Towards our Greater Sydney* the Draft *North District Plan* was released. There are three priorities for the North Region: Productivity, Livability and Sustainability. Each of these priorities has a series of related actions.

Productivity priorities of relevance for the proposal include:

- Managing employment and urban services land;
- Accessing a greater number of metropolitan jobs and centres within 30 minutes; and
- Accessing local jobs, goods and services within 30 minutes.

The proposal will assist with achieving these priorities through encouraging employment generation on site and contributing to achieving the greater employment targets for the Northern District.

Livability priorities of relevance for the proposal include:

- Improving housing choice;
- Improving housing diversity and affordability; and
- Creating great places in the North District.

Livability Actions that will be addressed by the proposal include:

- L1: Prepare local housing strategies;
- L2: Identify the opportunities to create the capacity to deliver 20-year strategic housing supply targets;
- L3: Councils to increase housing capacity across the District; and
- L4: Encourage housing diversity.

The proposal will assist with achieving these goals through providing housing opportunities to support a diverse workforce and population, contributing to achieving the housing targets identified and providing increased housing choice and affordability.

Sustainability priorities of relevance for the proposal include:

- Creating an efficient North District;
- Planning for a resilient North District;
- Mitigate the urban heat island effect;

The proposal facilitates the development of controls that advocate efficient and resilient redevelopment of the site. The future development of the site can provide an environmentally sensitive solution that provides high quality design and open space. The existing site presents an aged facility that has poor environmental and lacks a resilient design.

Q4. Is the planning proposal consistent with a council's local strategy or other local strategic plan?

The Local Planning Study was prepared by the City of Ryde in December 2010 to inform the creation of a new Local Environmental Plan. The Study was prepared on the back of the now superseded Inner North draft Subregional Strategy. Since the Local Planning Strategy, the Ryde Local Environmental Plan 2011 has been adopted

and then superseded by the Ryde Local Environmental Plan 2014. The relevant Strategies within The Local Planning Study have been superseded.

Mecone undertook an economic and strategic assessment of the site in relation to its local context. The document was prepared in consideration of the relevant State and local strategies as well as studies prepared by a team of specialist consultants including:

- Architectural studies, prepared by Grimshaw Architects;
- An Economic Impact Assessment, prepared by Hill PDA;
- Retail property advice, prepared by Ray White Retail; and
- Aged care and development programming advice, provided by Capital Project Control.

The findings of Mecone's strategic assessment are summarised within section 3.3.1 of this Planning Proposal.

Q5. Is the planning proposal consistent with the applicable State Environmental Planning Policies?

The proposal would address and/or be consistent with all relevant State Environmental Planning Policies (SEPPs). The following outlines the intent of the relevant SEPPs and consistency of the planning proposal.

Table 6 State Environmental Planning Policies

SEPP	Consistent	Comments
SEPP No. 1- Development Standards	Consistent	The proposal would repeal this SEPP, consistent with the standard instrument.
SEPP No. 14 – Coastal Wetlands	Not Applicable	
SEPP No. 19 – Bushland in Urban Areas	Not Applicable	
SEPP No 21 – Caravan Parks	Not Applicable	
SEPP No. 26 – Littoral Rainforests	Not Applicable	
SEPP No. 30 – Intensive Agriculture	Not Applicable	
SEPP No. 33 – Hazardous and Offensive	Consistent	The proposal is to adopt standard instrument definitions of hazardous and offensive development, which are not

Table 6 State Environmental Planning Policies		
Development		permitted on site.
SEPP No. 36 – Manufactured Home Estates	Not Applicable	
SEPP No. 44 – Koala Habitat Protection	Not Applicable	
SEPP No. 47 – Moore Park Showground	Not Applicable	
SEPP no. 50 – Canal Estate Development	Not Applicable	
SEPP No. 52 – Farm Dams and Other Works in Land and Water Management Plan Areas	Not Applicable	
SEPP No. 55 – Remediation of Land	Consistent	The site would be appropriately remediated to make it suitable for mixed use development.
SEPP No. 62 – Sustainable Aquaculture	Not Applicable	
SEPP No. 64 – Advertising and Signage	Consistent	The proposal is supported by a draft DCP, and any requirements for signage and advertising structures would be consistent with the SEPP and the draft Ryde DCP.
SEPP No. 65 – Design Quality of Residential Flat Development	Consistent	The proposal is supported by a draft DCP that has consistent requirements for residential flat buildings.
SEPP No. 70 – Affordable Housing (Revised	Consistent	The proposal would not affect the schemes within this SEPP, nor does it propose any new scheme for affordable housing that would need to

Table 6 State Environmental Planning Policies		
Schemes)		be included in this SEPP. The planning proposal is consistent with the objectives of this SEPP.
SEPP No. 71 – Coastal Protection	Not Applicable	
SEPP (Affordable Rental Housing) 2009	Consistent	This proposal does not inhibit any operations of this SEPP.
SEPP (Building Sustainability Index: BASIX) 2004	Consistent	The proposal is supported by a draft DCP that has consistent building sustainability requirements that would result in development that would be consistent with this SEPP.
SEPP (Exempt and Complying Development Codes 2008	Consistent	The proposal is to adopt the standard instrument provisions for exempt and complying development.
SEPP (Housing for Seniors or People with a Disability) 2004	Consistent	The proposal is supported by a draft DCP that has consistent adaptable and accessible dwelling requirements.
SEPP (Infrastructure) 2007	Not Applicable	
SEPP (Kosciuszko National Park – Alpine Resorts) 2007	Not Applicable	
SEPP (Kurnell Peninsula) 1989	Not Applicable	
SEPP (Mining, Petroleum Production and Extractive Industries) 2007	Not Applicable	
SEPP Penrith Lakes Scheme	Not Applicable	

Table 6 State Environmental Planning Policies		
SEPP (Rural Lands) 2008	Not Applicable	
SEPP (State and Regional Development) 2011	Not Applicable	
SEPP (State Significant Precincts) 2005	Not Applicable	
SEPP (Sydney Drinking Water Catchment) 2011	Not Applicable	
SEPP (Sydney Region Growth Centres) 2006	Not Applicable	
SEPP (Three Ports) 2013	Not Applicable	
SEPP (Urban Renewal) 2010	Not Applicable	
SEPP (Western Sydney Employment Area) 2009	Not Applicable	
SEPP (Western Sydney Parklands) 2009	Not Applicable	
SREP No. 8 – Central Coast Plateau Areas	Not Applicable	
SREP No. 9 – Extractive Industry (No 2 – 1995)	Not Applicable	
SREP No. 16 – Walsh Bay	Not Applicable	
SREP No. 20 –	Not Applicable	

Table 6 State Environmental Planning Policies		
Hawkesbury – Nepean River (No 2 – 1997)		
SREP No. 24 – Homebush Bay Area	Not Applicable	
SREP No. 26 – City West	Not Applicable	
SREP No. 30 – St Marys	Not Applicable	
SREP No. 33 – Cooks Cove	Not Applicable	
SREP (Sydney Harbour Catchment) 2005	Not Applicable	

Q6. Is the planning proposal consistent with applicable Ministerial Directions (S. 117 directions)?

The Gateway Determination (PP_2016_RYDEC_002_00) dated 21 April 2016 (Appendix 2) has required further assessment of the Planning Proposal against Ministerial Direction 1.1 Business and Industrial Zones.

The objectives of direction 1.1 include;

> *(a) encourage employment growth in suitable locations,*
>
> *(b) protect employment land in business and industrial zones, and*
>
> *(c) support the viability of identified strategic centres.*

The proposal includes the repositioning of existing industrial zoned land for mixed use development. The proposal does not compromise the use of the land for business and commercial purposes and instead promotes such uses. The change in the zoning reflects the changing nature of employment activity within the area. The planning proposal includes opportunity for retail, business premise and commercial floor space to be included. The Architectural Design Report in Appendix 3 describes schemes that could provide approximately 1,784m^2 of commercial Gross Floor Area.

The site currently contains an industrial development, which is physically disconnected from the greater Gladesville Industrial Precinct. The Gladesville Industrial Precinct is generally concentrated on the opposite side of Victoria Road. On account of the physical disconnection, the existing facility on the site has been unable to generate significant employment generating uses. The existing uses across the site provides employment to approximately 50 persons.

The inability to secure significant employment generating industrial tenants to the site is compounded by the fact that there has been a 20% decline in blue collar employment in the LGA. In 2009, an Employment and Centres Study was undertaken by Mecone for the City of Ryde Council. The report anticipated a reduction in industrial land demand within the LGA, mainly due to adequate supply of cheaper and larger industrial land elsewhere that is closer to labour markets.

A declining blue collar workforce, physical disconnection from the Gladesville Industrial area and the availability of newer, cheaper industrial land elsewhere justifies the discontinuation of the light industrial use of the site. Maintaining the designation for industrial purposes will not encourage employment, protect employment land or support the viability of strategic centres.

The planning proposal is consistent with all relevant S117 Directions. Further consideration of the balance directions is assessed in Table 79 below.

Table 7 Section 117 Ministerial Directions

Clause	Direction	Consistent	Comments
1. Employment and Resources			
1.1	Business and Industrial Zones	Consistent	The proposal provides for B4 Mixed Use, which would allow business operations. The provision is consistent with the Standard Instrument definition of Mixed Use premises.
1.2	Rural Zones	Not Applicable	
1.3	Mining, Petroleum Production and Extractive Industries	Not Applicable	
1.4	Oyster Aquaculture	Not Applicable	
1.5	Rural Lands	Not Applicable	
2 Environment and Heritage			
2.1	Environment Protection Zones	Not Applicable	

Table 7 Section 117 Ministerial Directions			
2.2	Coastal Protection	Not Applicable	
2.3	Heritage Conservation	Not Applicable	
2.4	Recreation Vehicle Areas	Not Applicable	
2.5	Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	Not Applicable	
3 Housing, Infrastructure and Urban Development			
3.1	Residential Zones	Consistent	The proposal allows for a range of residential unit types, which are consistent with the existing trends and market demands. The proposal is supported by a draft DCP, which will encourage good residential design.
3.2	Caravan Parks and Manufactured Home Estates	Not Applicable	
3.3	Home Occupations	Consistent	The proposal permits home occupation without the need for development consent.
3.4	Integrating Land Use and Transport	Consistent	The site is within walking distance to a range of retail and business services and is easily

Table 7 Section 117 Ministerial Directions			
			accessible by public transport.
3.5	Development Near Licensed Aerodromes	Not Applicable	
3.6	Shooting Ranges	Not Applicable	
4 Hazard and Risk			
4.1	Acid Sulphate Soils	Consistent	The proposal is consistent with the Standard Instrument and has provisions which aim to ensure suitability of any development and will manage the impact of any acid sulphate soils.
4.2	Mine Subsidence and Unstable Land	Not Applicable	
4.3	Flood Prone Land	Not Applicable	
4.4	Planning for Bushfire Protection	Not Applicable	
5 Regional Planning			
5.1	Implementation of Regional Strategies	Not Applicable	
5.2	Sydney Drinking Water Catchments	Not Applicable	
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	Not Applicable	
5.4	Commercial and Retail Development along the Pacific	Not Applicable	

Table 7 Section 117 Ministerial Directions			
	Highway, North Coast		
5.5	Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA) (Revoked 18 June 2010)	Not Applicable	
5.6	Sydney to Canberra Corridor (Revoked 10 July 2008. See Amended Directions 5.1)	Not Applicable	
5.7	Central Coast (Revoked 10 July 2008. See amended Directions 5.1)	Not Applicable	
5.8	Second Sydney Airport: Badgerys Creek	Not Applicable	
5.9	North West Rail Link Corridor Strategy	Not Applicable	
5.10	Implementation of Regional Plans	Consistent	The proposal is consistent with the overall intent of the Regional Plan and does not undermine the achievement of its vision, land use strategy, goals, directions or actions.
6 Local Plan Making			
6.1	Approval and Referral Requirements	Consistent	The proposal does not include consultation, referral or concurrence provisions, nor

Table 7 Section 117 Ministerial Directions			
			identifies any development as designated development.
6.2	Reserving Land for Public Purposes	Consistent	The proposal does not contain any land that has been reserved for a public purpose, and no requests have been made to reserve such land.
6.3	Site Specific Provisions	Consistent	The proposal is for rezoning of the site to an existing zone (Mixed Use) already applying in the Standard Instrument that allows land use without imposing any development standards or requirements in relation to those already contained in that Zone.
7 Metropolitan Planning			
7.1	Implementation of A Plan for Growing Sydney	Consistent	The proposal is consistent with the planning principles, directions and priorities for subregions, strategic centres and transport gateways in A Plan for Growing Sydney.

Table 7 Section 117 Ministerial Directions			
7.2	Implementation of Greater Macarthur Land Release Investigation	Not Applicable	

3.3.3 Section C - Environmental, Social and Economic Impact

Q7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site has been developed and used as industrial premises over many years. There are no signs or evidence that any critical habitat, threatened species, population or ecological communities, or their habitats are in fact present on the site. Therefore the likelihood of such an impact is not of a concern as a result of this Planning Proposal.

Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

Likely environmental impacts have been considered and have been addressed as part of the preparation of the Planning Proposal. This is addressed by several technical studies, which are attached to this proposal. The following list of likely impacts provides associated management strategies.

Contamination

A preliminary stage 1 Environmental Site Assessment was undertaken by Environmental Investigations Services Pty Ltd (EIS) to understand the contamination potential for the site. The report identifies potential sources of contamination on site, but concludes that the site can be made suitable for redevelopment as a mixed use precinct with residential, retail, commercial and community uses. The full Environmental Site Assessment is provided at Appendix 6. Further contamination studies should be undertaken as part of any future Development Applications as per the recommendations of the preliminary Environmental Site Assessment report.

Geotechnical Conditions

JK Geotechnics was engaged to undertake geotechnical investigations to obtain information on the subsurface conditions and provide recommendations on excavation, retention, footing design and hydrological considerations. Seven boreholes were drilled to depths between 0.73m and 4.24m below the existing ground level. Appendix 7 provides the full Geotechnical Assessment including the location of boreholes and the result of testing. In summary, it is understood that the site can be made suitable for the proposed mixed use development subject to construction recommendations provided in the geotechnical investigation report.

Traffic Impact Assessment

Traffix was engaged to undertake a traffic and car parking assessment of the proposal. The full traffic and parking assessment report is provided at Appendix 8.

The report demonstrates that the proposed rezoning is supportable on traffic planning grounds, based on the concept plan that has been adopted for assessment purposes, recognising that further detailed investigations will be undertaken at the future development application stage.

In summary, the report by Traffix provided the following key points in regards to vehicular access, parking, traffic generation, public transport, walking and cycling:

Vehicular access

- Access to the North of the site will consist of a new fourth arm on the existing roundabout of Tennyson Road with Searle Street will provide access for the servicing vehicles and the loading requirements.
- Access to the south of the site will be via a priority (Give Way) T intersection with Tennyson Road, this access would be located generally on the boundary of Lot 2-12 and Lot 14 Tennyson Road and would provide access to up to 659 car parking spaces for both Lot 2-12 and 15 Tennyson Road.
- The internal access arrangements, including car parking, will be designed in accordance with the Australian Standard requirements of AS2890.1 (2004) Part 1: Off-street car parking, AS2890.2 (2002) Part 2: Off-street commercial vehicle facilities, AS2890.6 (2009) Part 6: Offstreet parking for people with disabilities and AS4299 (1995) Adaptable housing.

Parking

- 476 – 601 parking spaces are to be provided in accordance with Ryde Council's Development Control Plan (DCP) 2014. The report details that sufficient area is provided to meet these controls.

Traffic generation

- Based on the latest RMS Guidance, the development is forecast to generate an additional 104 vehicle movements in the AM peak period with an additional 97 trips generated in the PM period. This is a significant reduction in trip generation when compared to the original scheme submitted in the Planning Scheme submitted 12 March 2013
- Of the trips generated, 100% of the traffic has been considered to travel through the intersection of Victoria Road and Tennyson Road, to the north of the site. Modeling has determined that the increase in traffic load on this intersection will not result in any unreasonable impacts on the current performance of the intersection.

Public transport

- Numerous bus services operate along Victoria Road, which are within walking distance of the site. Two bus stops (one in each direction) are located within 400m walking distance of the site as show in Figure 5 below.

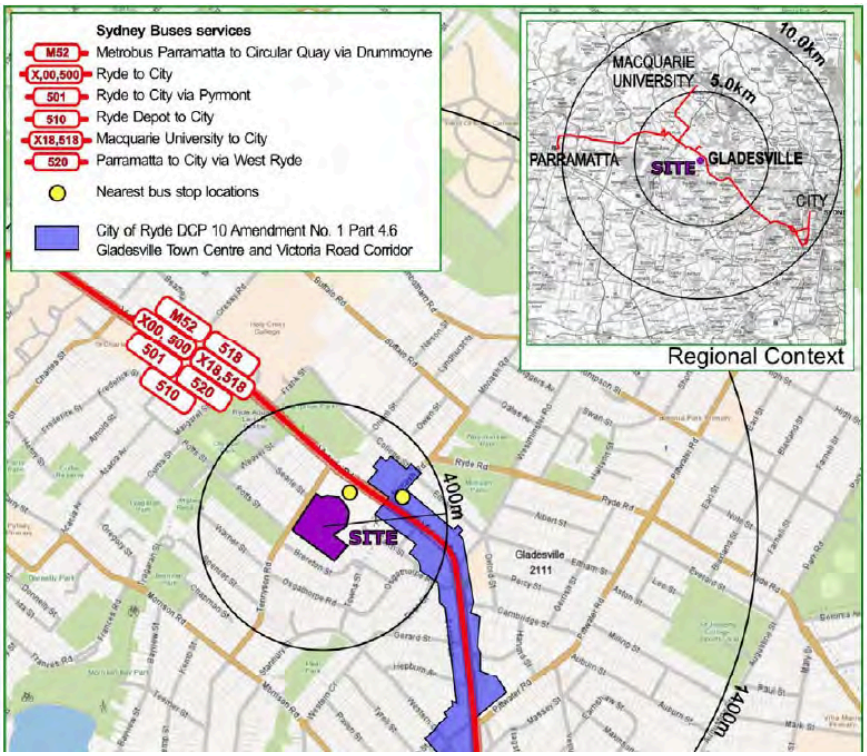


Figure 6 Public transport

Source: Traffix

Cycling and walking

Footpaths are provided to both sides of Tennyson and Victoria Road and the site is located just within 200m of the Gladesville town centre. Being close to the town centre encourages walking and cycling are viable forms of transport for commuting purposes.

The nearest marked on-street cycling route is located to the south of the site along Morrison Road this links into the larger cycleway network providing routes to the Sydney CBD and Parramatta in the west.

Stormwater Management

Taylor Thomson Whitting (TTW) was engaged to investigate the existing and potential future stormwater management provisions on site. The report provides recommendations for management of stormwater on site to ensure that:

- The peak runoff from the site is not increased;
- The risk of downstream and on-site flooding is reduced;
- The quality of the stormwater runoff is improved; and
- Risk of stormwater inundation on the proposed development is minimised.

The full Stormwater Management report and plan are provided at Appendix 9.

Q9. How has the planning proposal adequately addressed any social and economic effects?

Several positive planning outcomes would result from the Planning Proposal among which are:

- Encouraging a suitable land use mix with employment generation for jobs that are better matched to the Ryde labour profile.
- Facilitating the creation of an appropriate mix of residential unit types, which will increase housing choice and affordability on a site that is well located close to the Gladesville town centre, employment areas, educational facilities and other essential services and benefits from good connections to the Sydney CBD by public transport;
- Facilitating redevelopment of the site that is currently underutilised and ensuring high quality design that is aesthetically pleasant and environmentally sustainable; and
- Offering opportunities for public benefits and cultural hubs that could support employment growth within the LGA.

Potential adverse social, economic and environmental impacts of the Planning Proposal have been addressed and are considered manageable. A site-specific Development Control Plan as been prepared for the site, which controls potential development impacts such as parking, overlooking, overshadowing, flooding and stormwater and other controls.

3.3.4 Section D - State and Commonwealth Interest

Q10. Is there adequate public infrastructure for the planning proposal?

The subject site is currently serviced with electricity, water supply, telecommunications, sewer and stormwater. Given the site's current industrial use, it is anticipated that any development on site would not require major changes to these services to cater for the demand resulting from the planning proposal. The proposal ensures adequate infrastructure would be provided with subsequent Development Applications that result from the planning proposal.

The site is well serviced by transport options including bus corridors along Victoria Road. Retail services, medical and educational institutions, parks, open spaces, community and sport facilities are located in close vicinity of the site.

Q11. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

At its meeting held on 12 March 2013 Council resolved to accept and consider a Planning Proposal for the potential rezoning of the subject site (refer to the resolution attached at Appendix 1). A Gateway Determination was received from the Department of Planning and Environment on 21 April 2016 (Appendix 2). The determination supported the planning proposal and recommends public notification to be undertaken subject to the following;

1. *Prior to public exhibition, the planning proposal must be updated to;*
    a. *Apply a maximum floor space ratio of 1.85:1 at 2-12 Tennyson Road and 1:1 at 14 Tennyson Road;*
    b. *Apply a maximum building height RL66.60 at 2-12 Tennyson Road and RL50.4 at 14 Tennyson Road;*

c. *Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;*
d. *Demonstrate consistency with A Plan for a Growing Sydney and,*
e. *Include maps prepared to the standards identified in Standard Technical Requirements for Spatial Datasets and Maps (Department of Planning and Environment 2015)*

This Planning Proposal and supporting documents have been amended to reflect the above conditions of the Gateway Determination dated 21 April 2016 (Appendix 2) and subsequent negotiations. On the basis of the above, it is generally accepted that the Planning Proposal has merit and the final amended Planning Proposal has incorporated those views of the State and public authorities.

3.4 Part 4 – Mapping

New mapping in accordance with the relevant requirements are provided in Appendix 4.

Figure 7 Site location

Source: NSW Spatial Services modified by Mecone

Figure 8 Land use zoning

Source: Ryde Local Environmental Plan 2014

Figure 9 Height of Buildings

Source: Ryde Local Environmental Plan 2014

Figure 10 FSR

Source: Ryde Local Environmental Plan 2014

Figure 11 Proposed land use zoning

Source: Ryde Local Environmental Plan 2014 modified by Grimshaw

Figure 12 Proposed Height of Buildings

Source: Ryde Local Environmental Plan 2014 modified by Grimshaw

Figure 13 Proposed FSR

Source: Ryde Local Environmental Plan 2014 modified by Grimshaw

3.5 Part 5 – Community Consultation

Subject to confirmation from the Department of Planning and Environment that this Planning Proposal complies with Condition 1 of the Gateway Determination (PP_2016_RYDEC_002_00) issued on 21 April 2016 (Appendix 2), public exhibition can be commence, with community consultation undertaken in accordance with Section 56 and 57 of the Environmental Planning and Assessment Act 1979. It is anticipated that public exhibition would include:

- Notification on the City of Ryde Website;
- Advertisement in local newpapers that are circulated within the local government area; and
- Notification in writing to adjoining landowners and neighbours, and any other relevant stakeholders.

Further, a draft DCP for the site would accompany the exhibition of the Planning Proposal.

3.6 Part 6 – Project timeline

This project timeline has been provided to assist with monitoring the progress of the Planning Proposal through the plan making process and assist with resourcing to reduce potential delays.

Table 10 - Project timeline

Milestone	Date	Comments
Anticipated commencement date (date of Gateway determination)	April 2016	Determination issued REF: PP2016_RYDEC_02_00
Anticipated timeframe for the completion of required technical information	N/A	Completed
Timeframe for government agency consultation (pre and post exhibition as required by Gateway determination)	January 2016	Other relevant agencies to be consulted as necessary or required by the Gateway determination
Commencement and completion dates for public exhibition period	February 2017	
Dates for public hearing (if required)	Within exhibition period	
Timeframe for consideration of submissions	March 2017	
Timeframe for consideration of a proposal post exhibition	As above	
Date of submission to the department to finalise the LEP	April-May 2017	
Anticipated date for publishing of the plan	June 2017	
Anticipated date RPA will forward to the department for notification	As above	

4 Conclusion

The Planning Proposal has been prepared in accordance with:

- Section 55 of the Environmental Planning and Assessment Act 1979, (the Act);
- NSW Department of Planning Guidelines to Preparing a Planning Proposal; and; and
- Relevant s.117 Directions.

The Planning Proposal pertains to the land, currently described as follows:

- Site A: 2-12 Tennyson Road, Gladesville (Lot 2 in DP 549570); and
- Site B: 14 Tennyson Road, Gladesville (Lot 1 in DP 549570).

This report provides a full justification of the proposal in line with the Department of Planning and Infrastructure's template for gateway rezonings. The justification demonstrates that:

- The proposal is consistent with the Metropolitan Plan and the draft Inner North Subregional Strategy;
- The proposal is consistent with the Plan for Growing Sydney;
- The proposal is consistent with the draft Northern District Plan;
- The proposal is consistent with relevant S.117C directions;
- The site is extremely well serviced by public transport and is located in close proximity to the Gladesville Town Centre and a range of retail, commercial and community services;
- Recreational and education facilities are all within walking distance of the site;
- The provision of housing in close proximity to public transport, community services, shops and employment creates a socially improved work-home life balance for residents and improves the local economy through increased patronage;
- The provision of mixed use zoning will encourage employment generation on site and will support the growth of the town centre and the nearby industrial uses;
- The proposal will result in employment on the site that is better matched to the Ryde labour profile;
- The permissibility of retail and commercial uses on site further contributes to the social benefit for local residents, which includes activating local streets and increasing services;
- The proposal will result in major improvements to the public domain and will create high quality open spaces; and
- The proposal aims to commit to a range of ESD measures to improve water usage and carbon reduction on site.

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Appendix 1 – Council Resolution from 12 March 2013 workshop meeting

mecone

City of Ryde

Lifestyle and opportunity
@ your doorstep

ATTACHMENTS FOR: Council Meeting AGENDA NO. 4/13

Meeting Date: Tuesday 12 March 2013
Location: Council Chambers, Level 6, Civic Centre, 1 Devlin Street, Ryde
Time: 7.30pm

ATTACHMENTS FOR Council Meeting

Item **Page**

ITEM 4 (continued) **ATTACHMENT 1**

ATTACHMENT 1
RECORD OF PUBLIC MEETING:

City of Ryde
Lifestyle and opportunity
@ your doorstep

5 February 2013
7.30pm to 10.35pm
Rooms 2 and 3, Level 5, Civic Centre

Subsequent reconvened to

7 February 2013
7.00pm to 11.30pm
Rooms 2 and 3, Level 5, Civic Centre

Attendance:

Present	The Mayor, Councillor Petch
Present	Councillor Maggio
Present	Councillor Laxale
Leave of Absence	Councillor Etmekdjian
Present	Councillor Chung
Present	Councillor Li
Leave of Absence	Councillor Simon
Present	Councillor Yedelian OAM
Present	Councillor Pendleton
Present	Councillor Pickering
Present	Councillor Salvestro-Martin
Present	Councillor Perram

Staff in attendance:

General Manager, Group Manager Environment and Planning, Manager Urban Planning, Manager Governance and Strategic Planner

The Workshop commenced at 7.30pm

Speakers

PUBLIC PARTICIPATION

Topic: Housing

	Speakers
1.	Mr Rocky Tassone
2.	Ms Kay Britten

Page 1 of 6

ITEM 4 (continued) **ATTACHMENT 1**

3.	Mr Raffaello Angelo Barbagallo
4.	Mr Ronny Abram – did not speak
5.	Mr Peter John Hall (representing Peter Hall Architect P/L)

Workshop Direction:

That all current dual occupancy duplexes be allowed torrens title - **SUPPORTED**

That there be consideration in future of minimum size lots of 450m2. Frontage (including consideration of a reduction to 15m-18m frontage), size and amenity would need to come back as an amendment to the LEP – **NOT SUPPORTED**

That linear separation be removed from the DCP - **SUPPORTED**

Topic: Gladesville

	Speakers
6.	Mr Ted Webber (representing Residents for appropriate dev)
7.	Mr Philip Howe
8.	Ms Patricia Bloomfield (representing Residents against inappropriate development)
9.	Mr Justin Kucic
10.	Mr Roger Hooper (representing Christ Church)
11.	Mr Sam Circosta
12.	Mr Andy Ludvik (representing Ray Dresdner & Other owners of land in Gladesville industrial area)
13.	Mr Andy Ludvik (representing The Quek Family)
14.	Mr Russell Olsson (representing The Quek Family)
15.	Dr Jeremy Quek (representing The Quek Family)
16.	Mr Aaron Lynch
17.	Mrs Angela Pozzolungo
18.	Mr Kevin Bevitt
19.	Mr Aras Labutis (representing Land Owners)

Workshop Direction:

That consideration be given to inviting a planning proposal for 2 College Street - **SUPPORTED**

ITEM 4 (continued) **ATTACHMENT 1**

That consideration be given to inviting a planning proposal for 44 – 48 Eltham Street - **SUPPORTED**

That consideration be given to inviting a planning proposal for 2-14 Tennyson Road - **SUPPORTED**

That consideration be given to inviting a planning proposal for bulky goods being an additional land use in the IN2 zone - **SUPPORTED**

That consideration be given to not progressing the rezoning in 11-15 Farm Street - **SUPPORTED**

That consideration be given to not progressing the rezoning of Our Lady Queen of Peace – **SUPPORTED**

Reconvened to 7 February 2013 at 7.30pm in Rooms 2 and 3 on Level 5, Civic Centre the time being 10.35 pm.

ITEM 4 (continued) **ATTACHMENT 1**

RECORD OF PUBLIC MEETING - RECONVENED:

7 February 2013
7.00pm to 11.30pm
Rooms 2 and 3, Level 5, Civic Centre

Attendance:

Present	The Mayor, Councillor Petch
Absent	Councillor Maggio
Present	Councillor Laxale
Leave of Absence	Councillor Etmekdjian
Present	Councillor Chung
Arrived at 10.45pm	Councillor Li
Leave of Absence	Councillor Simon
Present	Councillor Yedelian OAM
Present	Councillor Pendleton
Present	Councillor Pickering
Present	Councillor Salvestro-Martin
Present	Councillor Perram

Staff in attendance:

Group Manager Environment and Planning, Manager Urban Planning, Manager Governance and Strategic Planner

The Workshop commenced at 7.00pm

Topic: Macquarie Park

	Speakers
20.	Ms Sophie Zhang
21.	Ellen Robertshaw (representing Morling College) – did not speak, not present
22.	Mr Patrick Azizi (representing Alnox Pty Ltd - 12A Epping Rd North Ryde)
23.	Mr Peter Azizi (representing Raymond B. Azizi of 86 Blenheim Rd North Ryde) did not speak
24.	Mr Paul Azizi (representing 12A & 14 Epping Rd & 86 Blenheim Rd North Ryde)
25.	Mr Raymond Azizi – did not speak

Workshop Direction:

That consideration be given to inviting a planning proposal 12A, 14 Epping Road and 86 Blenheim Road - **SUPPORTED**

ITEM 4 (continued) **ATTACHMENT 1**

Topic: Meadowbank

	Speakers
26.	Mr Ben Hendriks (representing O'Brien Engineering Pty Ltd)
27.	Mr Graham Kennard
28.	Mr Gary Lynch (representing Harrod& Skinner Pty Ltd)

Workshop Direction:

That a further more detailed Masterplan be initiated by Council for the area in Meadowbank bounded by Railway street, Constitution Road, Bowden Street and the Water Point development in the south. - **SUPPORTED**

Topic: Environment

	Speakers
29.	Ms Jill Hartley
30.	Ms Jennie Minifie (representing Ryde Environment Group)
31.	Mr Noel Plumb (representing Ryde Community Alliance)

Workshop Direction:

That a further community workshop be held to address the issues raised in particular the rezoning of additional land to E2 with as much clarity provided as possible - **SUPPORTED**

That Council support the retention of the Tennis World site and land adjoining Bundarra Reserve as recreational/bushland (Note: this direction would be undertaken through a political process rather than an amendment to the planning controls) - **SUPPORTED**

Topic: Eastwood, West Ryde, Putney

	Speakers
32.	Mr Arnold Docker – did not speak/ not present
33.	Mr Tod Anderson
34.	Mr Jon Griffiths (representing Residents in Lakeside Rd and Glen St) – did not speak/ not present
35.	Mr Peter Lubrano (representing Strata Plan 5991)

Workshop Direction:

That the Section 96 application in relation to 6 Clare Street Gladesville be brought to the Planning and Environment Committee – **SUPPORTED**

That Council commit to maintaining Cottonwood and Peachtree Road as roads – **SUPPORTED**

The Workshop finished at 11.30pm

ITEM 4 (continued) **ATTACHMENT 1**

SUMMARY OF PROPOSED ACTIONS

Based on the Council discussions that occurred at the Open Community Workshop the following actions are proposed:-

- Draft Ryde LEP 2011 be amended by:-
  - Reinstating the zoning and land use controls under LEP 2010 for 11 – 15 Farm Street and 14 – 20 Oxford St Gladesville.
  - enabling the Torrens titling of current dual occupancy developments.
- Council reaffirming its previous decision (made through adoption of the Local Planning Study 2010) to delete linear separation as a control with respect to dual occupancy and multi dwelling housing developments from Draft DCP 2011
- A detailed Masterplan be initiated for the area in Meadowbank bounded by Railway Rd, Constitution Rd. Bowden St and the Water Point development in the south. This will involve the engagement of consultants at an estimated cost of $150 000, such money will need to be allocated from General Revenue. The Masterplan would be commenced in the next 6 months and any amendments required to LEP 2011 would be carried out through a separate planning proposal.
- A Community Open Workshop to address the issues raised in particular the rezoning of additional land to E2 be held prior to the finalisation of Council's Bushland Management Plan. Council is currently reviewing, as required, all Parks Plans of Management. Recently reviewed Plans of Management include:-
  - Putney Park (adopted 11/10/2011) – 8.8ha
  - Shrimptons Creek Parklands (adopted 13/12/12) – 7parks
  - Ryde Riverside Reserve (end 2013) – 14parks
  - Ryde Park – to commence shortly

  The focus of review is on the 54 parks identified as containing bushland/natural areas. It is proposed to develop a Bushland Plan of Management to enable consistent and appropriate management of bushland/natural areas throughout Ryde. The zoning of parks containing bushland/natural areas is to be assessed by consultants as part of that Plan. A report to Council seeking adoption of a Bushland Plan of Management is anticipated to be presented to Council in 2013/14. It is considered that prior to finalisation of the Bushland Plan of Management the Open Community Workshop should be held to inform that Plan.
- Planning Proposals be accepted for consideration by Council for the properties: -
  - 12A, 14 Epping Rd/86 Blenheim Rd North Ryde
  - 2 – 14 Tennyson Rd Gladesville
  - 2 College St/10 Monash Rd Gladesville
  - Bulky goods premises in the IN2 zone in Gladesville.
- That Council continue expressing its preferred planning outcomes regarding development of land within the North Ryde Station Precinct and surrounding areas, in particular the retention of the Tennis World site and land adjoining Bundarra Reserve as recreational/bushland with State Government agencies to ensure the best and most appropriate outcomes for the area.
- That a Section 96 application in relation to 6 Clare St Gladesville be brought to the Planning and Environment Committee. A LDA for a new driveway and parking bay was approved by Council in August 2012 at 6 Clare St. The owner of the property has submitted a *s96 Modification of consent* to delete condition 49 of the original approval related to on going maintenance and a restriction on Title which will have the effect that the current and future property owners shall be required to maintain all the works shown on the Approved plans.
- That Council commits to maintaining Cottonwood Crescent and Peachtree Rd as roads. The concern of the speaker at the Workshop with respect to this matter was that the zoning of roads RE1 could have legal implications with respect to the continued use of the land as a road.

Appendix 2 – Gateway Determination

mecone

NSW GOVERNMENT Planning & Environment

Our ref: PP_2016_RYDEC_002_00 (16/04601)

Ms Gail Connolly
General Manager
Ryde City Council
Locked Bay 2069
North Ryde NSW 1670

Dear Ms Connolly

Planning proposal to amend Ryde Local Environmental Plan 2014

I am writing in response to Ryde City Council's letter dated 25 February 2016 requesting a Gateway determination under section 56 of the *Environmental Planning and Assessment Act 1979* (the Act) in respect of the planning proposal to amend the *Ryde Local Environmental Plan 2014* for 2-12 and 14 Tennyson Road, Gladesville by rezoning the site from IN2 Light Industrial to B4 Mixed Use and increasing the maximum floor space ratio and maximum building height.

As delegate of the Greater Sydney Commission, I have now determined the planning proposal should proceed subject to the conditions in the attached Gateway determination.

Council may still need to obtain the agreement of the Secretary to comply with the requirements of relevant S117 Directions. Council should ensure this occurs prior to the plan being made.

Plan making powers were delegated to councils in October 2012. It is noted that Council has requested to be issued with delegation for this planning proposal. I have considered the nature of Council's planning proposal and have decided not to issue an authorisation for Council to exercise delegation to make this plan due to the significance of the amendments.

The amending Local Environmental Plan (LEP) is to be finalised within 12 months of the week following the date of the Gateway determination. Council should aim to commence the exhibition of the planning proposal as soon as possible. Council's request for the Department of Planning and Environment to draft and finalise the LEP should be made 6 weeks prior to the projected publication date.

The State Government is committed to reducing the time taken to complete LEPs by tailoring the steps in the process to the complexity of the proposal, and by providing clear and publicly available justification for each plan at an early stage. In order to meet these commitments, the Greater Sydney Commission may take action under section 54(2)(d) of the Act if the time frames outlined in this determination are not met.

Should you have any queries in regard to this matter, I have arranged for Mr Wayne Williamson of the Department's regional office to assist you. Mr Williamson can be contacted on (02) 9228 6159.

Yours sincerely

Marcus Ray
Deputy Secretary
Planning Services
21/04/2016

Encl:
Gateway Determination

NSW GOVERNMENT | Planning & Environment

Gateway Determination

***Planning proposal (Department Ref: PP_2016_RYDEC_002_00)**: to amend the Ryde Local Environmental Plan 2014 for 2-12 and 14 Tennyson Road, Gladesville by rezoning the site from IN2 Light Industrial to B4 Mixed Use and increasing the maximum floor space ratio and maximum building height.*

I, the Deputy Secretary, Planning Services at the Department of Planning and Environment as delegate of the Greater Sydney Commission, have determined under section 56(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the *Ryde Local Environmental Plan 2014* should proceed subject to the following conditions:

1. Prior to public exhibition, the planning proposal is to be updated to:

   (a) apply a maximum floor space ratio of 1.5:1 across the whole site;
   (b) amend the maximum building heights in metres to be consistent with 5-6 storeys and 2-3 storeys adjoining low density residential areas;
   (c) address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;
   (d) demonstrate consistency with *A Plan for Growing Sydney*; and
   (e) include maps prepared to the standards identified in *Standard Technical Requirements for Spatial Datasets and Maps (*Department of Planning and Environment 2015).

2. Prior to public exhibition, the updated planning proposal must be provided to the Department of Planning and Environment for review and approval.

3. Community consultation is required under sections 56(2)(c) and 57 of the Act as follows:

   (a) the planning proposal is classified as routine and must be made publicly available for a minimum of 28 days; and
   (b) the relevant planning authority must comply with the notice requirements for public exhibition of planning proposals and the specifications for material that must be made publicly available along with planning proposals as identified in section 5.5.2 of *A Guide to Preparing LEPs* (Department of Planning and Infrastructure 2013).

4. Consultation is required with the following public authorities under section 56(2)(d) of the Act:
   - Department of Education and Communities;
   - Transport for NSW;
   - Roads and Maritime Services;
   - Office of Environment and Heritage;

- Ausgrid; and
- Sydney Water.

Each public authority is to be provided with a copy of the planning proposal and any relevant supporting material, and given at least 21 days to comment on the proposal.

5. A public hearing is not required to be held into the matter by any person or body under section 56(2)(e) of the Act. This does not discharge Council from any obligation it may otherwise have to conduct a public hearing (for example, in response to a submission or if reclassifying land).

6. The timeframe for completing the LEP is to be **12 months** from the week following the date of the Gateway determination.

Dated 21st day of April 2016

Marcus Ray
Deputy Secretary
Planning Services
Department of Planning and Environment

Delegate of the Greater Sydney Commission

NSW GOVERNMENT | Planning & Environment

Alteration of Gateway Determination

Planning proposal (Department Ref: PP_2016_RYDEC_002_00)

I, the Deputy Secretary, Planning Services at the Department of Planning and Environment as delegate of the Greater Sydney Commission, have determined under section 56(7) of the *Environmental Planning and Assessment Act 1979* (the Act) to alter the Gateway determination dated 21 April 2016 for the proposed amendment to the Ryde Local Environmental Plan 2014 as follows:

1. Delete condition 1 and replace with a new condition 1:

    1. Prior to community consultation, the planning proposal is to be updated to:
        (a) apply a maximum floor space ratio of 1.85:1 at 2-12 Tennyson Road and 1:1 at 14 Tennyson Road;
        (b) apply a maximum building height of RL 66.60 at 2-12 Tennyson Road and RL 50.04 at 14 Tennyson Road;
        (c) address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;
        (d) demonstrate consistency with *A Plan for Growing Sydney* and the draft North District Plan; and
        (e) include maps prepared to the standards identified in *Standard Technical Requirements for Spatial Datasets and Maps (*Department of Planning and Environment 2015).

2. Delete condition 6 and replace with a new condition 6:

    6. The LEP is to be completed by 28 April 2018.

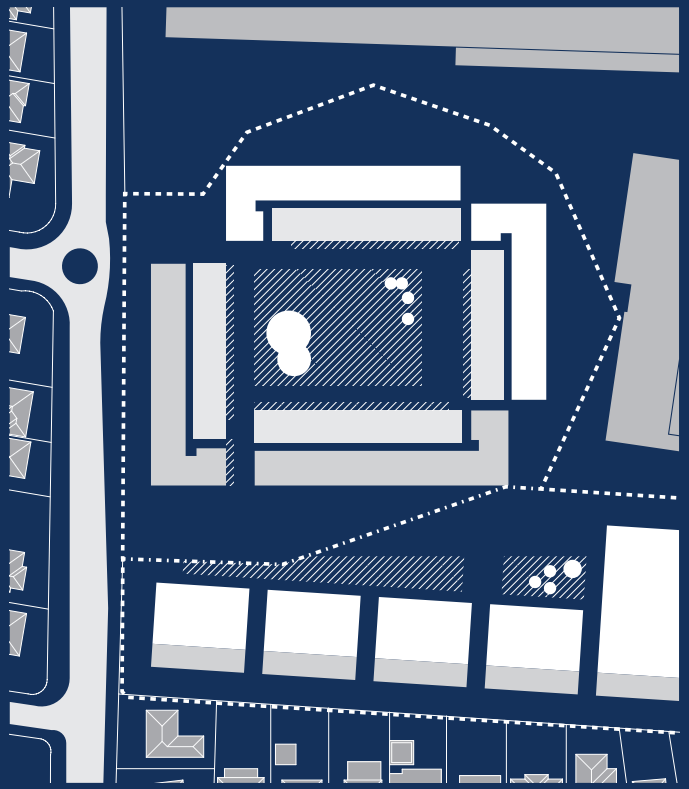
Dated 11th day of May 2017

Marcus Ray
Deputy Secretary
Planning Services
Department of Planning and Environment

Delegate of the Greater Sydney Commission

Appendix 3 – Architectural Design Report

mecone



Tennyson Village

Urban Design Report

Presentation To Ryde City Council

JANUARY 2017

GRIMSHAW / MECONE
PREPARED FOR DARCSOL LTD PTY

Job Title:	Tennyson Village Master Plan
Document Title:	Architectural Design Report
Prepared by:	Alessandra Fabbri
Checked by:	Mark Gilder
Authorised by:	Andrew Cortese

Date	Description	Issue	Revision No.	Format	Prepared by	Checked by	Approved by
11/09/14	Rezoning Application	Lodgement	00	A4	LJ	JM	AC
07/11/16	Rezoning Application Amendment	Lodgement	01	A4	AF	MG	AC

Presentation to	Ryde City Council
Produced by	Grimshaw
	Mecone
for	Darcsol Ltd.
Landowner 2-12 Tennyson Road, Gladesville	Ken Ahn
Landowner 14 Tennyson Road, Gladesville	Latham Australia Pty Ltd
Applicant	Joandarc Khouzame
	Darcsol Pty Ltd
Application	Land Rezoning

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This Urban Design Report has been prepared by Grimshaw Architects in support of the planning application for 2-14 Tennyson Road, on behalf of Darcsol Pty Ltd.

The report forms part of a master plan for the designated project site and associated documentation for a land rezoning application. The Proposal seeks to establish a new mixed-use village adjacent on the site of an old quarry. This report should be read in conjunction with the supporting documents for the rezoning application prepared by Grimshaw and Mecone for submission to Ryde Municipal Council.

The proposed master plan for 2-14 Tennyson Road is an exemplar vibrant residential hub, it seeks to embody values of community benefit, which has driven the development outcomes.

Tennyson Village aims to present a new model for mixed-use urban villages. The proposal will draw upon and enhance the unique character of the precinct, addressing its potential into a more sustainable model of urban intervention.

Contents

1.0 **Introduction**

Summary of Amendments

Revisions Index

Change reference	Change Notice	Comment	Referring Pages
PP_2016_ RYDEC_002_00	*1a) apply a maximum floor space ratio of 1.5:1 across the whole site*	Updated FSR figures calculated for various scenarios	pg. 96
	1b) amend the maximum building heights in metres to be consistent with 5-6 storeys and 2-3 storeys adjoining low density residential areas;	Section drawings show amended building heights	pg. 62-63
	1c) address the inconsistency with Section 117 Direction 1. 1 Business and Industrial Zones;	Proposal for public amenity and retail outlined	pg. 39
	1d) demonstrate consistency with A Plan for Growing Sydney; and	Proposal for public amenity and retail outlined. Enhanced street landscape, pedestrian focused site connections, and bike parking. Passive ventilation strategy and access to natural light.	pg. 39-41
	1e) include maps prepared to the standards identified in Standard Technical Requirements for Spatial Datasets and Maps (Department of Planning and Environment 2015).	Maps prepared in GIS format by Mecone	Mecone report and supporting Data
	2. Updated zoning, floor space and height maps		pg. 100
	Key site diagrams/ indicative concept plan of the proposed future development on the site		Sections 4-5
	Built form envelopes		pg. 66,67
	Access points to and from site		pg. 41
	A draft DCP outlining the controls reflecting in the above	Draft DCP demonstrates the controls	Mecone report and supporting Data
	Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones	Draft DCP demonstrates the controls	Mecone report and supporting Data
	Demonstrate consistency with A Plan for Growing Sydney		Throughout
	Upgrade traffic study with consideration given to the impact of the proposed development on the surrounding road network	Refer to Traffix Traffic assessment and modelling report	Refer to Traffix report
PGR_2014_ RYDEC_003_00	*1a) The FSR over the total site (ie the two sites together) does not exceed 2:1.*	Updated FSR figures calculated for various scenarios	pg. 96
	1b) A minumum of 20% of the total floor space allocated to employment generating uses.	Building summary demonstrates breakdown of building uses and areas	pg. 100

Purpose of the Document

Consultant Team and Specialists

The purpose of this document is to establish the design principles of the proposed Tennyson Village Master Plan, which form part of the gateway rezoning application to Ryde Municipal Council.

Furthermore this document:

- Illustrates the response to the existing ecological, physical, economic, environmental and social circumstances of the site,
- Demonstrates that the proposed master plan has been generated through considered design principles which have evolved with the findings of the consultants team studies and analysis,
- Details how the master plan brings community benefit to the wider Gladesville and Ryde Municipal Council area.

This report should be read in conjunction with the following documents which form part of the Master Plan and Rezoning Application:

- Planning Proposal, Site Specific DCP and VPA
- Landscape Plan Report
- Civils and Site Utilities Report
- Transport and Traffic Report
- Open space and community facilities study
- Economic Viability

The Team

A consultant team consisting of significant experts and specialists has been assembled to prepare a master plan and the necessary supporting documentation required to enable lodgement of a Rezoning Application to Ryde Municipal Council.

Grimshaw has been appointed lead consultant, project manager and master planning and urban design architect for the project.

Grimshaw and Mecone are particularly well placed to master plan due to their unique and in-depth knowledge of the site, its constraints and surrounding community, and lends vital knowledge to the Tennyson Village Master Plan aspiration of being a significant benefit to the local community.

Planning submission documents:

PLANNING PROPOSAL DOCUMENT
MECONE

SITE SPECIFIC DEVELOPMENT CONTROL PLAN
MECONE

VOLUNTARY PLANNING AGREEMENT (VPA)
MECONE

Supporting documents submitted to Council:

URBAN DESIGN STATEMENT
GRIMSHAW

LANDSCAPE PLAN
ASPECT

ECOLOGICAL ASSESSMENT REPORT
ECO-LOGICAL

TRANSPORT AND TRAFFIC REPORT
TRAFFIX

Supporting documents submitted to Council:

ECONOMIC VIABILITY STUDY
HillPDA

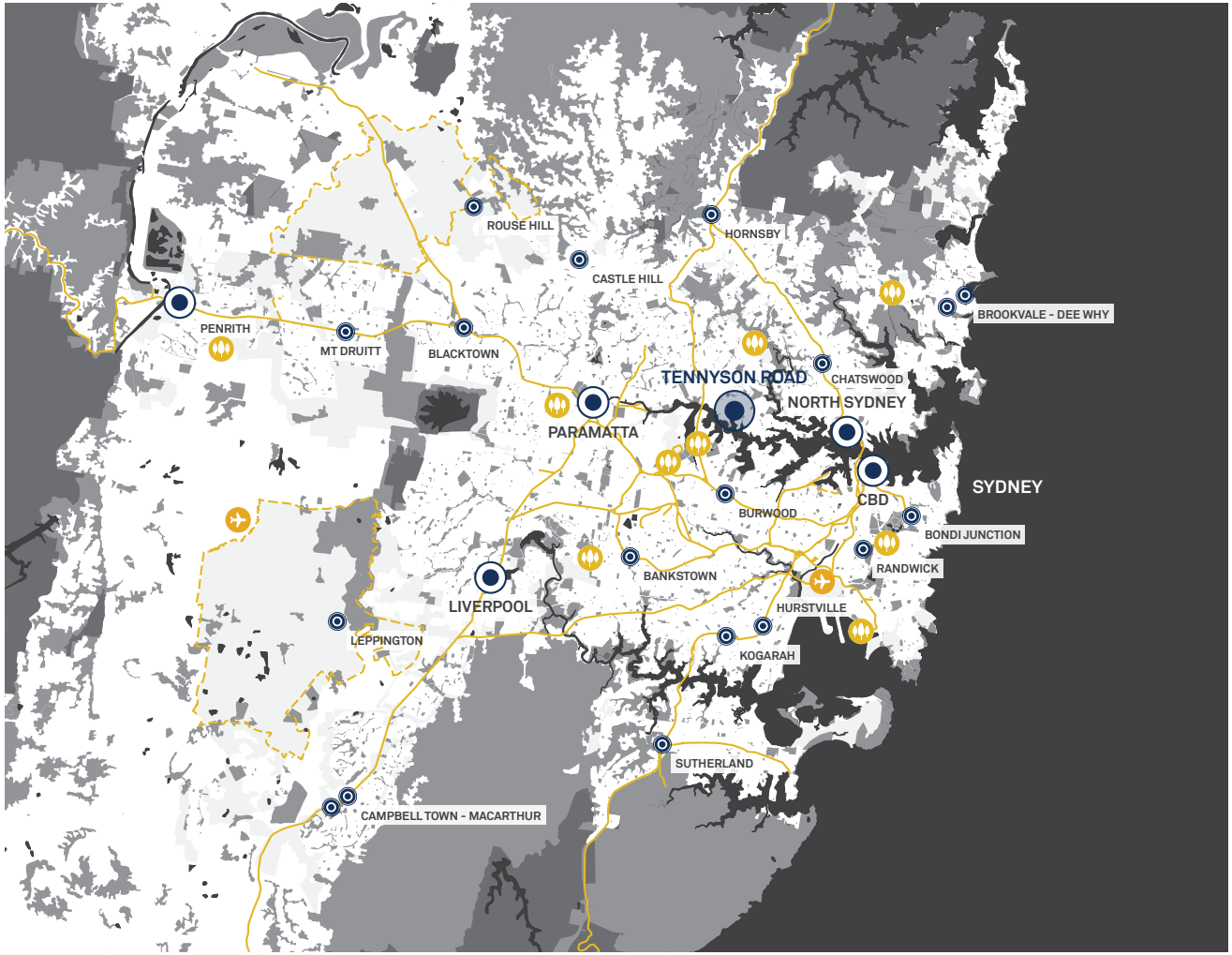
2.0 **Site Analysis and Context**

2.1 Regional Context

Greater Sydney in Context

In 2013 Sydney was recognised as the 10th most liveable city in the world according to Mercer's survey. As a growing city the ability to successfully anticipate and respond to the future will affect the enhancement of this important attainment. By 2031, Sydney will have around 1.3 million additional people, and the draft Metropolitan Strategy plans for a range of centres across metropolitan Sydney that will grow growth in new jobs and residences are anticipated in Sydney's metropolitan suburbs.

2-12 Plot is the site of an Old Quarry in Gladesville. With its close distance to Victoria Road, the precinct sits in a very strategic and accessible location. It is directly connected to the CBD via private (18 minutes) and public (35 minutes) transport. Within its excavated volume, the site offers the opportunity to revitalise the neighbourhood life by creating the first model of a vibrant mixed use village. Responding to the increasing need of residences and jobs, 2-12 Plot presents the possibility to be planned and designed with a correct balance between built and open space, residential and retail programme. Moreover, a green-focused design will provide a generous community space for the residents and for the surrounding community.



A map for greater Sydney, Source Grimshaw 2016

2.2 Site Location

The Plot Strategic Position

Project Site Location Plan, Source Grimshaw

Gladesville is approximately 10 Km West of the Sydney CBD and the project site a further 2 Km from the town centre. With over 10,000 residents, of whom the vast majority are Australian born residents (2011 Census) Gladeville boasts a strong community of well established inhabitants and families.

Despite being a predominantly low density residential area 2-14 Tennyson Road is in close proximity to the Gladesville Industrial Area, the Gladesville Town Centre retail precinct, and a short drive to Ryde and Meadowbank. It is a short distance to Tennyson Point, Morrison Bay and Glades Bay on the Parramatta River. With its strategic location, the site offers the opportunity for a higher density residential development that offers amenity back to the local community while providing a broader residential offering to the local industrial areas. The sloped site also offers the potential for views down to the Parramatta River.

- Project Site
- Village Centre
- Metropolitan Plan for Sydney 2036 Regional and Sub Regional Centre
- Town Centre
- Employment Centre
- Victoria Road Corridor

2.3 Site

Plot Characteristics

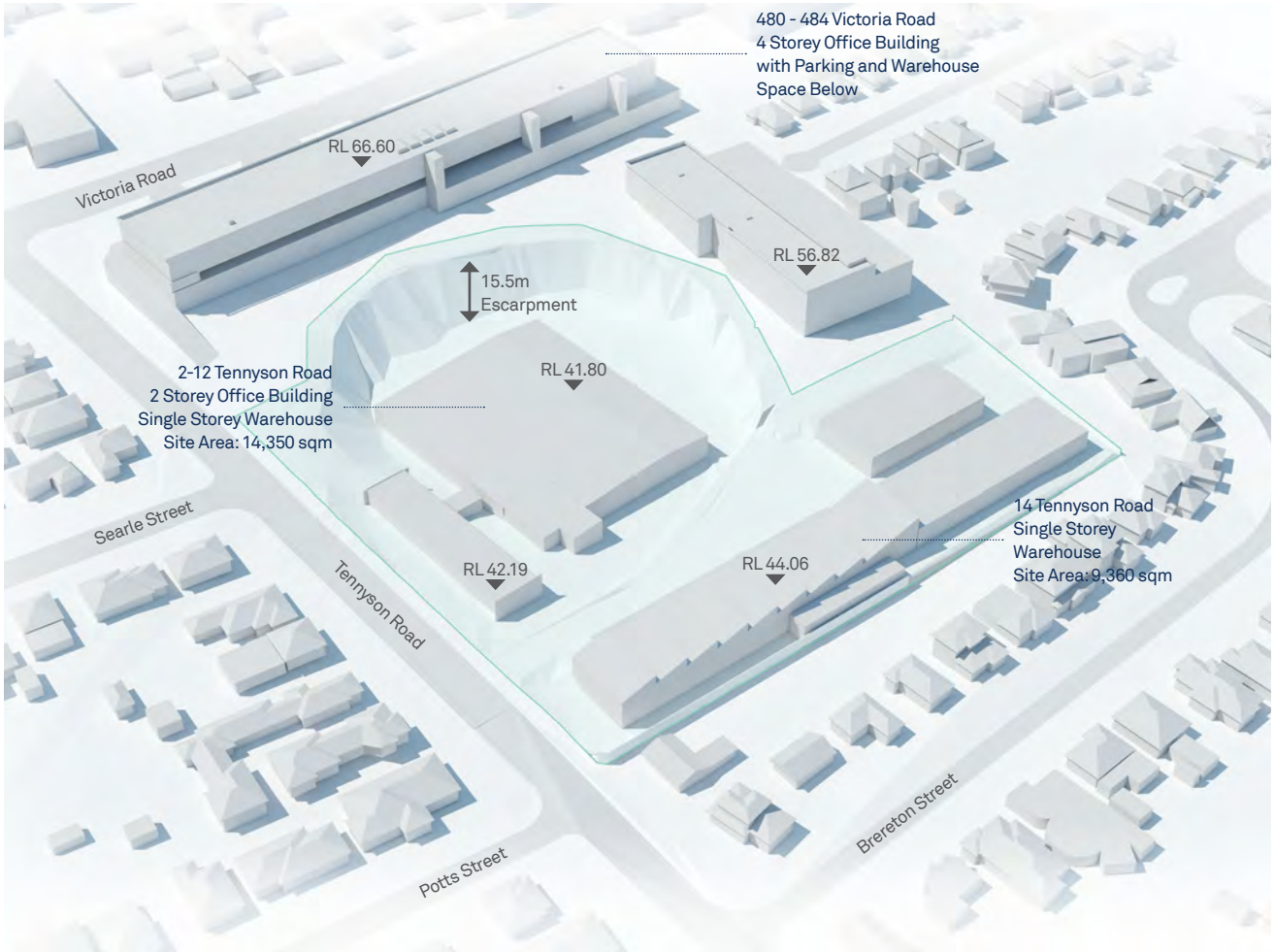
The project site occupies a significant landholding to the eastern edge of Tennyson road, Gladesville, flanked to the north by a four storey office building aligned to Victoria Road, and to the north-east by a smaller warehouse of similar height.

The site- itself sunken into an existing quarry - is largely obscured from Victoria road, and is accessed solely from Tennyson Road which runs along the western edge, north to south.

To the south, the site is bordered by a row of single and double storey residential properties cited on Brereton Street. In respect of its geographic context, 2 - 12 Tennyson Road is the site of an old quarry, within which currently sits a single storey warehouse, though of relatively recent construction, its value is minimal. Attached to the warehouse is a two storey administration building and a large area of hard-stand, used for car parking and vehicular access.

14 Tennyson Road is located outside the zone of the quarry and contains two single story warehouse and with attached administration space.

Both 2-12 and 14 Tennyson Road, are currently used for industrial and commercial purposes and are in occupancy and operational use.



2-14 Tennyson Road, Gladesville, Site Model

Project Site Location Plan, Source Grimshaw

2.4 Planning Controls

Ryde Local Environmental Plan 2016

Ryde Local Environmental Plan 2014 (updated August 2016) aims to make local environmental planning provisions for land in Ryde in accordance with the relevant standard environmental planning instruments. According to the current Ryde LEP, 2-14 Tennyson Road is currently identified as Zone IN2 Light Industrial.

The intention of this document is to present a case for Plot 2-12 & 14 being rezoned to B1 Mixed use, manifested as Residential with local retail. This is believed to be more in keeping with the broader region, appropriates medium density development and supports enhanced community amenity.

In the update to the LEP in August of 2016, the Maximum Floor Space Ratios for 2-14 Tennysoin Road was allocated a consistent FSR of 1.0.

This project proposes to develop an amalgamation of the 2-12 and 14 Tennyson to optomise density and efficiency, with exceptional to community benefit, and aims for an overall Gross FSR of 1.5.

Building heights in the LEP are required to be a uniform 10m across the site. In this proposal for the building, we make a case for the proposed development having heights respective of the adjacent building.

Zone:

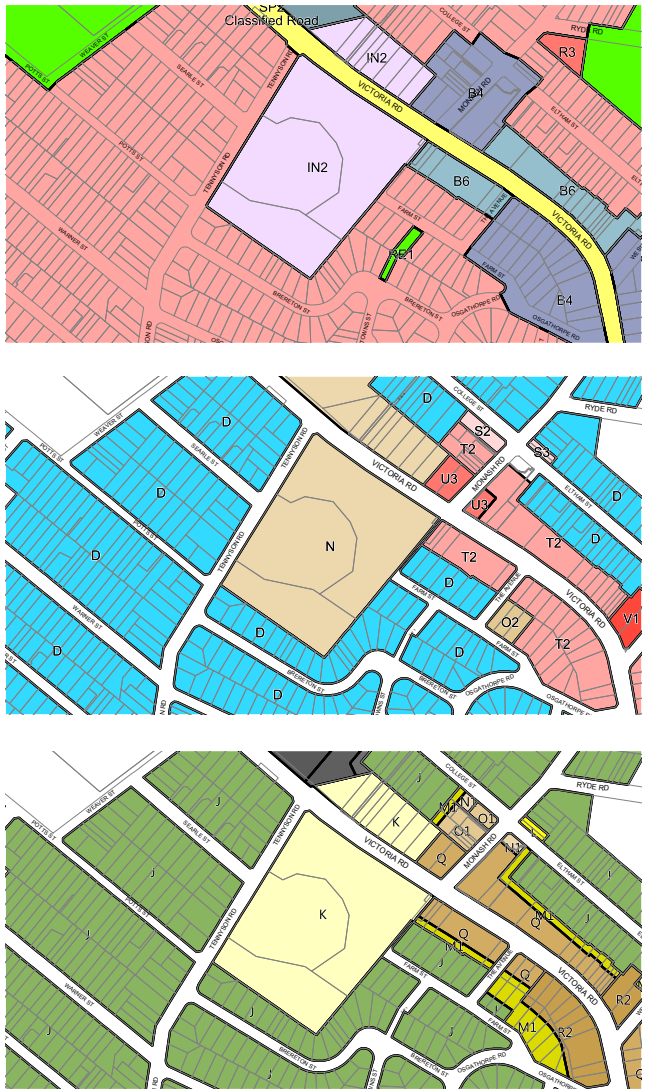
IN2	Light Industrial
B4	Mixed Use
B6	Enterprise Corridor
R2	Enterprise Corridor
R3	Medium Density Residential
RE1	Public Recreation

Max. Floor Space Ratio (n:1)

D	.50
N	1.00
O2	1.15
S2	1.70
T2	2.30
U3	2.70
V1	3.00

Max. Building Heights (m)

J	9.5
K	10
M1	12
O1	13
N1	15
P	19
Q	22



Extracted Maps from Ryde Local Environmental Plan 2016

Aerial View of Plot 2-14 from North East, Existing Condition

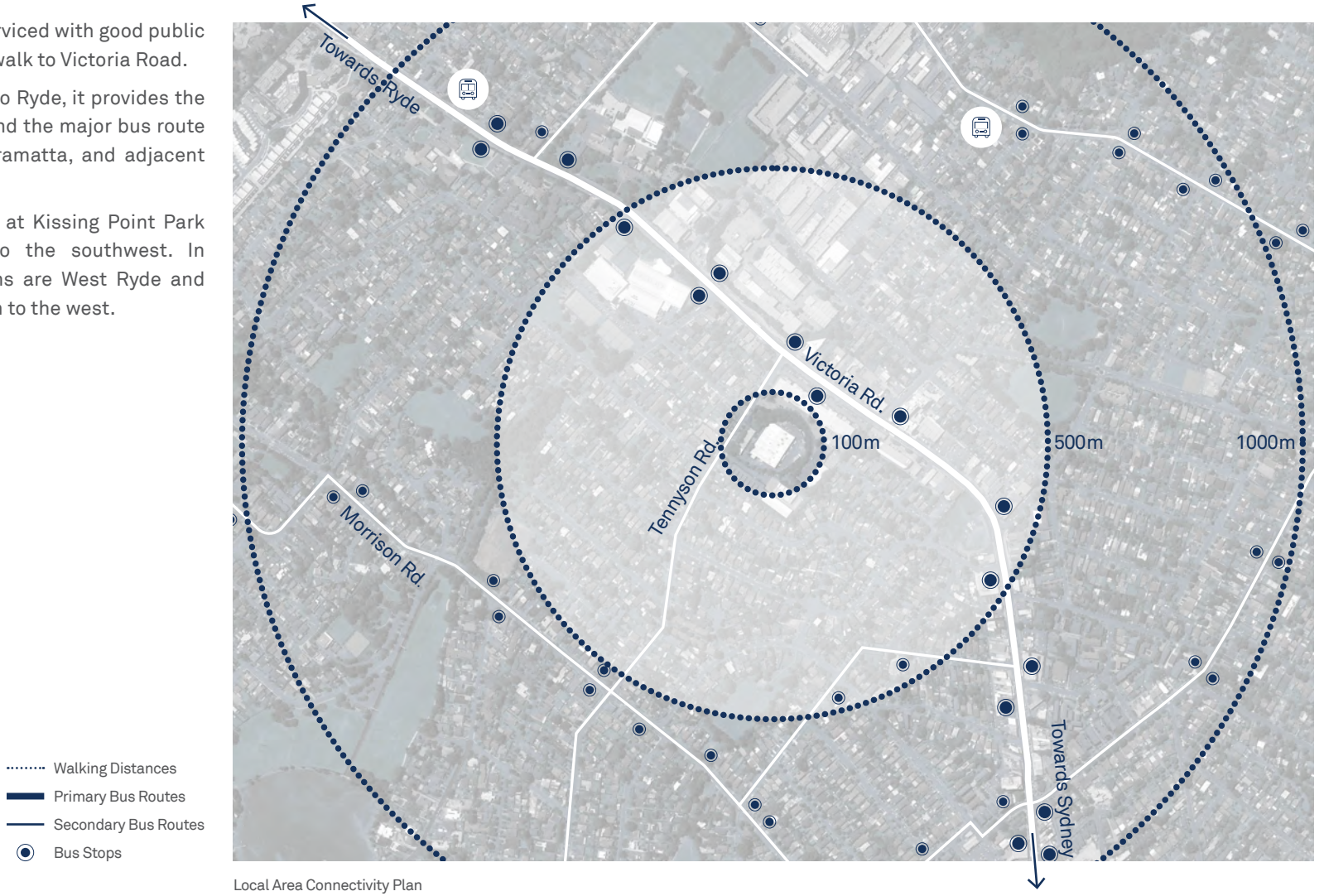
2.5 Transport Connectivity

Walking Distances and Bus Route Services

2-12 & 14 Tennyson Road is well serviced with good public transport links, being only a short walk to Victoria Road.

Running east to Sydney and west to Ryde, it provides the main route for traffic to the area and the major bus route between the Sydney CBD and Paramatta, and adjacent local areas.

From the site, the closest ferry is at Kissing Point Park (Putney), approximately 2.8km to the southwest. In addition, the nearest train stations are West Ryde and Meadowbank, approximately 2.5km to the west.



Local Area Connectivity Plan

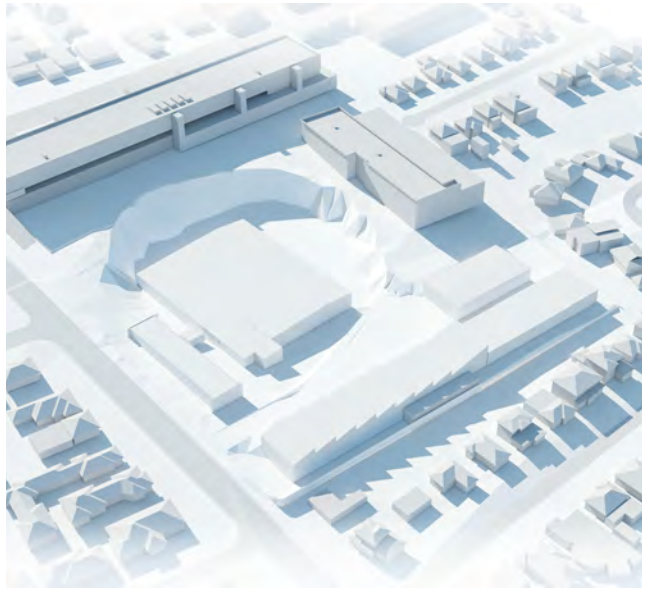
2.6 Site Photos

Existing Site Conditions

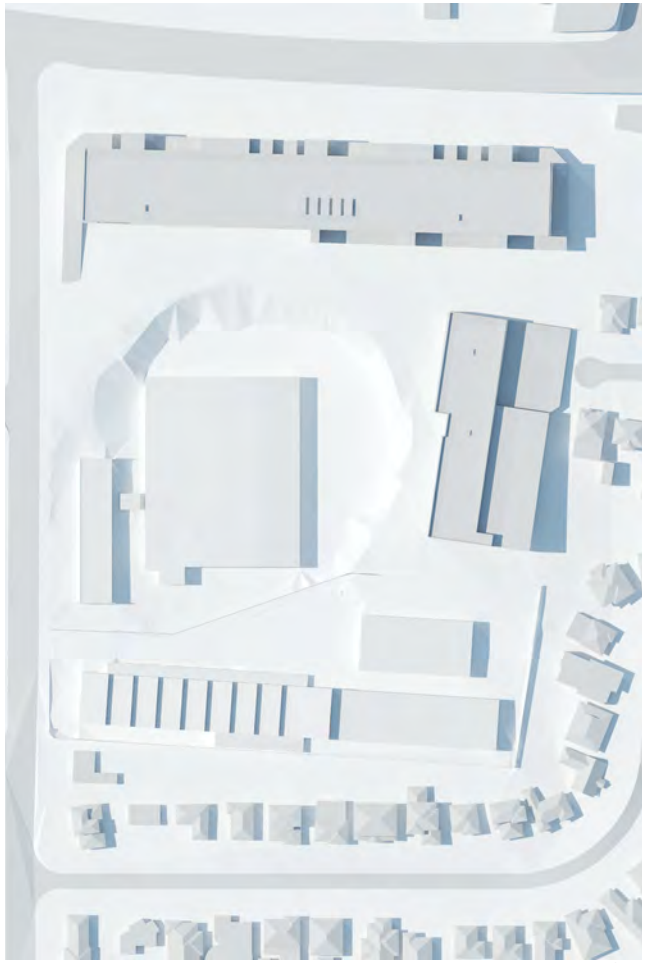
Site Photos, Source: Grimshaw

2.7 Solar Access

Existing Environmental Performance



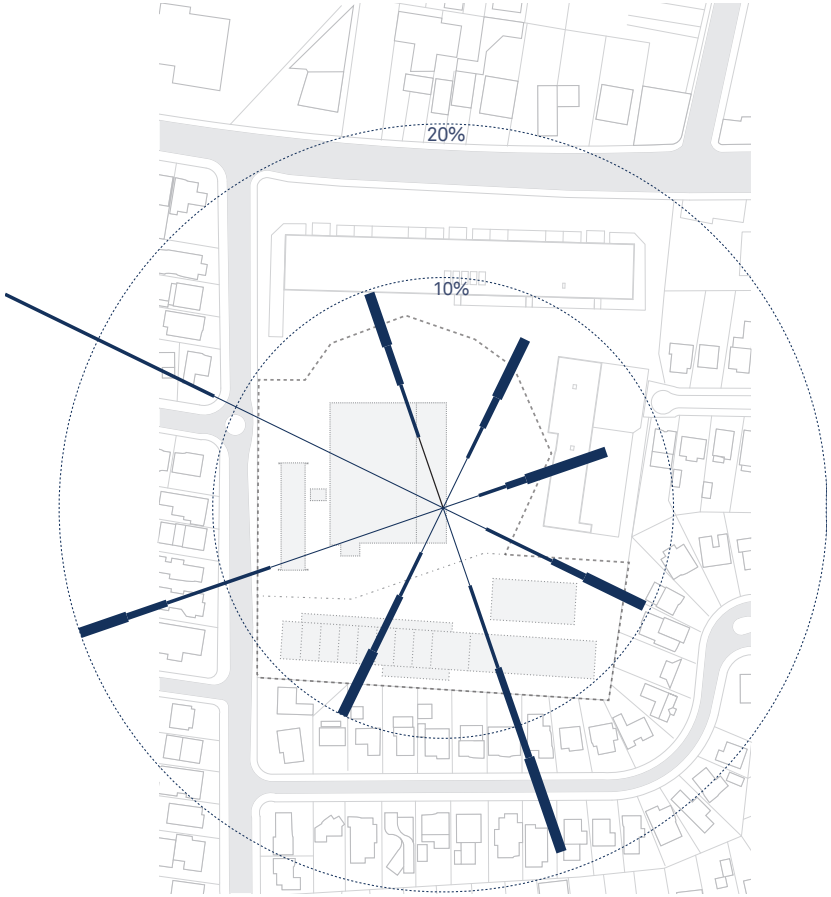
Overshadowing: Winter Solstice - June 21st @ 3pm



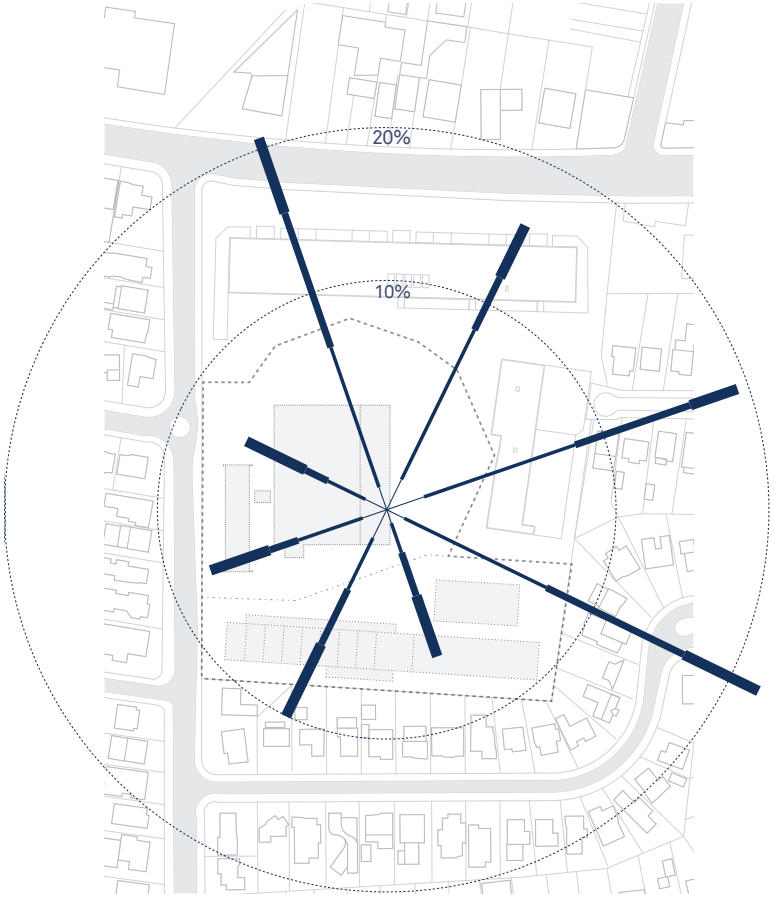
Overshadowing: Summer Solstice - Dec 21st @ 3pm

2.8 Wind Impact

Existing Environmental Performance



Annual Average Wind Across the Site at 9 a.m.



Annual Average Wind Across the Site at 3 p.m.

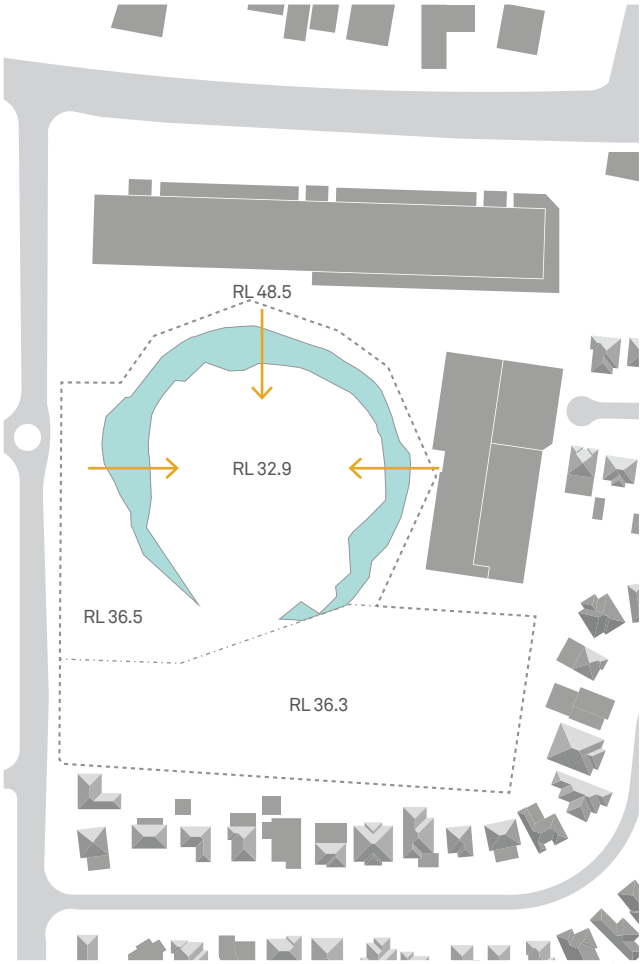
3.0 **Site Principles**

3.1 The Quarry

Precinct Features

The old quarry that makes up the 2 - 12 Tennyson Road site denotes a naturally intraverted site. There is an opportunity to employ this characteristic to create a sheltered public space inside a new development.

The quarry also allows a larger mass to sit into the landscape without appearing out of scale with the surrounding 2 storey residential buildings.



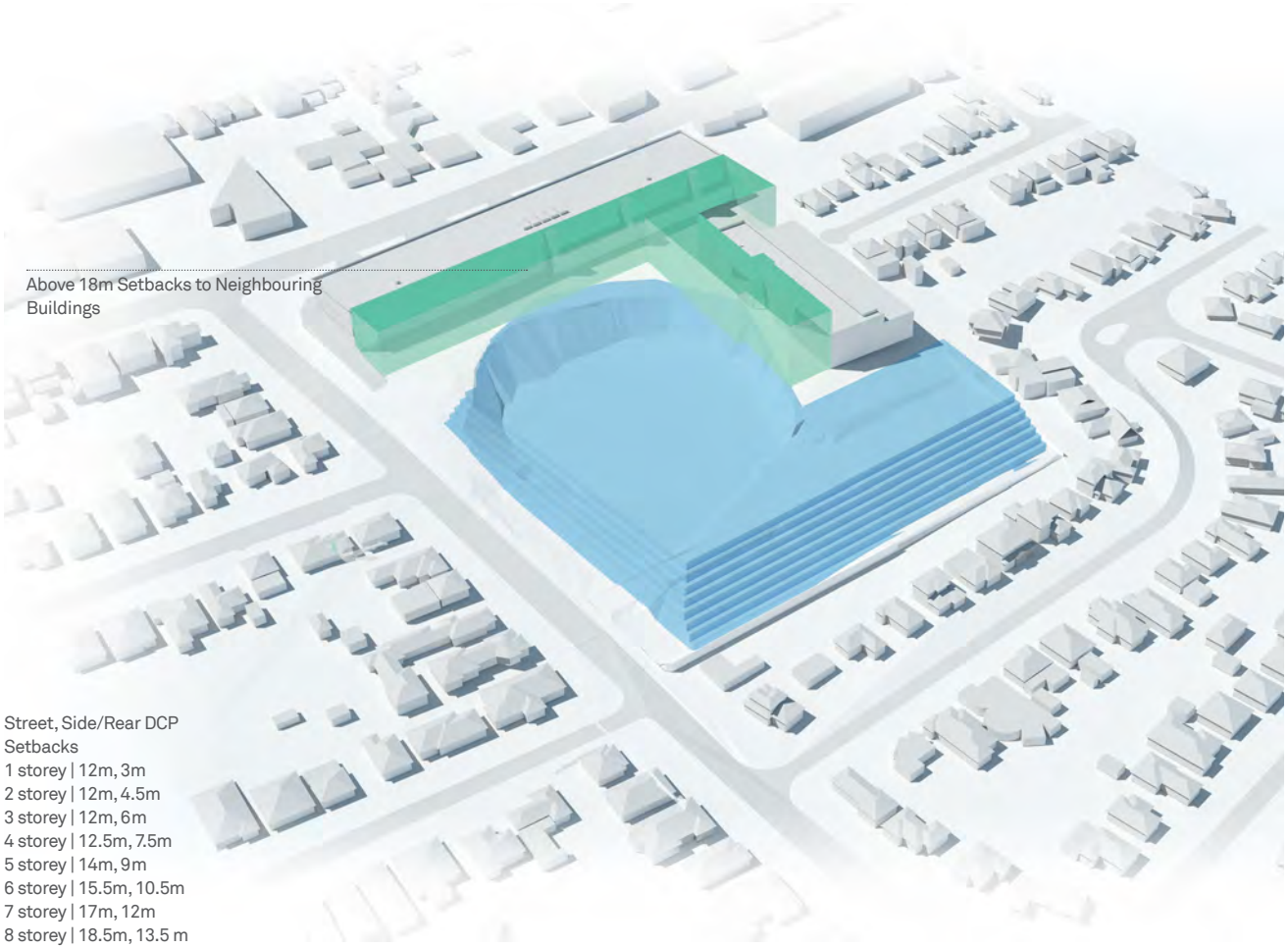
Quarry Site, Existing Precinct

Quarry Site Natural Topography

3.2 Site Setbacks

DCP Controls

The Ryde DCP 2010 describes the setback control for front, side and rear boundary setbacks. An 18m setback from neighbouring buildings provides appropriate separation to new residential buildings for privacy.



Street, Side/Rear DCP Setbacks
1 storey | 12m, 3m
2 storey | 12m, 4.5m
3 storey | 12m, 6m
4 storey | 12.5m, 7.5m
5 storey | 14m, 9m
6 storey | 15.5m, 10.5m
7 storey | 17m, 12m
8 storey | 18.5m, 13.5 m

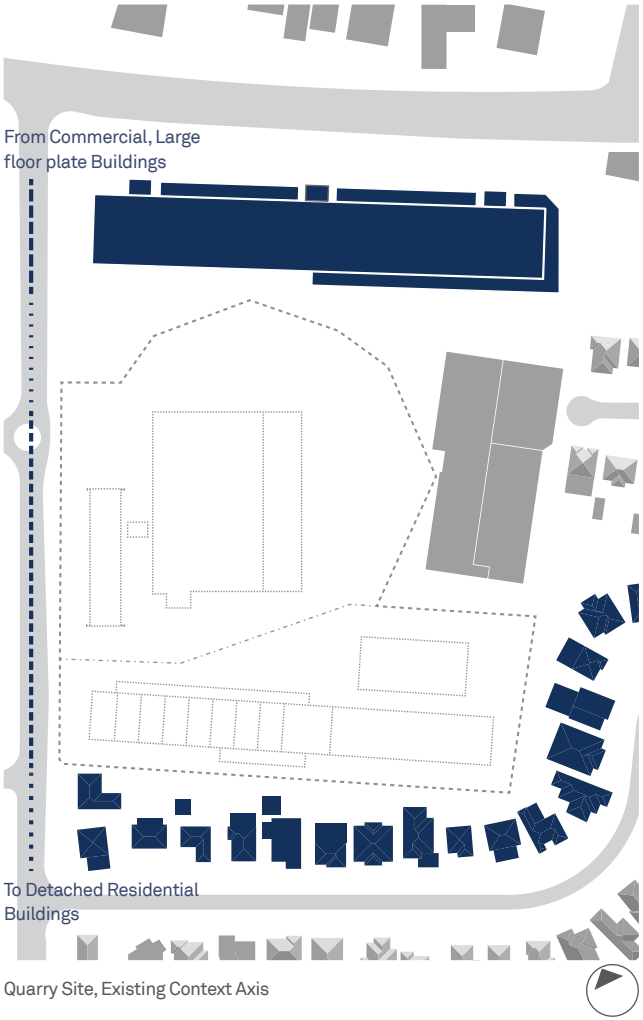
Quarry Site, Setbacks

3.3 Scale

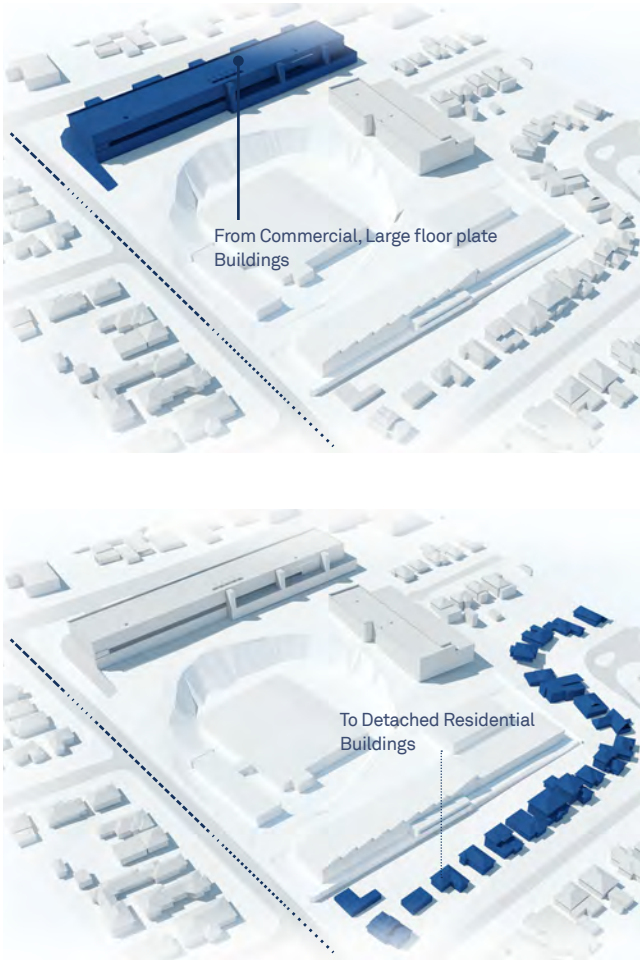
Surrounding Buildings Scale

The project site is uniquely located between two very disparate building typologies and built form scale. The commercial block to the north of the site which aligns to Victoria Road features large floor plates, whilst the residential buildings to the southern site edge along Brereton Street, is typically domestic in scale and profile.

The project has a very important position that forms the middle ground between the two distinct typologies of built form.



Quarry Site, Existing Context Axis



Existing context axonometric views

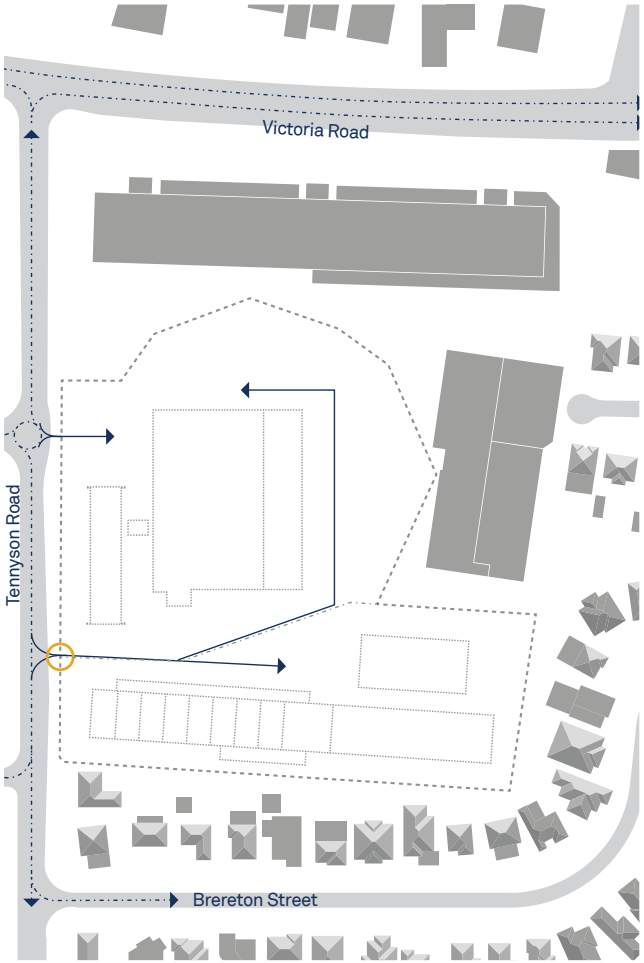
3.4 Access to the Site

Vehicular and Pedestrian

The existing site geography complicates constrains site access due to the fall in levels from Victoria road southwards.

This constraint is complicated further by the nature of the excavated quarry and surrounding ground levels, as such the proposed scheme will utilise existing, or close to existing access points onto the site from Tennyson Road.

With this in mind, three potential access points are represented in the adjacent diagram.



Quarry Site, Existing Access Roads

Access to 14 Tennyson Road

Access from Tennyson Road

3.5 Height Plane

Existing LEP

The existing LEP (2016) map dictates a consistent height across both sites of 10m.

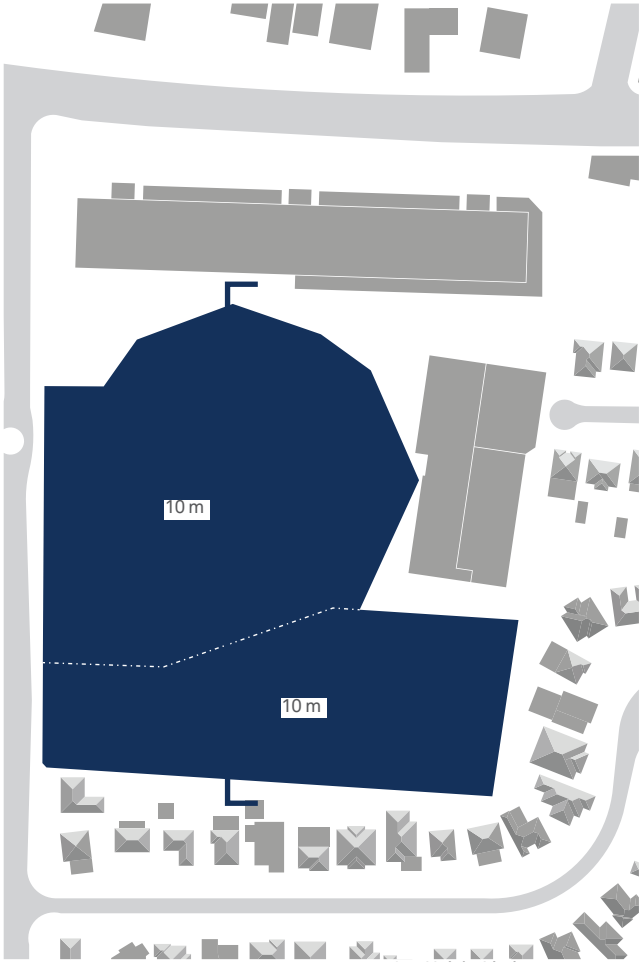
The local and current DCP stipulates the following:

"Site design, building setbacks and the location and height of level changes are to respect the existing topographic setting of the street and the relationship of existing buildings in the street to the topography."

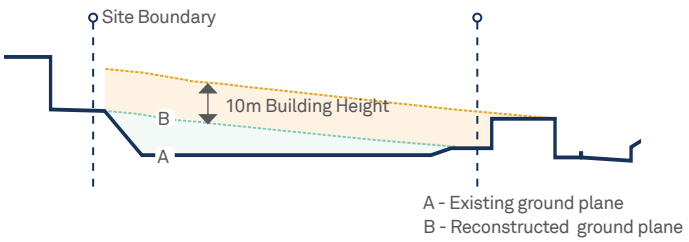
And defines the measurement of building height as:

"Building height is defined under Ryde LEP 2014. It is the vertical distance between existing ground level and the top most part of the building. The measurement of building height includes all roofs, but excludes communications devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues or the like. The height as specified is the maximum allowable."

Due to the excavated nature of the site it would be fair to project the original site section from Tennyson Road up to a maximum of 10m allowing for additional storeys below this level in the quarry.



Quarry Site, Building Height



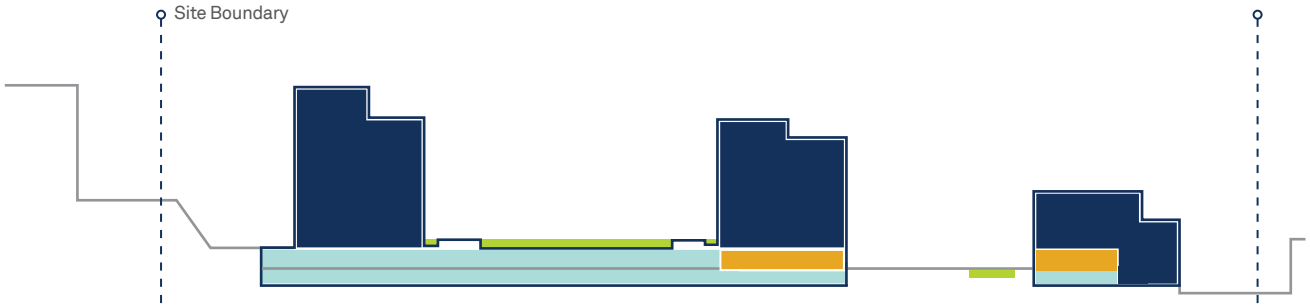
Extruded 10m Height plane

3.6 Building Use

From Light Industrial to Mixed Use

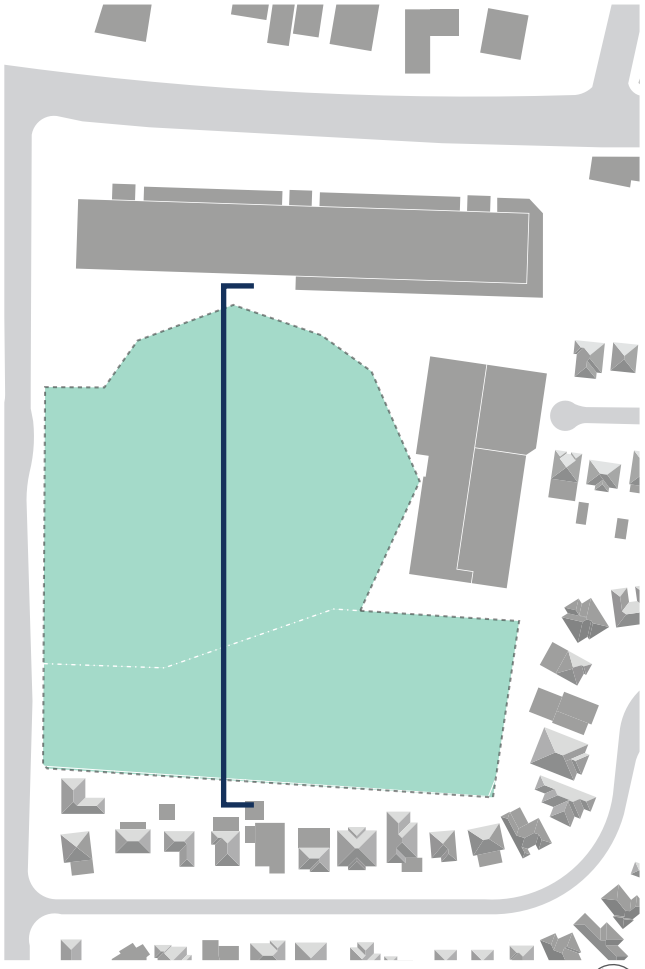
The site is currently zoned for Light Industrial use. This proposal presents a mixed use outcome, and it is our suggestion that this be amended to Mixed Use. This would allow not only for the site to be more in keeping with the local context but also to provide some local retail.

The aspiration for the aggregated plots is to provide some amenity back to the local community in the form of retail space. This would be located at grade beneath the residential development accompanied by additional parking for non-residents.



Quarry Site, Mixed Use Program Distribution

Landscape Car Parking Retail Residential



Quarry Site, Mixed Use Precinct

Mixed Use

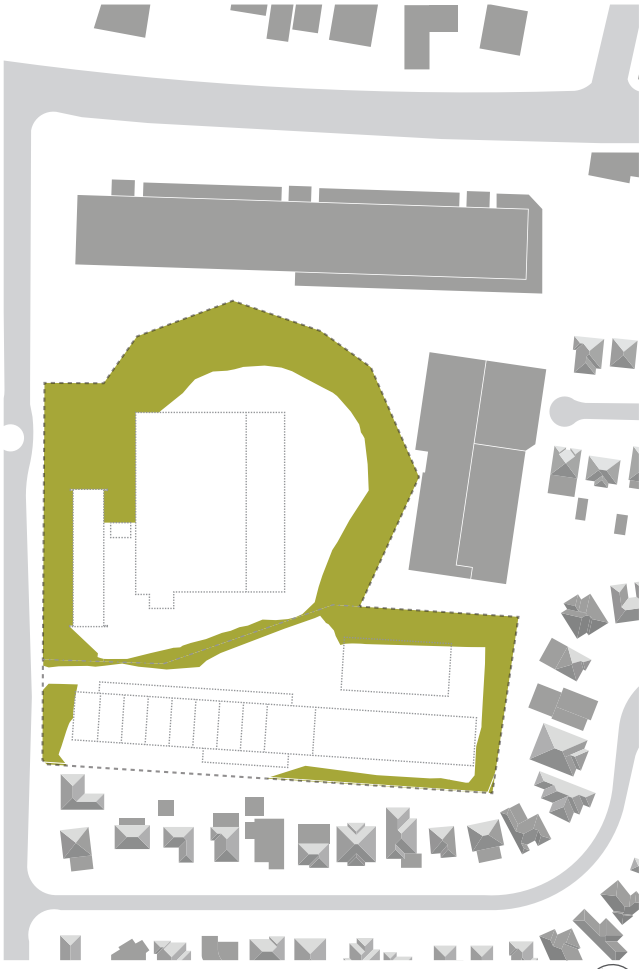
3.7 Landscape

Existing Boundary Conditions

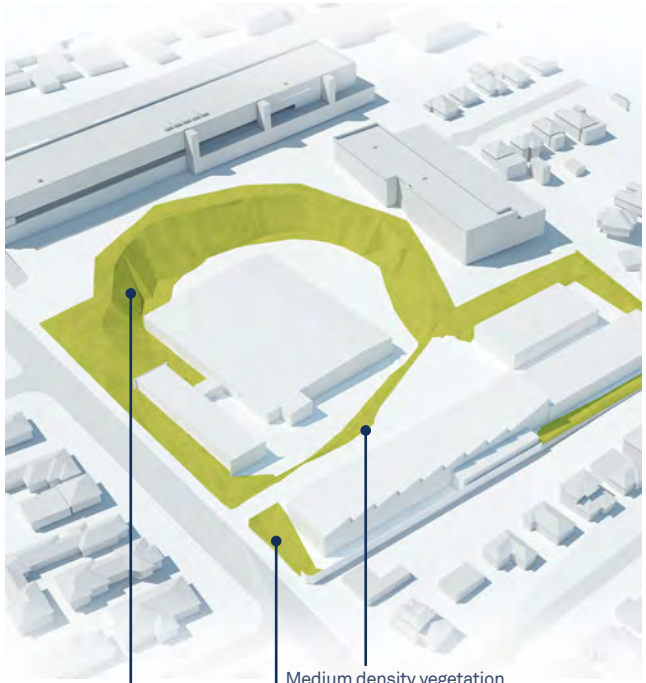
The geological circumstances of the project site broadly fall into three categories, the quarry as an excavated landscape, there is an abundance on site of well developed and dense trees to the peripheries of the quarry. Generally , the landscape is hard-scape and these areas are utilised for car access, car parking and storage.

There are grass verges along Tennyson Road, and sporadically throughout the site.

The trees within the site are of a varied type and assessment of this vegetation has been completed, and there are no protected species in site that warrant rehabilitation or protection.



Quarry Site Landscaping



Quarry Site Landscaping

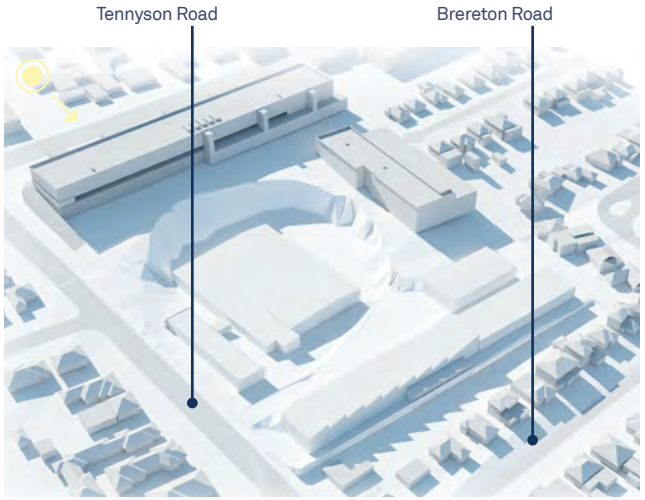
Undefined Green

3.8 Overshadowing

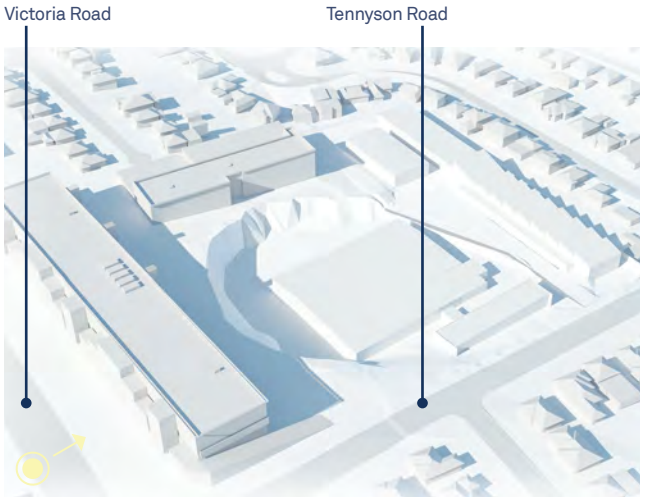
Minimising Overshadowing

The natural fall down Tennyson Road and the orientation of the site constrains the solar access provision.

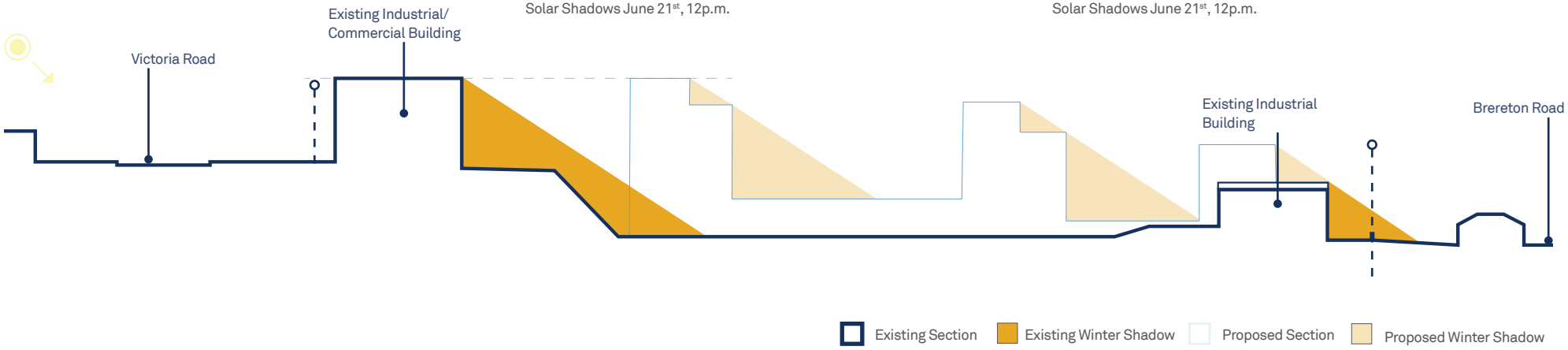
The massing of the proposed scheme will therefore need to recognise these constraints and ensure that heights and positioning will be sensitive to overshadowing and provide generous clearances in the north-south direction to ensure that light can reach the lower areas of the site.



Solar Shadows June 21st, 12p.m.



Solar Shadows June 21st, 12p.m.

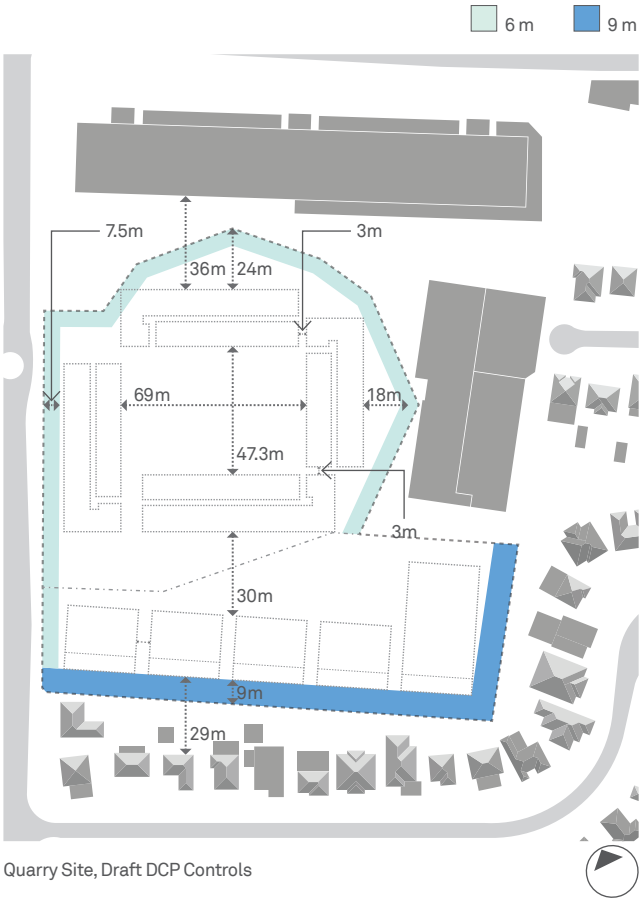


Solar Shadows, Section

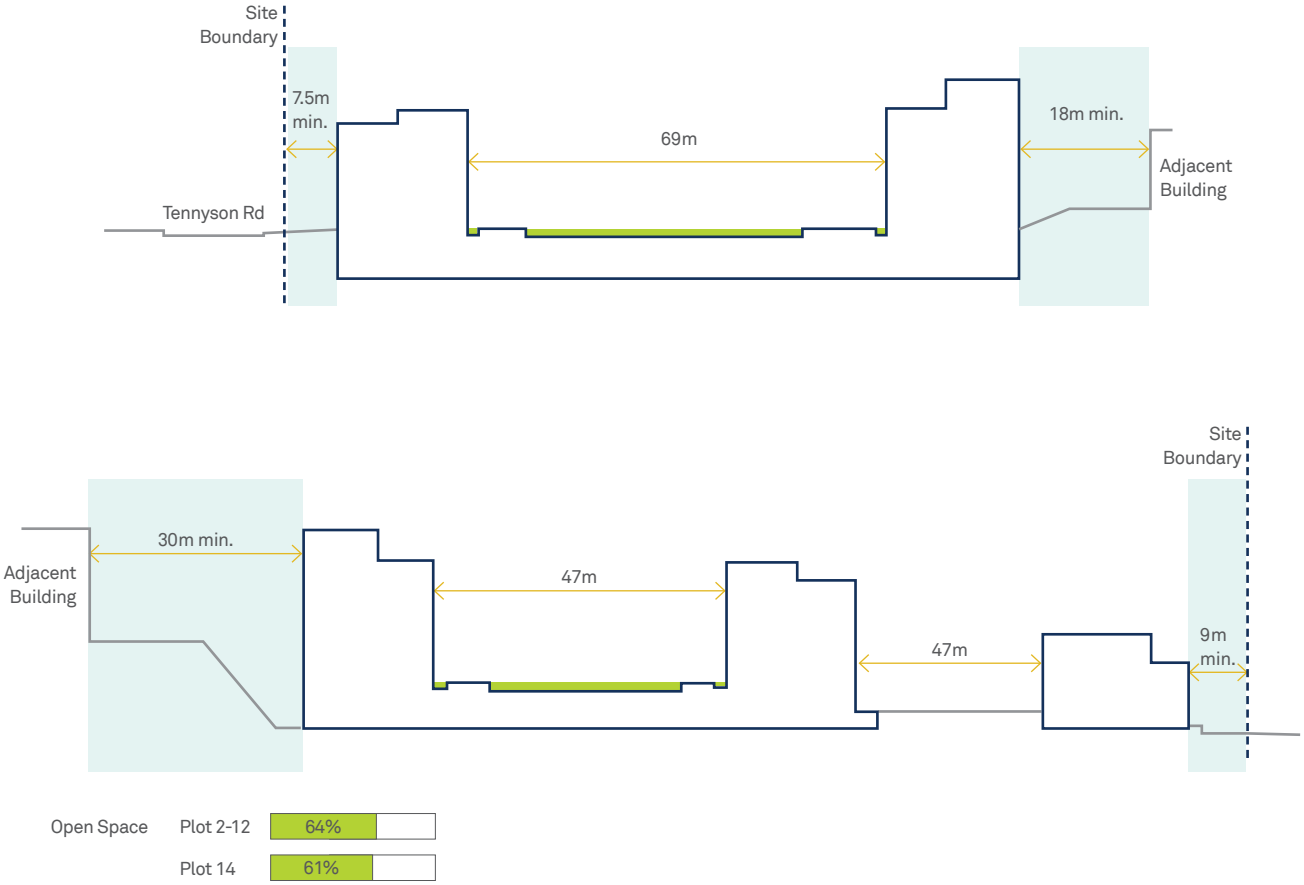
4.0 **Applying the Site Principles**

4.1 Site Setbacks

Respecting Adjacencies: Setbacks around the site determine the position of the massing.



Quarry Site, Draft DCP Controls

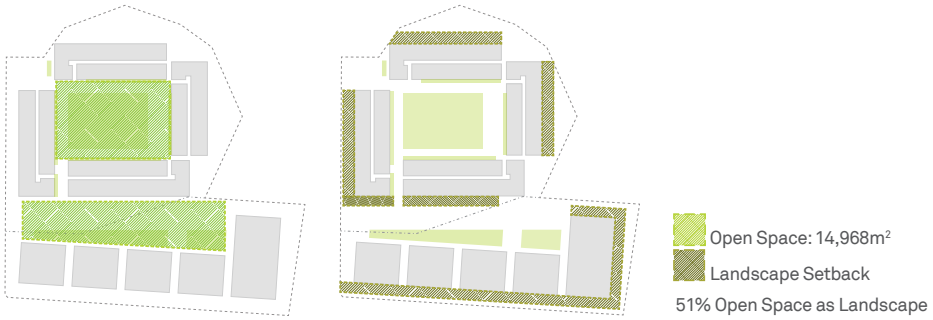


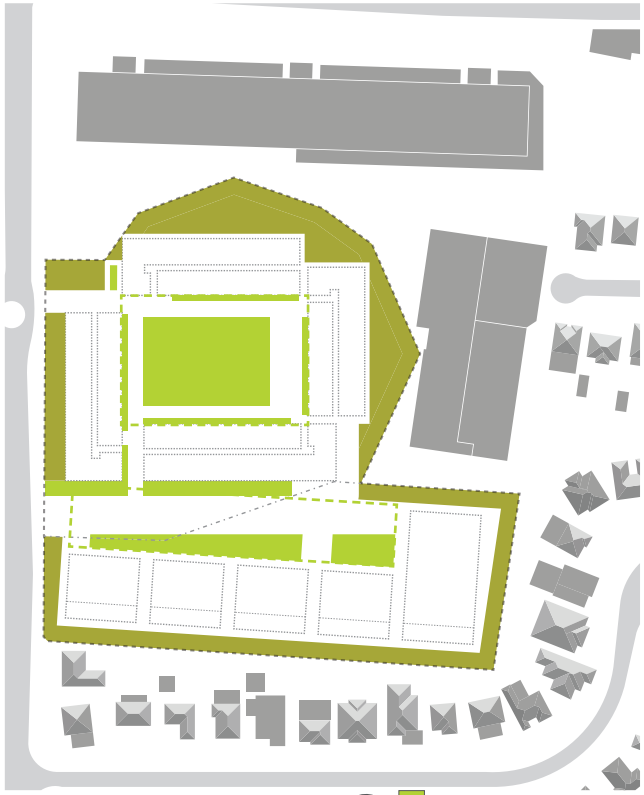
Quarry Site, Setbacks

4.2 Landscape

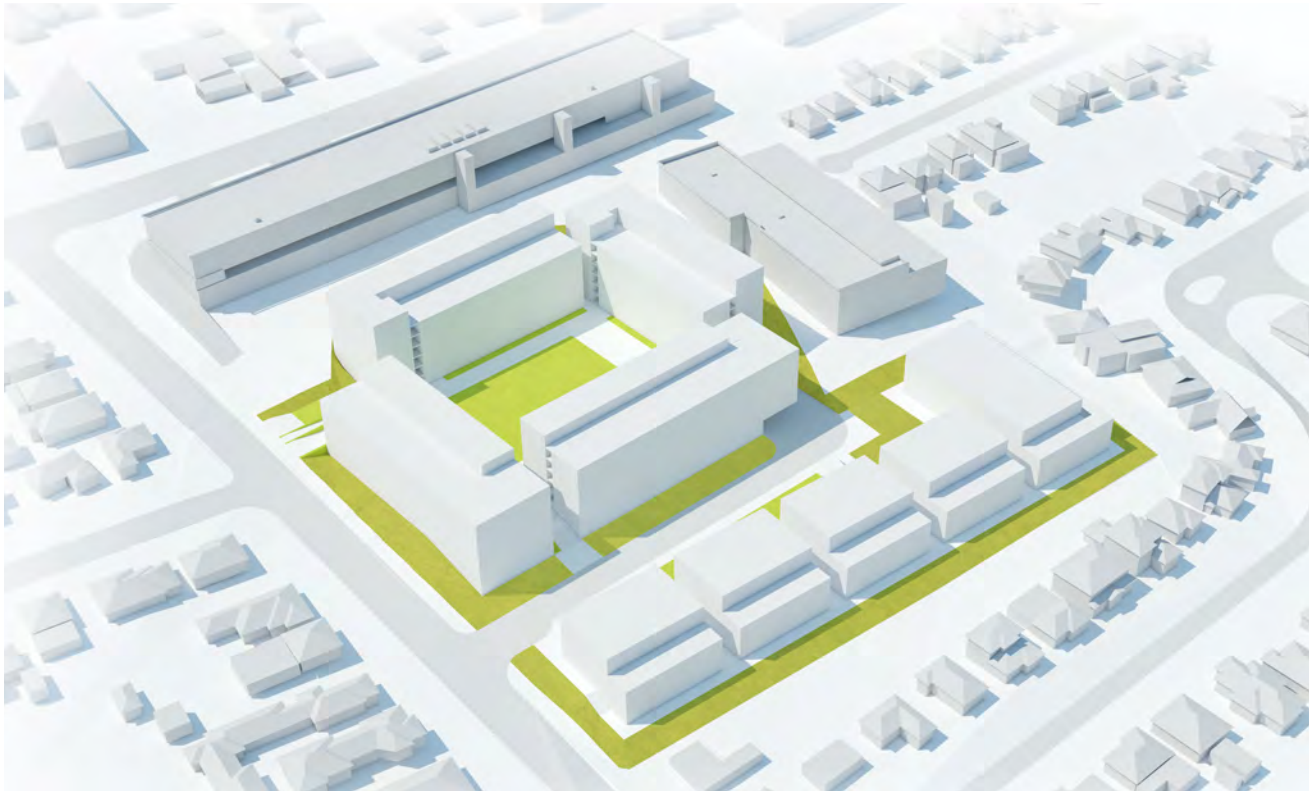
Enhancing Edge Condition & Providing Amenity

Forming the edges of the quarry site, deep fill soil is proposed to allow for mature tree planting, creating a green boundary to the site. A formal public green is proposed for the centre of the development





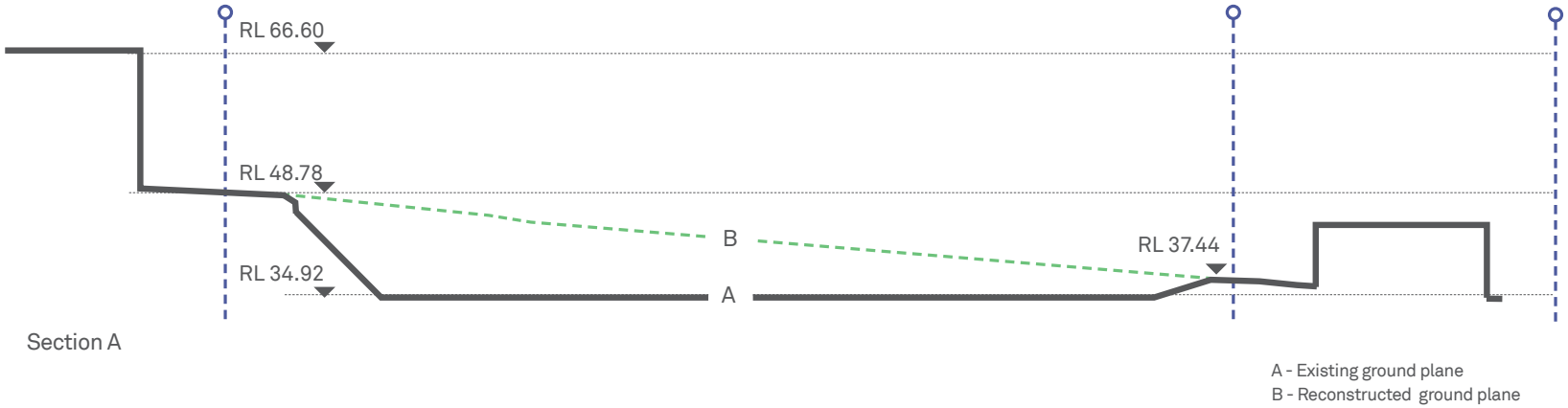
Quarry Site, the Quarry Green



Quarry Site, Massing Green

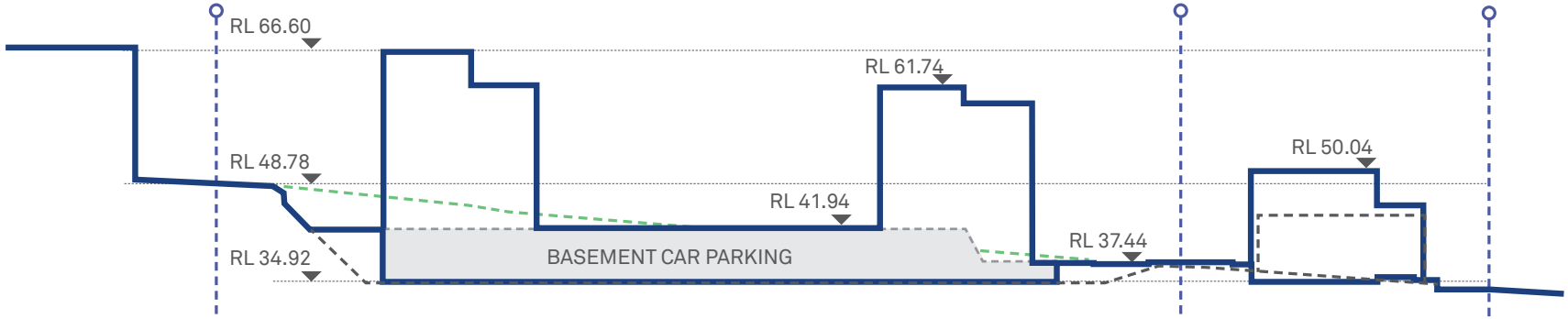
4.3 Ground Plane Definition

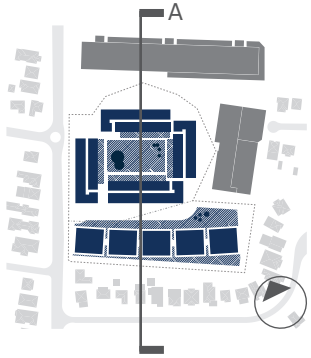
Defining the reconstructed ground plane

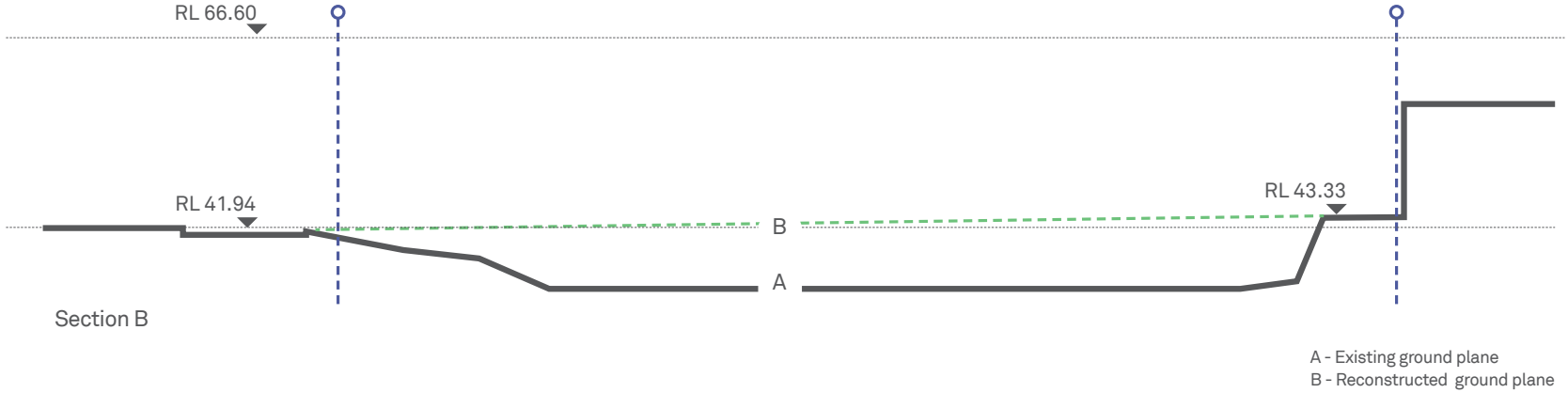


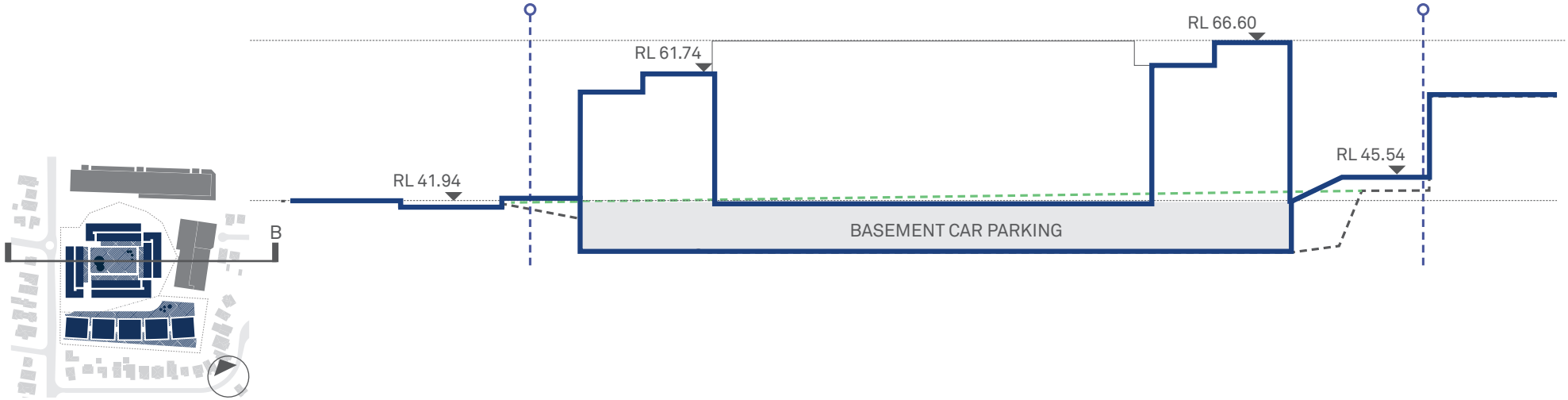
Section A

A - Existing ground plane
B - Reconstructed ground plane






RL 66.60
RL 41.94
RL 43.33
B
A
Section B
A - Existing ground plane
B - Reconstructed ground plane


RL 66.60
RL 61.74
RL 41.94
RL 45.54
BASEMENT CAR PARKING
B

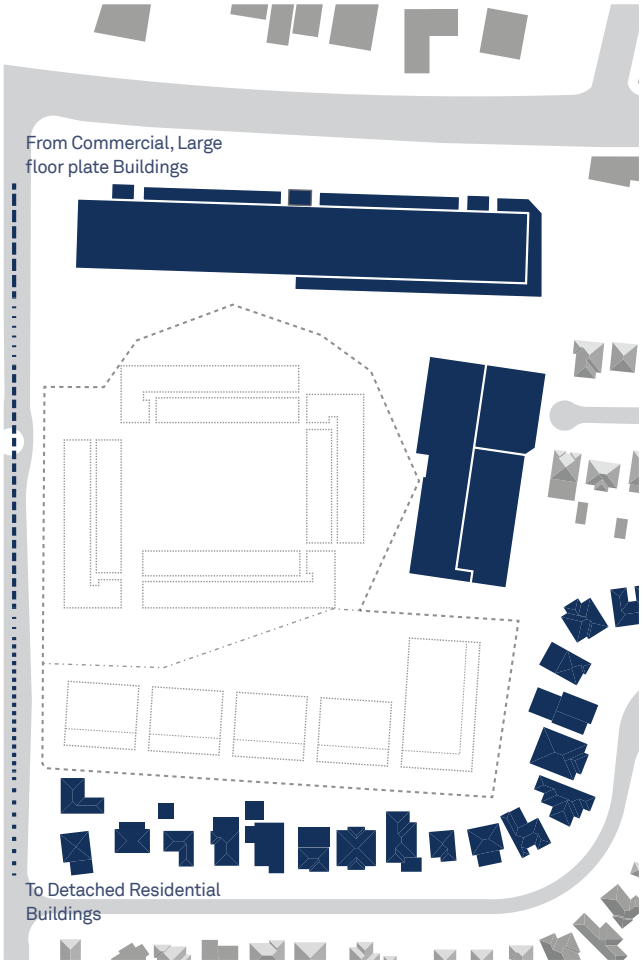
4.4 Scale

Surrounding Height Limits

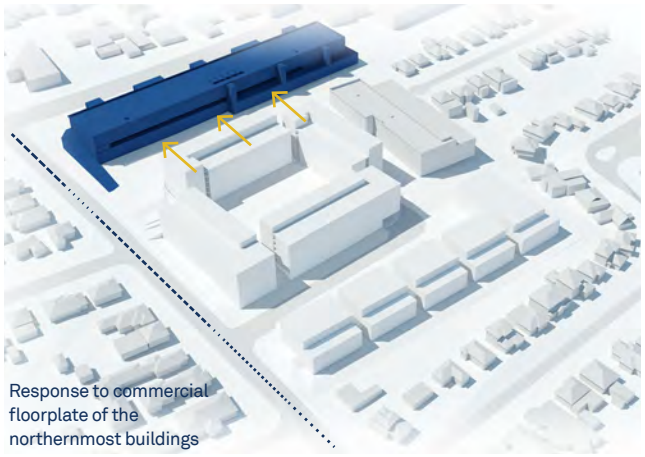
The site is located between two contrasting urban conditions; large floorplate commercial buildings to the north and east and detached residential buildings to the south east, west, and south.

In response, the proposed building within the quarry is informed in part by the association with the commercial footprints and is sensitive to the form and expanse of the northern elevation along Victoria Road. Similarly the eastern block of the proposed building footprint reflects the neighbouring commercial building.

The buildings proposed at 14 Tennyson Road respond to the scale, grain and proportion of the residential homes to the southern most site boundary and domestic environment beyond.



Quarry Site, Existing Context Axis

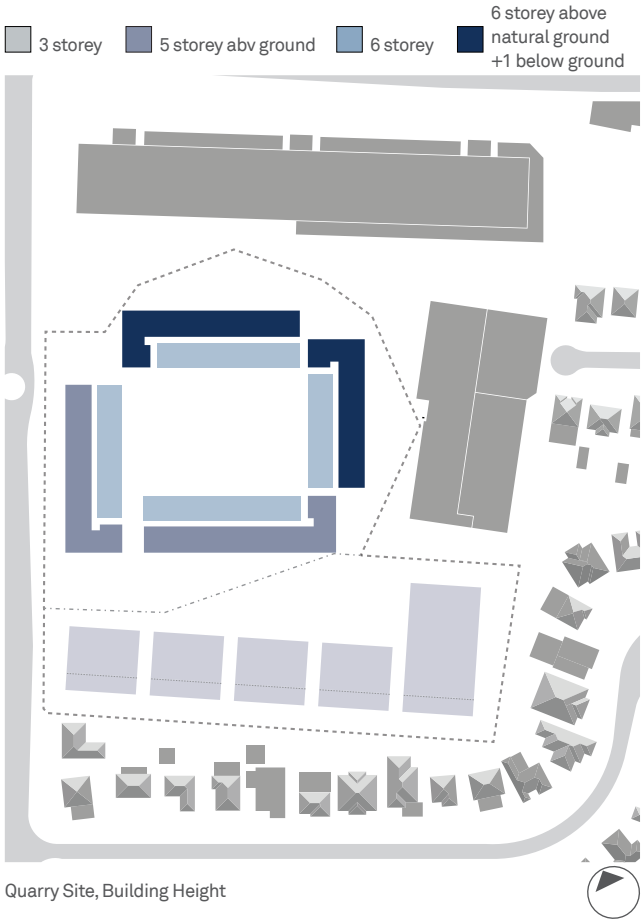


Response to the surrounding urban scale

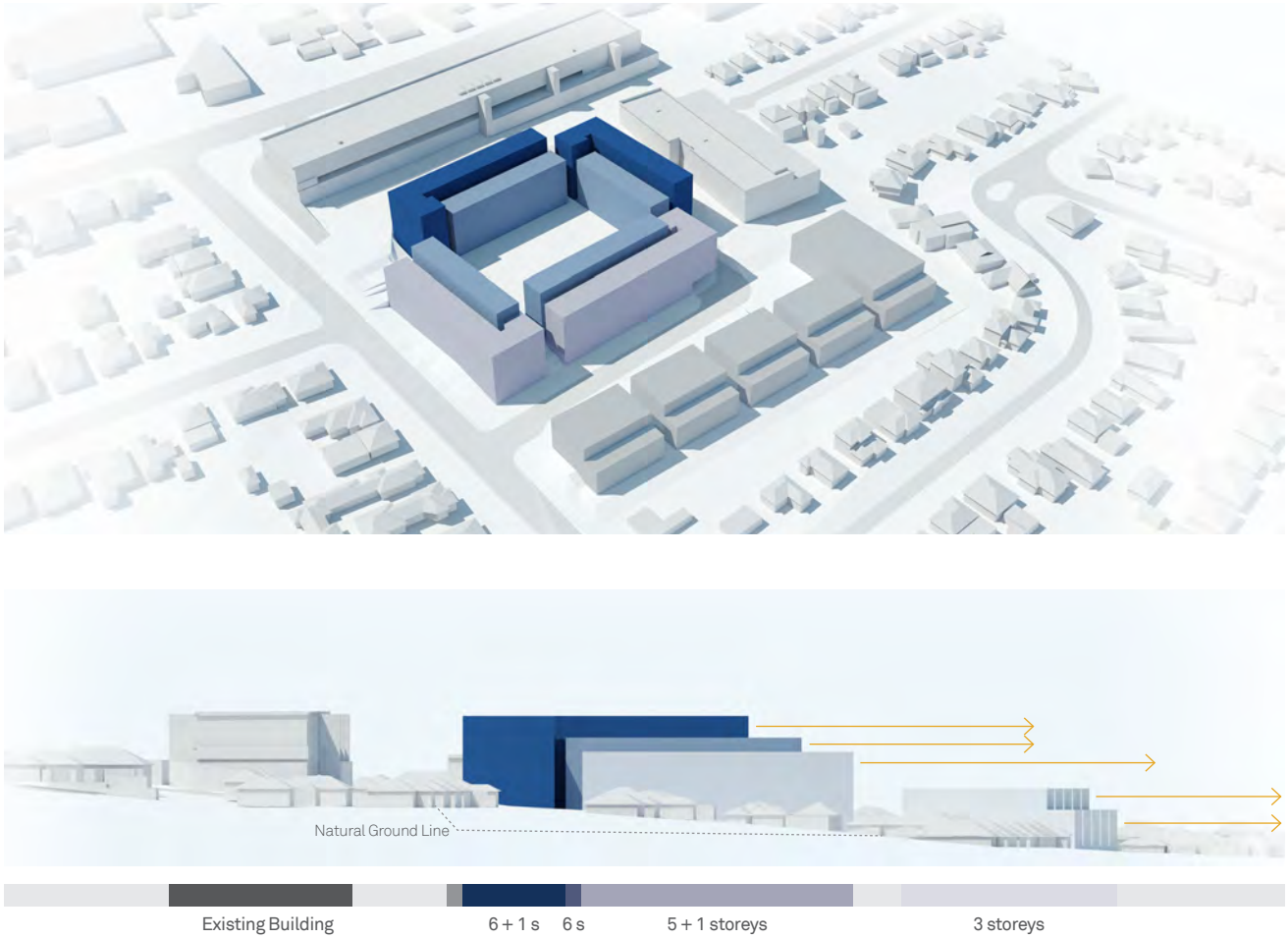
4.5 Building Height

Maximising the views towards the Southern Part of the Site

The built form maximises the level of sun access across the site as well as providing views out over wider landscape.



Quarry Site, Building Height

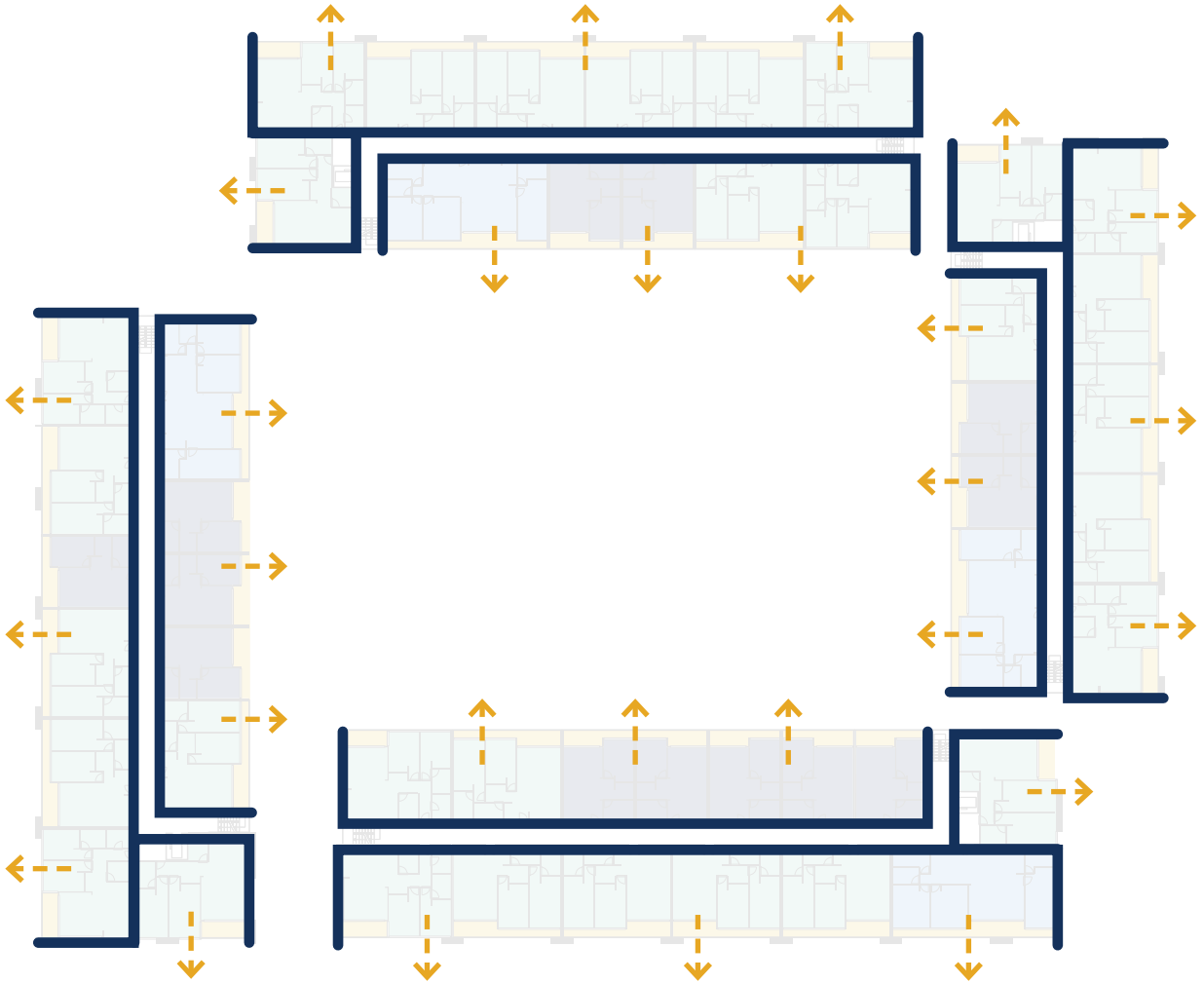


Quarry Site, Building Height Section

4.6 Building Orientation

Enhancing the Views through the Apartment Arrangements

The diagram adjacent indicates the primary orientation of the apartments on a typical floor. The layout and orientation has been designed to ensure minimal overlooking between apartments, while optimising views and daylight.

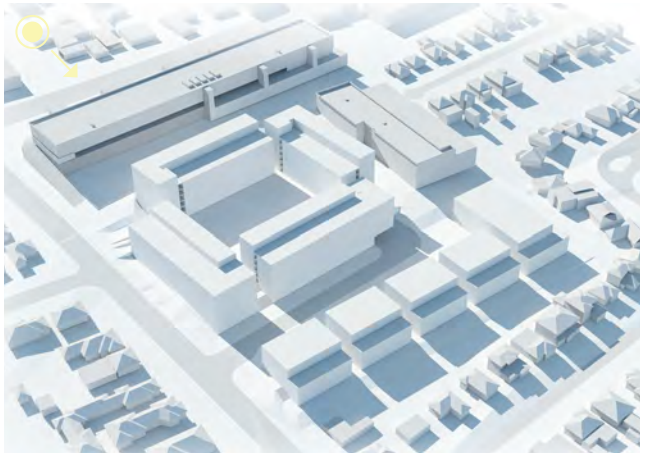


Typical Plan denoting views optimisation

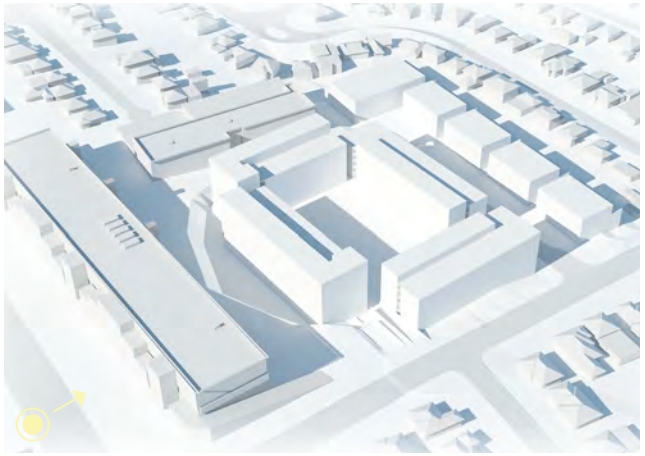
4.7 Solar Controls and Impacts

Minimising Overshadowing

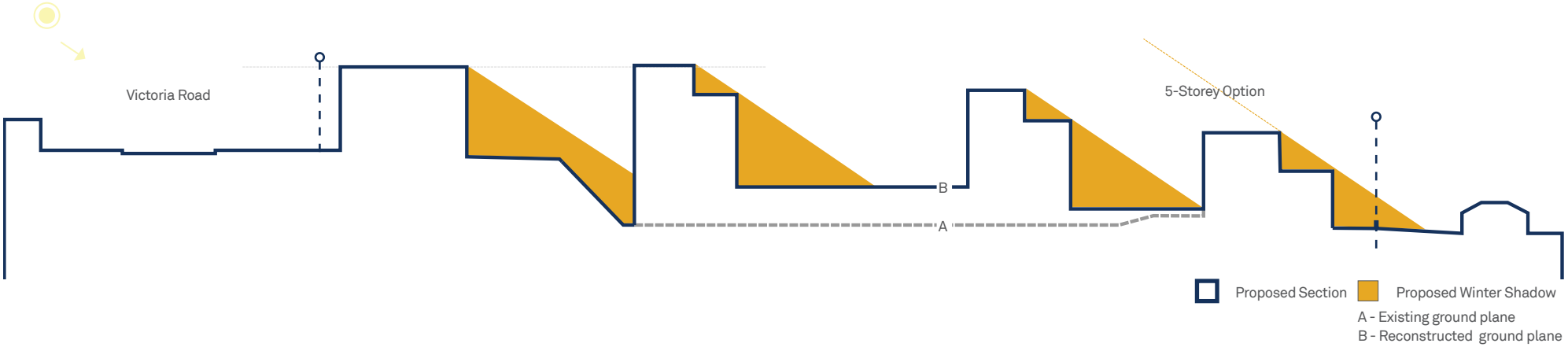
Solar Access is impacted by the topography of the site and its orientation to North. The site falls away to the south and as such built form is prone to overshadowing adjacent buildings. The proposal achieves over 70% of apartments with at least 3 hours of sunlight between 9am and 3pm on June 21st.Total number of apartments: 272Number that meet solar access guidelines: 199Percentage that meet solar access guidelines: 73%A detailed analysis of the solar access of the building is contained in



Solar Shadows June 21st, 12p.m.



Solar Shadows June 21st, 12p.m.

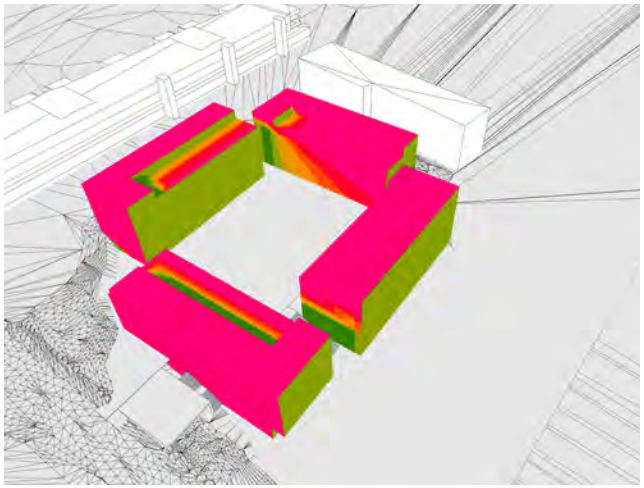


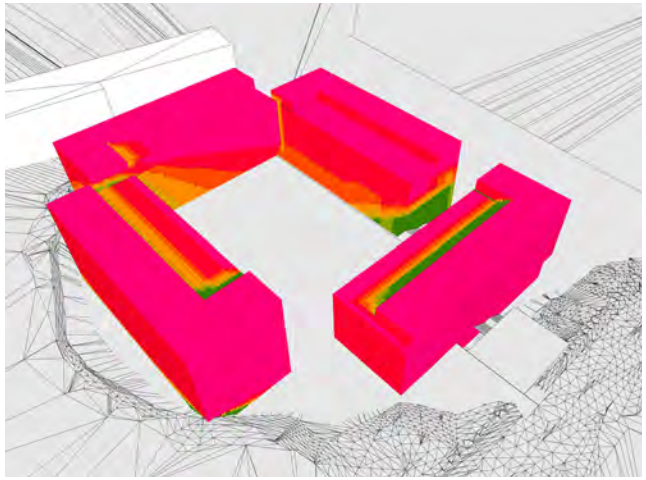
Solar Shadows, Section

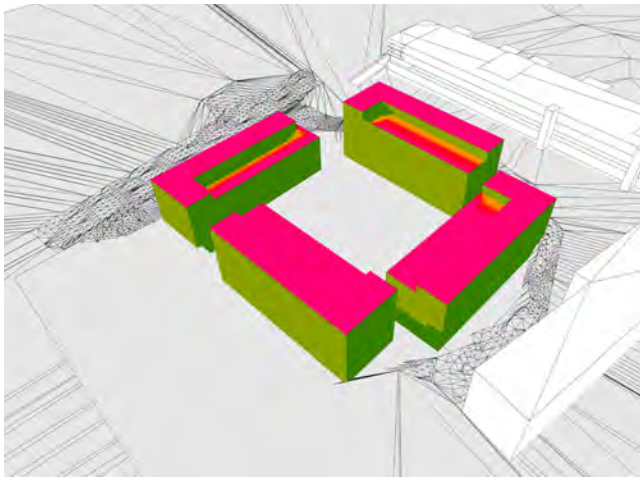
4.8 Solar Controls and Impacts- Access (2-12 Tennyson Road Plot)

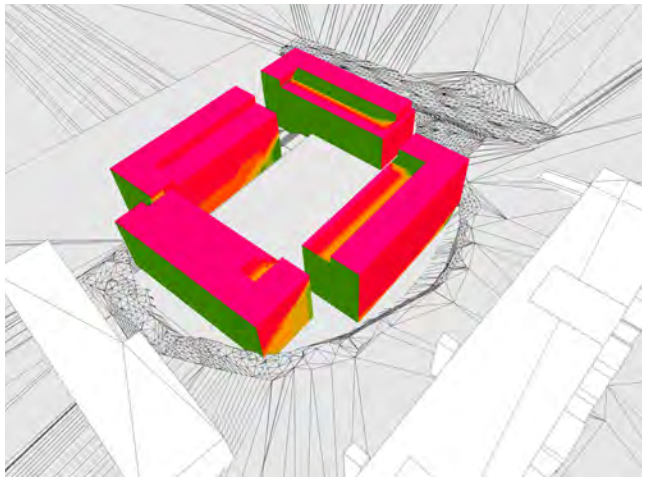
Solar Analysis & Area Diagrams

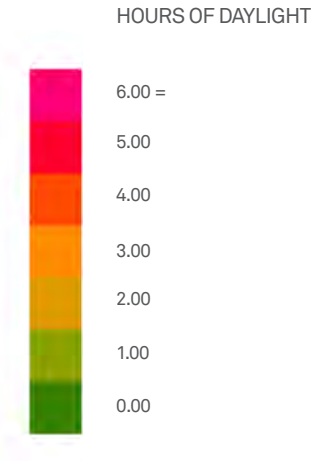
Solar studies of the building form were modelled in order to optimise the apartment layout to make the best possible access to daylight.





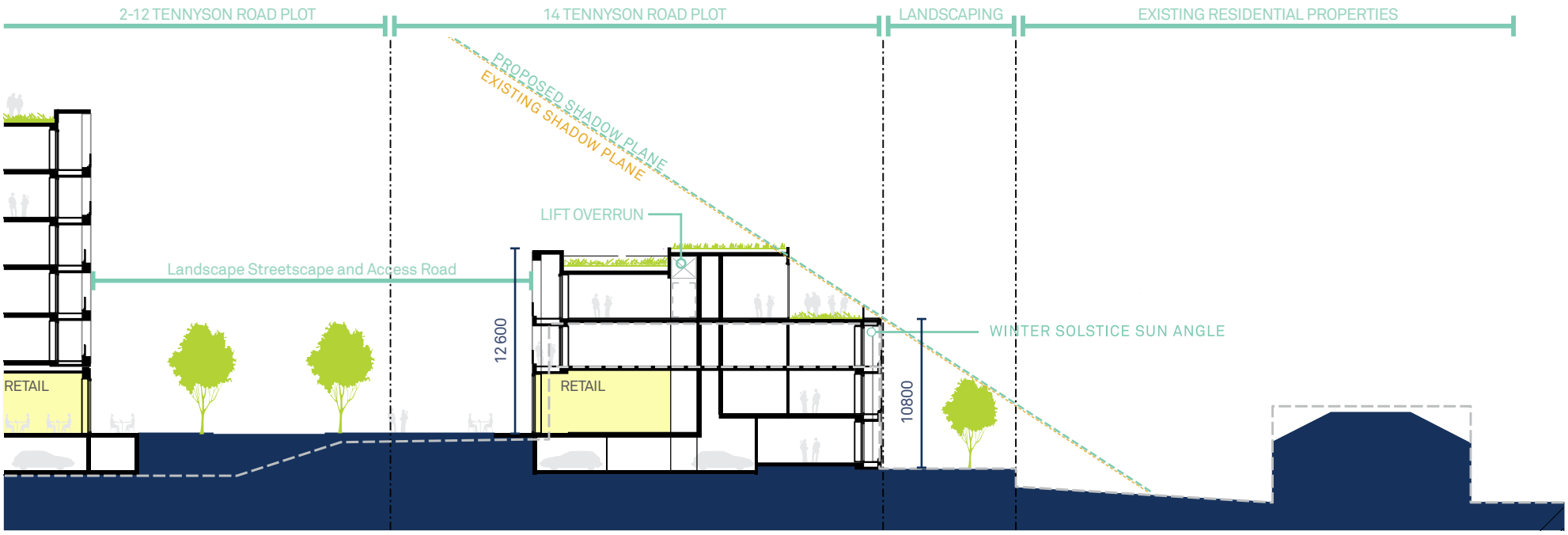






4.9 Solar Controls and Impacts - Adjacent Properties (14 Tennyson Road plot)

Minimising Impact of New Massing



Section through proposed building on 14 Tennyson Road plot

4.10 Site Access

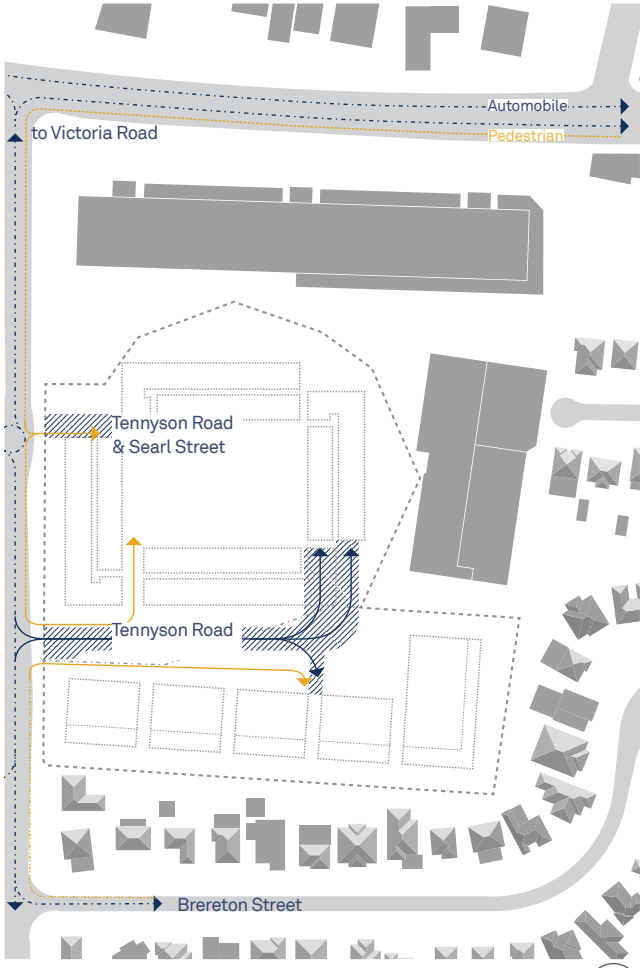
Enhancing the Relationship between Pedestrian and Vehicular Flows

The proposal scheme considers consolidating the adjacent access points on Tennyson Road and adding a new access from the roundabout at Searl Street.

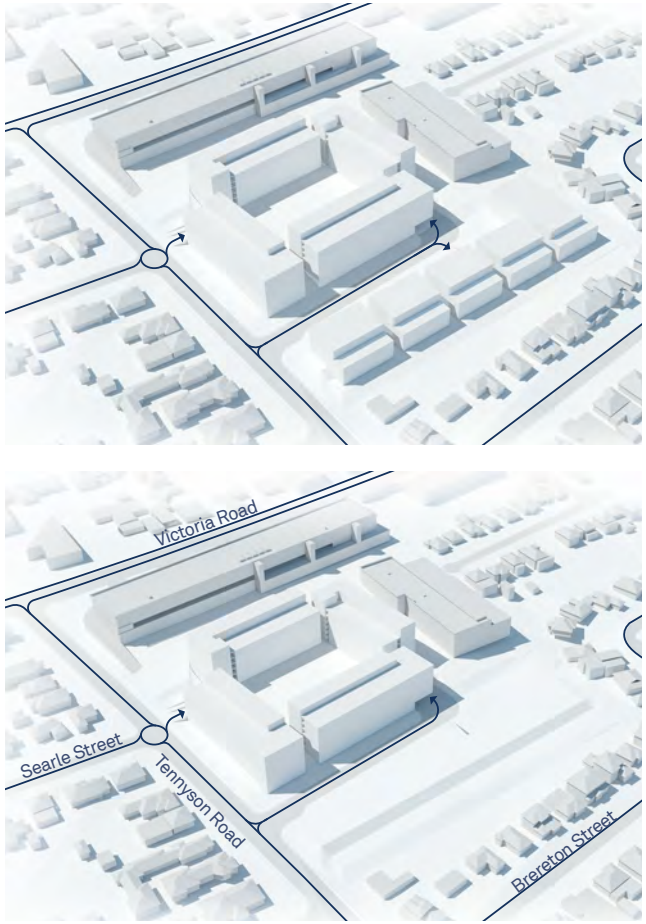
The order n which this occurs, however, will be subject to the construction implementation strategy employed by the client and contractor.

The 3 potential options for phasing the project recommend different access strategies:

1. A joint development of the site offers the most efficient where pedestrian and emergency vehicles access from the Searls St mini-roundabout and all other vehicles and pedestrians enter at a single point at the existing entry from Tennyson Rd.
2. Should Plot 2-12 be developed first this strategy remains unchanged.
3. If Plot 14 were to be developed independently all access would be at the lowest boundary of the site.



Quarry Site, Access Roads

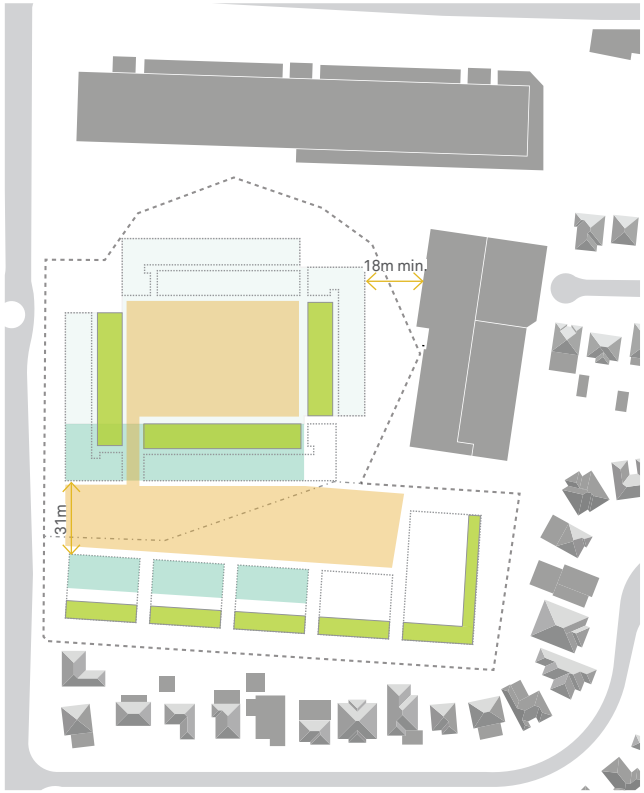


Response to the surrounding urban scale

4.11 Building Programme

A Vibrant Village Hub

Both Plot 2-12 and Plot 14 would provide a mix of retail and residential premises, with a high level of publicly accessible amenity as well as private roof terraces for residents.



Quarry Site, Retail and Amenities Space

Quarry Site, Mixed Use Precinct

4.12 Floor space ratios

Recommended Scheme

PLOT 2-12

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)	NSA - RESIDENTIAL	NSA - COMMERCIAL	Efficiency (NSA/GFA)	GFA/GBA	Carparks	1BR	2BR	3BR	TOTAL
Basement	RL 34.92	2.52	-7.02	Basement Carpark	9,121.0	-		-			323				
Lower Ground	RL 37.44	4.5	-4.50	Retail / Carpark	8,864.0	1,002.0		950.0	95%		256				
Sub Totals					17,985.0	1,002.0		950.0	95%						
Ground	RL 41.94	3.6		Residential/Community	5,204.3	4,116.3	3,472.8		84%	79%		17	26	3	46
L01	RL 45.54	3.24	3.60	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L02	RL 48.78	3.24	6.84	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L03	RL 52.02	3.24	10.08	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L04	RL 55.26	3.24	13.32	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L05	RL 58.5	3.24	16.56	Residential	3,578.3	2,922.3	2,583.4		88%	82%		15	17	3	35
L06	RL 61.74	4.86	19.80	Residential	1,471.4	1,152.5	1,095.9		95%	78%		6	9	0	15
ROOF	RL 66.6														
Sub Totals					31,557.6	25,737.9	22,280.1	**950.0**				87	181	20	**288**
Mix												30%	63%	7%	**RESIDENTIAL**
Overall Totals					**49,543**	**26,740**	**NSA Total**	**23,230**	**87%**		**579**	87	181	20	**288**

SITE AREA	**14478**	**FSR**	**1.85**
OPEN SPACE	9,273.7	**RATIO**	**64%**

Council Multiple	1	1.2	1.6
CAR SPACES	87	217.2	32

22368 TOTAL REQ. 336

TOTAL **579**

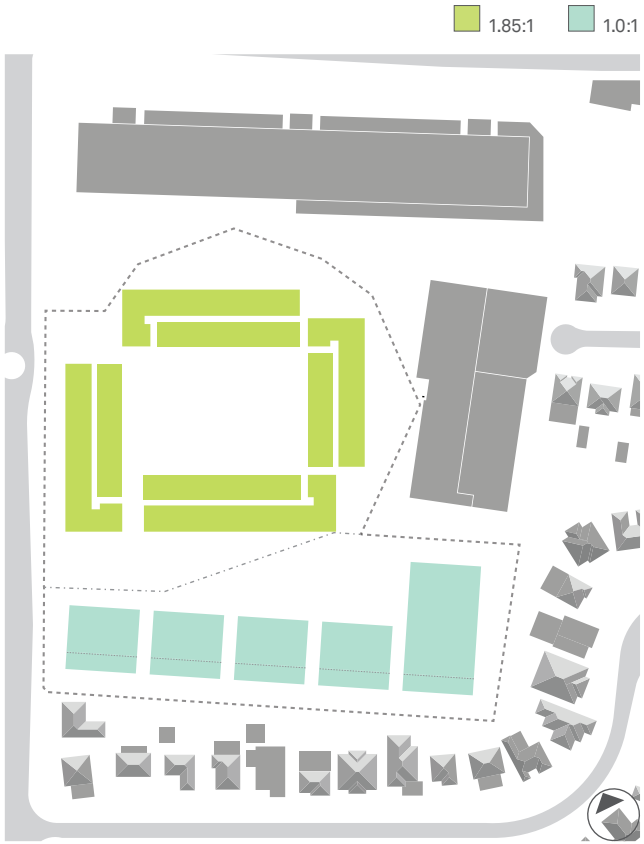
PLOT 14

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)	NSA - RESIDENTIAL	NSA - COMMERCIAL	Efficiency (NSA/GFA)		Carparks	1BR	2BR	3BR	TOTAL
Lower Ground/Basement	RL 34.74	3.6	-7.20	Residential	4,929.0	1,215.0	1,208.0		99%		144			10	10
Ground	RL 38.34	3.6	-3.60	Residential	3,672.0	2,960.0	1,974.3	834.0	95%			8	7	8	23
L01	RL 41.94	3.24	0.00	Residential	3,675.0	2,960.0	2,705.4		91%			8	16	8	32
L02	RL 45.18	4.86	3.24	Residential	3,675.0	2,186.0	2,060.0		94%			12	18		30
Sub Totals					11,022.0	9,321.0	7,947.7	**834.0**				28	41	26	**95**
Mix												29.47%	43.16%	27.37%	**RESIDENTIAL**
Overall Totals					**11,022**	**9,321**	**NSA Total**	**8,782**	**94%**		**144**	28	41	26	**95**

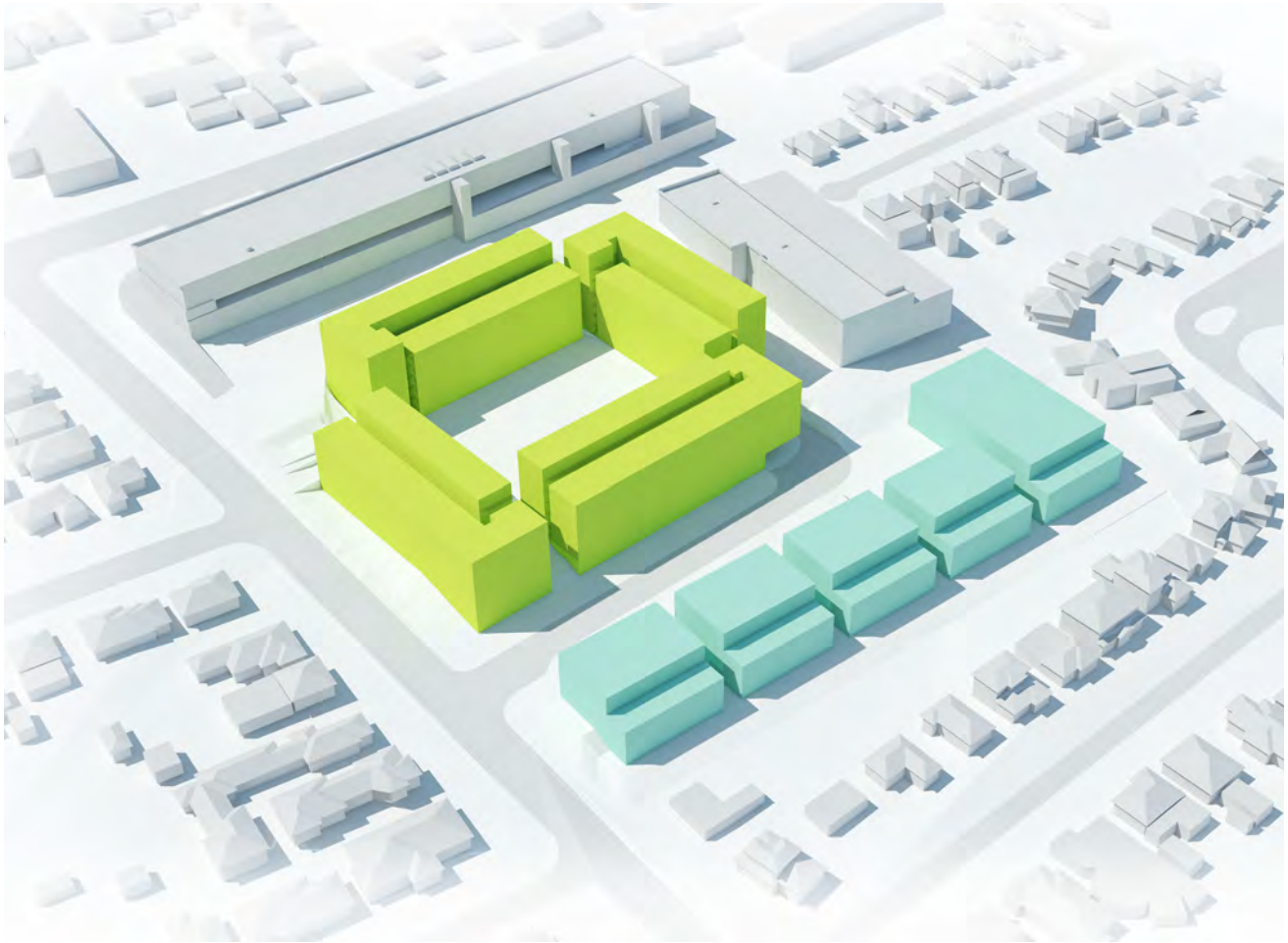
SITE AREA	**9321**	**FSR**	**1.0**

Council Multiple	1.5	1.2	1.6
CAR SPACES	42	49.2	41.6

With an aggregated FSR of 1.5, the recommended scheme offers an optimum balance of heights and ground coverage.



Quarry Site, Floor Space Ration



Quarry Site, Floor Space Ratio

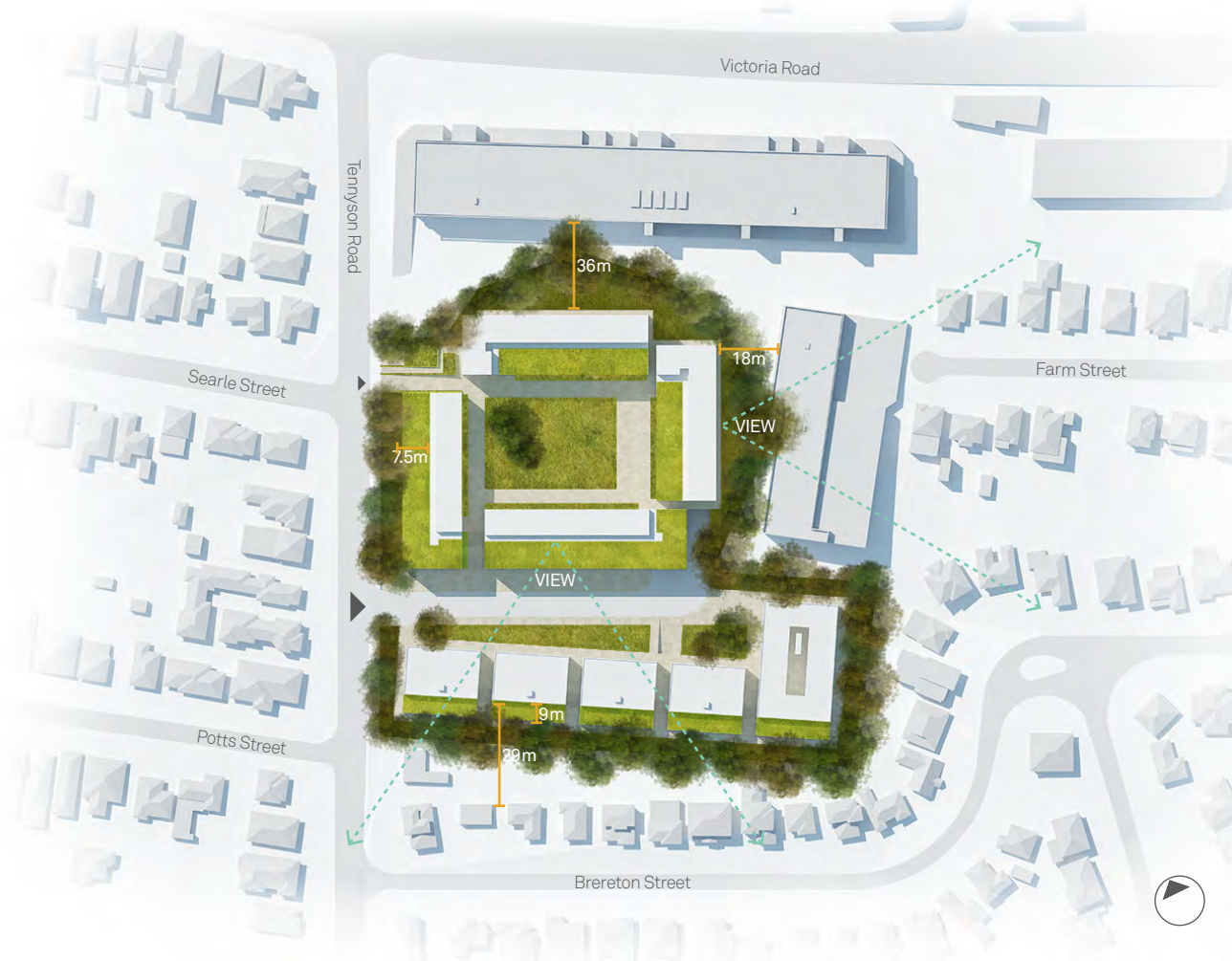
5.0 **Revised Design Proposition**

5.1 Site Plan

The Precinct Inner Courtyard

The ambition of this proposal is to create a distinctive place, a marker for Gladesville prioritised to the residents that will inhabit it and to the people of Gladesville who will enjoy its public realm as well as have the convenience of proximity to excellent public transport and a vibrant village centre with all the amenities that this brings.

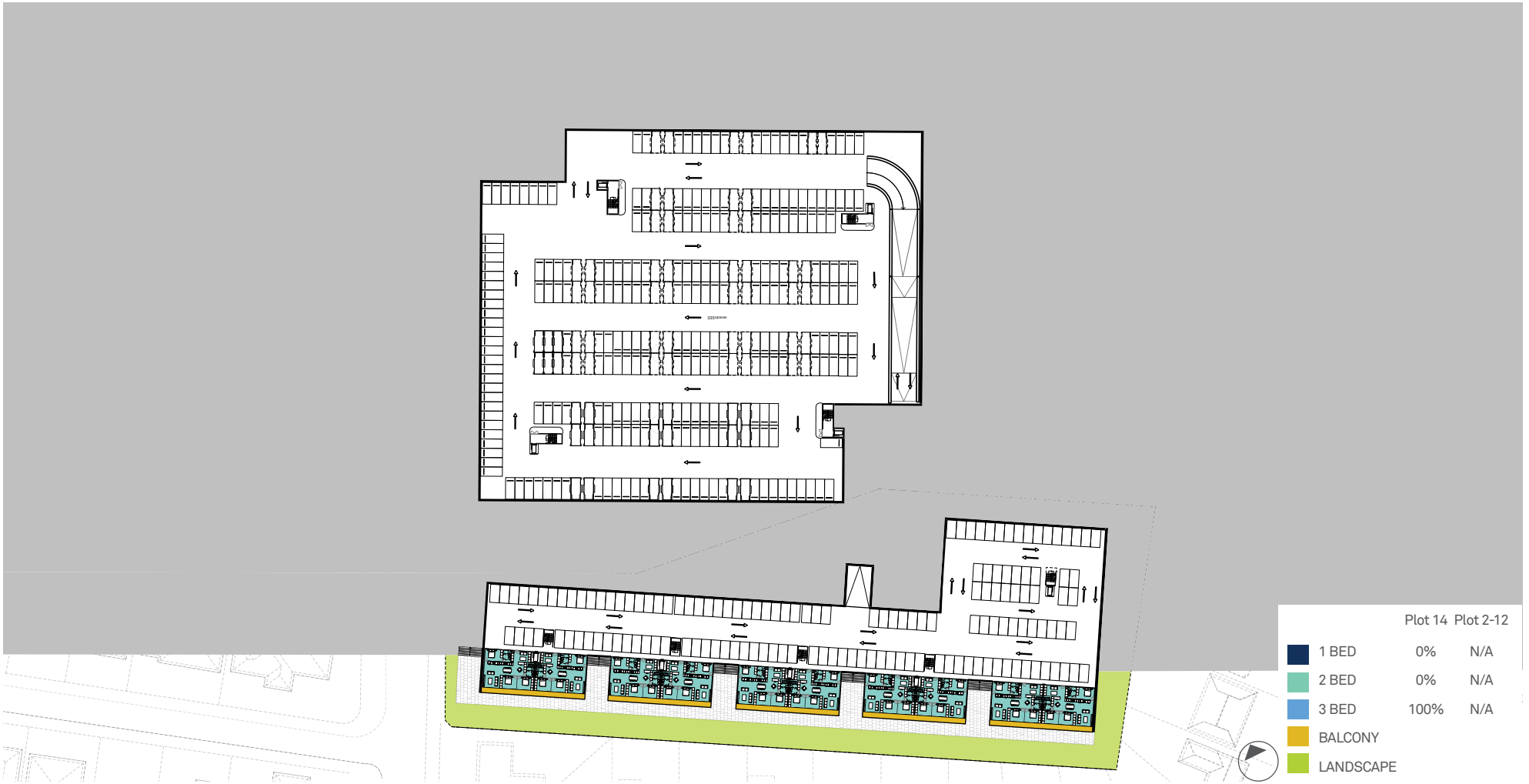
Our intention for the proposed building located on 2-14 Tennyson Road, is that it will be become a landmark within the Gladesville area, offering a new model for residential precinct development, including cafés and restaurants and a publicly accessible community garden. The quarry green, retail and dining precinct together create hubs with the potential for a variety of events benefiting the residents and the wider community.



Site Plan

Aerial View of Plot 2-14 Tennyson Road from North East, Proposed Development

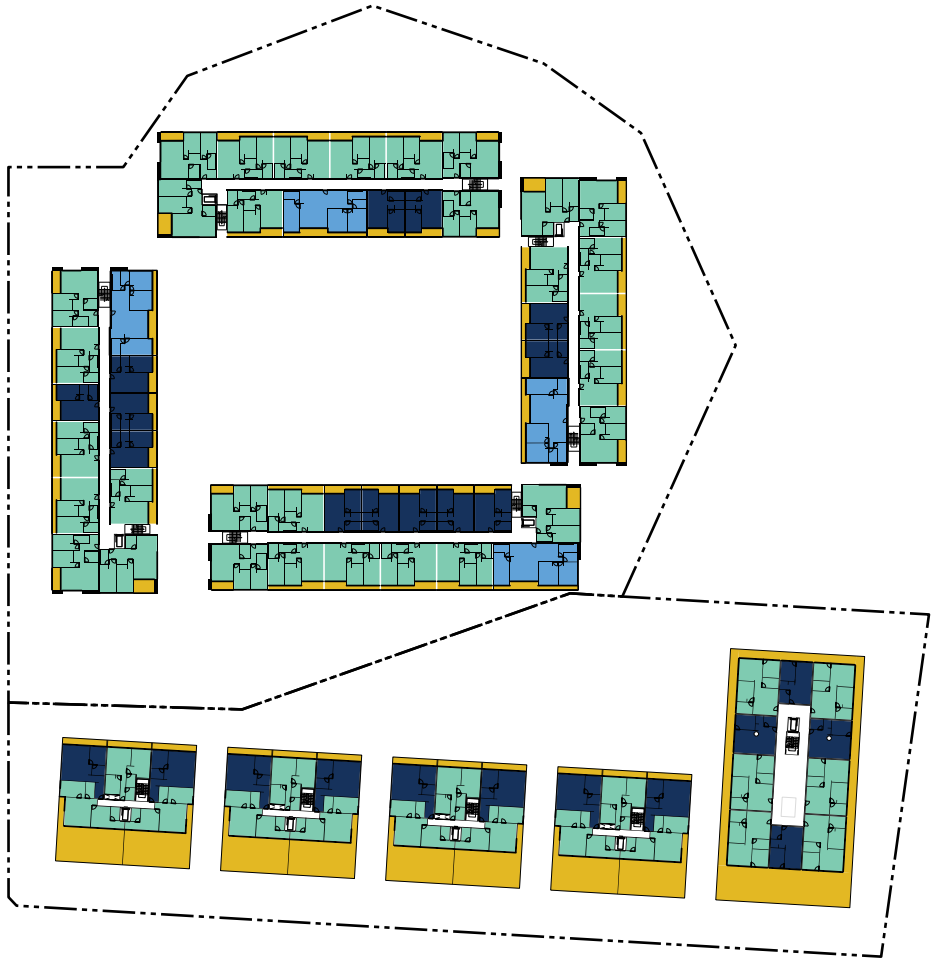
5.2 Basement Floor Plan



5.3 Lower Ground Floor Plan

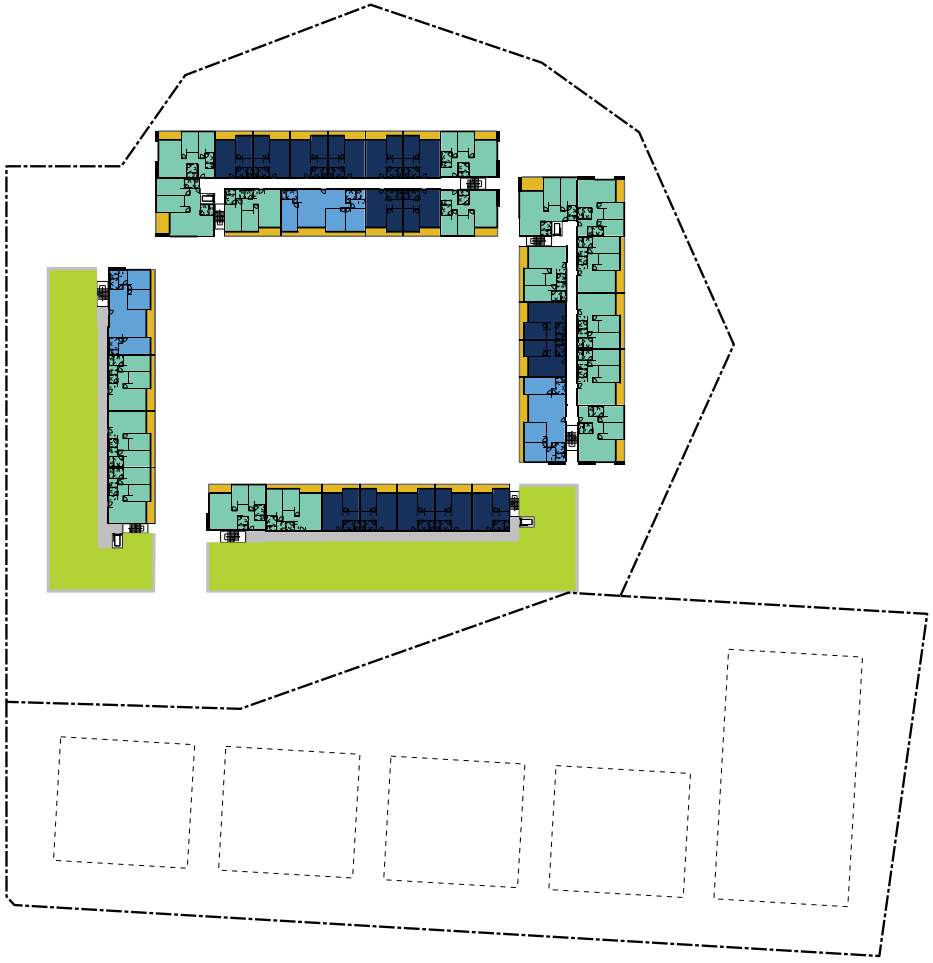
5.4 Ground Floor and Public Realm Plan

5.5 Typical Floor Plan



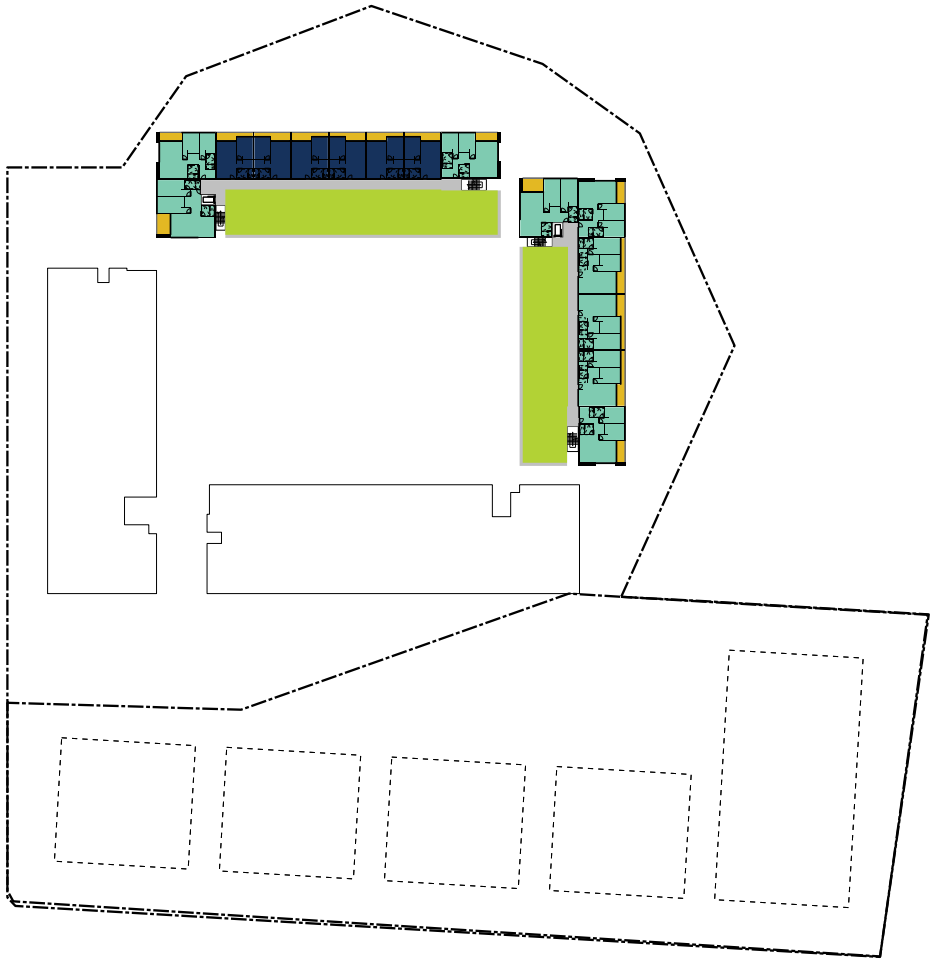
	Plot 14	Plot 2-12
1 BED	40%	27%
2 BED	60%	65%
3 BED	0%	8%
BALCONY		
LANDSCAPE		

5.6 Level Five Plan



	Plot 14	Plot 2-12
1 BED	N/A	42%
2 BED	N/A	49%
3 BED	N/A	9%
BALCONY		
LANDSCAPE		

5.7 Level Six Plan

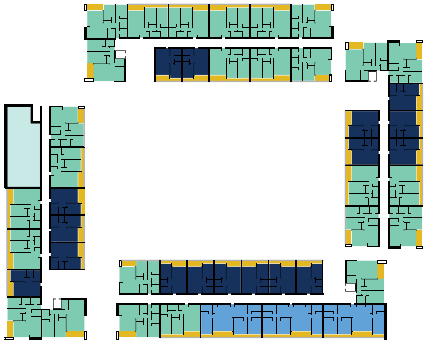


	Plot 14	Plot 2-12
1 BED	N/A	40%
2 BED	N/A	60%
3 BED	N/A	0%
BALCONY		
LANDSCAPE		

5.8 Apartment Layouts (2-12 Tennyson Road Plot)

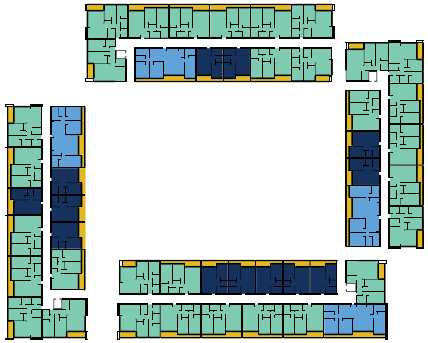
Building Block Summary

Solar studies of the forms were performed in order to optimise the apartment layout to make the best possible access to daylight.



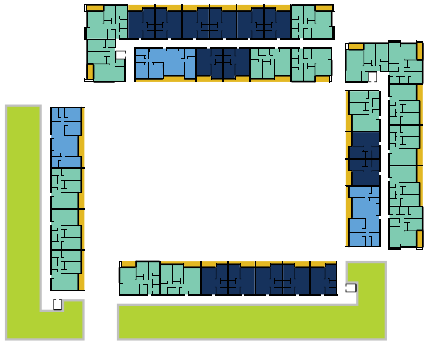
Level: Ground

GBA =	5,204 m²
GFA =	4,116 m²
Balconies =	389 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	3,472 m²
GFA/GBA=	79%
NSA/GFA=	84%



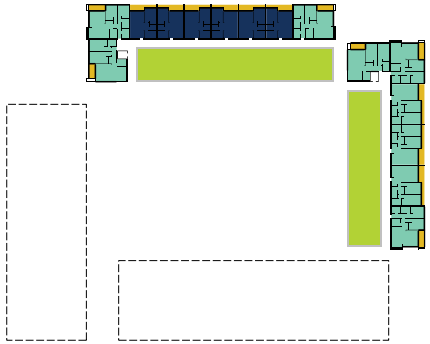
Level: 01-04

GBA =	5,326 m²
GFA =	4,387 m²
Balconies =	432 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	3,782 m²
GFA/GBA=	82%
NSA/GFA=	86%



Level: 05

GBA =	3,578 m²
GFA =	2,922 m²
Balconies =	306 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	2,583 m²
GFA/GBA=	82%
NSA/GFA=	88%



Level: 06

GBA =	1,471 m²
GFA =	1,153 m²
Balconies =	115 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	1,096 m²
GFA/GBA=	78%
NSA/GFA=	95%

Aerial View of Plot 2-14 from South East

5.10 Typical Floor Plan for Plot 12 Apartment Block

1 BED 33%
2 BED 58%
3 BED 9%
BALCONY

West Block

5.11 Typical Floor Plan for Plot 12 Apartment Block

1 BED 36%
2 BED 57%
3 BED 7%
BALCONY

South Block

5.12 Typical Floor Plan for Plot 12 Apartment Block

1 BED 20%
2 BED 70%
3 BED 10%
BALCONY

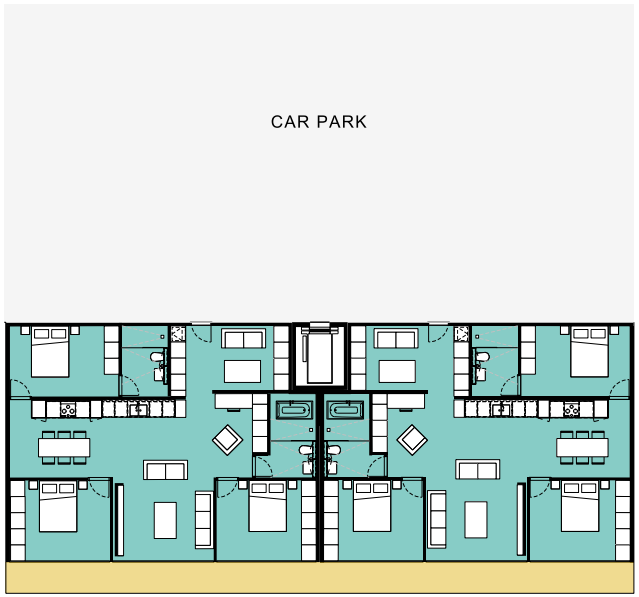
East Block

5.9 Typical Floor Plan for Plot 12 Apartment Block

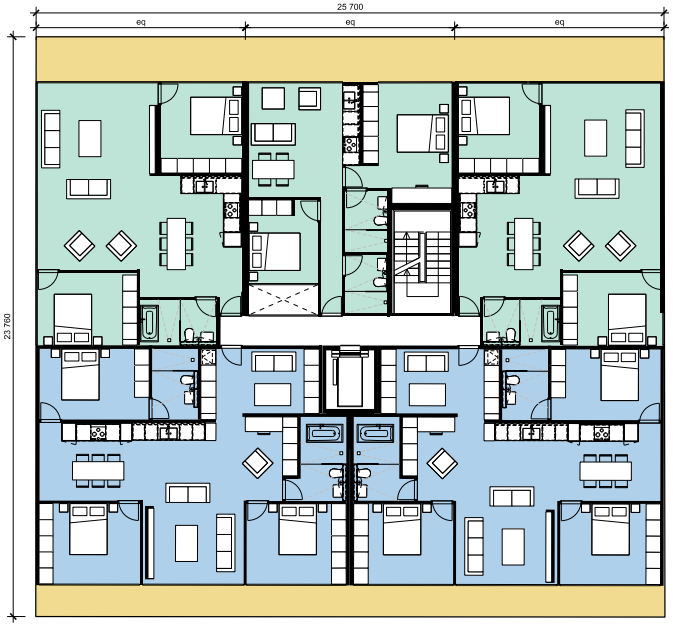
1 BED 17%
2 BED 75%
3 BED 8%
BALCONY

North Block

5.13 Typical Floor Plan for the Plot 14 Apartment Block



Basement



Typical Floor

Top Floor

1 BED
2 BED
3 BED
BALCONY

Level: Basement

GBA =	4,929 m²
GFA =	1,215 m²
Balconies =	163 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	1,208 m²
GFA/GBA=	25%
NSA/GFA=	99%

Level: Ground

GBA =	3,675 m²
GFA =	2,960 m²
Balconies =	388 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	2,705 m²
GFA/GBA=	81%
NSA/GFA=	91%

Level: 01

GBA =	3,675 m²
GFA =	2,186 m²
Balconies =	415 m²
NSA (Commercial) =	0 m²
NSA (Residential) =	2,060 m²
GFA/GBA=	59%
NSA/GFA=	94%

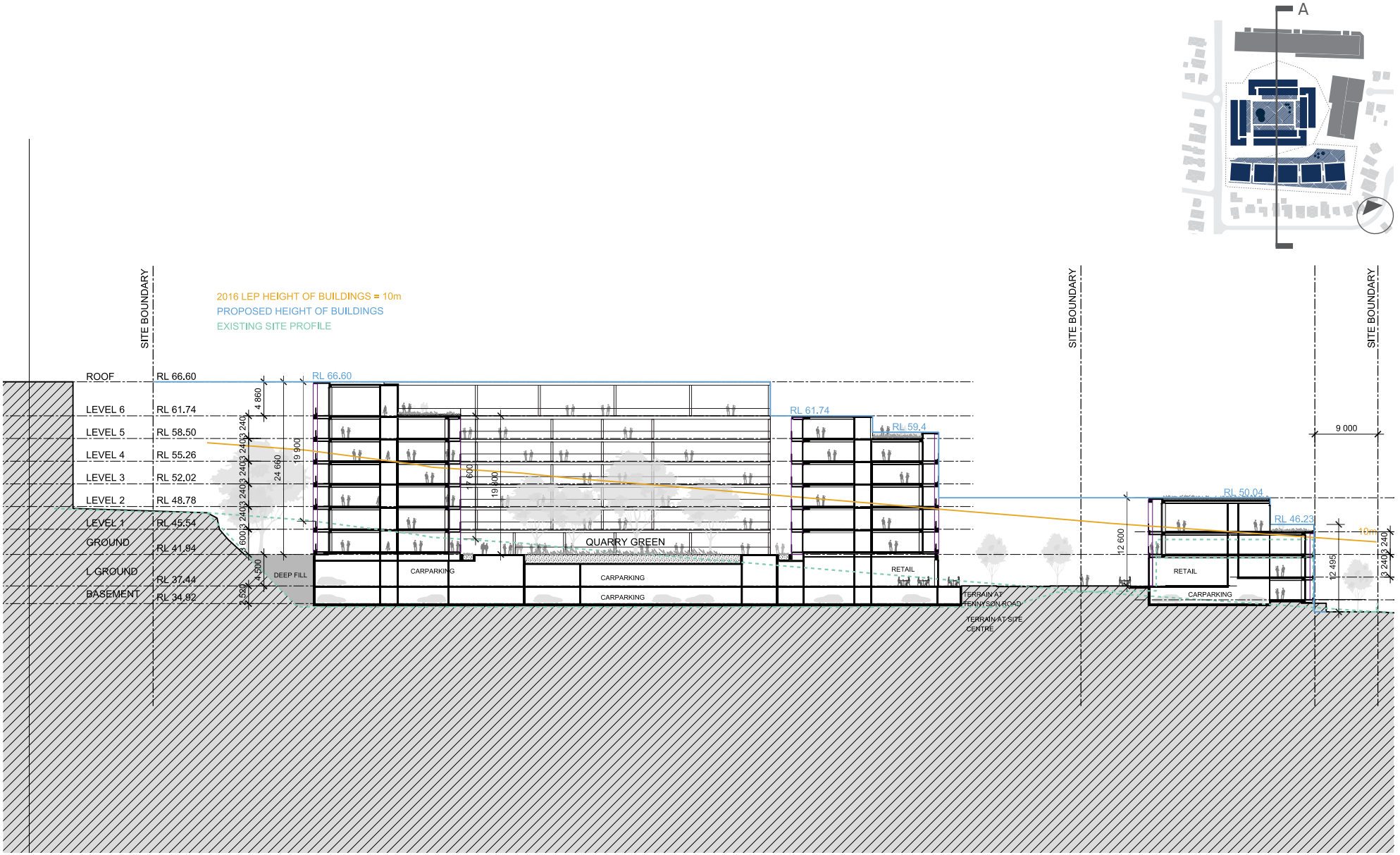
Typical Floor Plot 14 Apartment Block

Aerial View of Plot 2-14 from North

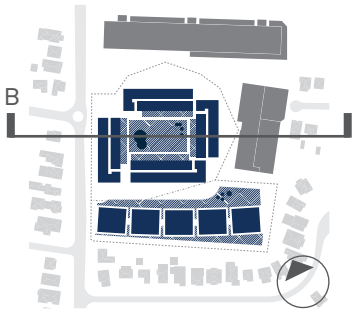
View on the Internal Courtyard Plot 2-12

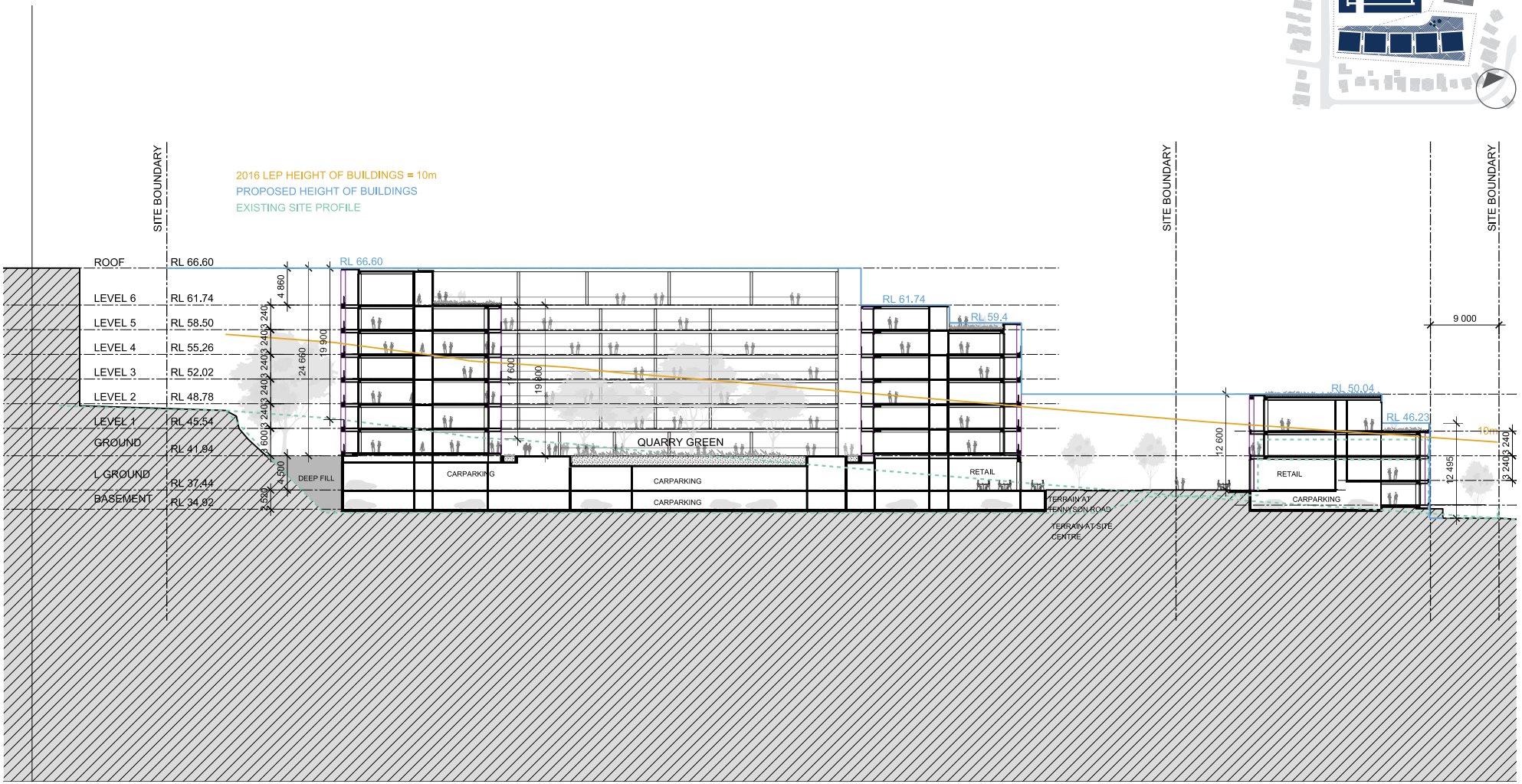
View on the Retail Avenue between Plot 2-12 and Plot 14

5.14 Section A



5.15 Section B





5.16 Elevations

South Elevation

North Elevation

East Elevation

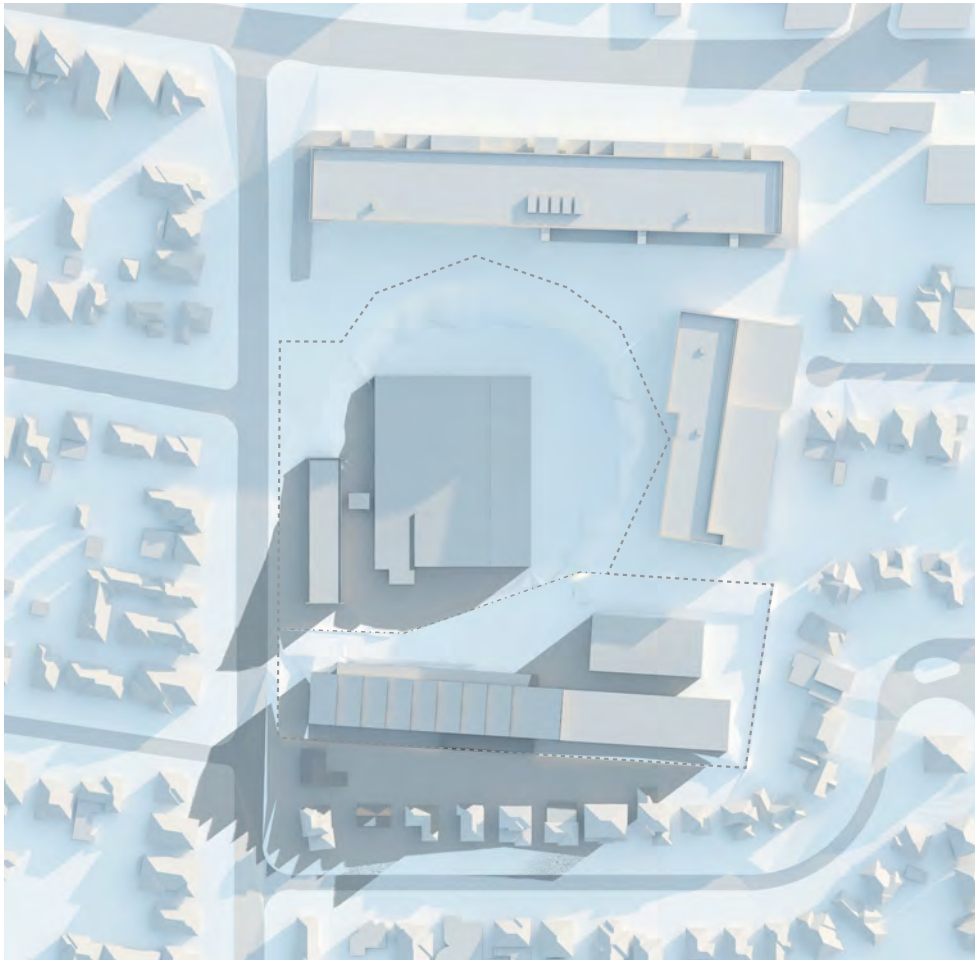
West Elevation

6.0 **Shadow Analysis**

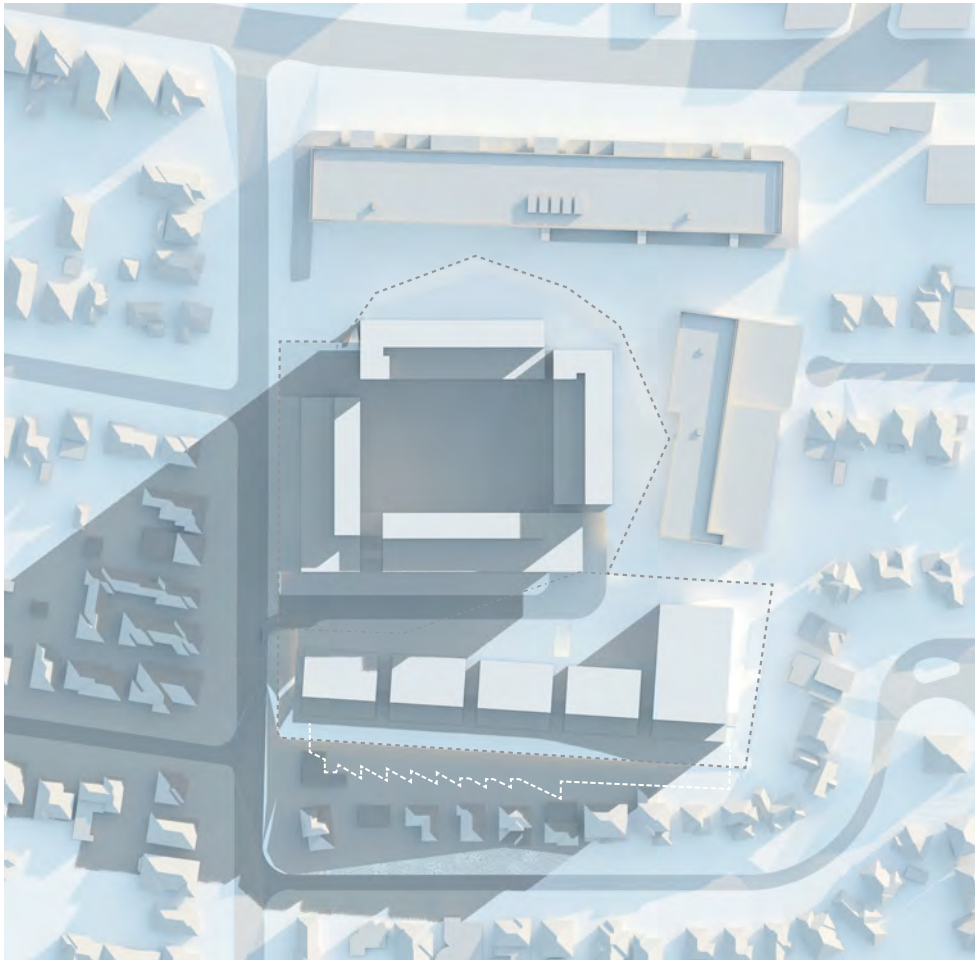
6.1 Solar Analysis

21st June, 8a.m.

Area of Overshadowing



Existing

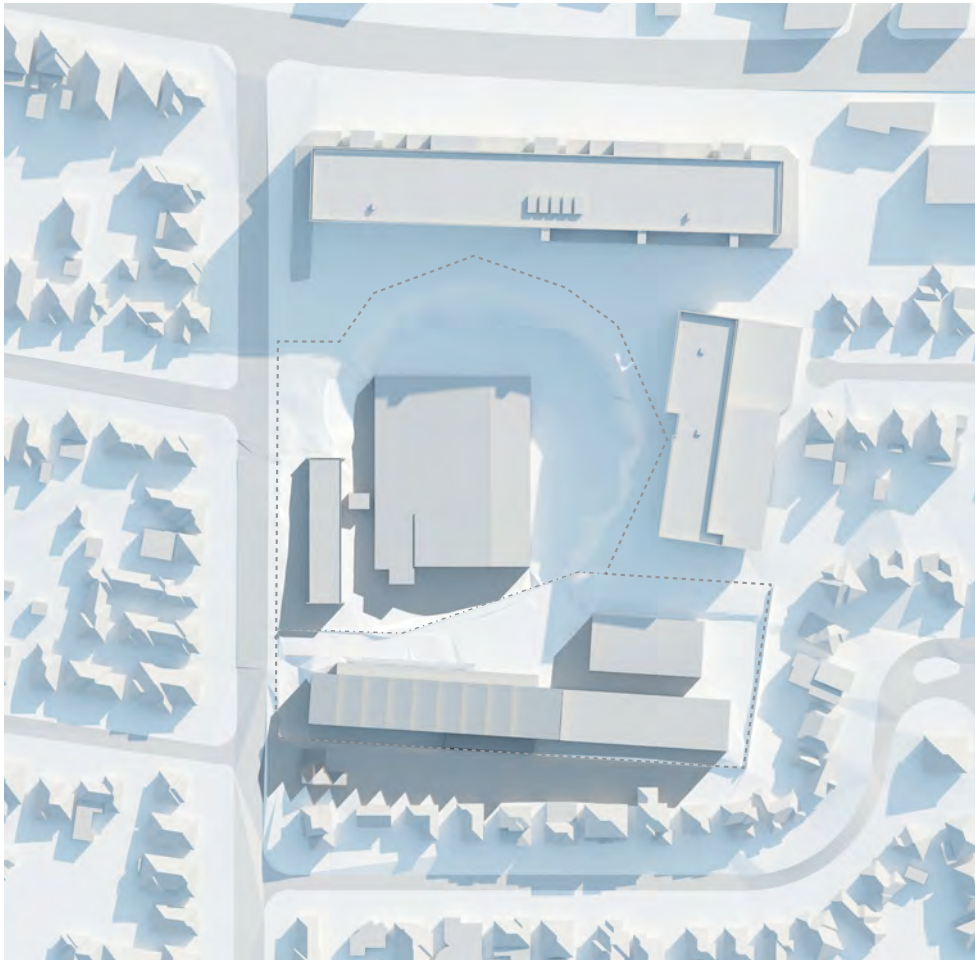


Proposed

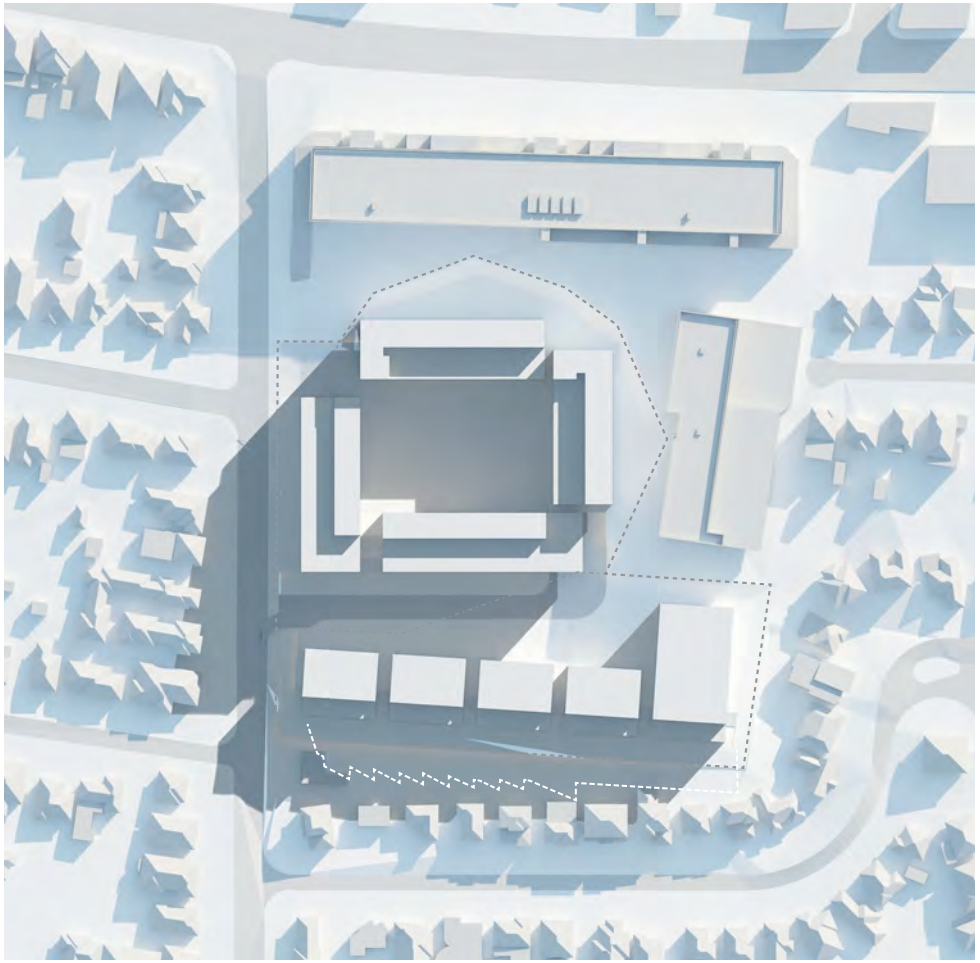
6.2 Solar Analysis

21st June, 9a.m.

Area of Overshadowing



Existing

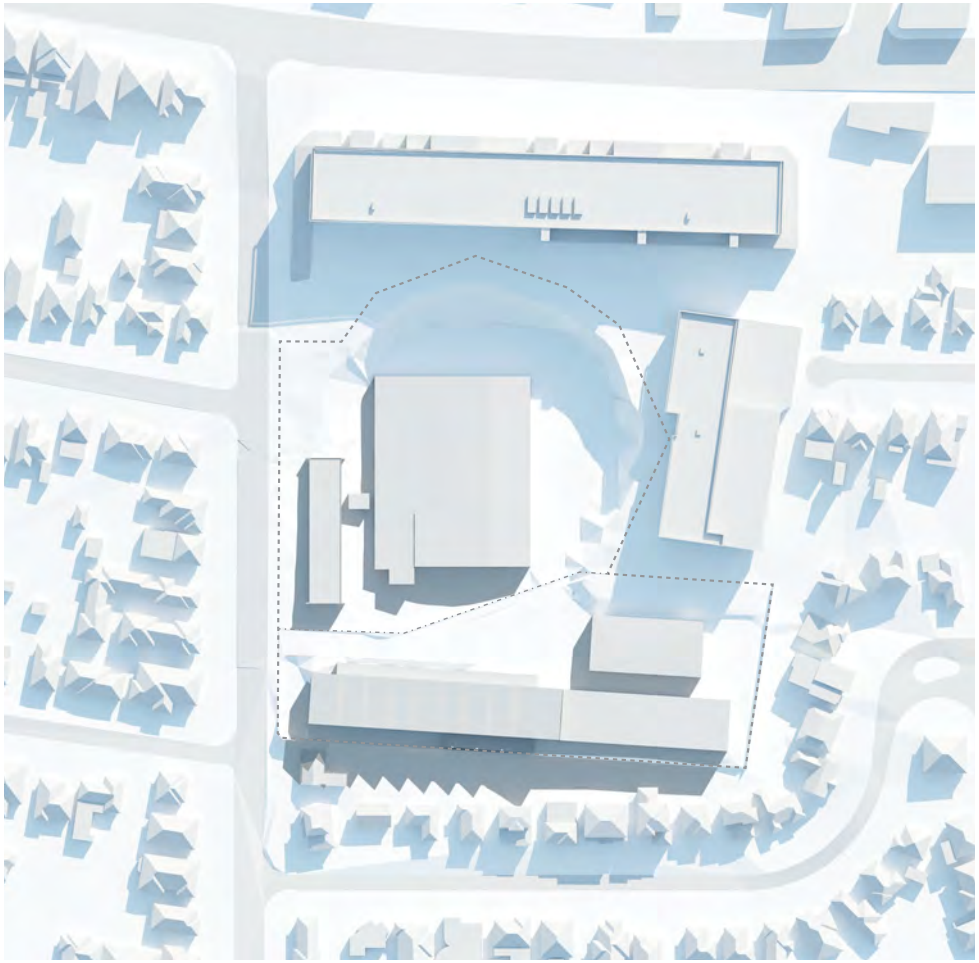


Proposed

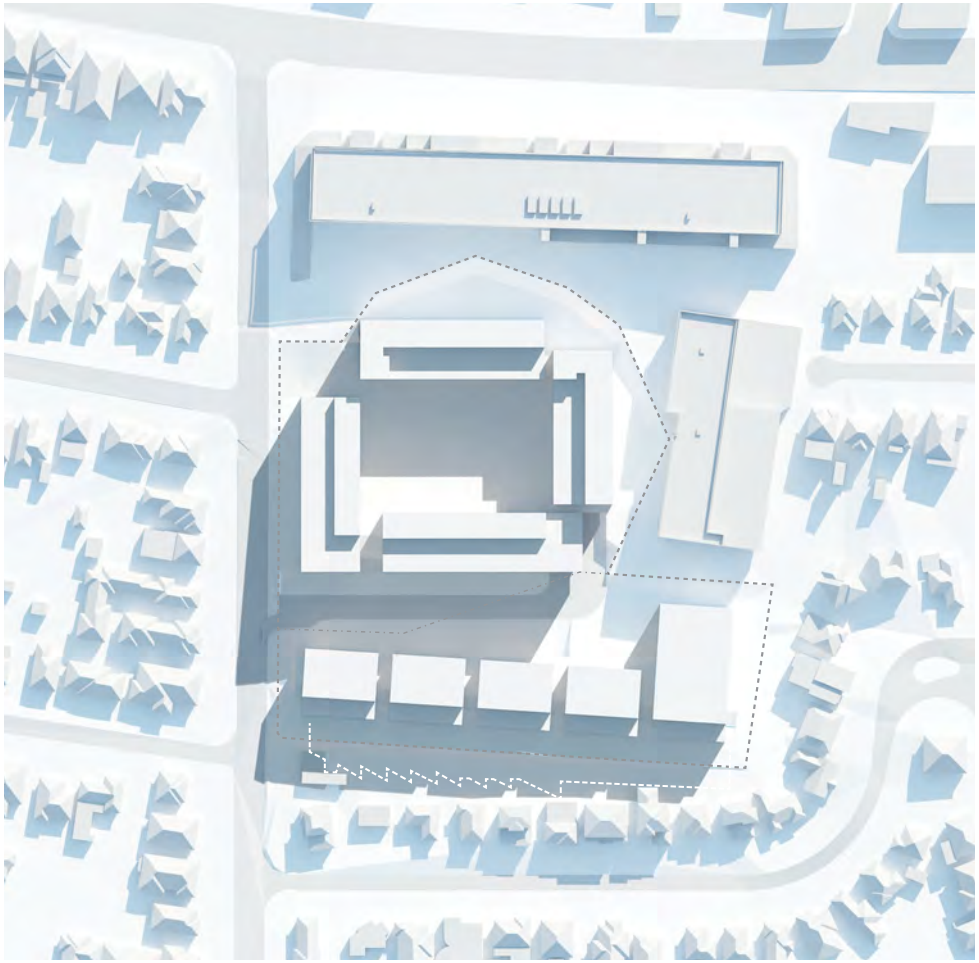
6.3 Solar Analysis

21st June, 10a.m.

Area of Overshadowing



Existing

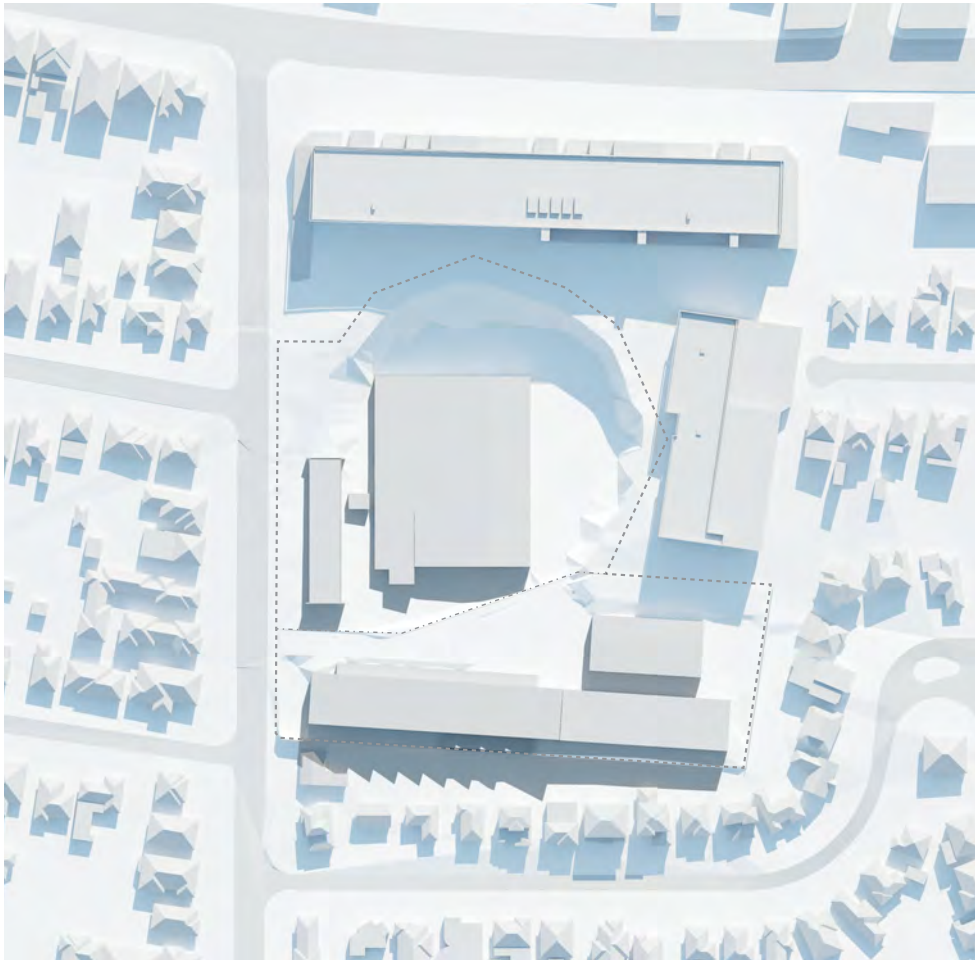


Proposed

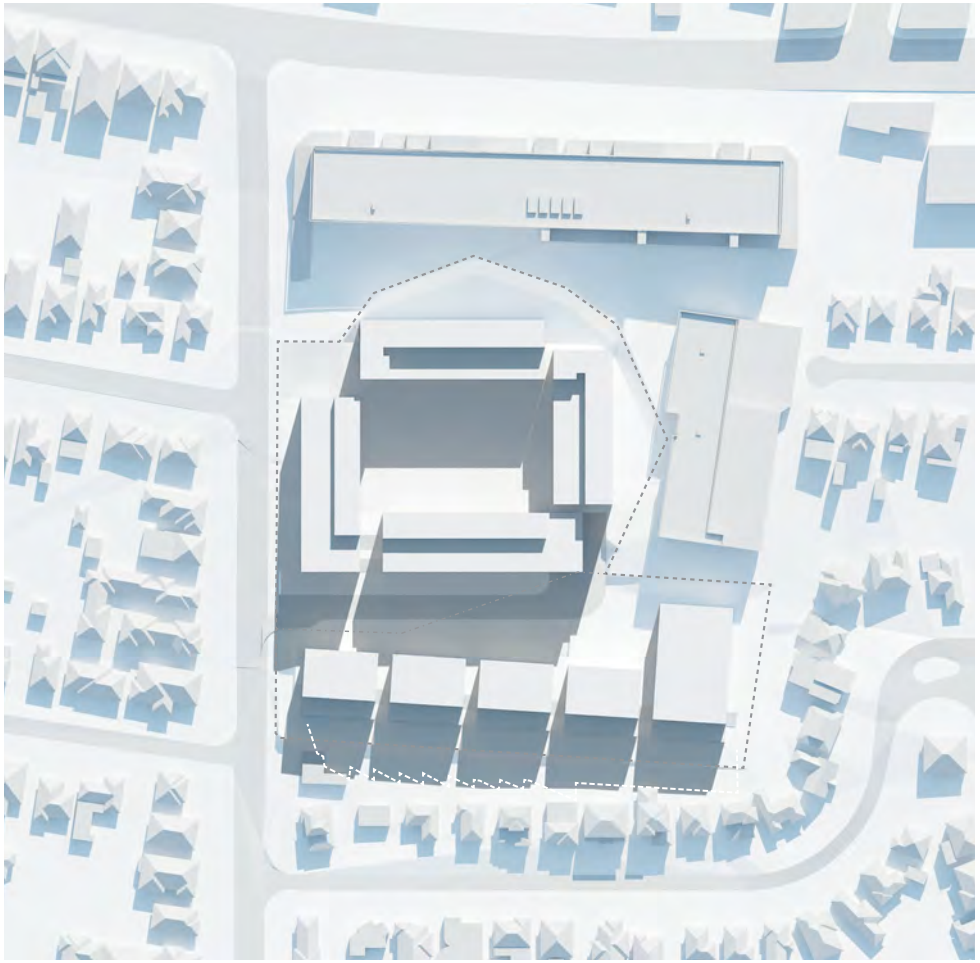
6.4 Solar Analysis

21st June, 11a.m.

Area of Overshadowing



Existing

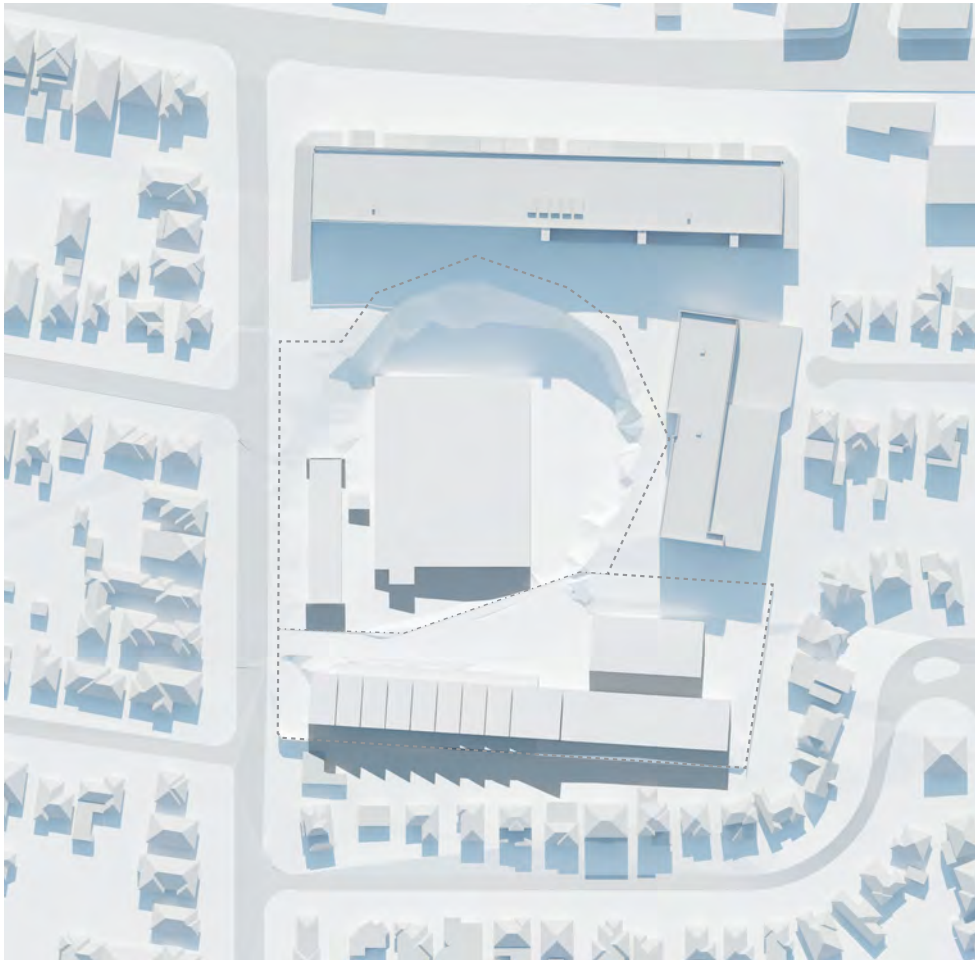


Proposed

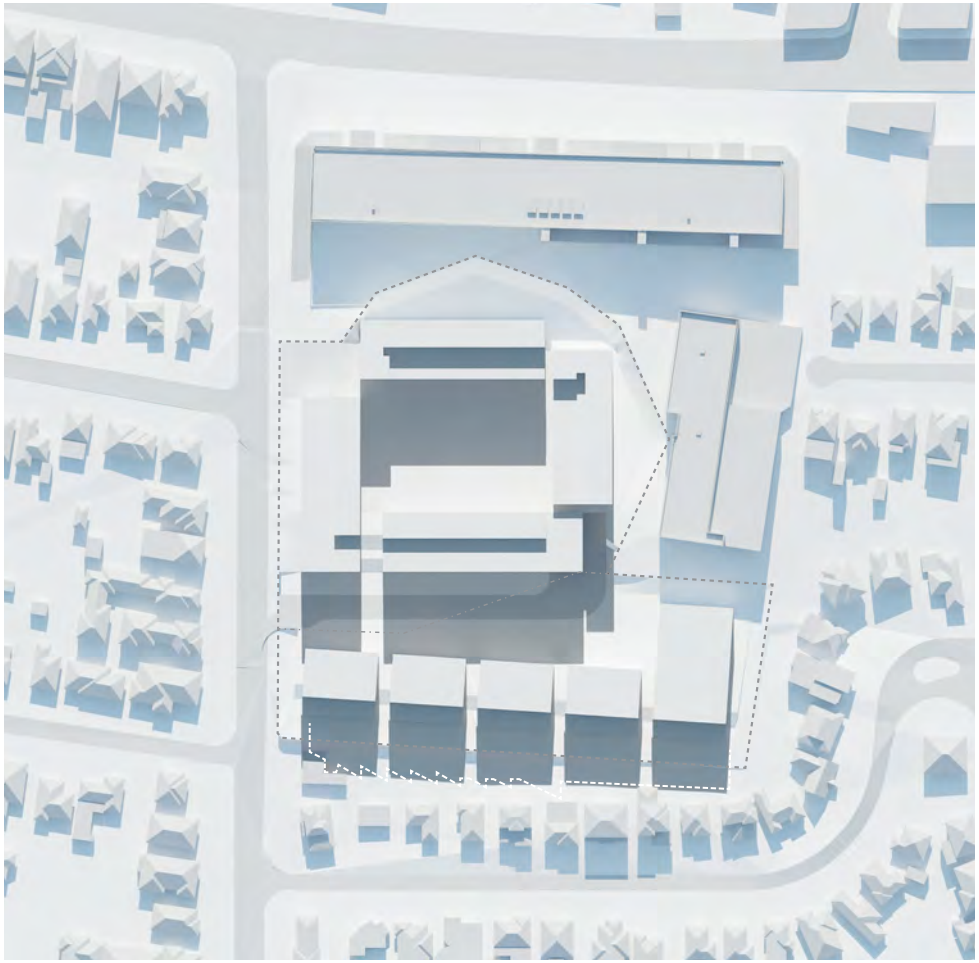
6.5 Solar Analysis

21st June, 12p.m.

Area of Overshadowing



Existing

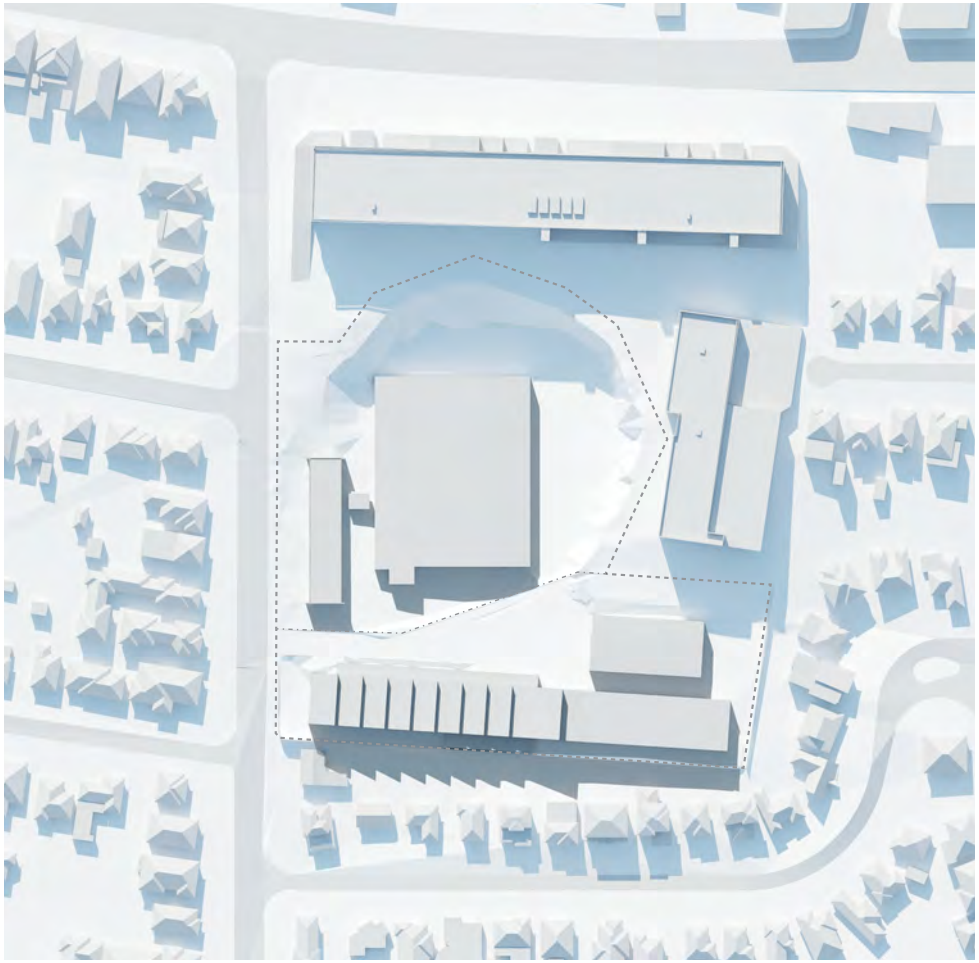


Proposed

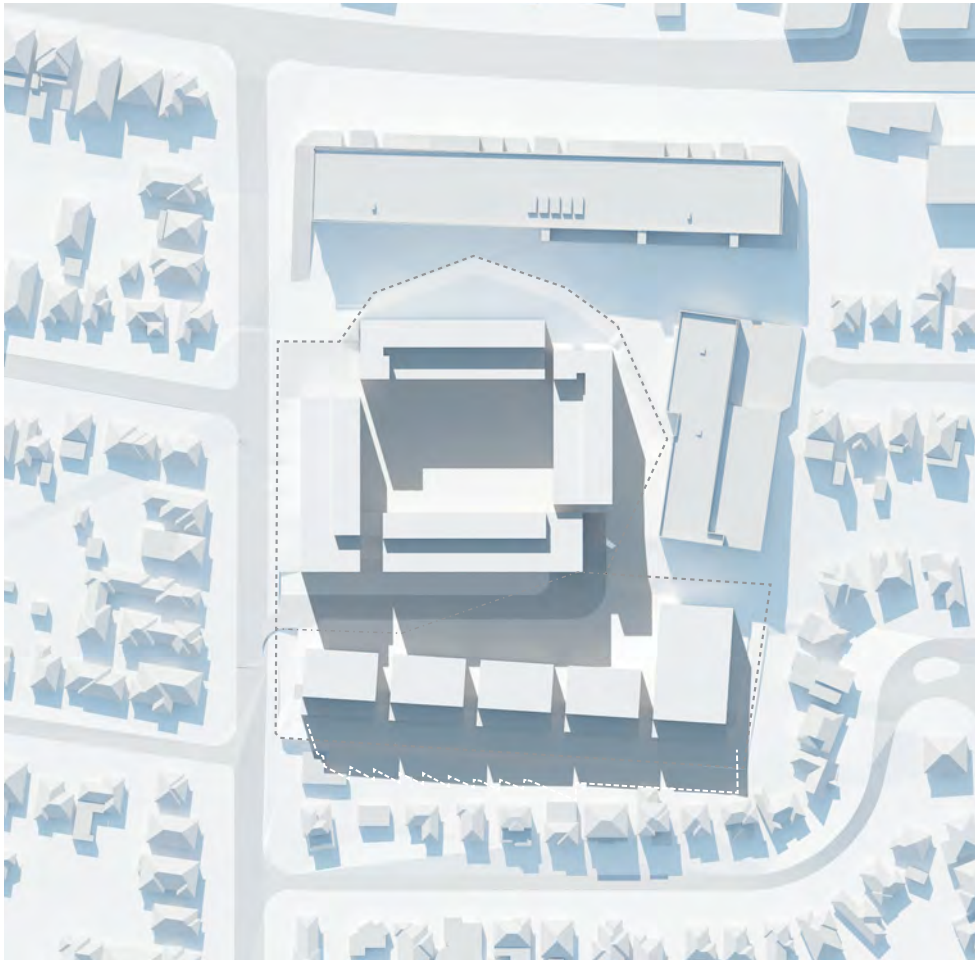
6.6 Solar Analysis

21st June, 1p.m.

Area of Overshadowing



Existing

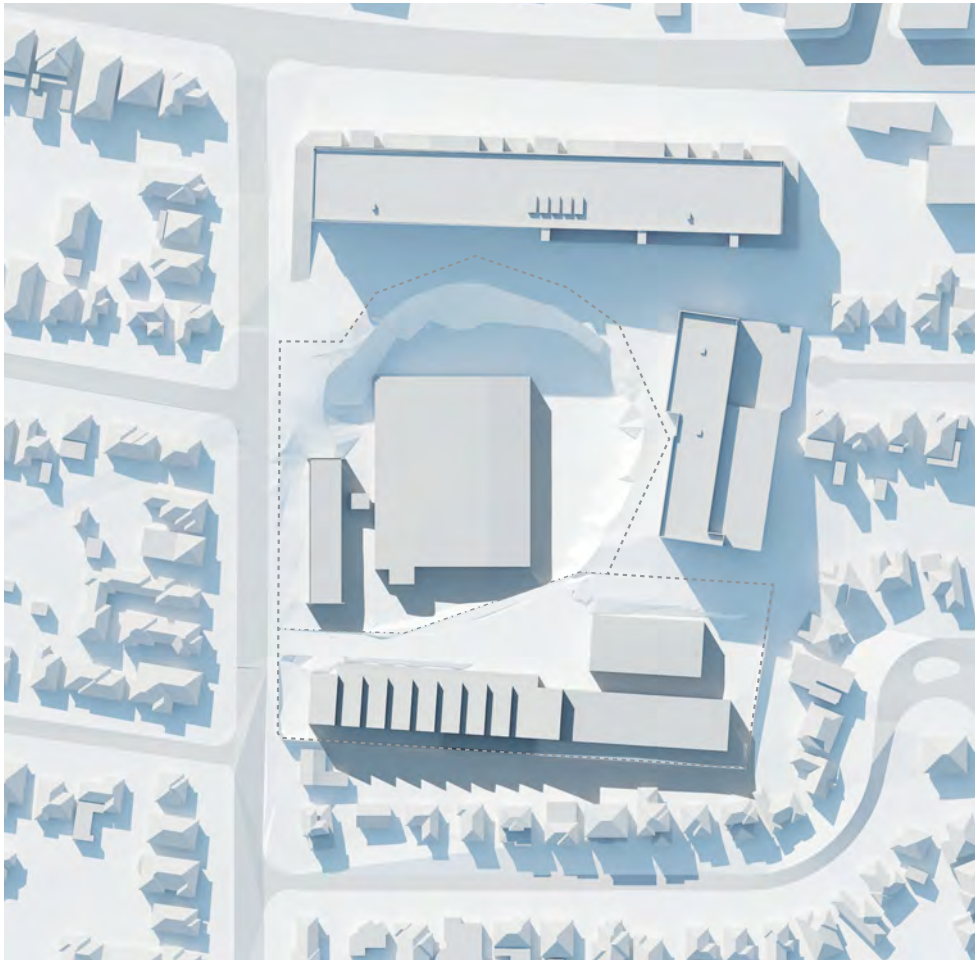


Proposed

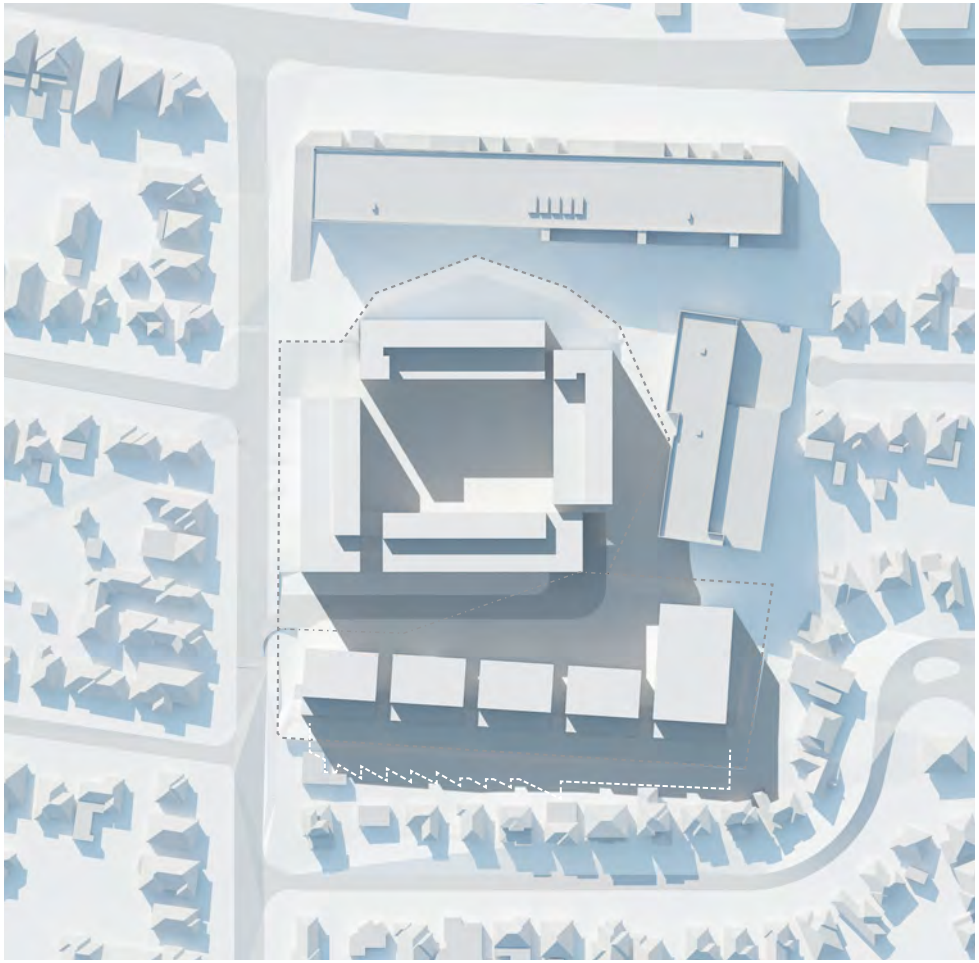
6.7 Solar Analysis

21st June, 2p.m.

Area of Overshadowing



Existing

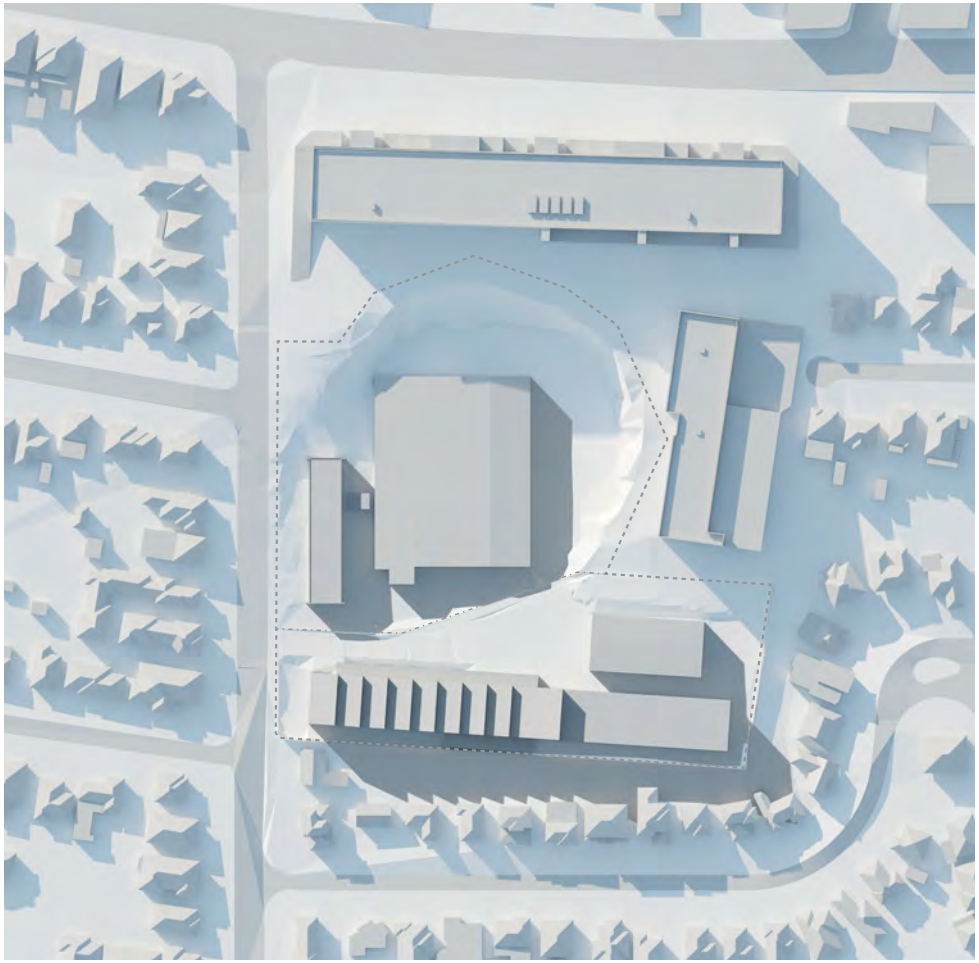


Proposed

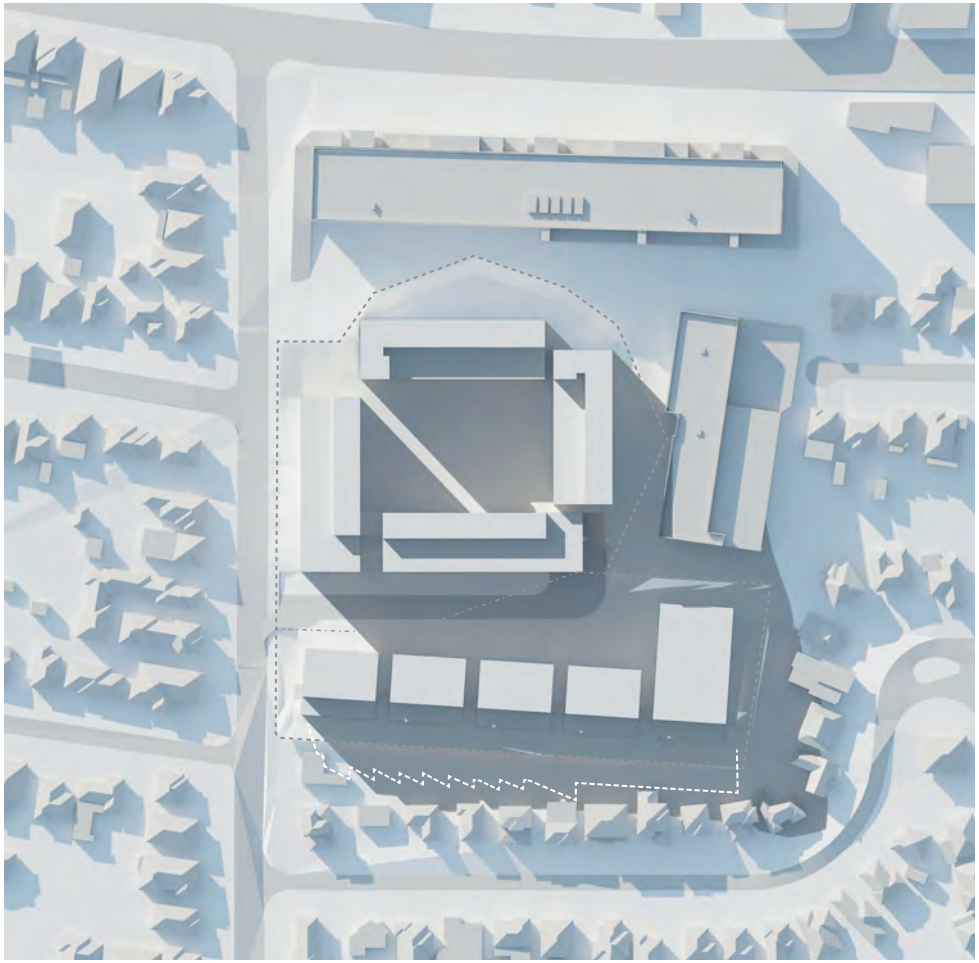
6.8 Solar Analysis

21st June, 3p.m.

Area of Overshadowing



Existing

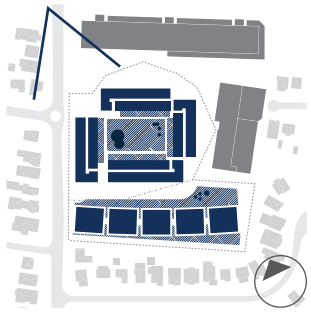


Proposed

7.0 **District Precinct Views**

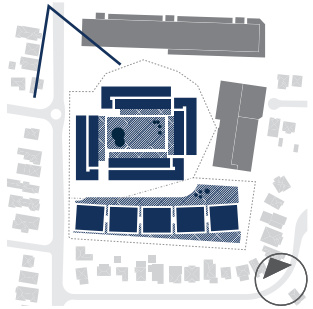
7.1 District View from North

Existing Context _ Looking Down Tennyson Road



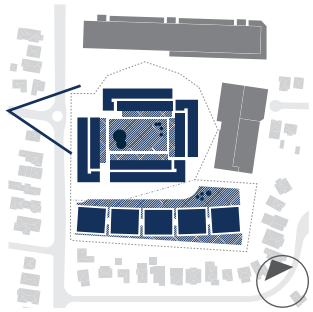
District View from North

Current Proposition _ Looking Down Tennyson Road



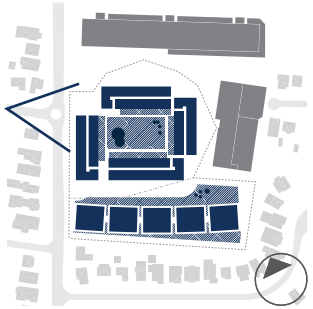
7.2 District View from West

Existing Context _ Looking at Main Entry to Site



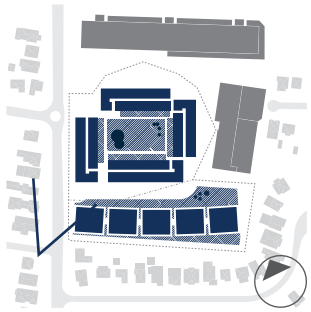
District View from West

Current Proposition _ Looking at Main Entry to Site



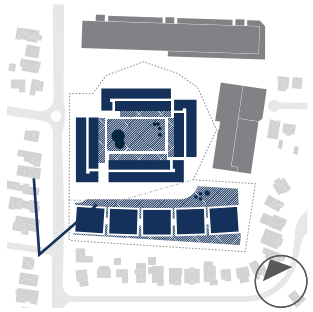
7.3 District View from Pott Street

Existing Context _ To South West looking up Tennyson Road



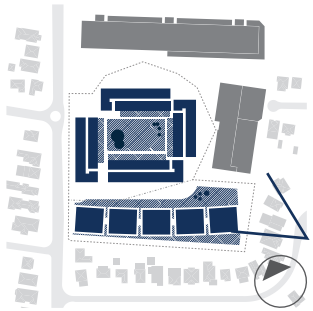
District View from Pott Street

Current Proposition _ To South West looking up Tennyson Road



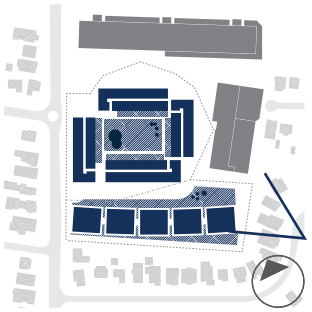
7.4 District View from South East

Existing Context



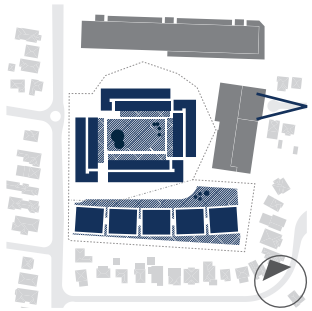
District View from South East

Current Proposition



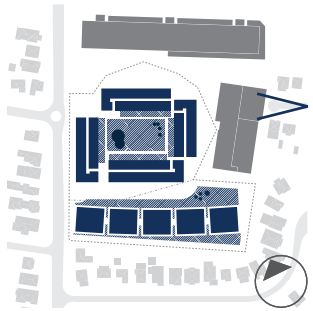
7.5 District View from East

Existing Context



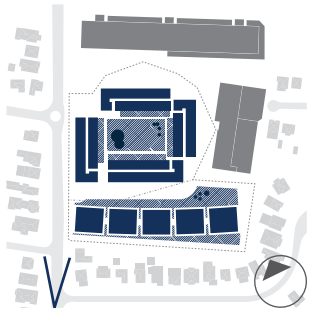
District View from East

Current Proposition



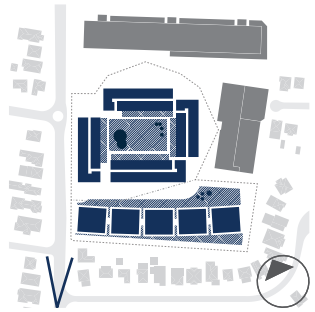
7.6 District View from South

Existing Context _ Looking up Tennyson Road



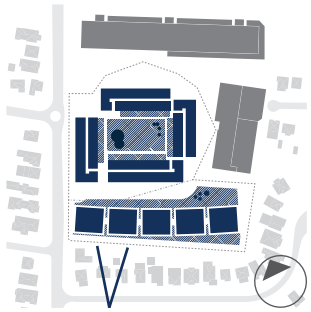
District View from South

Current Proposition _ Looking up Tennyson Road



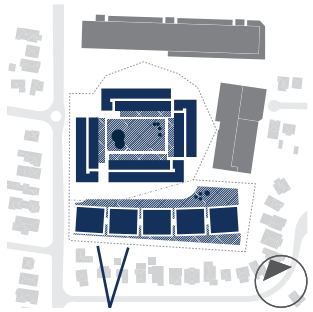
District View from South

Existing Context



District View from South

Current Proposition



8.0 **Planning Controls and Yields**

8.1 Planning Controls

Amendments to the LEP

This planning proposal makes recommendation for three key changes to the Ryde Local Environmental Plan 2014 (updated 2015). For details refer to Mecone planning report.

Landuse:

This planning proposal recommends a change in land use from Light Industrial (IN2) zoning to Mixed Use (B1) zoning.

Floor Space Ratio's:

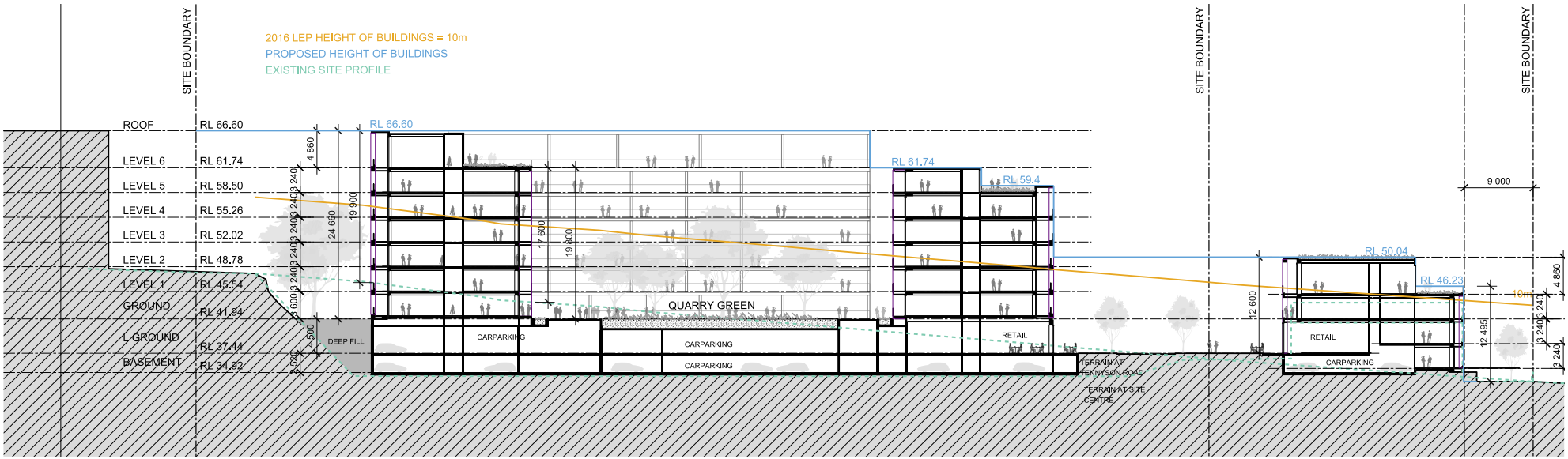
This planning proposal recommends change in the Floor Space Ratio (FSR) for Plot 2-12 to 1.85:1, for Plot 14 to 1.0:1 and therefore across the site to 1.5:1.

Building Heights:

The proposed building heights recommended in this planning proposal is split across the site into V, U4, U2, R1, M2, O1 and P.

Ground Line:

The existing ground line follows the excavation of the quarry, however for the purposes of the building heights measurement an assumed natural ground line has been used. This ground line follows the level of the adjacent street of Tennyson Road as the nearest estimate to the natural ground line.



Site Section denoting proposed and existing building Heights

Zone:

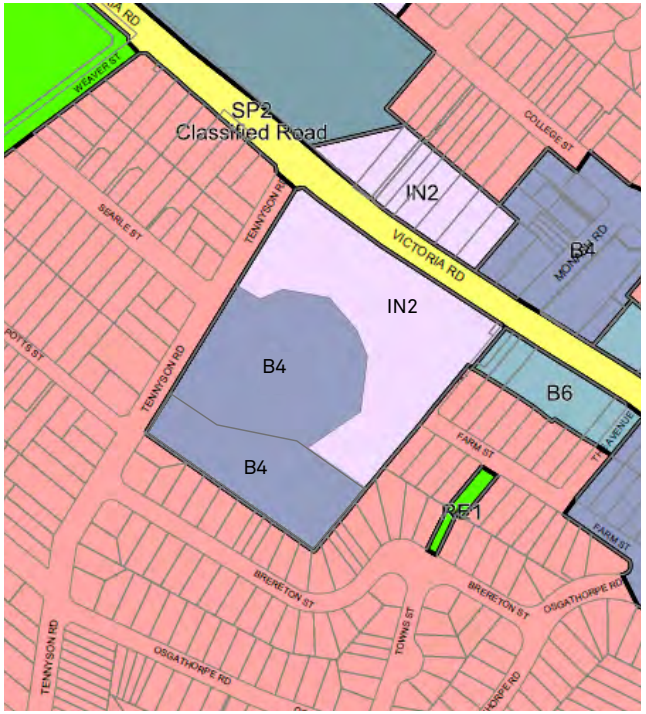
IN2	Light Industrial
B4	Mixed Use
B6	Enterprise Corridor
R2	Enterprise Corridor
R3	Medium Density Residential
RE1	Public Recreation

Max. Floor Space Ratio (n:1)

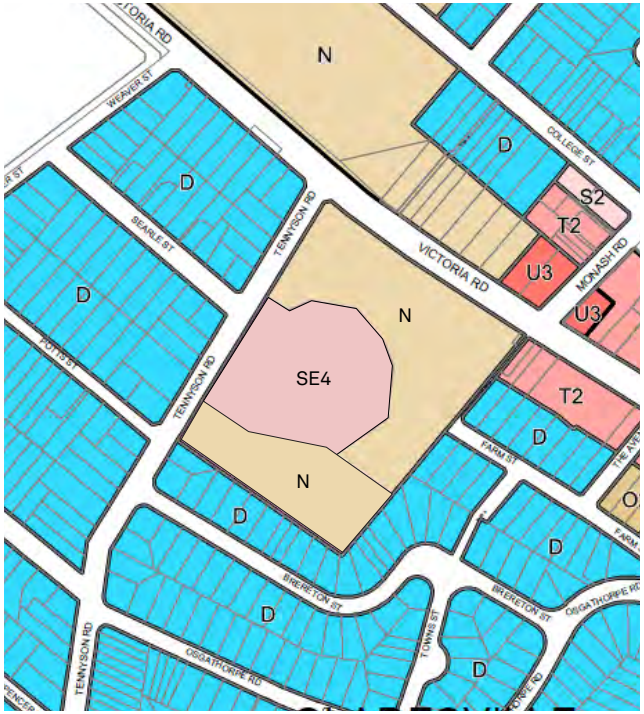
D	.50
N	1.00
02	1.15
S2	1.70
SE4	1.85
T2	2.30
U3	2.70
V1	3.00

Max. Building Heights (RL)

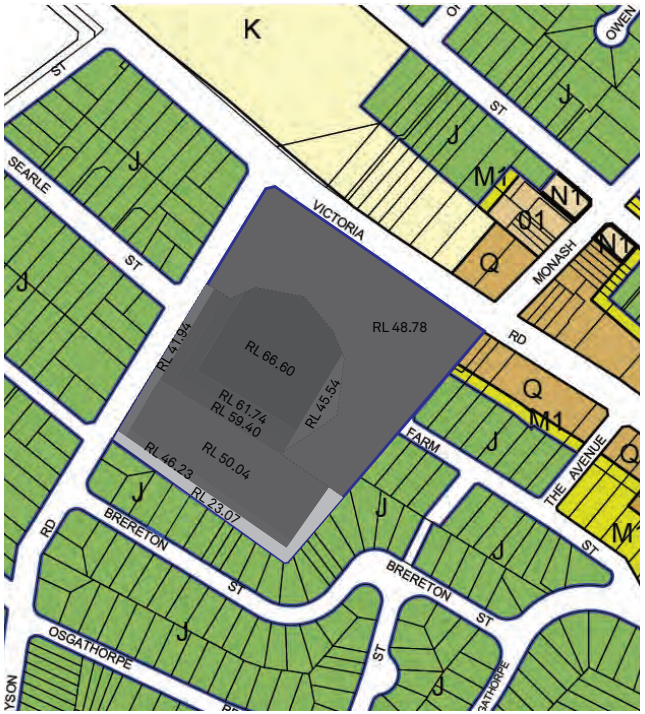
7	37.4	50.0	105
14.6	39	52	
18	42	59.4	
23.1	45.5	61.7	
24	46.2	63	
25	47.8	66.6	
33	48.8	91	



Proposed Land Use



Proposed Floor Space Ratio (FSR)



Proposed Building Heights

8.2 Building Yields

Optimising the building yields

This planning proposal presents two building yield summaries as defined below.

The Comparator Scheme was originally submitted as a planning proposal to the City of Ryde in 2014, and reviewed as part of a Pre- Gateway review on 11th September 2014.

The Recommended Scheme responds to the review and recommendations of the Joint Regional Planning Panel - Planning Assessment Commission (JRPP) and as such has been amended to include the following:

1. A maximum FSR of 1.51:1 across the whole site,
2. A reduced maximum building height consistent with 5-6 storeys and 2-3 storeys adjoining low density residential areas.
3. A reduced retail offering, and a minimum 20% of the total floor space being allocated to employment generated uses.

	Plot 2-12 Tennyson Road		**Plot 14 Tennyson Road**		**Site Wide Total:**	
Proposed Scheme	Floor Space Ratio (FSR)	Number of Units	Floor Space Ratio (FSR)	Number of Units	Floor Space Ratio (FSR)	Number of Units
The Revised Scheme (JRPP)	1.85:1	288	1.0: 1	95	1.5:1	383
The Comparator Scheme	1.6:1	242	1.0:1	76	**1.4:1**	318

Options Summary Table

8.3 Building Yields

Comparator Scheme (2014)

PLOT 2-12 COMPARATOR SCHEME

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)
Basement	RL 34.92	2.52	-7.02	Basement Carpark	9,419.0	-
Lower Ground	RL 37.44	4.5	-4.50	Retail / Carpark	9,419.0	1,200.0
Sub Totals					18,838.0	1,200.0
Ground	RL 41.94	3.6		Residential	5,073.0	4,437.0
L01	RL 45.54	3.24	3.60	Residential	5,209.0	4,524.0
L02	RL 48.78	3.24	6.84	Residential	5,209.0	4,524.0
L03	RL 52.02	3.24	10.08	Residential	5,209.0	4,524.0
L04	RL 55.26	3.24	13.32	Residential	3,825.0	3,023.0
L05	RL 58.5	3.24	16.56	Residential	2,473.0	1,120.0
ROOF	RL 61.74	4.86	19.80			
Sub Totals					26,998.0	22,152.0
Mix						
Overall Totals					**45,836**	**23,352**

SITE AREA	**14478**	**FSR**	**1.6**
OPEN SPACE	9,405.0	**RATIO**	**65%**

PLOT 14

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)
Basement	RL 34.74	3.6	-7.20	Residential	4,004.0	1,215.0
Lower Ground	RL 38.34	3.6	-3.60	Residential	3,433.0	2,950.0
Ground	RL 41.94	3.24		Residential	3,433.0	2,950.0
L01	RL 45.18	4.86	3.24	Residential	3,433.0	2,200.0
Sub Totals					10,299.0	9,315.0
Mix						
Overall Totals					**10,299**	**9,315**

SITE AREA	**9321**	**FSR**	**1.0**
OPEN SPACE	5,888.0	**RATIO**	**63%**
		AGGREGATE FSR	**1.4**

8.3 Building Yields

Recommended Scheme

PLOT 2-12

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)	NSA - RESIDENTIAL	NSA - COMMERCIAL	Efficiency (NSA/GFA)	GFA/GBA	Carparks	1BR	2BR	3BR	TOTAL
Basement	RL 34.92	2.52	-7.02	Basement Carpark	9,121.0	-		-			323				
Lower Ground	RL 37.44	4.5	-4.50	Retail / Carpark	8,864.0	1,002.0		950.0	95%		256				
Sub Totals					17,985.0	1,002.0		950.0	95%						
Ground	RL 41.94	3.6		Residential/Community	5,204.3	4,116.3	3,472.8		84%	79%		17	26	3	46
L01	RL 45.54	3.24	3.60	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L02	RL 48.78	3.24	6.84	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L03	RL 52.02	3.24	10.08	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L04	RL 55.26	3.24	13.32	Residential	5,325.9	4,386.7	3,782.0		86%	82%		13	31	4	48
L05	RL 58.5	3.24	16.56	Residential	3,578.3	2,922.3	2,583.4		88%	82%		15	17	3	35
L06	RL 61.74	4.86	19.80	Residential	1,471.4	1,152.5	1,095.9		95%	78%		6	9	0	15
ROOF	RL 66.6														
Sub Totals					31,557.6	25,737.9	22,280.1	**950.0**				87	181	20	**288**
Mix												30%	63%	7%	**RESIDENTIAL**
Overall Totals					**49,543**	**26,740**	**NSA Total**	**23,230**	**87%**		**579**	87	181	20	**288**

SITE AREA	**14478**	**FSR**	**1.85**
OPEN SPACE	9,273.7	**RATIO**	**64%**

Council Multiple	1	1.2	1.6
CAR SPACES	87	217.2	32

22368 TOTAL REQ. 336

TOTAL **579**

PLOT 14

Level	FFL RL	F-F (m)	Height	Use	GBA (m2)	GFA (m2)	NSA - RESIDENTIAL	NSA - COMMERCIAL	Efficiency (NSA/GFA)		Carparks	1BR	2BR	3BR	TOTAL
Lower Ground/Basement	RL 34.74	3.6	-7.20	Residential	4,929.0	1,215.0	1,208.0		99%		144			10	10
Ground	RL 38.34	3.6	-3.60	Residential	3,672.0	2,960.0	1,974.3	834.0	95%			8	7	8	23
L01	RL 41.94	3.24	0.00	Residential	3,675.0	2,960.0	2,705.4		91%			8	16	8	32
L02	RL 45.18	4.86	3.24	Residential	3,675.0	2,186.0	2,060.0		94%			12	18		30
Sub Totals					11,022.0	9,321.0	7,947.7	**834.0**				28	41	26	**95**
Mix												29.47%	43.16%	27.37%	**RESIDENTIAL**
Overall Totals					**11,022**	**9,321**	**NSA Total**	**8,782**	**94%**		**144**	28	41	26	**95**

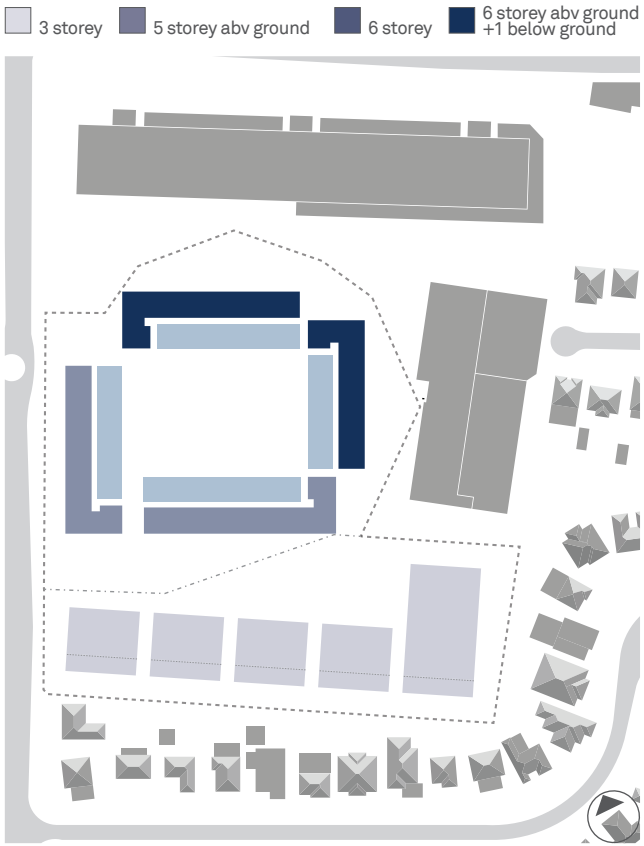
SITE AREA	**9321**	**FSR**	**1.0**

Council Multiple	1.5	1.2	1.6
CAR SPACES	42	49.2	41.6

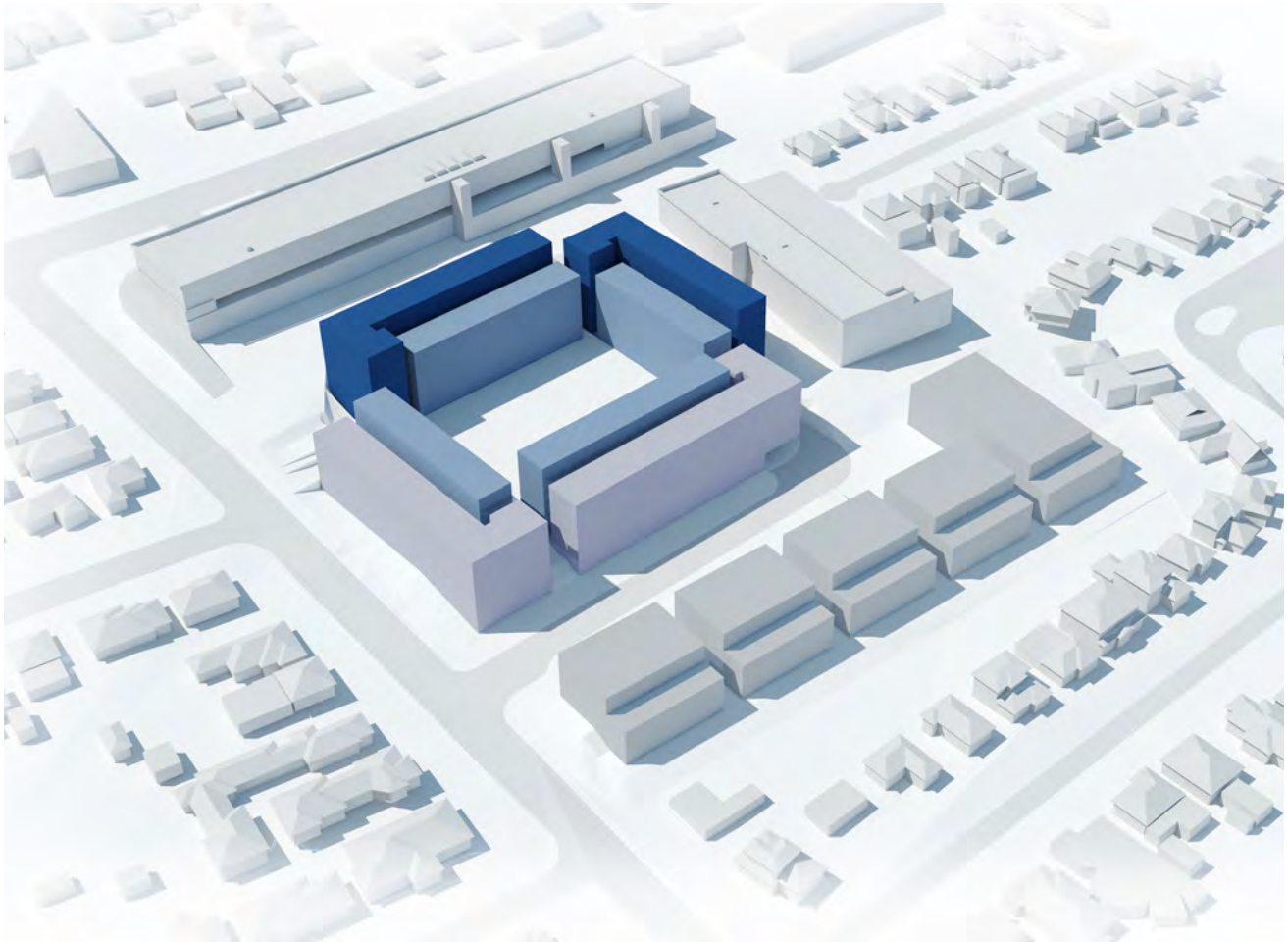
8.4 Building Yields

Recommended Scheme - Massing Study

With an aggregated FSR of 1.5, the recommended scheme offers an optimum balance of heights and ground coverage.



Quarry Site, Building Height



Quarry Site, Building Height Massing

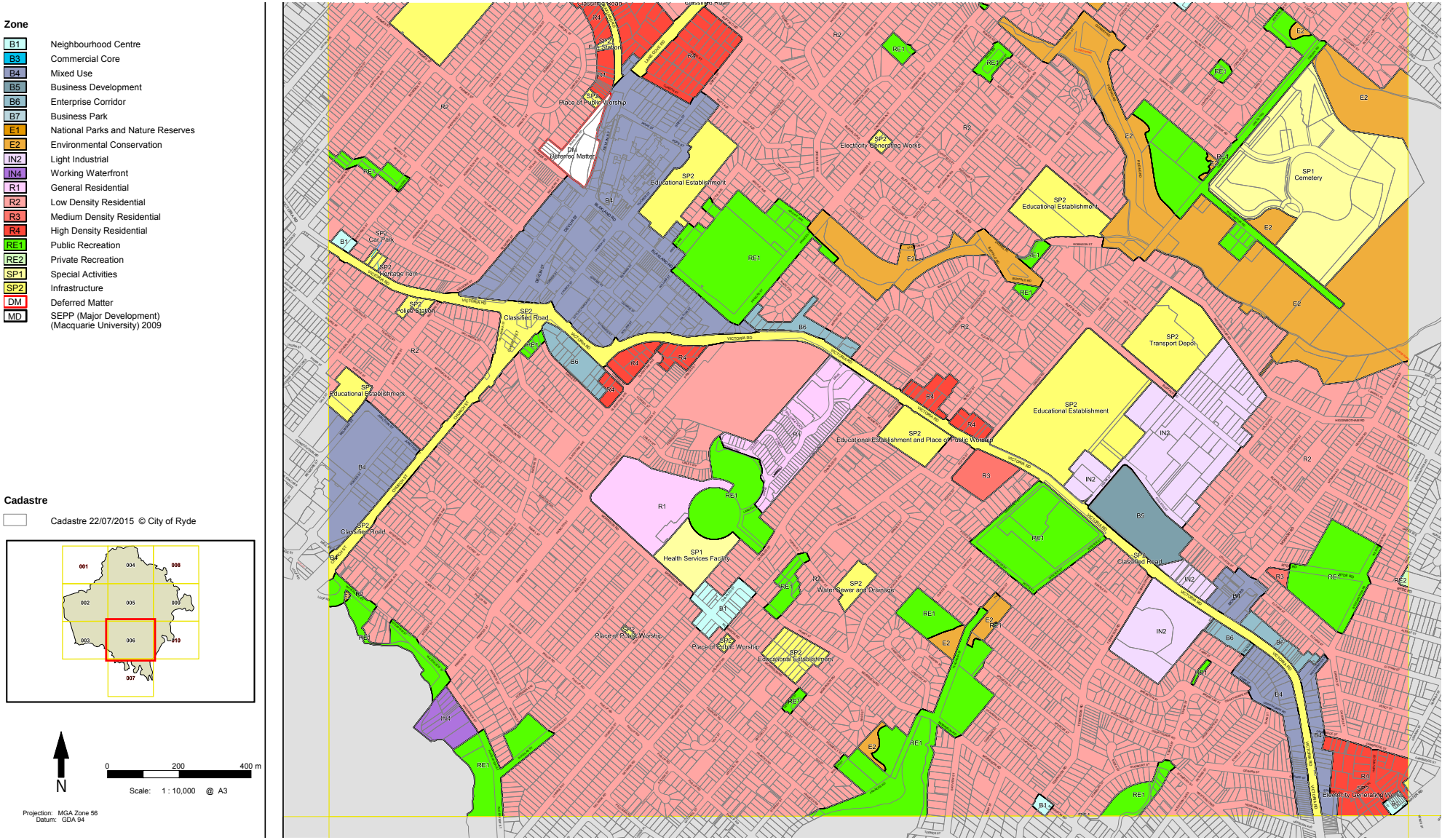
APPENDIX

A1. Ryde Local Environmental Plan

Height of Buildings Map

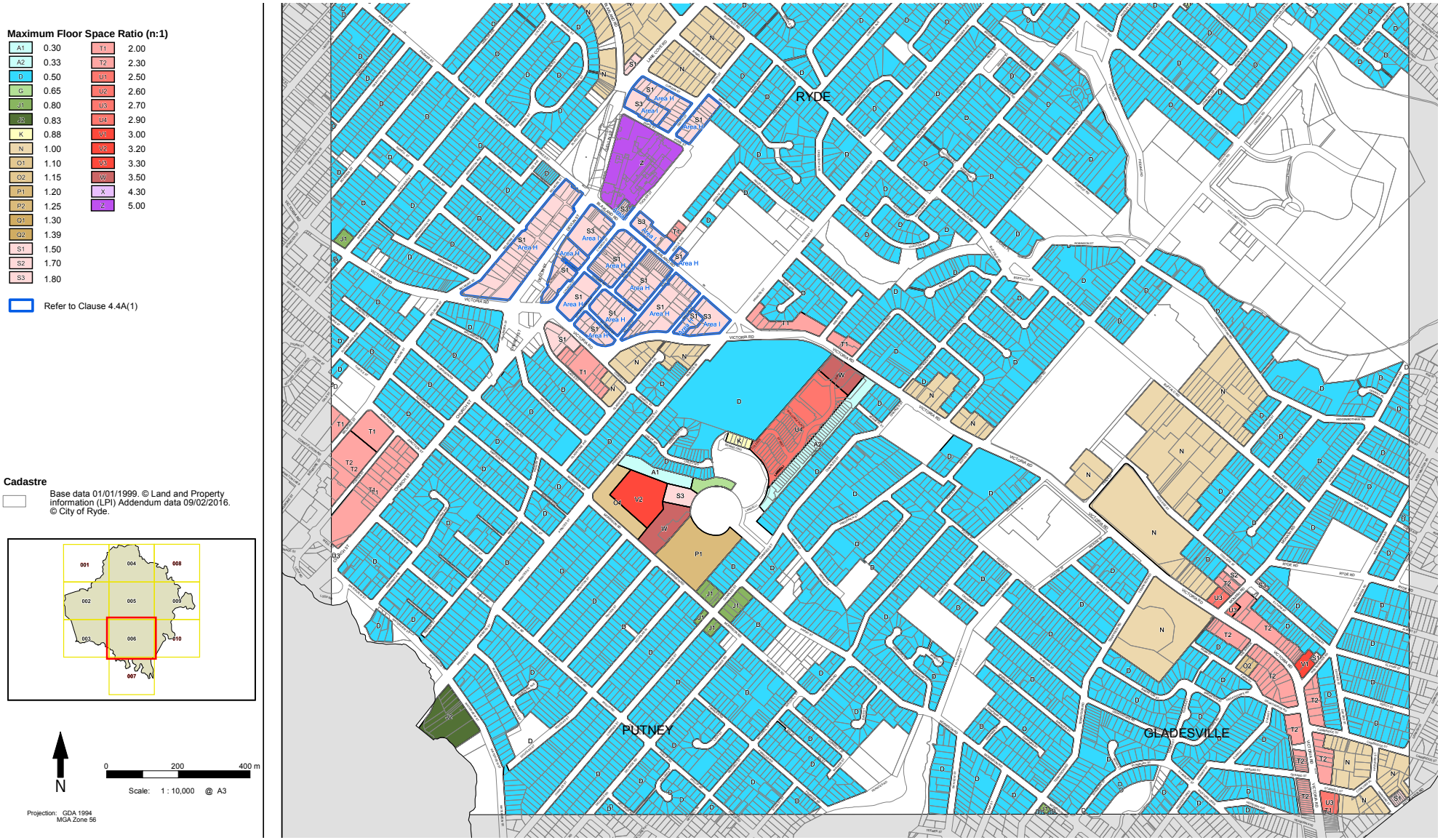
A2. Ryde Local Environmental Plan

Land Zoning Map



A3. Ryde Local Environmental Plan

Floor Space Ratio Map



A4. Apartment Schedule for Plot 2-12

PLOT 2-12 - APARTMENT SCHEDULE

	1 Bed [No.]	1 Bed [m²]	Balcony [m²]	2 Bed [No.]	2 Bed [m²]	Balcony [m²]	2 Bed cnr A [No.]	2 Bed cnr A [m²]	Balcony [m²]	2 Bed cnr B [No.]	2 Bed cnr B [m²]	Balcony [m²]	2 Bed cnr C [No.]	2 Bed cnr C [m²]	Balcony [m²]	2 Bed cnr D [No.]	2 Bed cnr D [m²]	Balcony [m²]
		52.2	7.7		80.5	10.5		86.6	6.1		99.5	6.5		84.5	6.1		84.6	6.3
Lower Ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ground Floor	17	887.4	130.9	12	966	126	3	259.8	18.3	4	398	26	3	253.5	18.3	4	338.4	25.2
Level 01	13	678.6	100.1	18	1449	189	3	259.8	18.3	4	398	26	4	338	24.4	2	169.2	12.6
Level 02	13	678.6	100.1	18	1449	189	3	259.8	18.3	4	398	26	4	338	24.4	2	169.2	12.6
Level 03	13	678.6	100.1	18	1449	189	3	259.8	18.3	4	398	26	4	338	24.4	2	169.2	12.6
Level 04	13	678.6	100.1	18	1449	189	3	259.8	18.3	4	398	26	4	338	24.4	2	169.2	12.6
Level 05	15	783	115.5	9	724.5	94.5	2	173.2	12.2	2	199	13	2	169	12.2	2	169.2	12.6
Level 06	6	313.2	46.2	3	241.5	31.5	2	173.2	12.2	2	199	13	2	169	12.2	0	0	0

	3 Bed [No.]	3 Bed [m²]	Balcony [m²]	3 Bed cnr A [No.]	3 Bed cnr A [m²]	Balcony [m²]	3 Bed cnr D [No.]	3 Bed cnr D [m²]	Balcony [m²]	No. Apartments	NSA Apartments	NSA Balcony	Efficiency	GFA
		122.7	15.2		123.9	15.4		121.4	15.4					
Lower Ground	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ground Floor	3	368.1	45.6	0	0	0	0	0	0	46	3471.2	390.3	84%	4116
Level 01	1	122.7	15.2	1	123.9	15.4	2	242.8	30.8	48	3782	431.8	86%	4385
Level 02	1	122.7	15.2	1	123.9	15.4	2	242.8	30.8	48	3782	431.8	86%	4385
Level 03	1	122.7	15.2	1	123.9	15.4	2	242.8	30.8	48	3782	431.8	86%	4385
Level 04	1	122.7	15.2	1	123.9	15.4	2	242.8	30.8	48	3782	431.8	86%	4385
Level 05	3	368.1	45.6	0	0	0	0	0	0	35	2586	305.6	88%	2922
Level 06	0	0	0	0	0	0	0	0	0	15	1095.9	115.1	95%	1153

No. Apartments Total	NSA Apartments	NSA Balcony	Efficiency	GFA Total
288	22281.1	2538.2	87%	25729.9

A5. Apartment Schedule for Plot 14

PLOT 14 - APARTMENT SCHEDULE - LOWER LEVELS

	1 Bed a [No.]	1 Bed a [m²]	Balcony [m²]	1 Bed b [No.]	1 Bed b [m²]	Balcony [m²]	1 Bed cnr a [No.]	1 Bed cnr a [m²]	Balcony [m²]	2 Bed a [No.]	2 Bed a [m²]	Balcony [m²]	2 Bed b [No.]	2 Bed b [m²]	Balcony [m²]	2 Bed c [No.]	2 Bed c [m²]	Balcony [m²]
		48.1	9.8		56.6	11.8		62.2	10.3		82.1	16.8		68.7	10.3		68.7	10.2
Basement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lower Ground	2	96.2	19.6	6	339.6	70.8	0	0	0	0	0	0	1	68.7	10.3	0	0	0
Ground Floor	2	96.2	19.6	6	339.6	70.8	0	0	0	0	0	0	4	274.8	41.2	0	0	0
Level 01	1	48.1	9.8	2	113.2	23.6	8	497.6	82.4	2	164.2	33.6	4	274.8	41.2	0	0	0

	2 Bed cnr a [No.]	2 Bed cnr a [m²]	Balcony [m²]	2 Bed cnr b [No.]	2 Bed cnr b [m²]	Balcony [m²]	2 Bed cnr c [No.]	2 Bed cnr c [m²]	Balcony [m²]	2 Bed cnr d [No.]	2 Bed cnr d [m²]	Balcony [m²]	2 Bed cnr e [No.]	2 Bed cnr e [m²]	Balcony [m²]	3 Bed [No.]	3 Bed [m²]	Balcony [m²]
		87.5	16.2		87.5	10.2		82.1	31.2		82.1	80.6		73.2	92		120.8	16.3
Basement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1208	163
Lower Ground	2	175	32.4	0	0	0	4	328.4	124.8	0	0	0	0	0	0	8	966.4	130.4
Ground Floor	8	700	129.6	0	0	0	4	328.4	124.8	0	0	0	0	0	0	8	966.4	130.4
Level 01	0	0	0	0	0	0	2	164.2	62.4	2	164.2	161.2	8	585.6	736	0	0	0

	No. Apartments	NSA Apartments	NSA Balcony	NSA Commercial	Efficiency	GFA
Basement	10	1208	163	0	99%	1215
Lower Ground	23	1974.3	388.3	834	67%	2960
Ground Floor	32	2705.4	516.4	0	91%	2960
Level 01	29	2011.9	1150.2	0	92%	2186

No. Apartments Total	NSA Apartments	NSA Balcony	NSA Balcony	Efficiency	GFA Total
94	7899.6	2218	834	94%	9,321

A6. Apartment Schedule for Plot 2-12

PLOT 2-12 - APARTMENT SCHEDULE

	Apt Type	Apt NSA (m²)	Apt GFA (m²)	Lower Ground No.	Ground No.	Areas (m²)	L01-L04 No.	Areas (m²)	L05 No.	Areas (m²)	L06 No.	Areas (m²)	No. 1 Bed	No. 2 Bed	No. 3 Bed	No. Apartments
	1 BED	52.2	56.6		14	730.8	13	678.6	15	783.0	6	313.2	87			**87**
	2 BED	80.5	86.1		17	1368.5	18	1449.0	9	724.5	3	241.5		101		
	2 BED CNR A	86.6	90.9		3	259.8	3	259.8	2	173.2	2	173.2		19		
	2 BED CNR B	99.5	99.5		4	398.0	4	398.0	2	199.0	2	199.0		24		
	2 BED CNR C	84.5	86.9		4	338.0	4	338.0	2	169.0	2	169.0		24		
	2 BED CNR D	84.6	86.9		3	253.8	2	169.2	2	169.2	0	0.0		13		**181**
	3 BED	122.7	129.9		0	0.0	1	122.7	1	122.7	0	0.0			5.0	
	3 BED CNR A	123.9	129.9		1	123.9	1	123.9	0	0.0	0	0.0			5.0	
	3 BED CNR D	121.4	128.0		0	0.0	2	242.8	2	242.8	0	0.0			10.0	**20.0**
No. Apartments					**46**		**48**		**35**		**15**		87	181	20	**288**
													30.2%	**62.8%**	**6.9%**	
NSA						**3472.8**		**3782.0**		**2583.4**		**1095.9**	NSA Total			**22,280**
GFA						**4116.3**		**4386.7**		**2922.3**		**1152.5**	**GFA Total**			**25,738**
						84%		**86%**		**88%**		**95%**	**Efficiency**			**87%**
GBA						**5204.3**		**5325.9**		**3578.3**		**1471.4**	**GBA Total**			**31,558**
						16%		**17%**		**11%**		**5%**				

PLOT 2-12 - BALCONY SCHEDULE

Apt Type	Apt Areas	Car Parking	Balcony	Ground	Areas	Typical	Areas	L05	Areas	L06	Areas
1 BED	52.2	5.8	7.7	14	107.8	13	100.1	15	115.5	6	46.2
2 BED	80.5	11.7	10.5	17	178.5	18	189	9	94.5	3	31.5
2 BED CNR A	86.6	11.7	6.1	3	18.3	3	18.3	2	12.2	2	12.2
2 BED CNR B	99.5	11.7	6.5	4	26	4	26	2	13	2	13
2 BED CNR C	84.5	11.7	6.1	4	24.4	4	24.4	2	12.2	2	12.2
2 BED CNR D	84.6	11.7	6.3	3	18.9	2	12.6	2	12.6	0	0
3 BED	122.7	16.0	15.2	0	0	1	15.2	1	15.2	0	0
3 BED CNR A	123.9	16.0	15.4	1	15.4	1	15.4	0	0	0	0
3 BED CNR D	121.4	16.0	15.4	0	0	2	30.8	2	30.8	0	0
				Ground Total	**389**	**Typical Total**	**432**	**L05 Total**	**306**	**L06 Total**	**115**

Balcony Total (m²) **1242**

A7. Apartment Schedule for Plot 14

PLOT 14 - APARTMENT SCHEDULE

	Apt Type	Apt Areas (m²)	Basement No.	Areas (m²)	Lower Ground No.	Areas (m²)	Ground No.	Areas (m²)	L01 No.	Areas (m²)	No. 1 BED	No. 2 BED	No. 3 BED	No. Apartments
	1 BED A	48.1		0	2	96.2	2	96.2	1	48.1	5			
	1 BED B	48.1							1	48.1	1			
	1 BED C	56.6		0	6	339.6	6	339.6	2	113.2	14			
	1 BED CNR A	62.2		0		0		0	8	497.6	8			
	2 BED CNR A	87.5		0	2	175	8	700		0		10		
	2 BED CNR B	87.5		0		0		0		0		0		
	2 BED CNR C	82.1		0	4	328.4	4	328.4	2	164.2		10		
	2 BED CNR D	82.1		0		0		0	2	164.2		2		
	2 BED CNR E	73.2		0		0		0	8	585.6		8		
	2 BED A	82.1		0		0		0	2	164.2		2		
	2 BED B	68.7		0	1	68.7	4	274.8	4	274.8		9		
	2 BED C	68.7		0		0		0		0		0		
	3 BED	120.8	10	1208	8	966.4	8	966.4		0			26	
	RETAIL					834								
No. Apartments			10		23		32		30		28	41	26	95
											29.5%	43.2%	27.4%	
NSA				1208		2808.3		2705.4		2060	NSA Total			8,782
GFA				1215		2960		2960		2186		GFA Total		9,321
				99%		95%		91%		94%		Efficiency		94%

PLOT 2-12 - BALCONY SCHEDULE

Apt Type	Balcony (m²)	Basement No.	Areas (m²)	Lower Ground No.	Areas (m²)	Ground No.	Areas (m²)	L01 No.	Areas (m²)
1 BED A	9.8		0	2	19.6	2	19.6	1	9.8
1 BED B	41.6							1	41.6
1 BED C	11.8		0	6	70.8	6	70.8	2	23.6
1 BED CNR A	10.3		0		0		0	8	82.4
2 BED CNR A	16.2		0	2	32.4	8	129.6	0	0
2 BED CNR B	10.2		0		0		0		0
2 BED CNR C	31.2		0	4	124.8	4	124.8	2	62.4
2 BED CNR D	80.6		0		0		0	2	161.2
2 BED CNR E	92		0		0		0		0
2 BED A	16.8		0		0		0	2	33.6
2 BED B	10.3		0	1	10.3	4	41.2		0
2 BED C	10.2		0		0		0		0
3 BED	16.3	10	163	8	130.4	8	130.4		0
		Basement Total	0	LG Total	258	Ground Total	386	L01 Total	415
									Balcony Total (m²) 1059

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Appendix 4 – LEP Maps

mecone

Ryde Local Environmental Plan 2014

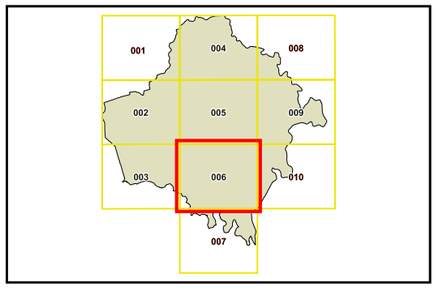
Land Zoning Map - Sheet LZN_006

Zone

B1	Neighbourhood Centre
B3	Commercial Core
B4	Mixed Use
B5	Business Development
B6	Enterprise Corridor
B7	Business Park
E1	National Parks and Nature Reserves
E2	Environmental Conservation
IN2	Light Industrial
IN4	Working Waterfront
R1	General Residential
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
SP1	Special Activities
SP2	Infrastructure
DM	Deferred Matter
MD	SEPP (Major Development) (Macquarie University) 2009

Cadastre

Cadastre 22/07/2015 © City of Ryde



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0 200 400 m

Scale: 1 : 10,000 @ A3

Projection: MGA Zone 56
Datum: GDA 94

Map Identification Number
6700_COM_LZN_006_010_20150722

Ryde Local Environmental Plan 2014

Height of Buildings Map - Sheet HOB_006

Maximum Building Height (m)

J	9.5	P	18.5	U3	33
K	10	Q	19	U4	33.5
L	11.5	R1	21.5	V	37
M1	12	R2	22	W	44.5
M2	12.5	S1	23	X	45
N1	13	S2	24	Z	57
N2	14	T1	26	AA2	75
O1	15	T2	27.5	AB1	92
O2	15.5	U1	30	AB2	99
O3	16	U2	30.5		

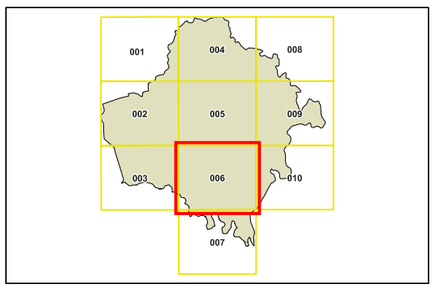
Maximum Building Height (RL(m))

	7		46.23
	14.6		47.75
	18		48.78
	23.07		50.04
	24		52
	25		59.4
	33		61.74
	39		63
	41.94		66.6
	42		91
	45.54		105

Refer to Clause 4.3A(1)

Cadastre

Cadastre 09/02/2016 © City of Ryde



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Projection: MGA Zone 56
Datum: GDA 94

Map Identification Number
6700_COM_HOB_006_010_20160209

Ryde Local Environmental Plan 2014

Floor Space Ratio Map - Sheet FSR_006

Maximum Floor Space Ratio (n:1)

A1	0.30	T1	2.00
A2	0.33	T2	2.30
D	0.50	U1	2.50
G	0.65	U2	2.60
J1	0.80	U3	2.70
J2	0.83	U4	2.90
K	0.88	V1	3.00
N	1.00	V2	3.20
O1	1.10	V3	3.30
O2	1.15	W	3.50
P1	1.20	X	4.30
P2	1.25	Z	5.00
Q1	1.30		
Q2	1.39		
S1	1.50		
S2	1.70		
S3	1.80		
S4	1.85		

Refer to Clause 4.4A(1)

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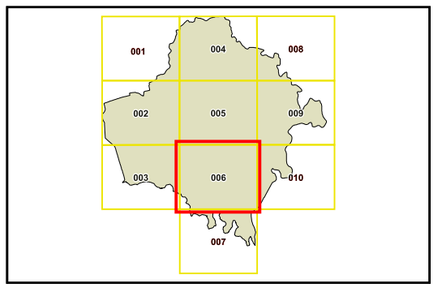
Base data 01/01/1999. © Land and Property information (LPI) Addendum data 09/02/2016. © City of Ryde.



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Scale: 1 : 10,000 @ A3

Projection: GDA 1994 MGA Zone 56

Map Identification number
6700_COM_FSR_006_010_20160209

RYDE

PUTNEY

GLADESVILLE

Appendix 5 – Draft DCP

mecone

City of Ryde
Draft Development Control Plan
2-14 Tennyson Road, Gladesville

On behalf of
Darcsol Pty Ltd
January 2017

mecone

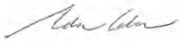

mecone

Project Director

Adam Coburn

Contributors

Denise Thornton/Michael Hanisch

Revision	Revision Date	Status	Authorised	
			Name	Signature
2	1 December 2016	Draft	A Coburn	
3	19 January 2017	Submission	A Coburn	

* This document is for discussion purposes only unless signed and dated by the persons identified. This document has been reviewed by the Project Director.

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Schedule of Figures and Tables

1 Preliminary

1.1 Introduction

This DCP provides objectives and controls for redevelopment of the site located at 2-14 Tennyson Road, Gladesville. The vision, objectives and controls provided in this DCP are supported by extensive studies undertaken by a team of specialist consultants. In the event of any inconsistencies between this DCP and any other DCP, the provisions of this DCP prevail to the extent of the inconsistency.

1.2 Name of this part

This part may be cited as City of Ryde Development Control Plan 2014 – Part 6.6 Tennyson Road, Gladesville.

1.3 Land and development to which this part applies

This part applies to land located at 2-12 Tennyson Road (hereon referred to as Site A) and 14 Tennyson Road, Gladesville (hereon referred to as Site B) as shown within the shaded area identified in Figure 1.

Figure 1. Land to which DCP applies map

1.4 Relationship of this part to other plans and policies

This DCP has been made in accordance with Section 74C of the *Environmental Planning & Assessment Act 1979* and complements the provisions of the *Ryde Local Environmental Plan 2014.*

Where there is any inconsistency between this DCP and the LEP, the LEP prevails. The DCP provides more detailed provisions than those in the LEP for development on the site.

The provisions in this DCP provide specific guidance for development on land covered by this DCP, and complement any other applicable DCPs. In the event

of any inconsistencies between this DCP and any other DCP, the provisions in this DCP prevail to the extent of the inconsistency.

1.5 Objectives

The objectives of this DCP are to:

a) Enable future redevelopment to make the best use of the subject land's proximity to public transport, infrastructure, services and community facilities;

b) Encourage employment generation on site by providing an appropriate mix of residential, retail, commercial and community uses;

c) Ensure that building design:

(i) Defines the street and the public domain and contributes to the desired urban character of the area;
(ii) Is environmentally innovative, durable and of a high quality;
(iii) Limits opportunities for crime;
(iv) Will not adversely impact surrounding residential developments;
(v) Incorporates useable and attractive common open spaces; and Integrates with surrounding development, public places and facilities.

d) Provide safe, well designed development that is inviting and accessible to all members of the community; and

e) To ensure the adequate provision of publicly accessible open space.

2 Vision Statement

2.1 Existing character

The site is currently identified as an industrial site and contains existing buildings that are being used as warehouse and office space. The site sits to the south of the Monash Road Precinct of the Gladesville Town Centre. The site is located in a predominantly residential area and is segregated from the larger industrial zoned precinct to the north of Victoria Road. The site is currently being under-utilised and affords a low employment generation rate.

2.2 Desired future character

The site is to be transformed from an under-utilised and poorly functioning industrial premises into a diverse and vibrant mixed use environment with an appropriate mix of activities and uses. The aim is to improve employment generation on site and provide a variety of residential dwellings to support the non-residential uses on site as well as the nearby Gladesville Town Centre.

Site planning should relate to the existing scale and character of buildings and respond to the natural topography and features while avoiding any adverse impact on the amenity of the surrounding residential developments.

3 Objectives and Controls

3.1 Land use

Objectives

a) To provide an appropriate mix of residential and non-residential uses;

b) To encourage employment generation on site;

c) To create a diverse and vibrant urban space; and

d) To cater for a range of residents from a diverse socio-economic background including socially or physically disadvantaged groups.

Controls

a) Development is to provide an appropriate mixture of compatible uses including residential and non-residential components;

b) In order to encourage employment generation on site, a minimum of 5% of total Gross Floor Area proposed on site A to be allocated to non-residential uses;

c) Non-residential uses are to be located on ground floor and be easily accessible from site entries and communal open spaces;

d) Development is to provide a variety of residential types to cater for the needs of different household groups;

e) As a general guide, not more than 75% of dwellings in any development are to have the same number of bedrooms; and

3.2 Built form

3.2.1 Height of buildings

Objectives

a) Provide additional detail on the distribution of building height, within the height controls established in the LEP; and

b) Establish maximum number of storeys permissible to ensure development:

   (i) reinforces the neighbourhood character;

   (ii) provides a positive contribution to the public domain; and

   (iii) maximises the level of sun access.

Controls

a) Buildings must comply with the maximum height described in the Height of Buildings plan of the LEP;

b) Building height in storeys must generally comply with the building height control as shown in Figure 2. Minor variations from the controls contained in Figure 2 are acceptable where the proposed development:

   i. Is generally in accordance with the LEP height controls and objectives;

   ii. Generally follows the intent of this clause, which is to be sympathetic to the existing built form and avoid any adverse environmental or amenity impacts on the adjoining buildings; and

iii. Demonstrates that the proposed variations will not result in any additional adverse impact in terms of overshadowing, overlooking, bulk and scale.

c) The building height limits in the LEP and DCP correlate to each other and should be read in conjunction;

d) Floor to ceiling height must be a minimum of 2.7m for habitable rooms of residential spaces. Non habitable rooms within residential units are to comply with the relevant guidelines provided in the Apartment Design guideline;

e) Minimum floor to floor height must be kept at minimum 3.3m for non-residential uses; and

f) To ensure flexibility for adaptive re-use in the future, minimum floor to floor height of 3.3m must be maintained at ground floor regardless of use.

Figure 2. Building height (No of storeys) map

3.2.2 Setbacks

Objectives

a) Ensure development contributes to the comfort and attractiveness of the City's streets by ensuring that:

   I. Consistency is achieved in the alignment of the building and street edge; and

   II. Buildings address and define streets and public spaces; and

b) Achieve development that provides a high level of pedestrian amenity; and

c) Create suitable separation from buildings on neighbouring properties to protect amenity, privacy and solar access.

Controls

a) Building setbacks at ground level and upper levels must comply with the setback controls provided in Figure 3.

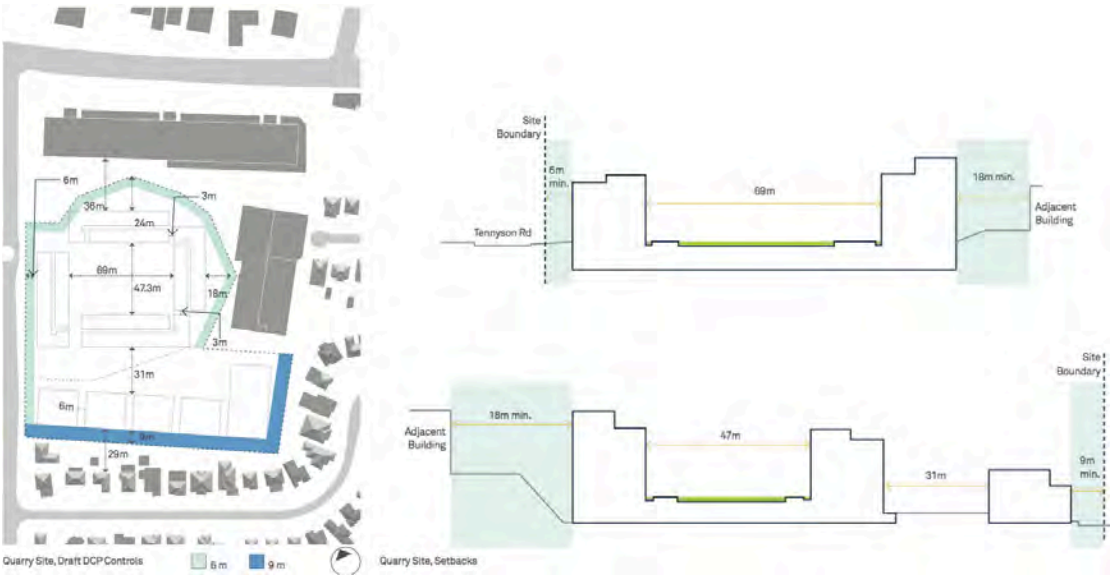

Figure 3. Setbacks map

3.2.3 Building width, depth and separation

Objectives

a) Ensure that the scale and modulation of development responds to the context of its setting;

b) Provide permeability between buildings, and adequate separation to achieve privacy, sun light access and open space; and

c) Ensure building depth maximises potential for cross ventilation and dual aspects within dwellings.

Controls

a) Residential buildings must be designed to achieve the targets set in the Apartment Design Guide in relation to building depth, solar access and cross ventilation; and

3.3 Traffic, access and car parking

3.3.1 Vehicular access

Objectives

a) Provide safe and easy access to the various uses within development;

b) Limit the impacts of vehicle entrances and car parking areas on the public domain and street network; and

c) Ensure parking areas are designed to integrate with the rest of the building façade and reflect the local character.

Controls

a) Vehicular access to the residential and non-residential uses should be designed to respond to the natural topography of the site, spatial and operational requirements of each use;

b) Vehicular and pedestrian access to buildings should be separated by means of architectural features, landscaping elements, paving, signage or similar;

c) Vehicle entrances are to be designed so that vehicles do not queue or reverse across pedestrian crossings or footpaths;

d) Vehicular access should avoid any adverse impact on streetscape continuity determined in reference to the:

   I. public domain or the street;

   II. character of the built form; and

   III. character of the front landscaping.

e) Vehicle access and egress is to be a single crossing with a maximum width of 3.5m over the footpath, and perpendicular to the kerb alignment;

f) Vehicles must be able to enter and leave the site in a forward direction. Access arrangements should be in accordance with the relevant Australian Standards;

g) The design of loading and unloading space should be in accordance with the relevant Australian Standards and guidelines; and

h) Figure 4 provides the indicative location of vehicular driveways and access points. Should Site A and Site B be developed independently, alternative access arrangements may be required.

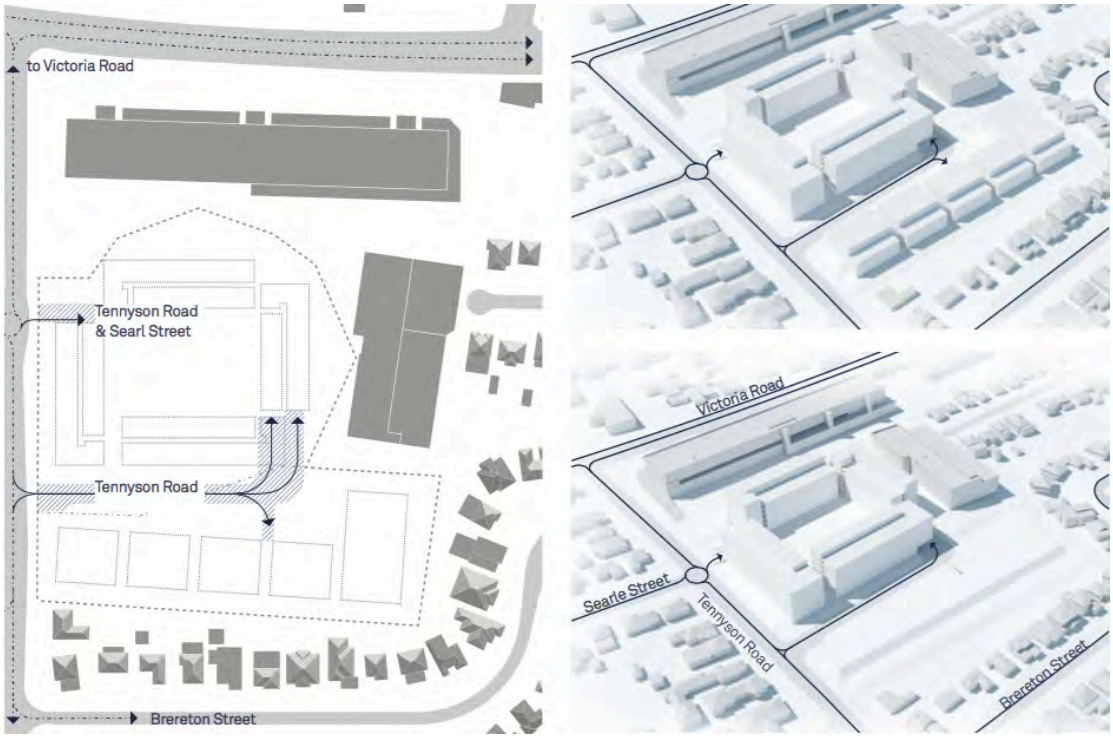

Figure 4. Site access map

3.3.2 Pedestrian access

Objectives

a) Provide safe access to the various residential and non-residential components of the building;

b) Ensure that site access meets the requirements of all household groups including children, seniors and people with a disability;

c) Provide secure access to residential areas of the building; and

d) Minimise opportunities for crime and vandalism.

Controls

a) Buildings are to be designed to be safe and accessible for pedestrians including children, seniors and people with a disability;

b) Continuous paths of travel are to be provided;

c) Pedestrian entry to buildings should be legible and easily identifiable by means of architectural features, appropriate lighting, landscaping and signage; and

d) Buildings should be designed to maximise opportunities for passive surveillance of building entries.

3.3.3 Parking

Objectives

a) Minimise traffic congestion and provide adequate off-street car parking spaces that meets the anticipated demand for the various uses of the building; and

b) Ensure any car parking facilities provided, ancillary to other land uses, are for a variety of vehicle types, are equally apportioned, and include car share, motorcycle, and accessible parking facilities.

Controls

a) Off-street car parking is to be provided as per the rates provided in Table 1 below:

Table 1. Off-street car parking rates

Proposed Use	Residents/Employees
Residential	
Residential Flat Buildings	0.6 to 1 space per one bedroom dwelling; 0.9 to 1.2 spaces per two bedroom dwelling; 1.4 to 1.6 spaces per three bedroom dwelling; and 1 visitor parking per 5 dwellings
Seniors Housing	As per the Seniors Housing SEPP
Child Care Centres	1 space per 8 children; and 1 space per 2 employees.
Health Consulting Rooms	1 space per doctor or dentist; and

Proposed Use	Residents/Employees
	1 space per two employees; and 1 patient's space per a doctor or dentist
Office and Business Premises	1 space per 40m^2 GFA
Restaurants, Retail Premises and Industrial Retail Outlet	1 space per 25m^2 GFA
Other uses	As per Part 9.3 of Ryde DCP 2010.

b) Where a development comprises of two or more different land uses, parking provisions will be assessed as the sum of the requirements Table 1 for each component of the mixed-use development. Calculations shall include an appropriate proportion of any common or administrative areas.

c) Where the main usage periods for components of mixed-use development do not coincide, Council may consider a reduction in the required parking. In this case the parking requirement will be based on whichever of the components generates the greatest parking requirement. The onus will be on the proponent to satisfy Council that the uses will not be operated concurrently.

d) Secured parking access is to be provided to the residential component;

e) Accessible car parking should be provided to all adaptable units;

f) Car parking should be designed so that vehicles can enter and exit the site in a forward direction;

g) Parking areas should be designed in accordance with the relevant Australian Standards;

h) Provide secure bicycle storage in all residential developments where the floor space exceeds 600m^2 GFA except for dwelling houses and retail developments.

3.4 Public domain and open spaces

3.4.1 Publicly accessible open spaces

Objectives

a) Ensure that the design of publicly accessible open space:

   i. is of a high quality;

   ii. provides for a variety of both passive and active uses; and

   iii. responds to community needs.

Controls

a) Public/Common accessible open space of at least 25% of total site area is to be provided within the development;

b) To maximise the benefits of the open space for the residents and the community, public space should be consolidated and easily accessible to/from the commercial uses.

c) The central open space should be clearly differentiated from adjacent private spaces or buildings, and should be accessible from a variety of points within the development;

d) Publicly accessible open spaces should be clearly defined by pedestrian entrances and paths; and have appropriate seating;

e) Open spaces should maximise access for people with mobility difficulties through appropriate design and location of paths and entrances;

f) The open space should provide high quality architectural and landscape design;

g) The design of open spaces should maximise safety and security of all users by providing open sightlines and landscaping, a high level of public surveillance and external lighting; and

h) The open space should only be publicly accessible during the hours of operation of the non-residential uses.

3.4.2 Private open spaces

Objectives

a) Ensure that the design provides adequate private open spaces of high quality.

Controls

a) All dwellings within a multi-dwelling housing development shall have at least one area of private open space that is attached to and accessible from the dwelling. The area of private open space should comply with the guidelines provided in the Apartment Design Guideline; and

b) Private open spaces are to be located such that they receive adequate solar access.

3.4.3 Landscaping

Objectives

a) To ensure the landscaping of the site within the development complements or enhances the desired future neighbourhood character; and

b) Ensure that trees and shrubs will have a softening effect on buildings, and the overall environment and trees are planted in sufficient numbers and scales to achieve this aim.

Controls

a) Development Applications for full buildings must be accompanied by a Landscape Concept Plan;

b) Trees are to be selected based on the scale of buildings, width of street, aspect, and on environmental parameters such as soil type in accordance with the *City of Ryde Public Domain Technical Manual*;

c) Provide landscaping to:

   i. Screen poor views;

   ii. Give privacy to occupants and neighbouring properties;

   iii. Be easily maintained;

   iv. Use native species, particularly species indigenous to the area; and

v. Provide for sufficient depth of soil to support the long-term viability of the landscaping.

d) Deep soil planting is to be provided to a minimum of 15% of the total site area (refer to Figure 5; and

e) Deep soil zones are to be located around site perimeters to encourage privacy through screening planting.

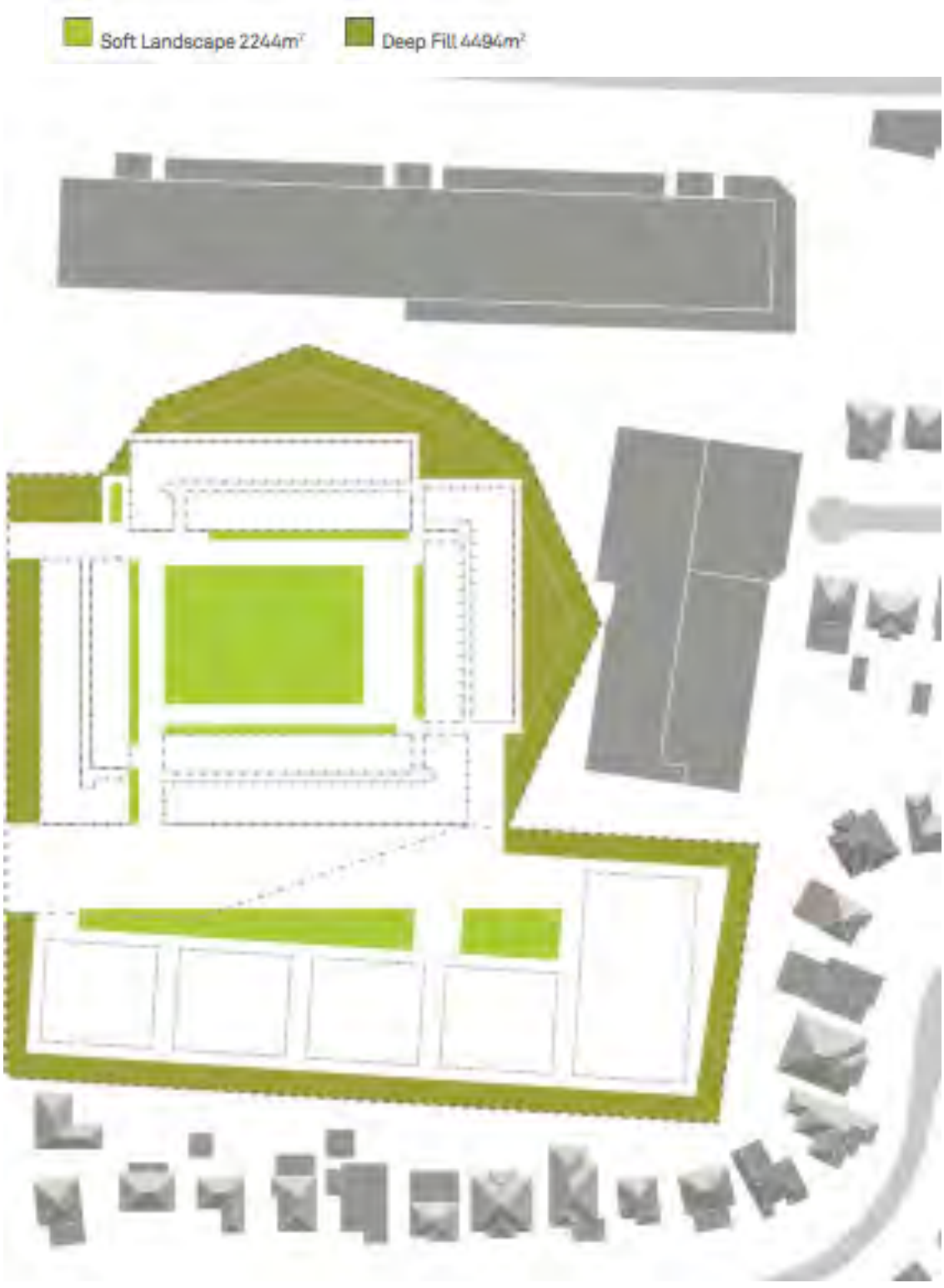

Figure 5. Deep soil zone map


mecone

Appendix 6 – Environmental Site Assessment

mecone

Phase 1 Environmental Site Assessment

14 Tennyson Road, Gladesville NSW

Prepared for:

Joandarc Khouzame

Director

Joandarc Realty

Unit 6 / 2-12 Tennyson Rd Gladesville NSW

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Document control log

Rev	Date	Comments	Prepared by	Reviewed by	Approved by
PA	31 May 2017	For Internal Review	AB	AP	AB
PB	2 June 2016	For Client Review	AB	AC	JK

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The findings, conclusions and recommendations in this report (i) have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and (ii) reflect E&G's best judgment based on information available at the time of preparation of this report. No other warranties, either expressed or implied, are made with respect to the professional services provided to Client or the findings, conclusions and recommendations contained in this report. The findings and conclusions contained in this report are valid only as of the date of this report and may be based, in part, upon information provided by others.

If any of the information is inaccurate, new information is discovered, site conditions change or applicable standards are amended, modifications to this report may be necessary. The results of this assessment should in no way be construed as a warranty that the subject site is free from any and all contamination.

Any soil and rock descriptions in this report and associated logs have been made with the intent of providing general information on the subsurface conditions of the site. This information should not be used as geotechnical data for any purpose unless specifically addressed in the text of this report. Groundwater conditions described in this report refer only to those observed at the location and time of observation noted in the report.

This report must be read as a whole, as sections taken out of context may be misleading. If discrepancies occur between the preliminary (draft) and final version of this report, it is the final version that takes precedence. Nothing in this report is intended to constitute or provide a legal opinion.

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EXECUTIVE SUMMARY

SNC-Lavalin was engaged by Darcsol Pty Ltd (Darcsol) to undertake a Phase 1 Environmental Site Assessment (Phase 1 ESA) for 14 Tennyson Road, Gladesville, New South Wales (NSW).

The subject site comprises Lot 1 of Deposited Plan (DP) 549570 and has a surveyed area of 9,321 m^2 (Grimshaw 2017). A planning proposal was prepared by Mecone Pty Ltd (Mecone) that seeks to rezone the subject site together with Lot 2 of DP 549570 from IN2 Light Industrial to B4 Mixed Use and increase the floor space ratio and building height controls. This planning proposal is currently at Gateway Determination with the Department of Planning and Environment.

Under State Environmental Planning Policy No 55 (SEPP 55), Council's consent to rezoning (Clause 6) requires the applicant to prepare and submit a site contamination report. As part of the Gateway Determination process, Darcsol has been requested to submit a contamination report for Lot 1 and 2 of DP 549570 (Ryde Council 2017). A Phase 1 ESA report has been completed for Lot 2 of DP 549570 (EIS 2012).

This report is a Phase 1 ESA for Lot 1 of DP 549570 with the following objectives:

- To identify past or current activities that may have contaminated the subject site;
- To identify Areas of Concern (AOC) and Contaminants of Potential Concern (COPC) that maybe associated with past or current activities; and
- To provide a determination of whether the subject site is suitable for rezoning to B4 Mixed Use in accordance with Clause 6 of SEPP 55.

The scope of work comprised the following:

- Desktop review of subject site and immediately surrounding areas; and
- Prepare a Phase 1 ESA report in accordance with the content requirements of the CLM Act and its associated guidelines, with note to the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011).

The subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 were occupied by buildings associated with a brickworks operation from the 1920s until the late 1940s. The void within Lot 2 of DP 549570 was most likely a clay pit and or sandstone quarry that had been developed prior to 1930 and may have been associated with the earlier part of the brickworks operation. From the 1950s until the late 1960s the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 were occupied buildings and hardstand associated with the manufacture of shoe manufacturing machinery and foot ware materials. From the late 1960s until 1995 Lot 2 of DP 549570 and Lot 2 of DP 539330 was occupied by various buildings associated with company that manufactured paint brushes and rollers (Rota Cota Pty Ltd) and other light commercial operations (e.g. home ware wholesale suppliers, printing shops, etc) (EIS 2012).

Since 1995 until the current day, the western end of the site has been used for design engineering, assembly and warehousing of various building, road and marine products. The eastern end of the site has been occupied by various light commercial operations and the warehousing and sales of waterproofing and sealant products.

Review of the site history, environmental setting and site inspection has identified the following AOC and COPC:

- Fill horizon in relation to several sources of COPC - Heavy metals, other metals such as barium and manganese, petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs), pesticides (e.g. OCPs and OPPs) and asbestos.
- Operation and maintenance of an electrical substation (leased to Sydney County Council) located close to the western boundary (based upon design appearance has been present from 1960s/1970s until current day) – PCBs; and
- Current light commercial activities (storage of small volumes of cleaning solvents, adhesives and sealant chemicals upon hardstand areas) - volatile and semi-volatile organic solvents.

Current land use/s of the subject site do not represent a significant risk of harm to human health or the environment based upon the following lines of evidence:

- Storage of cleaning solvents, adhesives and sealant chemicals for current light commercial operators upon the subject site is limited to small volumes that are stored upon hardstand;
- The importation of fill of unknown origin occurred late 1940s / early 1950s and late 1960s / early 1970s and since that time has remained relatively undisturbed and covered by concrete / asphalt hardstand (i.e. the only areas that may have been disturbed in the last 40 years would be associated with the installation of sub-surface pipe work and or building footings);
- Human occupation of the subject site over the last 20 years has been limited to light commercial land use with no direct exposure to the fill horizon;
- Absence of persistent primary sources of fuels, lubricants, volatile and semi-volatile organic solvents in the fill horizon;
- Sampling and laboratory test work upon Lot 2 of DP 549570 (which has a site history very similar to the subject site) suggests the following:
    - An absence of gross contamination of petroleum hydrocarbons, volatile and semi-volatile organic solvents, pesticides or metals in either the fill horizon or the underlying bedrock. This site is located immediately adjacent to the subject site and its fill horizon is a potential receiver of mobile gross contamination from the subject site and Lot 2 of DP 539330 as it is located in a former quarry pit (i.e. is topographically depressed relative to the other sites);
    - An absence of either observed of laboratory detectable levels of asbestos.
- The electrical substation (leased to Sydney County Council) located close to the western boundary appears to be in relatively good condition and if surface soils were impacted by PCBs, impacted volumes are likely to be limited to shallow soils within the immediate footprint of the electrical substation;
- There are no beneficial groundwater uses within 500 metres of the subject site (i.e. no groundwater wells used for either agriculture or drinking water);
- There are no natural surface water bodies within 500 metres of the subject site; and
- Although a ground water investigation has not been undertaken in relation to the subject site or Lot 2 of DP 549570 and it is unknown whether a groundwater investigation has been undertaken in relation to Lot 2 of DP 539330, groundwater flow in the vicinity of the subject site is likely to be limited by the following aspects in terms of potential down gradient reception:

- Concrete / asphalt hardstand that covers most of the site will significantly limit infiltration to groundwater. This was supported by an observed absence of groundwater in the fill upon Lot 2 of DP 549570 (EIS 2012); and
- Water within the fill horizon is likely to be confined by the underlying bedrock unit is likely to have very low hydraulic conductivity (i.e. as it is comprised of competent sandstones and shales). This was supported by an observed absence of groundwater in the bedrock up to a depth of 10.2 m BGL upon Lot 2 of DP 549570 (EIS 2012).

Change of zoning from IN2 Light Industrial to B4 Mixed Use does not change the risk profile associated with the site, specifically risk of harm to human health or the environment based upon the following lines of evidence:

- The subject site is currently zoned IN2 Light Industrial and current land use/s have been evaluated as not representing a significant risk of harm to human health or the environment;
- The nature of the proposed concept plan will require removal of all fill in the vicinity of the basement car parking area and the lowest residential units. Additionally, surrounding areas would comprise a mixture of hardstand pavement and landscaped areas (levels established via importation of clean engineered fill and landscaping soils);
- Even if the COPC were encountered at the site, significant risk of harm to human health or the environment could be readily mitigated (i.e. delineation and removal of impacted soils and or disposal of perched groundwater to an appropriately NSW EPA licensed waste facility); and
- All newly proposed land uses and or developments must be approved by Council as part of the planning approval process under the EP&A Regulations 2000.

On that basis the subject site is suitable for rezoning to B4 Mixed Use in accordance with Clause 6 of SEPP 55.

It should be noted the following should be undertaken prior to development of the subject site:

- Detailed visual inspection and where necessary use of ground penetrating radar survey to confirm the presence / absence of underground storage tanks (USTs) and subsurface water treatment infrastructure at the subject site;
- Removal of all USTs as per relevant guidelines (DECCW 2009);
- A Phase 2 ESA that seeks to further qualify key risks associated with earthworks and management of soils and groundwater. It should be undertaken in accordance with all relevant guidelines under the CLM Act and as a minimum the sampling and analysis plan must qualify the nature and extent of soil and groundwater contamination that maybe associated with the fore mentioned AOC and COPC; and
- Results of the Phase 2 ESA can then be utilized to inform the Construction Environmental Management Plan (CEMP) for the development in a manner that complies with both SEPP 55 and the POEO Act (e.g. inform characterization of spoil for offsite disposal to a NSW EPA licensed land fill).

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1 INTRODUCTION

1.1 BACKGROUND

SNC-Lavalin was engaged by Darcsol Pty Ltd (Darcsol) to undertake a Phase 1 Environmental Site Assessment (Phase 1 ESA) for 14 Tennyson Road, Gladesville, New South Wales (NSW) (refer to Figure 1 for subject site location).

The subject site comprises Lot 1 of Deposited Plan (DP) 549570 and has a surveyed area of 9,321 m^2 (Grimshaw 2017) (refer to Attachment 1 for a copy of the cadastral plan and current land title records).

The subject site currently comprises:

- A factory at the western end for design engineering, assembly and warehousing of various building, road and marine products (e.g. grates, expansion joints, covers, dock bumpers and marine fenders, safety flooring) [Latham Australia Pty Ltd]);
- Light commercial wholesales / manufacturing / ware-housing at the eastern end (curtain wholesalers and manufacturer [Venus Window Fashions Pty] and the warehousing and sales of waterproofing and sealant products [Pasco Construction Solutions Pty Ltd]);
- Hardstand parking (concrete and bitumen);
- Sewerage infrastructure in close proximity to the southern and western boundary (refer to Section 3.4 for more detail); and
- An electrical substation (leased to Sydney County Council) located close to the western boundary.

A planning proposal was prepared by Mecone Pty Ltd (Mecone) that seeks to rezone the subject site together with Lot 2 of DP 549570 from IN2 Light Industrial to B4 Mixed Use and increase the floor space ratio and building height controls. This planning proposal is currently at Gateway Determination with the Department of Planning and Environment.

Under State Environmental Planning Policy No 55 (SEPP 55), Council's consent to rezoning (Clause 6) requires the applicant to prepare and submit a site contamination report. As part of the Gateway Determination process, Darcsol has been requested to submit a contamination report for Lot 1 and 2 of DP 549570 (refer to Attachment 2). A Phase 1 ESA report has been completed for Lot 2 of DP 549570 (EIS 2012).

This report is a Phase 1 ESA for Lot 1 of DP 549570.

1.2 NATURE OF THE PROPOSED CONCEPT PLAN

The proposed concept plan will involve the following key elements (Grimshaw 2017) (refer to Figures 2 and 3):

- A basement car park cut into the underlying natural bedrock;
- Retail shops on the Ground Level and residential units on Levels 1 and 2 (northern side of western end);
- Residential units on the Ground Level and Levels 1 and 2 (southern side of western end and entire eastern end); and
- Surrounding areas that would comprise a mixture of hardstand pavement and landscaped areas (levels established via importation of clean engineered fill and landscaping soils).

1.3 OBJECTIVES

This Phase 1 ESA had the following objectives:

- To identify past or current activities that may have contaminated the subject site;
- To identify Areas of Concern (AOC) and Contaminants of Potential Concern (COPC) that maybe associated with past or current activities; and
- To provide a determination of whether the subject site is suitable for rezoning to B4 Mixed Use in accordance with Clause 6 of SEPP 55.

1.4 SCOPE OF WORK

The scope of work comprised the following:

- Desktop review of subject site and immediately surrounding areas as far as:
  - Land use/s, history and environmental setting; and
  - Potentially contaminating activities of the subject site and immediately surrounding areas as well as confirm the nature of topography, geology and drainage in the area;
- Preparation of a Phase 1 ESA report in accordance with the content requirements of the Contaminated Land Management (CLM) Act and its associated guidelines, with note to the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011).

2 SURROUNDING LAND USES AND ZONING

Surrounding land uses and zoning under the Ryde Local Environment Plan (Ryde 2014) within 300 metres currently comprise (refer to Figure 4):

- To the north – light commercial activities upon Lot 2 of DP 549570 and Lot 2 of DP 539330 [Light Industrial (IN2) zoning] and further north Victoria Road a mixture of small business and warehouse premises [Mixed Use (B4) and Business Development (B5) zoning];
- To the west – residential properties [Low Density Residential (R2) zoning];
- To the south - residential properties [Low Density Residential (R2) zoning]; and
- To the east – residential properties and a narrow parkland area [Low Density Residential (R2) and Public Recreation zoning respectively].

3 SITE HISTORY

3.1 SUBJECT SITE HISTORY

The subject site history provided below is based upon the following:

- Historical land title review (refer to summary in Table 1 and copies of historical title and land transfers in Attachment 3); and
- Historical aerial photo review (refer to the summary paragraph below).

The subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 were occupied by buildings associated with a brickworks operation (Moorview Brick Company and Brickworks Limited) from the 1920s until the late 1940s. The void within Lot 2 of DP 549570 was most likely a clay pit and or sandstone quarry that had been developed prior to 1930 and may have been associated with the earlier part of the brickworks operation.

From the 1950s until the late 1960s the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 was occupied buildings and hardstand associated with the manufacture of shoe manufacturing machinery and foot ware materials (The British United Shoe Machinery Company of Australia Proprietary Limited). From the late 1960s until 1995 Lot 2 of DP 549570 and Lot 2 of DP 539330 was occupied by various buildings associated with company that manufactured paint brushes and rollers (Rota Cota Pty Ltd) and other light commercial operations (e.g. home ware wholesale suppliers, printing shops, etc).

Since 1995 until the current day, the western end of the site has been occupied by design engineering, assembly and warehousing of various building, road and marine products (e.g. grates, expansion joints, covers, dock bumpers and marine fenders, safety flooring) [Truedoor Pty Ltd that later became Latham Australia Pty Ltd]) and the eastern end of the site has been occupied by various light commercial operations (i.e. typified by the current curtain wholesalers and manufacturer [Venus Window Fashions Pty] and the warehousing and sales of waterproofing and sealant products [Pasco Construction Solutions Pty Ltd]).

Table 1: Historical Land Title Review

NSW Land Title Reference	Owner	Years
[1]Vol 3160 Folio 152 Torrens Title Register	John Symonds (engineer & contractor).	Prior to 1921
[1]Vol 3160 Folio 152 Torrens Title Register	Moorview Brick Company	1921 to 1937
[1]Vol 4609 Folio 119 Torrens Title Register	Brickworks Limited	1937 to 1947
[1]Vol 5968 Folio 157 Torrens Title Register and Vol 5967 Folio 156 Torrens Title Register	The British United Shoe Machinery Company of Australia Proprietary Limited.	1947 to 1967
[1]Vol 6997 Folio 139 Torrens Title Register and Transfer O462800	Rota Cota Pty Ltd.	1967 to 1995
Historical title search for Lot 1 of DP 549570.	W Latham & Co Pty Limited (several name changes over ownership period)	1995 to 2017

Notes: [1]Old Torrens Title Register reviewed at the NSW Land Title Office, 1 Prince Albert Road, Queens Square, Sydney, NSW.

Historical aerial photography information (EIS 2012) infers the following:

- In the 1920 and 1930's the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 was occupied buildings most likely associated with the brick works;
- By the 1951 buildings previously associated with the brickworks had been demolished and new buildings and hardstand associated with the shoe machinery company occupied the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330;
- By 1970 the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 was occupied by buildings associated with Rota Cota Pty Ltd (now occupied by Latham Australia Pty Ltd) and other light commercial operations (e.g. home ware wholesale suppliers, printing shops, etc) (EIS 2012); and
- By 1994 the eastern end of the subject site had an additional two light commercial building structures (now occupied by Venus Window Fashions and Pasco Construction Solutions).

3.2 Regulatory Body Records Search

3.2.1 NSW Environmental Protection Authority (EPA)

A search of the NSW EPA contaminated land public register of record of notices [maintained under Section 58 of the Contaminated Land Management Act 1997 (CLM Act)] was undertaken on 24 May 2017 (NSW EPA 2015) (refer to Attachment 4). These results infer the following in relation to the subject site and surrounding areas:

- No orders made under Part 3 of the CLM Act;
- No approved voluntary management proposals under the CLM Act that have not been fully carried out and where the approval of the EPA has not been revoked; and
- No actions taken by EPA under Section 35 or 36 of the Environmentally Hazardous Chemicals Act 1985.

A search of the NSW EPA public register of licence, applications and notices [maintained under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act)] was undertaken on 24 May 2017 (NSW EPA 2015) (refer to Attachment 5). These results infer the following in relation to the subject site and surrounding areas:

- No environmental protection licences, applications, notices, audits, pollution studies and reduction programs;
- No penalty notices issued by the EPA;
- No enforceable undertakings by the EPA; and,
- No convictions or prosecutions under the POEO Act.

A search of the NSW EPA public register of contaminated sites notified to NSW EPA under Section 60 of the CLM Act was undertaken on 24 May 2017 (NSW EPA 2017) (refer to Attachment 6). These results infer there are no contaminated land sites currently known to the NSW EPA in relation to the subject site.

The nearest contaminant site notified to the EPA as of 8 May 2017 is located at 436 - 484 Victoria Road in Gladesville (refer to Figure 5).The site is identified as Glade View Business Park, approximately 160 metres northeast from the site (part of Lot 2 of DP 539330) and is currently under assessment.

3.2.2 NSW Office of Environment and Heritage (OEH)

A search of the NSW OEH public register of State Heritage Inventory items was undertaken on 24 May 2017. The register contains items listed by the Heritage Council under the NSW Heritage Act 1977 and items listed by local councils and shires, and state government agencies (refer to Attachment 7). These results infer that there are no State Heritage Inventory items in the immediate vicinity of the subject site.

3.2.3 Section 149 (2) Planning Certificate

A Section 149(2) Planning Certificate under the Environmental Planning and Assessment Act 1979 (EP&A Act) was obtained for the subject site from the City of Ryde on 24 May 2017 (refer to Attachment 8). The following key aspects are inferred in relation to the subject site:

- Current zoning as Zone IN2 Light Industrial;
- The land does not include or comprise critical habitat under the Local Environmental Plan;
- An item of environmental heritage is not situated on the land under the Local Environmental Plan;
- The land is not affected by the operation of section 38 or 39 of the Coastal Protection Act 1979;
- The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the Mine Subsidence Act 1961;
- There are no Council Hazard Risk Policies that restrict development of the subject site;
- The land is not affected by any road widening or road realignment under:
    - Division 2 of Part 3 of the Roads Act 1993;
    - Any Environmental Planning Instrument; and,
    - Any resolution of Council.
- Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors living) is subject to flood related development controls;

- Development on the land or part of the land for any other purpose is subject to flood related development controls;
- The subject site is not part of Biodiversity Certified Land under Part 7AA of the Threatened Species Conservation Act 1995;
- The subject site is not part of a Biobanking Agreement under Part 7A of the Threatened Species Conservation Act 1995;
- The subject site is not identified on a Bush Fire Prone Land map certified by the commissioner of the NSW Rural Fire service as being bush fire prone land as per the Rural Fires and Environmental Assessment Legislation Amendment Act 2002 No 67;
- The subject site is not part of a Property Vegetation Plan under Native Vegetation Act 2003;
- There has not been an order made under the Trees (Disputes between Neighbours) Act 2006 to carry out work in relation to a tree on the land;
- The subject site has no direction in force under section 75P (2)(c1) of the Environmental Planning and Assessment Act 1979; and
- The subject site has no known matters arising under the CLM Act as per Section 59(2) of the CLM Act. Specifically:
    - The land to which this certificate relates IS NOT significantly contaminated land;
    - The land to which this certificate relates IS NOT subject to a management order;
    - The land to which this certificate relates IS NOT the subject of an approved voluntary management proposal;
    - The land to which this certificate relates IS NOT subject to an ongoing maintenance order; and
    - The land to which this certificate relates IS NOT subject to a site audit statement.

3.3 Previous Site Contamination Investigation Reports

A preliminary site investigation of Lot 2 of DP 549570 (EIS 2012) infers the following key aspects:

- Identified AOC and associated COPC comprised:
    - Use of uncontrolled fill across the site - heavy metals, petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs), pesticides (e.g. OCPs and OPPs), electrical transformer fluids (e.g. PCBs) and asbestos;
    - Historical industrial activities at the site - heavy metals, petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs) and asbestos;
    - Chemical storage, including use of a underground storage tank (UST) located on the south-western segment of the site (location shown on the plan excerpt from the report in Attachment 9) - petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs) and lead;
    - Presence of an electrical substation (actually present upon the south-western corner of the subject site) - electrical transformer fluids (e.g. PCBs);
    - Demolition of buildings over the history of the site – asbestos.

- An investigation of the fill horizon around the site perimeter (seven boreholes at locations shown on the plan excerpt from the report in Attachment 9 and a total of 11 soil samples) suggested the following:
    - An elevated concentration of toluene [3 mg/kg which was above the Service Station Guideline value of 1.4 mg/kg (NSW EPA 1994)] was encountered in the fill horizon in the south-western area of the site (specifically at BH7, between 0.1 and 0.3 m below ground level [BGL]). However a deeper sample of fill material at the same borehole (specifically BH7, between 0.5 to 0.7 m BGL) reported an absence of detectable toluene (i.e. below the reporting limit of 0.5 mg/kg);
    - A detectable concentration of benzene [0.4 mg/kg which was below the Service Station Guideline value of 1.0 mg/kg (NSW EPA 1994)] was encountered in the fill horizon in the north-western area of the site (specifically at BH1, between 0.6 and 0.8 m BGL);
    - PID readings did not suggest the presence of gross contamination in relation to volatile organic solvents (i.e. results ranged from 0 to 7.2 parts per million [ppm] equivalent isobutylene);
    - A detectable concentration of C_{10}-C_{36} petroleum hydrocarbons [110 mg/kg which was below the Service Station Guideline value of 1000 mg/kg (NSW EPA 1994)] was encountered in the fill horizon in the southern area of the site (specifically at BH6, between 0.1 to 0.2 m BGL);
    - All samples reported concentrations of heavy metals, total PAHs and benzo(a)pyrene below the adopted criteria (NEPM 1999 (NEPC Guidelines) HILs - Column D 'Residential with minimal opportunities for soil access);
    - All samples reported concentrations of OCPs, OPPs, PCBs, TPH C_6-C_9, TPH C_{10}-C_{14}, TPH C_{15} – C_{28}, ethyl benzene and total xylenes below the reporting limit;
    - An absence of observed asbestos in the fill horizon and all soil samples reported below the reportable limit for asbestos;
    - The following strata at the site:
        - Fill comprising (a mixture of sandy gravels, sand, clay and crushed shale), underlying concrete / asphalt and ranging in depth from 0.3 to 1.1 m BGL in all locations other than BH7 where it extended to a depth of 3.6 m BGL. No groundwater or gross contamination was encountered within the fill horizon.
        - Underlying shale bedrock that comprises fine and medium grained sandstone, generally slightly weathered or fresh. The sandstone contains bands which are inter-bedded with shale. No groundwater or gross contamination was encountered up to the maximum depth of investigation (which varied from 6.8 to 10.2 m BGL).
- The report's conclusions and recommendations were made in relation to the mixed-use development (i.e. Clause 7 of State Environmental Planning Policy No 55—Remediation of Land, Contamination and remediation to be considered in determining development application) rather than a determination of whether the subject site is suitable for rezoning to B4 Mixed Use in accordance with Clause 6 of SEPP 55. Specifically, 'the site could be made suitable for the proposed mixed-use development' providing the following items are addressed prior to development of the site:

- An additional soil and groundwater investigation should be undertaken at the site. The investigation should be designed to meet the minimum sampling density and should also include: targeted investigations in the vicinity of the suspected UST, BH1 and BH7; and the installation of a minimum of four groundwater monitoring wells, with at least one of the wells located adjacent to and down gradient of the suspected UST;
- Following completion of the additional investigation, a remedial action plan (RAP) should be prepared for the site. The RAP should be implemented during the proposed development works and a suitable site validation report should be prepared on completion of the remediation; and
- Prior to the demolition of any structures on site, a suitably qualified asbestos consultant should be engaged to undertake a hazardous building materials survey of the buildings. The demolition works should be undertaken appropriately based on the findings of the survey.

3.4 Waste Service Infrastructure

The sewerage infrastructure upon the subject site comprises several lines from the above ground infrastructure to a discharge line on the western end of the southern boundary (refer to Attachment 10). The sewerage infrastructure upon Lot 2 of DP 549570 comprises several lines at the western end of the aboveground infrastructure that discharges to a main upon Tennyson Road.

3.5 Search for Schedule 11 Hazardous Chemicals

A search for Schedule 11 Hazardous Chemicals records associated with the subject site was not undertaken as part of this Phase 1 ESA. Historical dangerous goods licensing information associated with the immediately neighbouring Lot 2 of DP 549570 suggests use of underground storage tanks to store petrol (12,000 litre [L] tank in a central area of the site) and mineral spirit (2,000 L tank in a southern area of the site) ceased in 1992 (refer to Attachment 11).

4 ENVIRONMENTAL SETTING

4.1 TOPOGRAPHY AND DRAINAGE

The following summary inferred based upon review of aerial photography, elevation data and contour map information provided by Google Earth (2015):

- The subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 is covered in concrete / asphalt hardstand with the exception of small landscaped areas. On that basis infiltration to the underlying fill horizon at the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330 is likely to be very limited;
- Surface drainage across the subject site and Lot 2 of DP 539330 is likely to be in north to south direction as result of a fall in elevation of approximately 50 to 52 m AHD on the Victoria Road boundary of Lot 2 of DP 539330 to approximately 35 to 36 m AHD on the southern boundary of the subject site;
- Lot 2 of DP 549570 represents a topographic depression both in relation to Lot 2 of DP 539330 (approximately 49 m AHD down to 37 m AHD on the northern boundary of Lot 2 of DP 549570) and in relation to the subject site (approximately 34 m AHD to 36 m AHD on the southern boundary of Lot 2 of DP 549570). On that basis Lot 2 of DP 549570 is likely to receive run-off from both Lot 2 of DP 539330 and the subject site; and
- There is a drop of approximately 1 to 2 m between the subject site and the residential properties to the south and east, suggesting a fill horizon was used to establish current site levels.
- The nearest surface water bodies to the subject site is Glades Creek located 520 metres south of the site, and Grove Creek located 600 metres south-west of the site.

4.2 GEOLOGY AND SOILS

4.2.1 Geology

Based on the geological mapping information (GSNSW 1983; Chapman and Murphy 1989), the subject site is underlain by the Wianamatta Group Ashfield Shale and the Bringelly Shale formations. The Ashfield Shale is comprised of laminate and dark grey shale while the Bringelly Shale consists of shale, calcareous claystone, laminate, fine to medium grained lithic-quartz sandstone.

4.2.2 Probable Subject Site Strata

Although an intrusive investigation was not part of the scope of this Phase 1 ESA, the following can be inferred from the intrusive investigation of Lot 2 of DP 549570 (EIS 2012) and natural soil mapping information (Chapman and Murphy 1989):

- A fill horizon will be present as it would have been required to achieve current site levels upon the underlying natural north to southern sloping terrain. Assuming similarity with the immediately neighbouring Lot 2 of DP 549570 (which has a similar site history) it is likely to comprise a mixture of sandy gravels, sand, clay and crushed shale and be up to 1 to 2 metres thick (based upon relative levels of the subject site and the residential properties to the south and east;
- If any natural soils are present they would underlie the fill and possibly comprise the following (Chapman and Murphy 1989):

- Hardsetting brown clay loam (gn2): commonly a clay loam to find sandy clay loam with an a pedal massive or weakly pedal structure and an earthy or porous, rough-faced ped fabric; sub-angular blocky; pH ranges from strongly acidic (pH 4.0) and moderately acidic (pH 6.0);
- Whole coloured, reddish-brown (gn3): medium clay with strongly pedal structure and smooth-faced, dense, pedal fabric; sub-angular blocky or polyhedral; pH ranges from strongly acidic (pH 4.0) and moderately acidic (pH 5.5); and
- Mottled grey plastic clay (gn4): grey mottled, medium to heavy clay with strongly pedal structure and dense, smooth ped fabric; sub-angular blocky; strongly acidic (pH 4.0) and moderately acidic (pH 5.0).

> The fill horizon and natural soils (if present) would overlie shale bedrock of similar composition to that encountered upon Lot 2 of DP 549570 (i.e. fine and medium grained sandstone, generally slightly weathered or fresh and with a low probability of encountering groundwater for several metres).

4.2.3 Occurrence of Acid Sulfate Soils

According to regional acid sulphate soil mapping information (NSW L&W 1997) suggests a low probability of encountering acid sulfate soils.

According to the Ryde Local Environmental Plan acid sulphate soil mapping information (Ryde LEP 2014a), the south-west corner of the subject site is a Class 5 acid sulfate soil area (refer to Figure 6).

A Class 5 acid sulfate soil area pertains to making Council aware of dewatering activities that are likely to lower the water table of Class 1, 2, 3 or 4 acid sulfate soil areas. This is not likely to be an issue of concern at the subject site or Lot 2 of DP 549570 as the underlying bedrock is at elevation well above 5 m AHD and is not likely to require dewatering as per the currently proposed concept plan (i.e. groundwater is absent for at least the depth of the cut into the bedrock required by the proposed basement).

4.3 Hydro-geology and Beneficial Groundwater Use

The following key aspects can be inferred from the intrusive investigation of Lot 2 of DP 549570 (EIS 2012) and drainage (refer to Section 4.1);

> Limited perched water flow in the fill horizon as a result of a predominance of hardstand areas upon the subject site, Lot 2 of DP 549570 and Lot 2 of DP 539330;

> A relative absence of groundwater within the underlying bedrock to at least the depth of the cut into the bedrock required by the proposed concept plan basement;

> The bedrock is likely to represent an aquitard to perched water within the fill horizon as a result of its observed competence (EIS 2012) and the typically very low hydraulic conductivity of fine grained sandstones and shale (Domenico and Schwartz 1990);

A search of the Department of Primary Industries (DPI) Office of Water (2016) was undertaken on 24 May 2017 for bores in the vicinity of the subject site. Eleven registered bores were located within 500 metres of the subject site. The eleven registered bores are: GW108361, GW108362, GW108363, GW108364, GW108365, GW108366, GW108367, GW109573, GW109574, GW109575 and GW109576. All of the registered bores are located southeast of the site, with the exception of GW108366 which is located northeast of the site. All the registered bores are registered for monitoring purposes only. Four of the eleven registered bores have an active license status while the remaining bores are cancelled. There are

no records of bore construction or groundwater use. As such, it can be concluded that the groundwater in the vicinity of the subject site is not used for beneficial groundwater use.

4.3.1 Surface Water

Surface water bodies are not identified on the subject site, and are not expected to appear due to the location and current use of the subject site. The nearest surface water bodies to the subject site is Glades Creek located 520 metres south of the site, and Grove Creek located 600 metres southwest of the site.

Lot 2 DP 539330 (north of the site) has a higher elevation than the subject site, by approximately 10 to 15 metres. It is expected that majority of surface runoff from Lot 2 DP 539330 would flow off the hardstand areas and building roofs, and enter the regional stormwater infrastructure located on Farm Street and Tennyson Road. However, some runoff may enter the subject site due to the regional topography.

5 CHARACTERIZATION OF POTENTIAL CONTAMINATION ISSUES

The following sections are based upon site historical information (Section 3) and environmental setting information (Section 4) as a detailed site inspection of the subject site was not undertaken as part of this investigation.

5.1 PAST OR CURRENT ACTIVITIES THAT MAY HAVE CONTAMINATED THE SUBJECT SITE

The following past or current activities that may have contaminated the subject site comprise:

- Presence of a fill horizon using materials of unknown origin to establish current site levels;
- Historical activities associated with the following industrial operations:
    - Brickworks (1920s until late 1940s) – operation of vehicle maintenance facilities (e.g. lubricant and fuel storage) and use of additives for kilning of the bricks (e.g. manganese and barium salts);
    - Shoe machinery and shoe material manufacturing (late 1940s until late 1960s) – machinery manufacturing (cleaning solvents, storage of fuels and lubricants), shoe material manufacturing (e.g. various solvents associated with plastics, rubbers and polymers and adhesives) and operation of vehicle maintenance facilities (e.g. lubricant and fuel storage). Fuels, lubricants and solvents may have been stored in bulk in above or below ground storage tanks;
    - Painting equipment manufacturing (late 1960s until 1990s – manufacturing of brushes, rollers and paint trays (e.g. various solvents associated with plastics, rubbers and polymers and adhesives) and operation of vehicle maintenance facilities (e.g. lubricant and fuel storage). Fuels, lubricants and solvents may have been stored in bulk in above or below ground storage tanks;
    - Current light commercial activities (storage of small volumes of cleaning solvents, adhesives and sealant chemicals);
- Use of water treatment infrastructure for off-site discharge to sewer or storm water (possible but unconfirmed use from the 1950s until the 1990s) (e.g. treatment of residual amounts of solvents, fuels, lubricants and factory floor run-off);
- Operation and maintenance of an electrical substation (leased to Sydney County Council) located close to the western boundary (based upon design appearance has been present from 1960s/1970s until current day);
- Demolition of aboveground structures that may have been made of asbestos (e.g. redevelopment of the subject site and immediately surrounding sites: late 1940s / early 1950s, late 1960s / early 1970s and in the 1990s).

5.2 AREAS OF CONCERN (AOC) AND CONTAMINANTS OF POTENTIAL CONCERN (COPC)

Table 2 provides a summary of AOC and COPC for the subject site. It is based upon the fore mentioned activities that may have contaminated the subject site.

Table 2: AOC and COPC

Past or Current Activities that have Possibly Contaminated the Site	Areas of Concern (AOC)	Contaminants of Potential Concern (COPC)
Fill horizon using materials of unknown origin.	Across the whole subject site and off-site up gradient areas to the north (e.g. Lot 2 of DP 549570 and Lot 2 of DP 539330) - underlying concrete / asphalt hardstand and overlying bedrock.	Heavy metals, petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs), pesticides (e.g. OCPs and OPPs) and asbestos.
Brickworks (1920s until late 1940s) – operation of vehicle maintenance facilities (e.g. lubricant and fuel storage) and use of additives for kilning of the bricks (e.g. manganese and barium salts).	Not possible to clearly identify. If residual impacts are present most likely within fill horizon that underlies hardstand and overlies bedrock. Across the whole site and off-site up gradient areas to the north (e.g. Lot 2 of DP 549570 and Lot 2 of DP 539330).	Petroleum hydrocarbons and metals such as manganese and barium
Shoe machinery and shoe material manufacturing (late 1940s until late 1960s) and other immediately surrounding commercial operations – machinery manufacturing (cleaning solvents, storage of fuels and lubricants), shoe material manufacturing (e.g. various solvents associated with plastics, rubbers and polymers and adhesives) and operation of vehicle maintenance facilities (e.g. lubricant and fuel storage). Fuels, lubricants and solvents may have been stored in bulk in above or below ground storage tanks.	Not possible to clearly identify. If residual impacts are present most likely within fill horizon that underlies hardstand and overlies bedrock with particular note to locations of formerly operating USTs (presence/absence of historical USTs has yet to be confirmed). Across the whole subject site and off-site up gradient areas to the north (e.g. Lot 2 of DP 549570 and Lot 2 of DP 539330).	Petroleum hydrocarbons and volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs)

Table 2: AOC and COPC

Past or Current Activities that have Possibly Contaminated the Site	Areas of Concern (AOC)	Contaminants of Potential Concern (COPC)
Painting equipment manufacturing (late 1960s until 1990s) and other immediately surrounding commercial operations – manufacturing of brushes, rollers, paint trays (e.g. various solvents associated with plastics, rubbers and polymers and adhesives) and operation of vehicle maintenance facilities (e.g. lubricant and fuel storage). Fuels, lubricants and solvents may have been stored in bulk in above or below ground storage tanks.	Not possible to clearly identify. If residual impacts are present most likely within fill horizon that underlies hardstand and overlies bedrock with particular note to locations of formerly operating USTs (presence/absence of historical USTs has yet to be confirmed). Across the whole subject site and off-site up gradient areas to the north (e.g. Lot 2 of DP 549570 and Lot 2 of DP 539330).	Petroleum hydrocarbons and volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs)
Current light commercial activities (storage of small volumes of cleaning solvents, adhesives and sealant chemicals).	Storage areas upon hardstand within light commercial buildings.	Volatile and semi-volatile organic solvents
Use of water treatment infrastructure for off-site discharge to sewer or storm water (possible but unconfirmed use from the 1950s until the 1990s) (e.g. treatment of residual amounts of solvents, fuels, lubricants and factory floor run-off).	Former water treatment infrastructure (not possible to clearly identify), subsurface sewerage infrastructure that runs to a discharge line on the western end of the southern boundary and the fill horizon in the immediate vicinity.	Petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs)

Table 2: AOC and COPC

Past or Current Activities that have Possibly Contaminated the Site	Areas of Concern (AOC)	Contaminants of Potential Concern (COPC)
Operation and maintenance of an electrical substation (leased to Sydney County Council) located close to the western boundary (based upon design appearance has been present from 1960s/1970s until current day)	Surface soils that immediately underlie and surround the electrical substation.	PCBs
Demolition of aboveground structures that may have been made of asbestos (e.g. redevelopment of the subject site: late 1940s / early 1950s and late 1960s / early 1970s)	The fill horizon across the whole site (underlying concrete / asphalt hardstand and overlying bedrock).	Asbestos

5.3 LAND USE IMPLICATIONS

5.3.1 Current Land Uses

The current land use/s of the subject site do not represent a significant risk of harm to human health or the environment in relation to the AOC and COPC that have been identified as part of this Phase 1 ESA based upon the following lines of evidence:

- Storage of cleaning solvents, adhesives and sealant chemicals for current light commercial operators upon the subject site is limited to small volumes that are stored upon hardstand;
- The importation of fill of unknown origin occurred late 1940s / early 1950s and late 1960s / early 1970s and since that time has remained relatively undisturbed and covered by concrete / asphalt hardstand (i.e. the only areas that may have been disturbed in the last 40 years would be associated with the installation of sub-surface pipe work and or building footings);
- Human occupation of the subject site over the last 20 years has been limited to light commercial land use with no direct exposure to the fill horizon;
- Absence of persistent primary sources of fuels, lubricants, volatile and semi-volatile organic solvents in the fill horizon:
    - If bulk chemical storage of fuels, lubricants, volatile and semi-volatile organic solvents (either in aboveground storage tanks or USTs) did occur at the subject site or at Lot 2 of DP 549570 or at Lot 2 of DP 539330 this would have most likely ceased in the early 1990s. Although neither a inspection or search for Schedule 11 Hazardous Chemicals was undertaken for the subject site or adjacent sites, this assumption is reasonable based upon the following lines of evidence:
        - Painting equipment manufacturing could have only occurred up until 1995 (i.e. when lands owned by Rota Cota Pty Ltd were transferred);
        - Current light commercial activities upon the subject site only require storage of small volumes of cleaning solvents, adhesives and sealant chemicals;
        - Historical dangerous goods licensing information associated with the immediately neighbouring Lot 2 of DP 549570 (which has a site history very similar to the subject site) suggests use of underground storage tanks for storage of fuels and mineral spirits ceased in 1992.
    - If water treatment infrastructure for off-site discharge to sewer or storm water was present at the subject site or at Lot 2 of DP 549570 or at Lot 2 of DP 539330 this would have most likely ceased in the early 1990s. This is supported by the following lines of evidence:
        - Painting equipment manufacturing could have only occurred up until 1995 (i.e. when lands owned by Rota Cota Pty Ltd were transferred); and
        - Current light commercial activities upon the subject site do not require such infrastructure (i.e. where manufacturing activities occur they are limited to product assembly and warehousing).
- Sampling and laboratory test work upon Lot 2 of DP 549570 (which has a site history very similar to the subject site) suggests the following:

- An absence of gross contamination of petroleum hydrocarbons, volatile and semi-volatile organic solvents, pesticides or metals in either the fill horizon or the underlying bedrock. This site is located immediately adjacent to the subject site and its fill horizon is a potential receiver of mobile gross contamination from the subject site and Lot 2 of DP 539330 as it is located in a former quarry pit (i.e. is topographically depressed relative to the other sites);
- An absence of either observed of laboratory detectable levels of asbestos.

> The electrical substation (leased to Sydney County Council) located close to the western boundary appears to be in relatively good condition and if surface soils were impacted by PCBs, impacted volumes are likely to be limited to shallow soils within the immediate footprint of the electrical substation;

> There are no beneficial groundwater uses within 500 metres of the subject site (i.e. no groundwater wells used for either agriculture or drinking water);

> There are no natural surface water bodies within 500 metres of the subject site; and

> Although a ground water investigation has not been undertaken in relation to the subject site or Lot 2 of DP 549570 and it is unknown whether a groundwater investigation has been undertaken in relation to Lot 2 of DP 539330, groundwater flow in the vicinity of the subject site is likely to be limited by the following aspects in terms of potential down gradient reception:

- Concrete / asphalt hardstand that covers most of the site will significantly limit infiltration to groundwater. This was supported by an observed absence of groundwater in the fill upon Lot 2 of DP 549570 (EIS 2012); and
- Water within the fill horizon is likely to be confined by the underlying bedrock unit is likely to have very low hydraulic conductivity (i.e. as it is comprised of competent sandstones and shales). This was supported by an observed absence of groundwater in the bedrock up to a depth of 10.2 m BGL upon Lot 2 of DP 549570 (EIS 2012).

5.3.2 Change of zoning from IN2 Light Industrial to B7 Business Park

Change of zoning from IN2 Light Industrial to B4 Mixed Use does not change the risk profile associated with the site, specifically risk of harm to human health or the environment based upon the following lines of evidence:

> The subject site is currently zoned IN2 Light Industrial and current land use/s have been evaluated as not representing a significant risk of harm to human health or the environment;

> The nature of the proposed concept plan will require removal of all fill in the vicinity of the basement car parking area and the lowest residential units. Additionally, surrounding areas would comprise a mixture of hardstand pavement and landscaped areas (levels established via importation of clean engineered fill and landscaping soils);

> Even if the COPC were encountered at the site, significant risk of harm to human health or the environment could be readily mitigated (i.e. delineation and removal of impacted soils and or perched groundwater to an appropriately NSW EPA licensed waste facility); and

> All newly proposed land uses and or developments must be approved by Council as part of the planning approval process under the EP&A Regulations 2000.

6 CONCLUSIONS AND RECOMMENDATIONS

Review of the site history, environmental setting and site inspection has identified the following AOC and COPC:

- Fill horizon in relation to several sources of COPC:
  - Use of uncontrolled fill - heavy metals, petroleum hydrocarbons, volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs), pesticides (e.g. OCPs and OPPs) and asbestos;
  - Brickworks (1920s until late 1940s) with probable operation of vehicle maintenance facilities (e.g. lubricant and fuel storage) and use of additives for kilning of the bricks (e.g. manganese and barium salts) - Petroleum hydrocarbons and metals such as manganese and barium;
  - Shoe machinery and shoe material manufacturing (late 1940s until late 1960s) and other commercial operators at the subject site and surrounding sites had fuels, lubricants and solvents stored in bulk in above or below ground storage tanks and are likely to have had water treatment infrastructure with discharge lines running through the fill horizon - petroleum hydrocarbons and volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs);
  - Painting equipment manufacturing (late 1960s until 1990s – manufacturing of brushes, rollers and paint trays) and other commercial operators at the subject site and surrounding sites had fuels, lubricants and solvents stored in bulk in above or below ground storage tanks and are likely to have had water treatment infrastructure with discharge lines running through the fill horizon - petroleum hydrocarbons and volatile and semi-volatile organic solvents (e.g. BTEX, VOCs and PAHs).
  - Demolition of aboveground structures that may have been made of asbestos that may have impacted exposed fill (e.g. redevelopment of the subject site: late 1940s / early 1950s, late 1960s / early 1970s and in the 1990s).
- Operation and maintenance of an electrical substation (leased to Sydney County Council) located close to the western boundary (based upon design appearance has been present from 1960s/1970s until current day) – PCBs; and
- Current light commercial activities (storage of small volumes of cleaning solvents, adhesives and sealant chemicals upon hardstand areas) - volatile and semi-volatile organic solvents.

Current land use/s of the subject site do not represent a significant risk of harm to human health or the environment based (refer to Section 5.3.1 for detail).

Change of zoning from IN2 Light Industrial to B4 Mixed Use does not change the risk profile associated with the site, specifically risk of harm to human health or the environment based upon the following lines of evidence:

- The subject site is currently zoned IN2 Light Industrial and current land use/s have been evaluated as not representing a significant risk of harm to human health or the environment;

- The nature of the proposed concept plan will require removal of all fill in the vicinity of the basement car parking area and the lowest residential units. Additionally, surrounding areas would comprise a mixture of hardstand pavement and landscaped areas (levels established via importation of clean engineered fill and landscaping soils);
- Even if the COPC were encountered at the site, significant risk of harm to human health or the environment could be readily mitigated (i.e. delineation and removal of impacted soils and or disposal of perched groundwater to an appropriately NSW EPA licensed waste facility); and
- All newly proposed land uses and or developments must be approved by Council as part of the planning approval process under the EP&A Regulations 2000.

On that basis the subject site is suitable for rezoning to B4 Mixed Use in accordance with Clause 6 of SEPP 55.

It should be noted the following should be undertaken prior to development of the subject site:

- Detailed visual inspection and where necessary use of ground penetrating radar survey to confirm the presence / absence of USTs and subsurface water treatment infrastructure at the subject site;
- Removal of all USTs as per relevant guidelines (DECCW 2009);
- A Phase 2 ESA that seeks to further qualify key risks associated with earthworks and management of soils and groundwater. It should be undertaken in accordance with all relevant guidelines under the CLM Act and as a minimum the sampling and analysis plan must qualify the nature and extent of soil and groundwater contamination that maybe associated with the fore mentioned AOC and COPC; and
- Results of the Phase 2 ESA can then be utilized to inform the Construction Environmental Management Plan (CEMP) for the development in a manner that complies with both SEPP 55 and the POEO Act (e.g. inform characterization of spoil for offsite disposal to a NSW EPA licensed land fill).

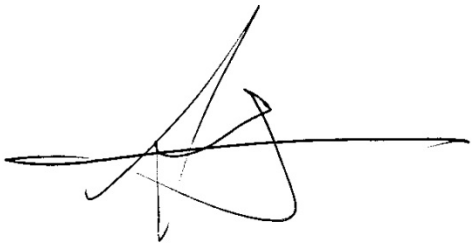
7 CLOSURE

This report presents the findings of a Phase 1 ESA for 14 Tennyson Road, Gladesville, NSW.

I trust that this information satisfies your requirements. If you require any further assistance, please do not hesitate to contact me by telephone on 0407 390 585 or by email at andrew.botfield@snclavalin.com.

Yours sincerely

SNC-LAVALIN AUSTRALIA PTY LTD



Andrew Botfield

PhD Environmental Engineering

Principal Geoscientist and Geochemistry Specialist

8 REFERENCES

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FIGURES

LOCATION PLAN
SCALE 1:250,000

LEGEND

SITE BOUNDARY

NOTES

1. IMAGERY FROM GOOGLE EARTH.

REVISIONS

REV	DATE	DESCRIPTION	DRN	APP
0	-	-	-	-

REFERENCE DRAWINGS

DWG No	DESCRIPTION
-	-

1:250,000 0 2.5 5 7.5 10 km

1:1,500 0 10 30 50 m

SNC·LAVALIN

CLIENT
JOANDARC REALTY

PROJECT LOCATION
14 TENNYSON ROAD,
GLADESVILLE, NEW SOUTH WALES

TITLE
SUBJECT SITE LOCATION

DES BY	KN	DRN BY	EO	DATE	2017 05 30	FIG No 1	REV 0
CHK BY	KN	APP BY	KN	DWG No	140354		11X17

G:\CADD_Data\Katrina - Australia\140354.dwg

Figure 2: Aerial View of Subject Site from Northeast (Grimshaw 2017)

Figure 3: Site Cross Section (Grimshaw 2017)

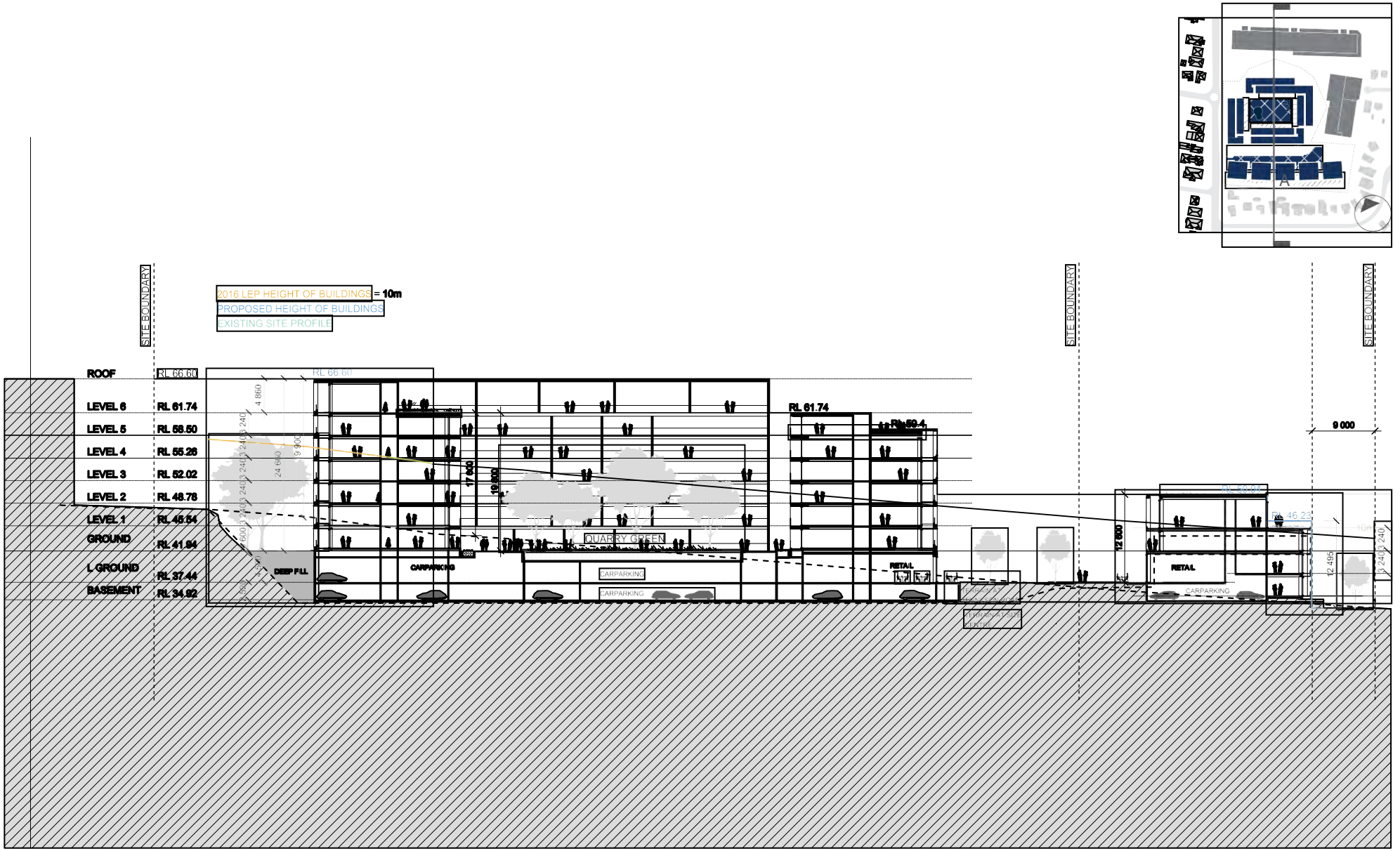


Figure 4: Land Zoning Map (Excerpt from Ryde 2014)

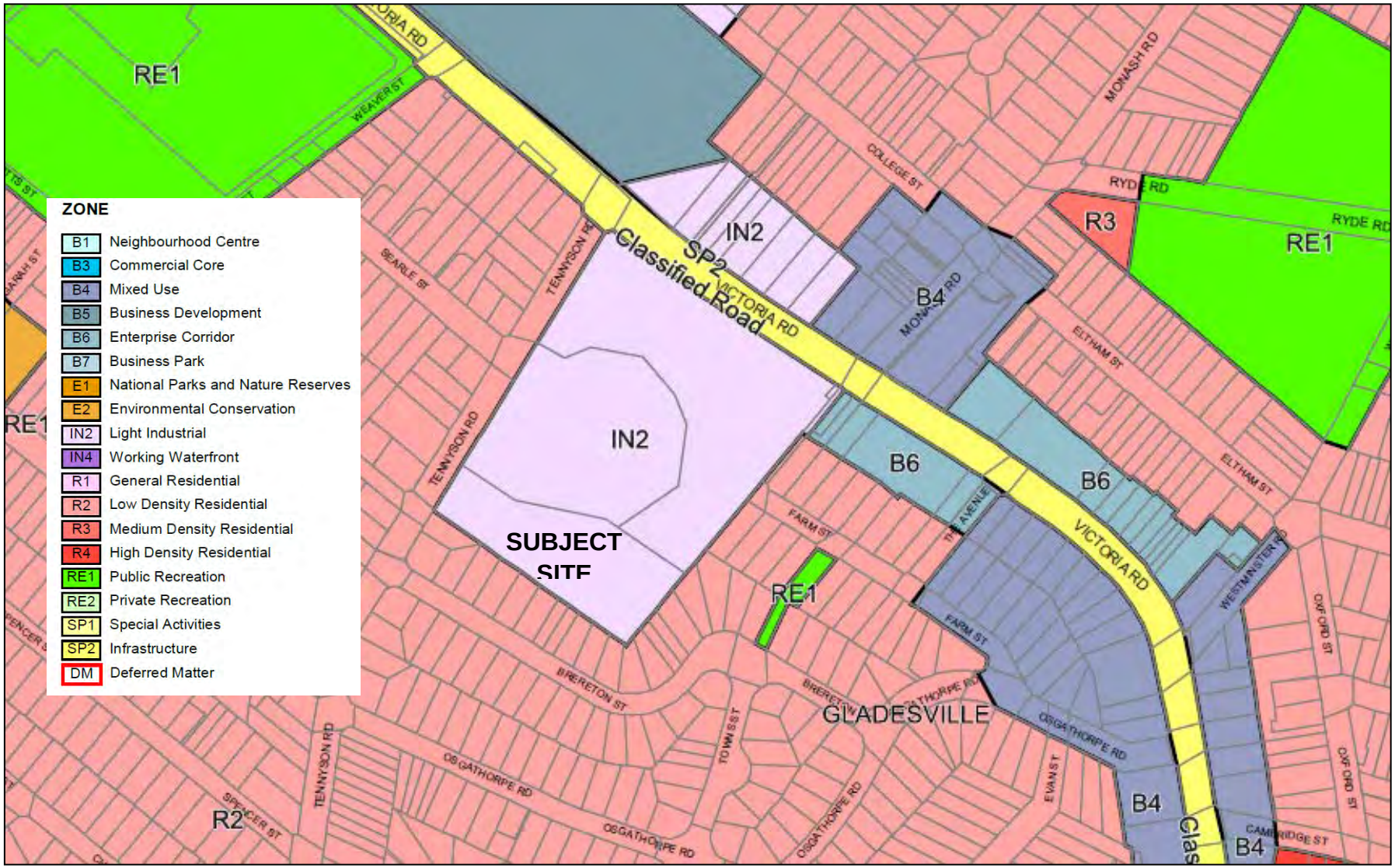


Figure 5: Contaminated Sites Surrounding the Subject Site (Google Maps 2017)

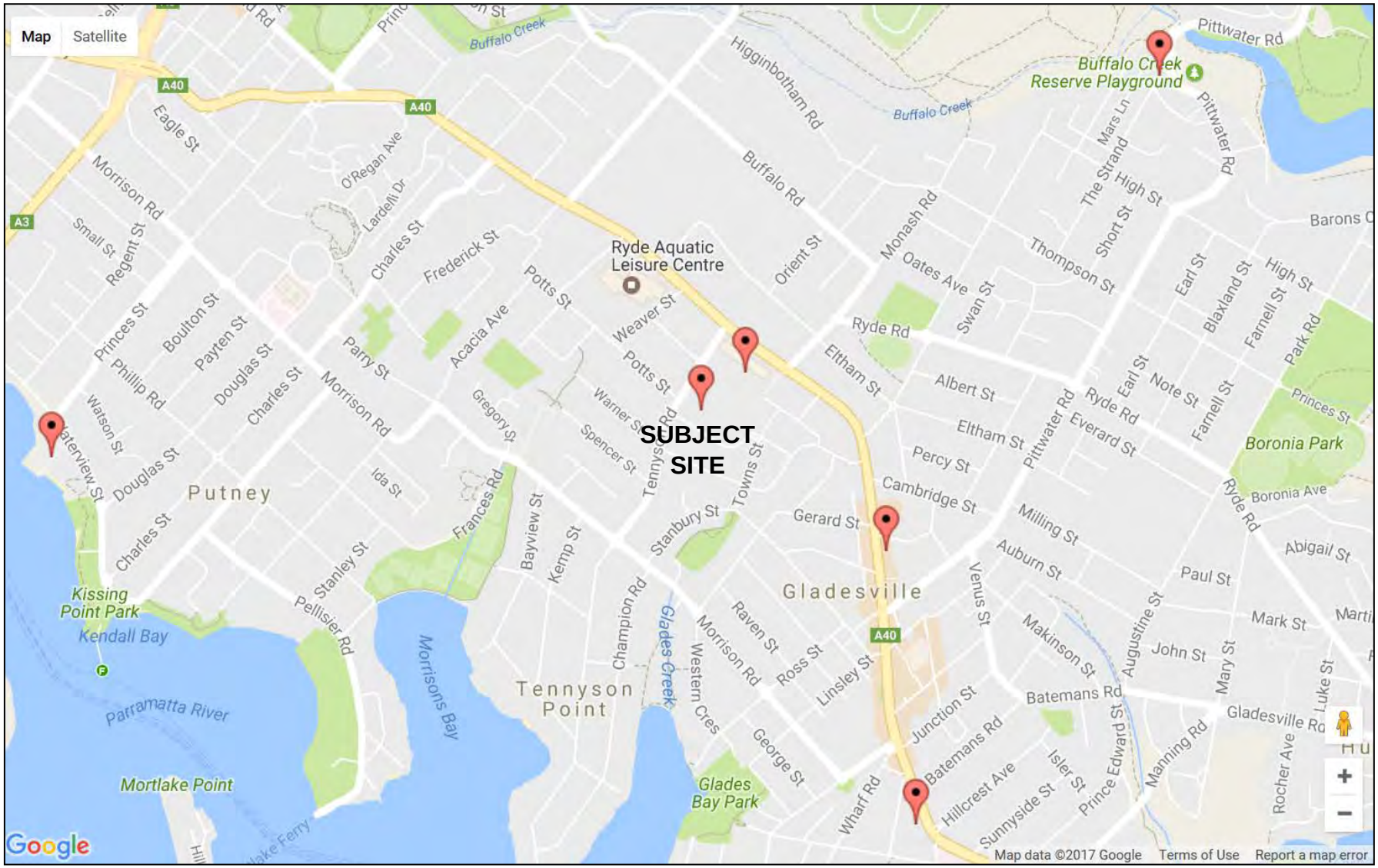
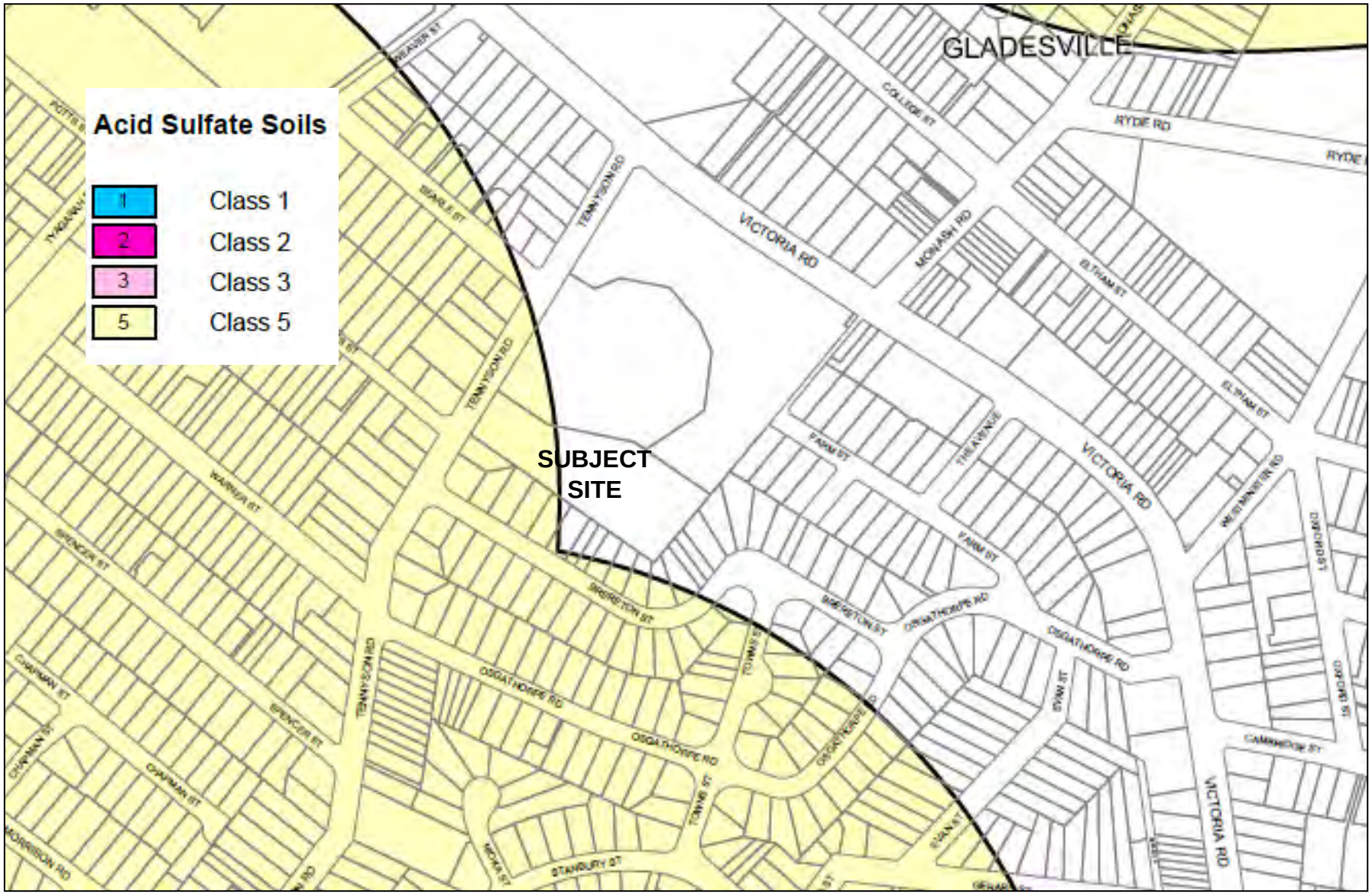


Figure 6: Acid Sulfate Soil Map (Excerpt from Ryde 2014a)



ATTACHMENT 1 – LAND TITLE AND CADESTRAL MAPS

Land & Property Information

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

COMPUTER FOLIO REFERENCE	
1/549570	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
9	24/1/2017

No. 53

Search certified to:
24/5/2017 11:17 AM

LAND

LOT 1 IN DEPOSITED PLAN 549570
AT GLADESVILLE
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP549570

FIRST SCHEDULE

W LATHAM & CO PTY LIMITED (CN AK812261)

SECOND SCHEDULE (7 NOTIFICATIONS)
---
1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP549570 EASEMENT TO DRAIN WATER AFFECTING THE EXISTING LINES OF PIPES
3 DP549570 EASEMENT TO DRAIN SEWAGE AFFECTING THE EXISTING LINES OF PIPES
4 N655271 LEASE TO THE SYDNEY COUNTY COUNCIL OF SUBSTATION PREMISES NO. 2628, TOGETHER WITH RIGHTS OF WAY AND EASEMENT FOR ELECTRICITY PURPOSES SHOWN IN ANNEXURE CLAUSE 9. EXPIRES: SEE DEALING.

* AK971351 LEASE OF LEASE N655271 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).

* AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC

END OF PAGE 1 - CONTINUED OVER

SECOND SCHEDULE (7 NOTIFICATIONS) (CONTINUED)

ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1

* AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY SERVICES PTY LTD

* AK971571 CHANGE OF NAME AFFECTING LEASE N655271 LESSEE NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING CORPORATION

5 AK473288 LEASE TO VENUS WINDOW FASHIONS PTY LTD OF UNIT 3, 14 TENNYSON RD, GLADESVILLE. EXPIRES: 31/3/2019. OPTION OF RENEWAL: 3 YEARS AND A FURTHER OPTION OF 3 YEARS.

6 AK812285 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

7 AM99153 LEASE TO PASCO CONSTRUCTION SOLUTIONS (NSW) PTY LTD OF UNIT 4, 14 TENNYSON ROAD, GLADESVILLE. EXPIRES: 30/6/2019. OPTION OF RENEWAL: 3 YEARS (AND 1 FURTHER OPTION OF 3 YEARS).

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

NSW Land & Property Information

Cadastral Records Enquiry Report

Ref : BOX 97 - GLADESVILLE

Requested Parcel : Lot 2 DP 549570

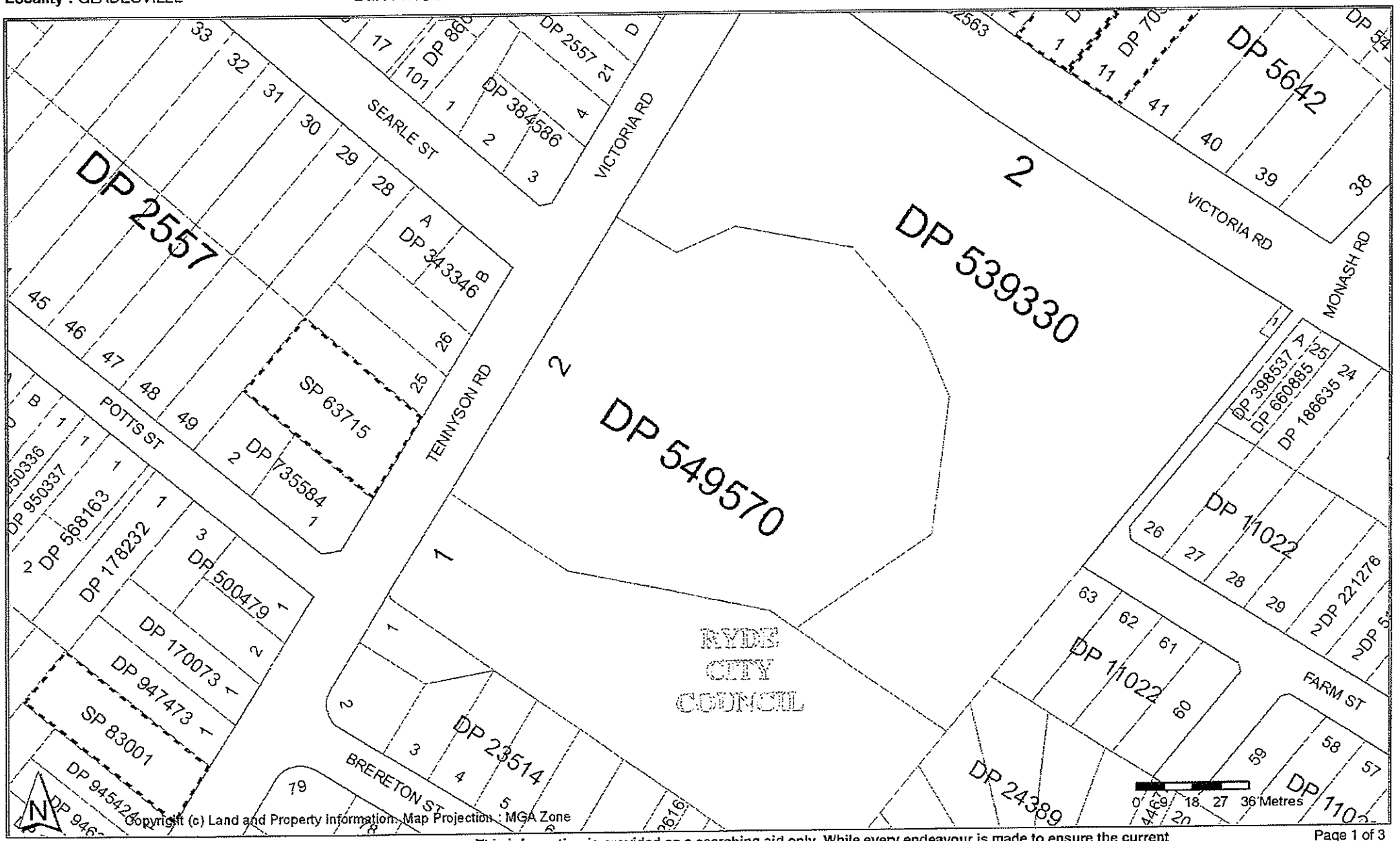
Identified Parcel : Lot 2 DP 549570

Locality : GLADESVILLE

LGA : RYDE

Parish : HUNTERS HILL

County : CUMBERLAND



Report Generated 11:52:06 AM, 17 September, 2012

This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

ATTACHMENT 2 – COUNCIL LETTER REGARDING GATEWAY DETERMINATION

City of Ryde

Lifestyle and opportunity @ your doorstep

Ms Joandarc Khouzame
Director Darcsol Pty Ltd
PO BOX 1411
NEWTOWN 2042

18 May 2017

LEP2013/15/004

Dear Ms Khouzame

Planning Proposal 2-14 Tennyson Road Gladesville
(Department Ref PP_2016_RYDEC_002_00)

You are advised that the Department of Planning and Environment on the 11 May 2017 issued an Alteration of Gateway Determination for the subject Planning Proposal. The alterations included replacing Condition 1 of the Gateway Determination issued on the 21 April 2016 and extending the time for the LEP to be completed until 28 April 2018. .

A copy of the Alteration of the Gateway Determination is enclosed for your information.

Condition 1 of the Alteration of the Gateway Determination requires prior to community consultation that the Planning Proposal be updated to comply with the following:

- A maximum floor space ratio of 1.85:1 at 2-12 Tennyson and 1:1 at 14 Tennyson Road
- A maximum building height of RL66.60 at 2 – 12 Tennyson Road and RL50.04 at 14 Tennyson Road
- Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones
- Demonstrate consistency with a Plan for Growing Sydney and the draft North District Plan
- Include maps prepared to the Department of Planning and Environments standards.

You are advised that to satisfy the Gateway Determination it will be necessary to submit to Council an amended Planning Proposal that complies with the

conditions of the Gateway Determination of the 21 April 2016 and as amended by the Alteration of Gateway Determination issued on the 11 May 2017.

As you have been previously advised it is also necessary for a contamination report of the property 2 – 12 and 14 Tennyson Road Gladesville to be undertaken prior to exhibition.

Should you have any enquiries regarding the above please contact Susan Wotton –Strategic Planner on 9952 8204.

Yours sincerely

Lexie Macdonald
Senior Co ordinator Strategic Planning

NSW GOVERNMENT | Planning & Environment

Alteration of Gateway Determination

Planning proposal (Department Ref: PP_2016_RYDEC_002_00)

I, the Deputy Secretary, Planning Services at the Department of Planning and Environment as delegate of the Greater Sydney Commission, have determined under section 56(7) of the *Environmental Planning and Assessment Act 1979* (the Act) to alter the Gateway determination dated 21 April 2016 for the proposed amendment to the Ryde Local Environmental Plan 2014 as follows:

1. Delete condition 1 and replace with a new condition 1:

    1. Prior to community consultation, the planning proposal is to be updated to:
        (a) apply a maximum floor space ratio of 1.85:1 at 2-12 Tennyson Road and 1:1 at 14 Tennyson Road;
        (b) apply a maximum building height of RL 66.60 at 2-12 Tennyson Road and RL 50.04 at 14 Tennyson Road;
        (c) address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones;
        (d) demonstrate consistency with *A Plan for Growing Sydney* and the draft North District Plan; and
        (e) include maps prepared to the standards identified in *Standard Technical Requirements for Spatial Datasets and Maps* (Department of Planning and Environment 2015).

2. Delete condition 6 and replace with a new condition 6:

    6. The LEP is to be completed by 28 April 2018.

Dated 11th day of May 2017

Marcus Ray
Deputy Secretary
Planning Services
Department of Planning and Environment

Delegate of the Greater Sydney Commission

ATTACHMENT 3 - HISTORICAL TITLE AND LAND TRANSFERS

Land & Property Information

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

No. 54

Search certified to: 24/5/2017 11:17AM

Computer Folio Reference: 1/549570

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 11700 FOL 42

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/7/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/8/1995	O462799	DISCHARGE OF MORTGAGE	
16/8/1995	O462800	TRANSFER	EDITION 1
28/6/2000	6887908	CHANGE OF NAME	
28/6/2000	6887909	LEASE	EDITION 2
14/9/2004	AA953897	MORTGAGE	EDITION 3
8/7/2005	AB611817	LEASE	EDITION 4
13/4/2012	AG923889	DISCHARGE OF MORTGAGE	
13/4/2012	AG923890	LEASE	EDITION 5
24/10/2014	AI980280	LEASE	EDITION 6
8/6/2016	AK474257	DEPARTMENTAL DEALING	
20/6/2016	AK473288	LEASE	EDITION 7
5/10/2016	AK812261	CHANGE OF NAME	
5/10/2016	AK812285	MORTGAGE	EDITION 8
24/1/2017	AM99153	LEASE	EDITION 9

END OF PAGE 1 - CONTINUED OVER

Land & Property Information

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

No. 54

Search certified to: 24/5/2017 11:17AM

Computer Folio Reference: 1/549570

Recorded	Number	Type of Instrument	C.T. Issue
28/2/2017	AK971351	LEASE	
28/2/2017	AK971352	SUB-LEASE	
28/2/2017	AK971502	MORTGAGE OF LEASE	
28/2/2017	AK971571	CHANGE OF NAME	
28/2/2017	AM33440	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

97-01T

TRANSFER

Real Property Act, 1900

O 462800 J

Office of State Revenue use only

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

1/549570

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
29X	HICKSON LAKEMAN & HOLCOMBE DX 309 BOX 29X REFERENCE (max. 15 characters): 953018 TRUEDOOR

(C) **TRANSFEROR** ROTA COTA PTY. LIMITED ACN 000 160 814

(D) acknowledges receipt of the consideration of $2,400,000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. Lse. N655271 2. ..... 3. .....

(F) **TRANSFEREE**

T

TRUEDOOR PTY. LIMITED ACN 067 109 111
of 11 Wells Street, Annandale.

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** 4th August, 1995

Signed in my presence by the Transferor who is personally known to me.

THE COMMON SEAL of ROTA COTA PTY. LIMITED was hereunto affixed in the presence of:

~~Signature of Witness~~

~~Name of Witness (BLOCK LETTERS)~~

~~Address of Witness~~

ROTA COTA PTY. LTD. A.C.N. 000 160 814 Common Seal

Secretary Director

~~Signature of Transferor~~

Signed in my presence by the Transferee who is personally known to

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

Solicitor for ~~Signature of~~ Transferee
Mr. A. Osburg

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

[redacted]

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

11700-42

Vol. 11700 Fol. 42

Appln. No. 13891

Prior Title Vol. 6977 Fol. 139

Edition issued 3-11-1971

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

SE SURD FOLIO

(Page 1) Vol. 11700 Fol. 42

ESTATE AND LAND REFERRED TO

S

Estate in Fee Simple in Lot 1 in Deposited Plan 549570 at Gladesville in the Municipality of Ryde Parish of Hunters Hill and County of Cumberland being part of Portion 130 granted to William Raven on 12-11-1799.

FIRST SCHEDULE

ROTA COTA PTY. LIMITED.

Registrar General.

SECOND SCHEDULE

GRY

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
M 2. Mortgage No.K795810 to Bank of New South Wales. Entered 14-9-1967.
– 3. ~~Mortgage No.L771822 to Bank of New South Wales Nominees Pty. Limited. Entered 24-3-1970.~~ Discharged V535154.
4. ~~Postponement of Mortgage No.L853287 whereby Mortgage No.L771822 is entitled in priority as if it had been registered before Mortgage No.K795810. Entered 24-6-1970.~~ Cancelled V535154.
EW 5. Easement to Drain Water affecting the existing lines of pipes shown in the plan hereon within the land above described created by the registration of Deposited Plan 549570 See M461405.
ES 6. Easement to drain sewage affecting the existing lines of pipes shown in the plan hereon within the land above described created by the registration of Deposited Plan 549570 See M461405.
7. ~~Easement for underground electricity cables appurtenant to the land above described created by the registration of Deposited Plan 549570. See M461405.~~ Released P144457
8. ~~Easement for electricity switchgear and cables appurtenant to the land above described created by the registration of Deposited Plan 549570. See M461405.~~ Released P144457
9. ~~Right of Carriageway 10 feet wide appurtenant to the land above described created by the registration of Deposited Plan 549570. See M461405.~~ Released P144457
10. ~~Right of Carriageway 4 feet wide appurtenant to the land above described created by the registration of Deposited Plan 549570. See M461405.~~ Released P144457

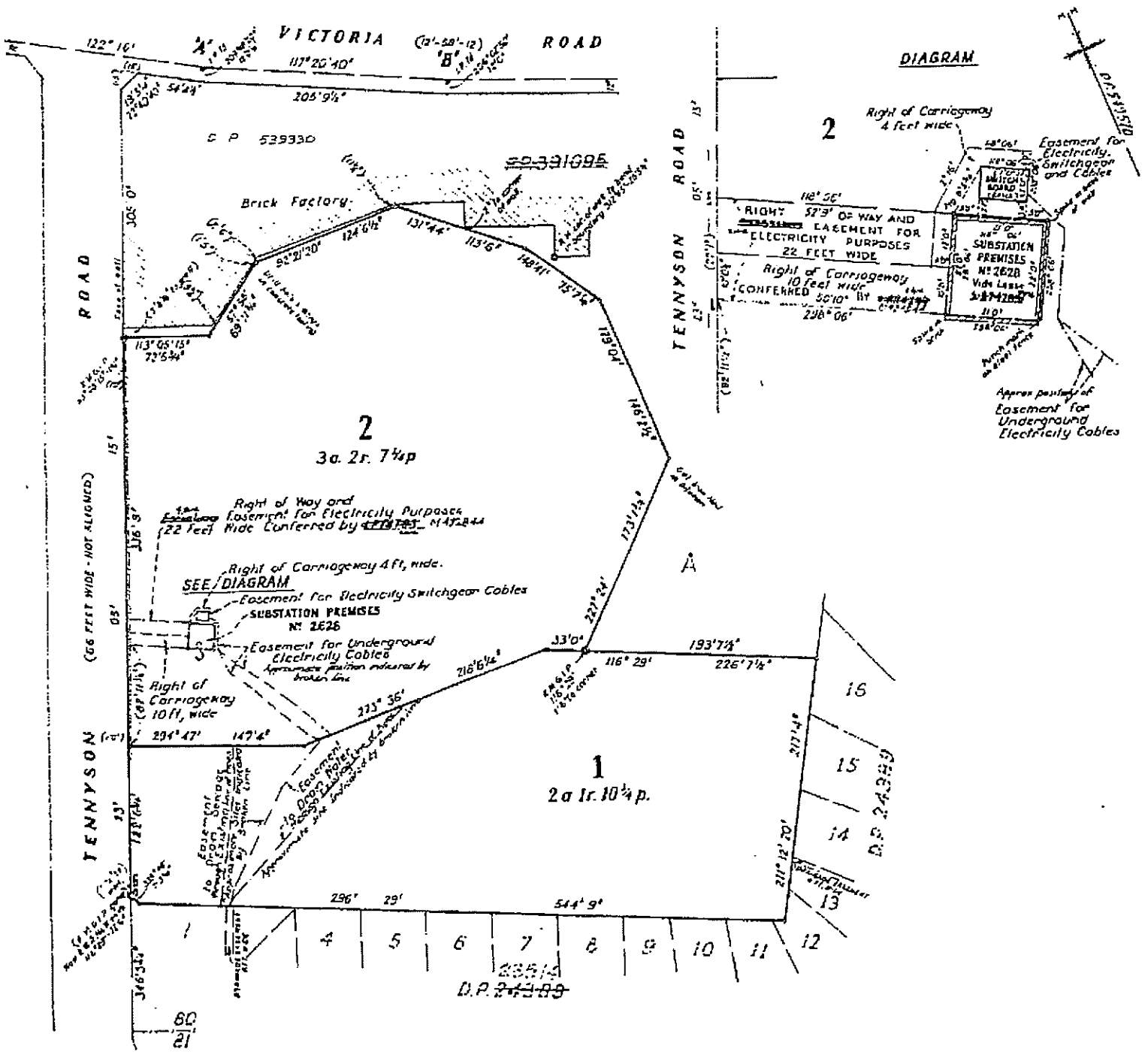
Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

Vol. 11700 Fol. 42



(Page 3 of 4 pages)

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
~~Lease~~	~~N655271 P~~	20-5-1973	~~of part together with rights to the Sydney County Council~~	~~20-3-1974~~	[signature]			
~~Transfer~~	~~P14457~~	~~[illegible]~~	~~Easement for Underground Electricity Cables, Easement for Electricity Switchgear Switchgear and Cables, Right of Carriageway 10 feet wide and Right of Carriageway 4 feet wide created by registration of M549570 are hereby released~~	~~15-11-1974~~				
~~Mortgage~~	~~L771822~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	[signature]	Cancelled	V535154	
~~Mortgage~~	~~S250887~~		to Bunting & Company Limited	~~28-1-1981~~	[signature]	Discharged	S979575	[signature]
~~L771822 Mortgage V21312 Transfer of Mortgage to Permanent Nominees (Aust) Limited. Registered 5-7-1984.~~					[signature]	Cancelled	V535154	

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

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FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
			SEE AUTO FOLIO					

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

ATTACHMENT 4 – SECTION 58 OF CLM ACT SEARCH RESULTS

Healthy Environment, Healthy Community, Healthy Business

Home Contaminated land Record of notices

Search results

Your search for:Suburb: GLADESVILLE

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.POEO public register

24 May 2017

Connect Feedback

Web suppo
Public cons

ATTACHMENT 5 – POEO ACT SEARCH

Healthy Environment, Healthy Community, Healthy Business

Exemptions from provisions of the POEO Act or Regulations

Notice number: Issued to:

Suburb: GLADESVILLE

LGA: Catchment:

Search Clear

returned 0 results

Healthy Environment, Healthy Community, Healthy Business

Prosecution search results

Your search for:**Party name -** Darcsol Pty Ltd

Search again Return to previous page

No records match your query.

24 May 2017

Healthy Environment, Healthy Community, Healthy Business

Search results

Your search for: **Pollution studies and reduction programs** with the following criteria

Suburb - GLADESVILLE

returned 0 result

Search Again

24 May 2017

Healthy Environment, Healthy Community, Healthy Business

Search results

Your search for: **POEO Licences** with the following criteria

Suburb - GLADESVILLE

returned 0 results

Search Again

Healthy Environment, Healthy Community, Healthy Business

Search results

Your search for: **Notices** with the following criteria

Notice type - Penalty Notice
Suburb - GLADESVILLE

returned 0 result

Search Again

Healthy Environment, Healthy Community, Healthy Business

Enforceable undertakings

Notice number: Issued to:

Suburb: GLADESVILLE

LGA: Catchment:

Search Clear

returned 0 results

Enforceable undertaking - the administrative power of the EPA to accept a written undertaking by a company or individual in relation to an actual or potential breach of the POEO Act, which is enforceable in the Land and Environment Court.

For more information, see the enforceable undertakings guidelines.

Click here to view the media release archives for enforceable undertakings.

Healthy Environment, Healthy Community, Healthy Business

Search results

Your search for: **Audit** with the following criteria

Suburb - GLADESVILLE

returned 0 result

Search Again

24 May 2017

Healthy Environment, Healthy Community, Healthy Business

Search results

Your search for: **Applications** with the following criteria

Suburb - GLADESVILLE

returned 0 result

Search Again

ATTACHMENT 6 – NSW EPA CONTAMINATED SITES REGISTER

List of NSW Contaminated Sites Notified to EPA as of 8 May 2017

Background

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

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

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

Where indications are that the nominated site is causing actual harm to the environment or an unacceptable offsite impact (i.e. it is a "significantly contaminated site"), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site.

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

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

Frequently asked questions

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

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

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

Why my site appears on the list?

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

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

Does the list contain all contaminated sites in NSW?

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

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

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

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2008.
- The contamination is being managed under a specifically tailored program operated by another agency (for example the Department of Industry and Investment's *Derelict Mines Program*).

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

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

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

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

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

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon,

particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

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

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

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

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

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

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

Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	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 being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process (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.

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
ABBOTSFORD	Former Gasworks	43 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85270604	151.126976
ABBOTSFORD	Former Gasworks	80-81 Wymston Pde and 35 and 41 St Albans STREET	Gasworks	Regulation under CLM Act not required	-33.85306653	151.1268142
ABBOTSFORD	Former Gasworks	82, 83, 84 Wymston Pde, & 37, 39, 43, 45 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288316	151.1267729
ABBOTSFORD	Former Gasworks	83 Wymston PARADE	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288351	151.1265979
ABBOTSFORD	Former Gasworks	85 Wymston PARADE	Gasworks	Regulation under CLM Act not required	-33.85265214	151.1266277
ABERDEEN	Former Transport Depot	87-89 St Andrew STREET	Other Industry	Regulation under CLM Act not required	-32.17160931	150.8972859
ALBION PARK	Caltex Albion Park Service Station	1 Calderwood ROAD	Service Station	Regulation under CLM Act not required	-34.57131362	150.7647971
ALBION PARK RAIL	Caltex Service Station	172-174 Princes HIGHWAY	Service Station	Under assessment	-34.56134097	150.7953663
ALBION PARK RAIL	Caltex Service Station	31 Princes HIGHWAY	Service Station	Under assessment	-34.55162786	150.7880626
ALBION PARK RAIL	Former Timber Storage Area	36 Rivulet CRESCENT	Other Industry	Regulation under CLM Act not required	-34.54872597	150.7899351
ALBURY	Mobil Depot, Railway Place Albury	1 Railway PLACE	Other Petroleum	Regulation under CLM Act not required	-36.08526805	146.9236999
ALBURY	Former Thales Australia site, Albury	161 Fallon STREET	Other Industry	Contamination currently regulated under CLM Act	-36.064966	146.9434831
ALBURY	Former Gasworks and surrounding commercial land.	441 Kiewa STREET	Gasworks	Contamination currently regulated under CLM Act	-36.08357983	146.9137004
ALBURY	SRA Land	448 and 452 Young STREET	Unclassified	Regulation under CLM Act not required	-36.08438605	146.9235454
ALBURY	Coles Express Albury	465 Guinea STREET	Service Station	Regulation under CLM Act not required	-36.07513665	146.9213077
ALBURY	SRA Land, 514 to 526 Young Street	514 to 526 Young STREET	Other Petroleum	Under assessment	-36.08084123	146.9241682
ALBURY	Woolworths Petrol	515 Young STREET	Service Station	Under assessment	-36.08073723	146.92351
ALBURY	Former Caltex Service Station	624 Young STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.07555262	146.9256466
ALBURY	Caltex Service Station	79 Union ROAD	Service Station	Under assessment	-36.05496713	146.9487635
ALBURY	Former Caltex Service Station	842 David STREET	Service Station	Regulation under CLM Act not required	-36.06398743	146.9252143
ALBURY	Albury Plaza	Cnr Smollett Street and Townsend STREET	Other Industry	Regulation under CLM Act not required	-36.08112933	146.9135719
ALBURY	Caltex Service Station	Dean St Cnr Creek STREET	Service Station	Under assessment	-36.07978937	146.9110825
ALBURY	Mobil Albury Aviation Fuel Depot	Hangar 8 (Albury Airport), Ogden PLACE	Other Petroleum	Regulation under CLM Act not required	-36.07178139	146.9530165
ALEXANDRIA	Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016)	10-20 Botany ROAD	Service Station	Contamination currently regulated under CLM Act	-33.895363	151.198779
ALEXANDRIA	Australia Post	10-24 Ralph STREET	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.91583041	151.197997
ALEXANDRIA	Caltex Alexandria Service Station	133 Wyndham St, cnr McEvoy STREET	Service Station	Regulation under CLM Act not required	-33.90220927	151.2000425

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
ALEXANDRIA	Alexandria Gardens	146-156 Wyndham St & 146-156 Botany Rd	Unclassified	Under assessment	-33.89956961	151.1997377
ALEXANDRIA	Former Industrial Site	16 O'Riordan STREET	Other Industry	Under assessment	-33.9069796	151.201902
ALEXANDRIA	Perry Park	1B Maddox STREET		Regulation under CLM Act not required	-33.90809949	151.1962945
ALEXANDRIA	Former Mobil Service Station	20 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.9075539	151.2014811
ALEXANDRIA	Australian Refined Alloys	202-212 Euston ROAD	Metal Industry	Regulation under CLM Act not required	-33.91505136	151.185872
ALEXANDRIA	Mascot Developments	494-504 Gardeners ROAD	Other Industry	Regulation under CLM Act not required	-33.9198218	151.191282
ALEXANDRIA	Former Cadbury Schweppes	49-59 O'Riordan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.91406619	151.195067
ALEXANDRIA	Alexandria GoGas	562 Botany ROAD	Service Station	Regulation under CLM Act not required	-33.91577222	151.2000753
ALEXANDRIA	Alexandra Canal Sediments	Off Huntley STREET	Unclassified	Contamination currently regulated under CLM Act	-33.92204213	151.1770009
ALEXANDRIA	Sydney Park	Sydney Park, Alexandria ROAD	Landfill	Under assessment	-33.91163421	151.1840827
ALSTONVILLE	Caltex Service Station	73 Main STREET	Service Station	Under assessment	-28.84115994	153.4388699
AMBARVALE	Caltex Service Station	37 Woodhouse DRIVE	Service Station	Regulation under CLM Act not required	-34.08438034	150.8019168
ANNANDALE	Shell Coles Express Service Station	124-126 Johnston STREET	Service Station	Regulation under CLM Act not required	-33.88085651	151.1704805
ANNANDALE	7-Eleven (former Mobil) Annandale Service Station	198 Parramatta ROAD	Service Station	Under assessment	-33.88706434	151.1741135
APPIN	Elladale Creek Aqueduct Upper Canal	Macquariedale ROAD	Unclassified	Regulation under CLM Act not required	-34.18867067	150.7539597
APPIN	West Cliff Colliery	Wedderburn ROAD	Other Petroleum	Regulation under CLM Act not required	-34.21970612	150.8217522
ARDLETHAN	Landmark Fertiliser storage	24-26 Ariah STREET	Chemical Industry	Under assessment	-34.35696645	146.9007084
ARMIDALE	Mobil Armidale Service Station and Former Depot	10-12 McLennan STREET	Service Station	Regulation under CLM Act not required	-30.51107573	151.648242
ARMIDALE	Former Mobil Depot	132 Niagara STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.51115918	151.6490343
ARMIDALE	Former Shell Depot	134 Niagara STREET	Other Petroleum	Regulation under CLM Act not required	-30.51180178	151.6488634
ARMIDALE	Caltex Service Station	144 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51709925	151.6675802
ARMIDALE	Caltex Service Station	146 Miller STREET	Service Station	Under assessment	-30.51362759	151.6481123
ARMIDALE	Armidale Dumaresq Council Grafton Road Depot	15-25 Grafton ROAD	Other Petroleum	Under assessment	-30.52058076	151.6815261
ARMIDALE	Caltex Service Station	19/10541 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-30.53210764	151.6160492
ARMIDALE	Caltex North Hill Service Station	2-4 Marsh STREET	Service Station	Under assessment	-30.50320439	151.6727051
ARMIDALE	Shell Service Station	93 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51299824	151.6697557
ARMIDALE	RTA land adjoining Martin Street estate	adjoining Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.5045	151.6433
ARMIDALE	Parklands near the former gasworks	Beardy Street and Allingham STREET	Gasworks	Regulation under CLM Act not required	-30.51013465	151.6652722

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
ARMIDALE	Gasworks and portion of Harris Park	Corner of Beardy Street and Allingham STREET	Gasworks	Contamination currently regulated under CLM Act	-30.51157406	151.6623073
ARMIDALE	Martin Street Estate, Lot 3	Lot 3 Martin STREET	Other Industry	Regulation under CLM Act not required	-30.5066659	151.6453692
ARMIDALE	Martin Street , Crown Land	Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.50414076	151.6429516
ARMIDALE	Martin Street Estate	Martin STREET	Other Industry	Regulation under CLM Act not required	-30.50559024	151.6431854
ARMIDALE	Caltex Service Station	Queen Elizabeth DRIVE	Service Station	Under assessment	-30.50348872	151.6510748
ARNCLIFFE	7-Eleven Arncliffe	28 Princes HIGHWAY	Service Station	Under assessment	-33.93428397	151.1525438
ARTARMON	BP Artarmon	432 Pacific HIGHWAY	Service Station	Under assessment	-33.81132193	151.1755358
ARTARMON	7-Eleven (former Mobil) Artarmon Service Station	477 Pacific HIGHWAY	Service Station	Under assessment	-33.81053826	151.1774248
ASHBY	Ashby Dry Dock	via Clarence STREET	Other Industry	Contamination formerly regulated under the CLM Act	-29.44158377	153.1972304
ASHFIELD	Vehicle Workshop	445-449 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88826829	151.1167477
ASQUITH	BP Service Station	462 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.68982678	151.106156
ATTUNGA	Attunga Limestone Mine (Waste Oil Site)	Garthowen ROAD	Other Industry	Regulation under CLM Act not required	-30.92920627	150.8579435
AUBURN	RailCorp Auburn	1 Manchester ROAD	Other Industry	Under assessment	-33.84410947	151.0242502
AUBURN	DIC Australia	323 Chisholm ROAD	Other Industry	Regulation under CLM Act not required	-33.87228962	151.0157032
AUBURN	Former Ajax chemical factory	9 Short STREET	Other Industry	Contamination currently regulated under CLM Act	-33.83671601	151.0292071
AUBURN	Department of Corrective Services land adjacent to the former Auburn Landfill	Jamieson STREET	Landfill	Contamination formerly regulated under the CLM Act	-33.82928257	151.0590653
AUBURN	Janyon	Manchester ROAD	Other Industry	Regulation under CLM Act not required	-33.84467826	151.020745
AWABA	Awaba Colliery	Wilton ROAD	Other Industry	Under assessment	-33.02098186	151.5383612
BALGOWLAH	Part of Manly Council Maintenance Depot	8-10 Roseberry STREET	Other Petroleum	Regulation under CLM Act not required	-33.78928907	151.2679557
BALGOWLAH	BP Service Station	Cnr Sydney Road and Maretimo STREET	Service Station	Under assessment	-33.79546175	151.2559309
BALLINA	Ballina Shell	273 River STREET	Service Station	Under assessment	-28.86809272	153.5552789
BALLINA	Former Mobil Service Station	37-41 Cherry STREET	Service Station	Regulation under CLM Act not required	-28.87022308	153.5620713
BALLINA	Woolworths Petrol	Kerr STREET	Service Station	Regulation under CLM Act not required	-28.85824461	153.5605439
BALLINA	Ballina Mays Motors	River STREET	Other Petroleum	Regulation under CLM Act not required	-28.86935402	153.5585931
BALRANALD	Caltex Service Station	Sturt HIGHWAY	Service Station	Under assessment	-34.57451679	142.7431207
BANKSMEADOW	Caltex Terminal	1-3 Penrhyn ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.96335328	151.2171062
BANKSMEADOW	Orica Botany Groundwater Project	16-20 Beauchamp ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.9552673	151.2151954
BANKSMEADOW	Discovery Cove, Former Ampol Rail Terminal	1801 Botany ROAD	Other Petroleum	Regulation being finalised	-33.96162178	151.2184122

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
BANKSMEADOW	Pacific National Rail Siding	Beauchamp ROAD	Unclassified	Contamination currently regulated under CLM Act	-33.95757712	151.2204974
BANKSMEADOW	Orica Former Chlor Alkali Plant	Botany Industrial PARK	Chemical Industry	Contamination currently regulated under CLM Act	-33.95664283	151.221685
BANKSMEADOW	Mobil Terminal	Coal Pier ROAD	Other Petroleum	Under assessment	-33.94477081	151.1965027
BANKSMEADOW	Orica Car Park Waste Encapsulation	Corish CIRCLE	Landfill	Contamination currently regulated under POEO Act	-33.94703665	151.22083
BANKSMEADOW	Former Pipeline	Corish CIRCLE	Other Petroleum	Regulation being finalised	-33.94705787	151.2209919
BANKSMEADOW	Mobil Banksmeadow Terminal	Port Feeder ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.95405624	151.2142048
BANKSMEADOW	Orica Botany (Pre-2003 Regulation)	Port Feeder ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.9516159	151.2195804
BANKSTOWN	7-Eleven Service Station	689 Henry Lawson DRIVE	Service Station	Regulation under CLM Act not required	-33.92749953	150.9804784
BANORA POINT	Caltex Service Station	Corner Leisure Drive and Darlington DRIVE	Service Station	Regulation under CLM Act not required	-28.21390712	153.5417434
BARMEDMAN	Caltex - Barmedman	Corner Watson Street and Star STREET	Other Petroleum	Regulation under CLM Act not required	-34.14351302	147.3824934
BARRACK HEIGHTS	Caltex Service Station	332-336 Shellharbour ROAD	Service Station	Under assessment	-34.56489171	150.8597814
BATEAU BAY	Former landfill	The Entrance ROAD	Landfill	Contamination currently regulated under CLM Act	-33.3938305	151.4699046
BATEHAVEN	Caltex Service Station	264 Beach ROAD	Service Station	Under assessment	-35.73255166	150.1997536
BATEMANS BAY	Caltex Service Station	87-89 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.71940701	150.1762788
BATHURST	Shell Coles Express Service Station	(Cnr Stewart and Rocket Street) 298 Stewart STREET	Service Station	Regulation under CLM Act not required	-33.41910999	149.5677773
BATHURST	Former Mobil Depot	1 Lambert STREET	Other Petroleum	Regulation under CLM Act not required	-33.42875534	149.5806344
BATHURST	Bathurst - Former Caltex Depot	114 Howick STREET	Other Petroleum	Regulation under CLM Act not required	-33.42296963	149.5862574
BATHURST	Bathurst Rail Fabrication Centre	34 Alpha STREET	Other Industry	Regulation under CLM Act not required	-33.43037796	149.5821533
BATHURST	Devro Cattle Hide Processing Plant	46 Vale ROAD	Other Industry	Regulation under CLM Act not required	-33.43926137	149.5803563
BATHURST	Caltex Bathurst Service Station	53 Durham STREET	Service Station	Under assessment	-33.41689545	149.5848527
BATHURST	Former Shell Depot Bathurst	56 Bant STREET	Other Petroleum	Regulation under CLM Act not required	-33.43471575	149.5774595
BATHURST	Shell Coles Express Bathurst Service Station	59 Durham STREET	Service Station	Under assessment	-33.41639415	149.5843243
BATHURST	Former Gasworks	71 Russell STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.42420302	149.5864517
BATHURST	Former Police Station	Corner of William Street and Durham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.41592424	149.5842233
BATHURST	Former Mobil Depot	Lower Russell STREET	Other Petroleum	Regulation under CLM Act not required	-33.42497876	149.585128
BATHURST	Crago Mill site	Piper STREET	Other Industry	Regulation under CLM Act not required	-33.42777602	149.5809428
BAULKHAM HILLS	Caltex Baulkham Hills Service Station	117 Seven Hills ROAD	Service Station	Under assessment	-33.76139872	150.9750767
BAULKHAM HILLS	Caltex Service Station	130-132 Seven Hills ROAD	Service Station	Under assessment	-33.76180431	150.9746297

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
BAULKHAM HILLS	Shell Coles Express Service Station	363 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.7601819	150.9916224
BEACON HILL	Caltex Service Station	176 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75381485	151.2602617
BEACONSFIELD	63-85 Victoria St, Beaconsfield	63-85 Victoria STREET	Other Industry	Under assessment	-33.9102929	151.2016275
BEGA	Former BP Service Station	100 - 102 Gipps STREET	Service Station	Regulation under CLM Act not required	-36.67563094	149.8433291
BEGA	Bega Gasworks	27 Upper STREET	Gasworks	Under assessment	-36.67710613	149.8480253
BEGA	Coles Express (former Caltex) Service Station	280 Carp (2-6 Swan) STREET	Service Station	Under assessment	-36.67388263	149.838163
BEGA	Caltex Service Station	36-40 Lagoon STREET	Service Station	Under assessment	-36.66832965	149.8289048
BELMONT	Belmont Bus Depot	2 Floraville ROAD	Other Petroleum	Under assessment	-33.02476269	151.6606657
BELMONT	Former Ampol Service Station	467-469 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.0299728	151.6613301
BELMONT	Coles Express Belmont Service Station	502 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.03317155	151.6605194
BELMONT NORTH	Woolworths Service Station Belmont North	399 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.02454211	151.6634893
BELMONT NORTH	Caltex Service Station	406 Pacific HIGHWAY	Service Station	Under assessment	-33.02476876	151.6623655
BELMORE	SRA Land	348 Burwood ROAD	Unclassified	Regulation under CLM Act not required	-33.91753611	151.0859487
BELMORE	7-Eleven Service Station	792-794 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92567992	151.0873469
BELROSE	Caltex Service Station	157 Forest WAY	Service Station	Under assessment	-33.7347675	151.2212004
BELROSE	Glenrose Shopping Centre	56-58 Glen STREET	Unclassified	Contamination currently regulated under CLM Act	-33.73917996	151.2101029
BELROSE	Woolworths Petrol	60 Glen STREET	Service Station	Regulation under CLM Act not required	-33.74009002	151.2091045
BERESFIELD	Former Koppers Timber Treatment Site	53 Weakleys DRIVE	Other Industry	Under assessment	-32.79902937	151.6358846
BERESFIELD	BP Beresfield Truckstop	Cnr Kinta Drive and John Renshaw DRIVE	Service Station	Under assessment	-32.81122768	151.6393427
BERKELEY VALE	Former Berkeley Vale Service Station	121-123 Lakedge AVENUE	Service Station	Regulation under CLM Act not required	-33.34899186	151.4423109
BERKSHIRE PARK	Shell Coles Express Berkshire Park	746 - 752 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.66508654	150.7990243
BEROWRA	Caltex Berowra Service Station	12-14 Berowra Waters ROAD	Service Station	Regulation under CLM Act not required	-33.6233827	151.1505554
BEROWRA	42 Berowra Waters Road	42 Berowra Waters ROAD	Unclassified	Regulation under CLM Act not required	-33.6203211	151.1482454
BEROWRA	Shell Coles Express Berowra	955 Pacific (Cnr Yallambee Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62818015	151.1475736
BEROWRA	7-Eleven Berowra Service Station	965-969 Pacific (Cnr Waratah Rd) HIGHWAY	Service Station	Under assessment	-33.62673163	151.1479171
BERRIGAN	Caltex Service Station	155-165 Chanter STREET	Service Station	Under assessment	-35.6557616	145.8015557
BERRY	Shell Berry - Now BP branded	79 Queen STREET	Service Station	Under assessment	-34.77500516	150.695167
BERRY	Berry Service Centre - Shell Branded	88 Queen STREET	Service Station	Regulation under CLM Act not required	-34.77571634	150.6961713
BEXLEY	7-Eleven Bexley	474 Forest ROAD	Service Station	Under assessment	-33.95160096	151.1252355

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BEXLEY	7-Eleven (former Mobil) Service Station	613 Forest ROAD	Service Station	Under assessment	-33.95539246	151.118447
BILLINUDGEL	CSR Readymix	Mogo PLACE	Other Industry	Regulation under CLM Act not required	-28.50210255	153.5278161
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881
BLACKMANS FLAT	Lamberts Gully Mine	Castlereagh HIGHWAY	Other Industry	Under assessment	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	7-Eleven Service Station	62 Walters ROAD	Service Station	Under assessment	-33.77599783	150.8948926
BLACKTOWN	Land at Reservoir Road	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.990197	151.11361
BLAKEHURST	The Bay Nursing Home	392-394 Princes HIGHWAY	Service Station	Under assessment	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Under assessment	-33.74627	150.6137669
BOAMBEE	Lindsay Bros transport depot site	542 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.33106848	153.0802985
BOAMBEE	BP-branded (former Mobil/7-Eleven) Service Station	601 Pacific HIGHWAY	Service Station	Under assessment	-30.33544287	153.0817266
BOBS FARM	Bob's Farm	15 Fenningham Island ROAD	Other Industry	Regulation under CLM Act not required	-32.74867207	152.0316217
BOGGABILLA	Caltex Service Station	Cnr Simpson St & Newell HIGHWAY	Service Station	Under assessment	-28.60654029	150.3571056
BOGGABILLA	Lowes (Former Mobil) Depot	Newell HIGHWAY	Other Petroleum	Under assessment	-28.61023985	150.3529156
BOMADERRY	Bomaderry Works Depot	10 McIntyre WAY	Other Petroleum	Under assessment	-34.84576748	150.6131411
BOMADERRY	Caltex Service Station	246 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.83833824	150.5958799
BOMADERRY	Commercial Land	320 Princes Highway HIGHWAY	Other Industry	Under assessment	-34.84424073	150.5958149
BOMADERRY	Caltex Service Station	341 Princes HIGHWAY	Service Station	Under assessment	-34.84561952	150.5946978
BOMADERRY	Former Shell Depot	44 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-34.85193621	150.6117038
BOMADERRY	Former Mobil Emoleum Depot	7 Victa WAY	Other Petroleum	Under assessment	-34.84454618	150.6139462
BOMADERRY	SRA Land	Lot 2 Meroo STREET	Unclassified	Regulation under CLM Act not required	-34.85314813	150.6099573
BOMBALA	Caltex Service Station	161 Maybe STREET	Service Station	Under assessment	-36.91234945	149.2374622
BOMBALA	Former Bright Street Timber Mill	Bright STREET	Other Industry	Regulation under CLM Act not required	-36.91547645	149.2302454
BOMBALA	Caltex Bombala Service Station	High Street corner Stephen STREET	Service Station	Under assessment	-36.90447935	149.241292
BOMBALA	Prime Pine site	Sandy LANE	Other Industry	Regulation under CLM Act not required	-36.9315425	149.2110959
BOMEN	Caltex Terminal	18 Lewington STREET	Other Petroleum	Under assessment	-35.0695246	147.4084379
BONDI	BP-branded Service Station	185 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.89432208	151.2647671
BONDI	Caltex Service Station	51 Bondi ROAD	Service Station	Under assessment	-33.8936307	151.260001

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BONDI JUNCTION	Waverley Bus Depot	1-15 Oxford STREET	Other Industry	Regulation under CLM Act not required	-33.89165341	151.2421246
BONNY HILLS	Bonny View Store	923 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.59075636	152.8392935
BONNYRIGG	United Bonnyrigg (Formerly AP SAVER)	709 Cabramatta ROAD	Service Station	Contamination currently regulated under POEO Act	-33.893058	150.892476
BONNYRIGG	Caltex Service Station	Smithfield Rd Cnr Elizabeth DRIVE	Service Station	Under assessment	-33.88840816	150.8822609
BONNYRIGG HEIGHTS	BP-branded Service Station	Corner Cowpasture Road and North Liverpool ROAD	Service Station	Under assessment	-33.89416327	150.8578378
BOOLAROO	Incitec Pivot	13 Main STREET	Other Industry	Contamination formerly regulated under the CLM Act	-32.94803538	151.6302187
BOOLAROO	Bunnings Site - Pasminco Cockle Creek	13a Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94364503	151.6252316
BOOLAROO	Cardiff West Estate - Pasminco Cockle Creek	Adjacent to PCC Smelter at 13A Main ROAD	Metal Industry	Regulation under CLM Act not required	-32.93950137	151.6349183
BOOLAROO	Pasminco Cockle Creek Smelter	Lake ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.94434593	151.6307345
BOOLAROO	Cockle Creek and Cockle Bay Sediments	Off Creek Reserve ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.96079541	151.6141327
BOOROWA	Former Mobil Depot	14-16 Brial STREET	Other Petroleum	Regulation under CLM Act not required	-34.43673234	148.7300821
BOOROWA	Mobil Service Station	63-69 Marsden STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.44157331	148.7162391
BOTANY	Botany, Underwood	14a Underwood AVENUE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.94508532	151.1947626
BOTANY	Former Aerosols of Australia	1617 Botany ROAD	Chemical Industry	Under assessment	-33.9529386	151.2037468
BOTANY	Former Tannery	2 Daniel STREET	Other Industry	Regulation under CLM Act not required	-33.94126194	151.1991087
BOTANY	Former Industrial Site	28 Folkestone PARADE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.95187539	151.1960537
BOTANY	Nuplex Resins	49-61 Stephen ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.952588	151.21101
BOTANY	Roads and Maritime Service	5 - 9 Lord STREET	Other Industry	Regulation under CLM Act not required	-33.94100279	151.1968763
BOTANY	Caltex Terminal	Penrhyn ROAD	Other Petroleum	Under assessment	-33.96633917	151.2149156
BOURKE	Caltex Service Station	82-86 Anson STREET	Service Station	Regulation under CLM Act not required	-30.09500388	145.9414388
BOURKE	Former Shell Bourke Depot	94-106 Anson STREET	Service Station	Regulation under CLM Act not required	-30.09548497	145.9436745
BOWENFELS	Bowenfels Field Support Centre	9-13 Cooerwull ROAD	Other Petroleum	Regulation under CLM Act not required	-33.47514572	150.1323899
BOWRAL	Shell Coles Express Bowral Service Station	430 Bong Bong STREET	Service Station	Regulation under CLM Act not required	-34.48269596	150.417389
BOWRAL	Former Gasworks	Merrigang STREET	Gasworks	Contamination currently regulated under CLM Act	-34.4783957	150.4255053
BOX HILL	Former Waste Management Facility	25 Terry ROAD	Landfill	Regulation under CLM Act not required	-33.65559259	150.8977986

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BRANXTON	Former Service Station	70 Maitland STREET	Service Station	Under assessment	-32.65647051	151.3516199
BREWARRINA	Dowell's Fuel	39 Doyle STREET	Service Station	Under assessment	-29.96152786	146.8612561
BRIGHTON-LE-SANDS	Shell Service Station Brighton Le Sands & adjacent land	2 General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9579214	151.1578665
BRIGHTON-LE-SANDS	Cook Park	General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9581072	151.1579572
BROADMEADOW	Former Industrial Site	16 Broadmeadow ROAD	Service Station	Regulation under CLM Act not required	-32.91444096	151.7300112
BROADMEADOW	Nineways Broadmeadow Coles Express SS	Corner Brunker Road and Lambton ROAD	Service Station	Under assessment	-32.92511185	151.7364247
BROKEN HEAD	South Byron Sewage Treatment Works	Broken Head ROAD	Other Industry	Under assessment	-28.67233626	153.6148974
BROKEN HILL	Former Caltex Service Station	167-173 Argent STREET	Service Station	Regulation under CLM Act not required	-31.96066663	141.4624175
BROKEN HILL	Former Caltex Depot	3 Kanandah ROAD	Service Station	Regulation under CLM Act not required	-31.98341823	141.4332211
BROKEN HILL	Tasco Petroleum (Former Mobil) Depot	5 Kanandah ROAD	Other Petroleum	Regulation under CLM Act not required	-31.9843986	141.4329127
BROKEN HILL	Caltex Service Station	535 Argent STREET	Service Station	Regulation under CLM Act not required	-31.95311924	141.4745274
BROKEN HILL	Caltex Service Station	73-87 Oxide STREET	Service Station	Contamination currently regulated under CLM Act	-31.95519591	141.4658647
BROKEN HILL	Broken Hill Airport Mobil Refuelling Facility	Bonanza STREET	Other Petroleum	Under assessment	-31.99928312	141.4685759
BROKEN HILL	Former Mobil Depot	Corner Of Talc Street and Gossan STREET	Other Petroleum	Regulation under CLM Act not required	-31.96018102	141.4514752
BROKEN HILL	Former Gasworks	Cornish STREET	Gasworks	Contamination formerly regulated under the CLM Act	-31.96330562	141.4470611
BROOKLYN	Former Oyster Farm	Off Government ROAD	Unclassified	Under assessment	-33.54716867	151.2229744
BROOKVALE	Little Drycleaning	123 Old Pittwater ROAD	Other Industry	Under assessment	-33.76759121	151.2625932
BROOKVALE	Coles Express Service Station Brookvale	198 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.76332299	151.2794028
BROOKVALE	Brookvale Depot	630-636 Pittwater ROAD	Other Petroleum	Under assessment	-33.76641698	151.2705659
BROOKVALE	Caltex Service Station Brookvale	740-742 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76146721	151.2745358
BROOKVALE	Harrison Manufacturing Co Pty Ltd	75 Old Pittwater ROAD	Unclassified	Under assessment	-33.76498388	151.2638048
BROOKVALE	Woolworths Petrol Brookvale	756 Pittwater ROAD	Service Station	Under assessment	-33.76170587	151.2762411
BROOKVALE	AMP Warringah Mall	Cnr Condamine Street, Old Pittwater Rd & Cross STREET	Other Industry	Regulation under CLM Act not required	-33.76729923	151.2657272
BROWNSVILLE	Caltex Service Station	342 Kanahooka ROAD	Service Station	Regulation under CLM Act not required	-34.48591734	150.8064373
BRUNSWICK HEADS	Caltex Service Station	5 Tweed STREET	Service Station	Under assessment	-28.5381619	153.5487135
BUDGEWOI	Colongra Power Station	Off Scenic DRIVE	Other Industry	Under assessment	-33.21463137	151.5529338
BULAHDELAH	Former Caltex Service Station	53-59 Bulahdelah WAY	Service Station	Under assessment	-32.40729992	152.2110142
BULAHDELAH	Mobil Service Station	59-63 Booloombayt STREET	Service Station	Under assessment	-32.40971018	152.2105785
BULAHDELAH	Caltex Service Station	8 Red Gum Road, Corner Mahogany STREET	Service Station	Under assessment	-32.39837094	152.2106015
BULLABURRA	Former Burmah Bullaburra Service Station	367 - 369 Great Western HIGHWAY	Service Station	Under assessment	-33.72482995	150.4124537

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BULLI	Scrap Yard	7 Molloy STREET	Other Industry	Contamination currently regulated under CLM Act	-34.33663195	150.9131154
BUNGENDORE	Former Timber Treatment Plant	Corner King Street and Butmaroo STREET	Other Industry	Contamination formerly regulated under the CLM Act	-35.26151273	149.4434907
BURONGA	Caltex Service Station	Sturt Hwy Cnr Silver City HIGHWAY	Service Station	Under assessment	-34.17056496	142.1813847
BURWOOD	Burwood STA Depot	Cnr Shaftesbury and Parramatta ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.86982934	151.1089057
BYRON BAY	Residential Development	Lot 15 Seaview STREET	Unclassified	Regulation under CLM Act not required	-28.65214464	153.6165573
CABARITA	Cabarita Wellcome	33 Phillips STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85250251	151.1176366
CABARITA	Dulux (Orica Australia)	Cabarita ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.84643972	151.1157115
CABRAMATTA	Caltex Service Station	166 John STREET	Service Station	Under assessment	-33.89422314	150.9279279
CALGA	Former service station	101 Peats Ridge ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.37592138	151.2254951
CALLALA BEACH	Callala Beach General Store	(formerly 1 Quay Rd) 114A Quay ROAD	Service Station	Regulation under CLM Act not required	-35.0101817	150.6964322
CAMBRIDGE PARK	Caltex Cambridge Park	Star COURT	Service Station	Under assessment	-33.74068794	150.717174
CAMDEN	Caltex Camden Service Station	21 Barsden STREET	Service Station	Regulation under CLM Act not required	-34.05808413	150.6914744
CAMDEN	Camden High School (former)	John STREET	Gasworks	Regulation under CLM Act not required	-34.05114079	150.6951285
CAMDEN SOUTH	Coles Express Service Station Camden South	273 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08660995	150.6945444
CAMELLIA	James Hardie Factory (former, eastern portion)	1 Grand AVENUE	Other Industry	Contamination currently regulated under CLM Act	-33.8182384	151.0261019
CAMELLIA	Council Reserve	11B Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81850502	151.0302425
CAMELLIA	Bitumen Manufacturer	12 Grand AVENUE	Other Industry	Contamination currently regulated under CLM Act	-33.82189695	151.0429251
CAMELLIA	Wrigg	13 Grand AVENUE	Metal Industry	Under assessment	-33.81971361	151.0321525
CAMELLIA	Hymix Concrete	14 Grand AVENUE	Metal Industry	Contamination currently regulated under CLM Act	-33.82243454	151.044789
CAMELLIA	Hambear	14 Thackeray STREET	Metal Industry	Regulation under CLM Act not required	-33.81920482	151.0419394
CAMELLIA	Mauri Foods	15 Grand AVENUE	Other Industry	Regulation being finalised	-33.81996985	151.0335725
CAMELLIA	Railway Land	27 Grand AVENUE	Other Industry	Regulation under CLM Act not required	-33.81910822	151.0382483
CAMELLIA	Maritime Services Board	33A Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81836086	151.0401249
CAMELLIA	Veolia	37 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.81980027	151.0430689
CAMELLIA	Former Asciano Properties	39 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82056014	151.0443331
CAMELLIA	Sydney Water	41 Grand AVENUE	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8217493	151.0453367

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CAMELLIA	Former Akzo Nobel site	6 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82238826	151.0319264
CAMMERAY	Coles Express Cammeray	477-483 Miller STREET	Service Station	Under assessment	-33.82141124	151.2108658
CAMMERAY	Tunks Park	Brothers AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.81734704	151.2113338
CAMPBELLTOWN	Former vehicle wrecking yard	38 Blaxland ROAD	Unclassified	Under assessment	-34.06055735	150.8130598
CAMPBELLTOWN	BP Denham Court	505 Campbelltown ROAD	Service Station	Under assessment	-33.98208395	150.8459471
CAMPBELLTOWN	Mobil Service Station	96-98 Queen STREET	Service Station	Regulation under CLM Act not required	-34.06407588	150.8170082
CAMPBELLTOWN	BP Macarthur Service Station	Cnr Blaxland ROAD and Campbelltown ROAD	Service Station	Regulation under CLM Act not required	-34.05312872	150.8234349
CAMPERDOWN	Former Gee Graphics	27 Church STREET	Other Industry	Regulation under CLM Act not required	-33.88737747	151.1773616
CAMPERDOWN	O'Dea Reserve	Salisbury LANE	Landfill	Contamination formerly regulated under the CLM Act	-33.89072786	151.1736948
CAMPSIE	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una STREET	Service Station	Contamination currently regulated under CLM Act	-33.91605617	151.1086596
CAMPSIE	Former Sunbeam factory	60 Charlotte STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.92254225	151.1025796
CANLEY HEIGHTS	Caltex Service Station	280-286 Canley Vale ROAD	Service Station	Under assessment	-33.88393501	150.9241656
CANLEY HEIGHTS	Former Caltex Canley Heights	368 Canley Vale ROAD	Service Station	Under assessment	-33.88271081	150.9154176
CANLEY VALE	Former Mobil Service Station	96 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88591573	150.9369801
CANOWINDRA	BP Service Station (Reliance Petroleum)	76 Rodd STREET	Service Station	Under assessment	-33.56131773	148.6682805
CANTERBURY	Metro Petroleum Service Station	13-19 Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90783455	151.125207
CARDIFF	Former Caltex Service Station	367 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93761223	151.6577781
CARDIFF	7-Eleven Service Station	399 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93391137	151.6562111
CARDIFF	Former Mobil Service Station	43 Macquarie ROAD	Service Station	Under assessment	-32.94118246	151.6578195
CARDIFF	Former Mobil Depot	7 Ranton STREET	Other Petroleum	Regulation under CLM Act not required	-32.94516764	151.6470387
CARDIFF	BP Service Station (Reliance Petroleum)	Corner Sturt and Main ROADS	Service Station	Under assessment	-32.93792229	151.6569905
CARDIFF	Maneela Oval	Main ROAD	Other Industry	Regulation under CLM Act not required	-32.93018443	151.6435559
CARDIFF	Settlement Pond	Off Main ROAD	Unclassified	Under assessment	-32.94001389	151.6604919
CARINGBAH	Adjacent to Spirent Australia	101-103 Cawarra ROAD	Other Industry	Contamination currently regulated under CLM Act	-34.03360747	151.1245577
CARINGBAH	Spirent Australia	105 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03425343	151.1245092
CARINGBAH	Former Consumer Health Products Manufacturer	32-40 Cawarra ROAD	Other Industry	Regulation under CLM Act not required	-34.03024369	151.1277755
CARINGBAH	7-Eleven Service Station	367 The Kingsway	Service Station	Under assessment	-34.03948677	151.1203268
CARINGBAH	Caltex Lilli Pilli Service Station	477-481 Port Hacking ROAD	Service Station	Under assessment	-34.05243807	151.1216353
CARLINGFORD	Caltex Service Station	131 Pennant Hills ROAD	Service Station	Under assessment	-33.78762398	151.0279422
CARLINGFORD	Caltex Service Station	797 Pennant Hills ROAD	Service Station	Under assessment	-33.7757819	151.0516532

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
CARLTON	Shell Coles Express Service Station	274-281 Princes HIGHWAY	Service Station	Under assessment	-33.9748579	151.1272732
CARRINGTON	Carrington redevelopment site	11 Howden STREET	Other Industry	Regulation under CLM Act not required	-32.91309509	151.7625341
CARRINGTON	Commercial Metals Company (CMC) Australia Pty Ltd	117-121 Bourke STREET	Other Industry	Regulation under CLM Act not required	-32.9148832	151.7677193
CARRINGTON	Forgacs Dockyard	81 Denison STREET	Other Industry	Regulation under CLM Act not required	-32.9207441	151.764816
CARRINGTON	NAT vacant land	Bourke STREET	Unclassified	Regulation under CLM Act not required	-32.91276029	151.7685894
CARRINGTON	Carrington Coal Tar Pavements	Bourke Street to Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91441348	151.770271
CARRINGTON	Pasminco Ship Loader	Dyke Berth 2 (off Bourke Street) OTHER	Metal Industry	Regulation under CLM Act not required	-32.9148698	151.7716837
CARRINGTON	Dyke Point Containment Cell	Dyke ROAD	Other Industry	Under assessment	-32.9169089	151.772423
CARSS PARK	Vacant Property	334 Princes HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.98628486	151.1133908
CARWELL	Cement Australia Carwell Creek Quarries	Quarry ROAD	Other Industry	Under assessment	-32.85413742	149.923172
CASINO	Former Gasworks	134-136 North STREET	Gasworks	Regulation under CLM Act not required	-28.86080712	153.0526043
CASINO	Caltex Casino Service Station	32 Dyraaba STREET	Service Station	Under assessment	-28.85488567	153.044806
CASINO	Caltex Service Station	96 Centre STREET	Service Station	Regulation under CLM Act not required	-28.86539567	153.0450654
CASINO	Woolworths Service Station Casino	Canterbury Street Cnr Summerland WAY	Service Station	Under assessment	-28.86231341	153.0464642
CASULA	Caltex Casula Service Station	646 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.95641262	150.8934783
CATHERINE HILL BAY	Catherine Hill Bay Coal Handling and Preparation Plant	1A Keene STREET	Other Industry	Regulation under CLM Act not required	-33.16120556	151.6302456
CESSNOCK	Former Mobil Service Station	102 Wollombi ROAD	Service Station	Under assessment	-32.83844074	151.3436022
CESSNOCK	Caltex Cessnock Service Station	105 Wollombi (Cnr James Street) ROAD	Service Station	Under assessment	-32.83936243	151.3430078
CESSNOCK	Former Service Station	2-4 Allandale ROAD	Service Station	Under assessment	-32.83118911	151.3560677
CHARBON	Charbon Colliery	Charbon ROAD	Other Industry	Under assessment	-32.92390131	149.9839098
CHARLESTOWN	7-Eleven Charlestown (Formerly BP Charlestown)	273 Charlestown ROAD	Service Station	Under assessment	-32.95802555	151.6897931
CHARLESTOWN	Ausgrid Powell Street Depot	8 Powell STREET	Other Industry	Regulation under CLM Act not required	-32.95912375	151.6944136
CHARLESTOWN	Caltex Service Station	81 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-32.96708479	151.6955919
CHARLESTOWN	BP Service Station	91-93 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-32.96633569	151.6959051
CHARMHAVEN	Caltex Service Station	13-15 Pacific HIGHWAY	Service Station	Under assessment	-33.21655768	151.5091452
CHATSWOOD	Auto Repairs	2 Devonshire STREET	Service Station	Regulation under CLM Act not required	-33.8015482	151.1859632
CHATSWOOD	Woolworths Chatswood	364-366 Eastern Valley WAY	Service Station	Under assessment	-33.78667419	151.2010828
CHATSWOOD	Caltex Service Station Chatswood	572 Pacific HIGHWAY	Service Station	Under assessment	-33.80381271	151.1789656

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
CHATSWOOD	Former Caltex Chatswood Service Station	607 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.80396472	151.1795766
CHATSWOOD	Coles Express Service Station Chatswood	877-879 Pacific HIGHWAY	Service Station	Under assessment	-33.79182176	151.1804867
CHATSWOOD WEST	Chatswood Toyota	728 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.79654247	151.1776136
CHERRYBROOK	Caltex Service Station	67 Shepherds DRIVE	Service Station	Under assessment	-33.72069183	151.0451415
CHESTER HILL	Former Orica, Chester Hill	127 Orchard ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8869823	150.9952873
CHIPPENDALE	Frasers Development	Wellington STREET	Unclassified	Under assessment	-33.88669108	151.2015805
CHIPPING NORTON	Former Mobil Depot Chipping Norton	49-51 Riverside ROAD	Other Petroleum	Under assessment	-33.91621314	150.9696948
CHIPPING NORTON	Former ACR	85-107 Alfred STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92226795	150.9586496
CHISWICK	Former Sydney Wiremills (BHP) site	Blackwall Point ROAD	Other Industry	Regulation under CLM Act not required	-33.85131849	151.1369131
CHITTAWAY BAY	Former Caltex Chittaway Point	100 Chittaway ROAD	Service Station	Regulation under CLM Act not required	-33.32707555	151.4293546
CHULLORA	Chullora Railway Workshops	Worth STREET	Other Industry	Under assessment	-33.88639388	151.0598201
CLARENCE	Clarence Colliery	Chifley ROAD	Other Industry	Under assessment	-33.46450217	150.2522729
CLARENDON	Coles Express Clarendon	244 Hawkesbury Valley WAY	Service Station	Under assessment	-33.6083729	150.7890956
CLEARFIELD	Former Pamplings Dip Site	Off Clearfield ROAD	Cattle Dip	Regulation under CLM Act not required	-29.16287185	152.882974
CLYBUCCA	BP Service Station	2171 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.93913118	152.9417395
CLYDE	7-Eleven Clyde	3 Parramatta (Cnr Harbord Street) ROAD	Service Station	Under assessment	-33.83494433	151.0222628
COBAR	Former Caltex (Bogas) Service Station Cobar	56-58 Marshall STREET	Service Station	Regulation under CLM Act not required	-31.49793339	145.8346684
COBAR	Caltex Service Station Cobar	99 Marshall (formerly Cnr Barrier Highway and Bathurst Street) STREET	Service Station	Regulation under CLM Act not required	-31.49631924	145.8275727
COBAR	Mckinnons Gold Mine	Cobar ROAD	Metal Industry	Under assessment	-31.78179755	145.693
COBAR	Caltex Service Station	Lot 10 Railway PARADE	Service Station	Regulation under CLM Act not required	-31.49350124	145.8442372
COFFS HARBOUR	Dan Murphy's Coffs Harbour	10 Elbow STREET	Service Station	Under assessment	-30.29439262	153.115069
COFFS HARBOUR	BP Service Station	134-136 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-30.29187037	153.1182106
COFFS HARBOUR	Caltex Service Station	157 Orlando STREET	Service Station	Regulation under CLM Act not required	-30.28975334	153.1306354
COFFS HARBOUR	Aussitel Backpackers Hostel	312 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3057	153.132
COFFS HARBOUR	Mobil Service Station	314-316 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3056983	153.131966
COFFS HARBOUR	Coffs Harbour Slipway	38 Marina DRIVE	Other Industry	Under assessment	-30.30325637	153.1441437
COFFS HARBOUR	Mobil Coffs Harbour Airport	Aviation DRIVE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.313385	153.1175018
COFFS HARBOUR	Woolworths Petrol	Park Beach Plaza, Arthur STREET	Service Station	Regulation under CLM Act not required	-30.28101154	153.132027

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COLEAMBALLY	Former Coleambally Mobil Depot	19 Bencubbin AVENUE	Other Petroleum	Under assessment	-34.80279552	145.8945239
COLLARENEBRI	Former Shell Depot	Corner Narran Street and Queen STREET	Other Petroleum	Regulation under CLM Act not required	-29.54114772	148.5789365
COLONGRA	Endeavour Colliery	Scenic DRIVE	Other Industry	Under assessment	-33.21297737	151.5416882
COLYTON	Ampol Service Station	88 Great Western HIGHWAY	Service Station	Under assessment	-33.7754	150.7954
CONCORD	Caltex Service Station	87-89 Parramatta ROAD	Service Station	Under assessment	-33.86785624	151.0993769
CONCORD WEST	Caltex Service Station	369-375 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.84113835	151.0888843
CONDOBOLIN	BP-Branded Service Station	38 Denison Street, corner Molong STREET	Service Station	Under assessment	-33.08520378	147.1524976
CONDOBOLIN	Former Mobil Depot	6 Burnett STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.08010515	147.1642972
CONDOBOLIN	Former Ampol Depot	Cnr Parkes Road and Goobang STREET	Service Station	Regulation under CLM Act not required	-33.08034753	147.1642436
CONDOBOLIN	Caltex Service Station	Parkes ROAD	Service Station	Under assessment	-33.08275986	147.1586456
CONDOBOLIN	Mobil Condobolin Depot Railway Siding	Railway Siding behind 6 Burnett STREET	Other Petroleum	Under assessment	-33.08058612	147.164225
CONSTITUTION HILL	Sydney Water Land	Caloola ROAD	Unclassified	Regulation under CLM Act not required	-33.79776636	150.9697715
COOGEE	Caltex Coogee Service Station	146-148 Coogee Bay (Cnr Mount St) ROAD	Service Station	Under assessment	-33.91989232	151.2517454
COOKS HILL	Former Council depot	152 Bruce and 115 Corlette STREET	Other Industry	Under assessment	-32.93525537	151.7641074
COOLAC	Coolac Service Station	Corner Hume Highway and Coleman STREET	Service Station	Regulation under CLM Act not required	-34.95435052	148.1595525
COOLAH	BP Depot (Reliance Petroleum)	72 (formerly 17-23) Cunningham STREET	Other Petroleum	Regulation under CLM Act not required	-31.82275896	149.7243171
COOLONGOLOOK	Caltex Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.21648325	152.322813
COOMA	Former Mobil Cooma Depot	2 Commissioner STREET	Other Petroleum	Under assessment	-36.23267537	149.1346338
COOMA	Former Caltex Cooma Depot	2 Short STREET	Service Station	Regulation under CLM Act not required	-36.2338672	149.1348862
COOMA	Lowes Petroleum Cooma Depot and Service Station (Former BP Reliance Petroleum)	2-4 Sharp STREET	Other Petroleum	Regulation under CLM Act not required	-36.22862603	149.1356483
COOMA	Caltex Cooma Service Station	44 Sharp (Cnr Baron St) STREET	Service Station	Regulation under CLM Act not required	-36.23323489	149.1304134
COOMA	Former Shell Depot	48-50 Bradley STREET	Other Petroleum	Regulation under CLM Act not required	-36.23448955	149.1347987
COOMA	Former Shell Service Station	48-52 Sharp STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.23350402	149.1299514
COOMA	Woolworths Caltex Cooma Service Station	Bombala Street Cnr Massie STREET	Service Station	Under assessment	-36.23364626	149.1267469
COONABARABRAN	Shell Coles Express Service Station	2-6 John STREET	Service Station	Under assessment	-31.27706775	149.27836
COONABARABRAN	Former Mobil Depot	49 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27096226	149.2818461
COONABARABRAN	Caltex Service Station	85-87 John STREET	Service Station	Regulation under CLM Act not required	-31.27231215	149.2771297

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COONABARABRAN	Caltex Service Station	Cnr Dawson & Drummond STREET	Service Station	Under assessment	-31.26994941	149.28183
COONABARABRAN	Former Shell Coonabarabran CVRO	Corner Cowper St and Dawson St (formerly 51 Cowper) STREET	Other Petroleum	Regulation under CLM Act not required	-31.27003745	149.281788
COONAMBLE	Former Shell Coonamble Depot	Corner Aberford Street and Quambone ROAD	Other Petroleum	Regulation under CLM Act not required	-30.95349182	148.3793432
COONAMBLE	Caltex Service Station	Quambone ROAD	Service Station	Under assessment	-30.95410067	148.3792167
COORANBONG	Former Poultry Farm	64 - 98 Alton ROAD	Unclassified	Regulation under CLM Act not required	-33.06860138	151.4512156
COOTAMUNDRA	Cootamundra Gasworks	140-146 Hovell STREET	Gasworks	Contamination currently regulated under CLM Act	-34.64572841	148.0255049
COOTAMUNDRA	Former BP Depot	1-5 Murray STREET	Other Petroleum	Under assessment	-34.62915841	148.0306962
COOTAMUNDRA	Former Caltex Depot	219 Sutton STREET	Service Station	Under assessment	-34.65126548	148.0145283
COOTAMUNDRA	Caltex Service Station	26-34 Hovell STREET	Service Station	Under assessment	-34.63616276	148.0348299
COOTAMUNDRA	Former Amoco Depot	68-72 Hovell STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.63871124	148.0321134
COOTAMUNDRA	Former Ampol service station	72 Parker STREET	Service Station	Under assessment	-34.63471008	148.0296112
COOTAMUNDRA	Former Ampol Cootamundra Rail Siding	Back Brawlin ROAD	Other Petroleum	Under assessment	-34.65326425	148.0143068
CORAMBA	Martin Street	End of Martin Street and adjacent car park	Service Station	Ongoing maintenance required to manage residual contamination (CLM Act)	-30.22125208	153.0156997
COROWA	Former Ampol Corowa	10 Bow STREET	Service Station	Under assessment	-35.99364786	146.3901259
COROWA	Corowa Shire Council Works Depot	12 - 18 Poseidon ROAD	Other Petroleum	Under assessment	-35.98807923	146.3652266
COROWA	Cignall Corowa	280 Hume STREET	Service Station	Under assessment	-36.00996015	146.3760437
CORRIMAL	7-Eleven Corrimal	138-146 Princes HIGHWAY	Service Station	Under assessment	-34.36986923	150.8978271
CORRIMAL	Woolworths Petrol	275-277 Princes HIGHWAY	Service Station	Under assessment	-34.37527426	150.8962637
COWRA	Lowes Petroleum (former BP Cowra Depot)	10-12 Campbell STREET	Other Petroleum	Under assessment	-33.83803706	148.6977873
COWRA	Former Gasworks	30 Brougham STREET	Gasworks	Contamination currently regulated under CLM Act	-33.8389659	148.6963482
COWRA	Shell Depot	34 Brougham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.83932421	148.6976295
COWRA	Landmark Fertiliser Storage	Corner Young Road & Waratah STREET	Chemical Industry	Under assessment	-33.84321832	148.6722578
CRANGAN BAY	Big T Road House.	555 and 565 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.17326538	151.6083864
CREMORNE	Shell Coles Express Service Station	225 Military ROAD	Service Station	Regulation under CLM Act not required	-33.83063306	151.226223
CRINGILA	Cringila Public School	Sheffield STREET	Landfill	Regulation under CLM Act not required	-34.4719665	150.8695522
CROA	Breen Holdings	Bate Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.03861737	151.1614114
CROWS NEST	Caltex Service Station	111-121 Falcon STREET	Service Station	Under assessment	-33.82868236	151.2060317
CROYDON	Caltex Service Station	404-410 Liverpool ROAD	Service Station	Under assessment	-33.88853994	151.115879
CROYDON	BP Ashfield	582-586 Parramatta ROAD	Service Station	Under assessment	-33.87399409	151.1267296
CROYDON PARK	Mobil Service Station	334 Georges River ROAD	Service Station	Regulation under CLM Act not required	-33.89771626	151.0999194
CULCAIRN	Caltex Service Station	Olympic WAY	Service Station	Under assessment	-35.67441635	147.0356845

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CULLEN BULLEN	Baal Bone Colliery	Castlereagh HIGHWAY	Other Industry	Under assessment	-33.27193875	150.0587194
CUNDLETOWN	Caltex Service Station	Old Pacific HIGHWAY	Service Station	Under assessment	-31.89329598	152.5068225
CURL CURL	John Fisher Park	Corner Harbord and Abbott ROADS	Landfill	Regulation under CLM Act not required	-33.76352692	151.2798462
DACEYVILLE	Astrolabe Park	Cook AVENUE	Landfill	Regulation being finalised	-33.92963704	151.221773
DAPTO	RailCorp Dapto	(Rear of property) 12-14 Hamilton STREET	Other Industry	Regulation under CLM Act not required	-34.50045405	150.787353
DARLINGHURST	Proposed Retail Unit	139-155 Palmer STREET	Unclassified	Regulation under CLM Act not required	-33.87504688	151.2168106
DARLINGHURST	Cross City Tunnel	Riley Street and William STREET	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.87424636	151.2158305
DEE WHY	United Dee Why	1 The Strand STREET	Service Station	Under assessment	-33.75569207	151.2959451
DEE WHY	Caltex Service Station	793-797 Pittwater ROAD	Service Station	Under assessment	-33.74566596	151.2920719
DEE WHY	Roche Products Dee Why Facility	Inman ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.73834964	151.2876392
DEE WHY	Dee Why Town Centre	Pittwater ROAD	Other Industry	Under assessment	-33.753169	151.2875805
DENHAM COURT	Service Station, Denham Court	505 Campbelltown ROAD	Service Station	Under assessment	-33.98208395	150.8459471
DENILIQUIN	Former Deniliquin Caltex Depot	116-118 Hardinge (Cnr Wood St) STREET	Service Station	Regulation under CLM Act not required	-35.53196985	144.9544597
DENILIQUIN	Former Shell Depot	143-147 Napier STREET	Other Petroleum	Regulation under CLM Act not required	-35.5342355	144.953169
DENILIQUIN	Shell Coles Express Service Station	336 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.52373613	144.9807345
DENILIQUIN	Deniliquin Gasworks	365 and 369 George St and 380 Charlotte STREET	Gasworks	Under assessment	-35.52663248	144.9634981
DENILIQUIN	Landmark Chemicals Storage	90-101 Davidson STREET	Chemical Industry	Under assessment	-35.52534735	144.975142
DENILIQUIN	BP Depot (Reliance Petroleum)	Corner Hardinge Street and Sloane STREET	Service Station	Under assessment	-35.53222124	144.9517397
DENMAN	Former Industrial Site	10 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37945456	150.6868239
DENMAN	Former Industrial Site	9 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37911159	150.6869866
DOYALSON	Munmorah Power Station	(Central Coast Highway) Scenic DRIVE	Unclassified	Regulation under CLM Act not required	-33.20678347	151.540795
DOYALSON	Part Lot 3 DP 259306	Off David STREET	Other Industry	Regulation under CLM Act not required	-33.20436131	151.5232558
DOYALSON	Mannering Colliery (formerly Wyee)	Rutleys ROAD	Other Industry	Under assessment	-33.17179576	151.5419248
DOYALSON	Munmorah Colliery	Scenic DRIVE	Other Industry	Under assessment	-33.21297737	151.5416882
DOYALSON NORTH	Shell Coles Express Service Station	260-270 Pacific HIGHWAY	Service Station	Under assessment	-33.18636608	151.5482399
DRUMMOYNE	Caltex Service Station	191-195 Lyons ROAD	Service Station	Under assessment	-33.85699216	151.1460356
DRUMMOYNE	Former Dry Cleaners	225 Victoria ROAD	Chemical Industry	Under assessment	-33.8507152	151.1537113
DRUMMOYNE	Shell Coles Express Drummoyne (Westbound)	35-51 Victoria ROAD	Service Station	Under assessment	-33.85606575	151.1589061
DRUMMOYNE	Shell Coles Express Drummoyne (Eastbound)	36 - 46 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85576628	151.1593519
DUBBO	Lowes Petroleum (BP-Branded) Depot, Dubbo	105 Erskine STREET	Service Station	Regulation under CLM Act not required	-32.24423247	148.6101676

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DUBBO	BP Reliance Petroleum Service Station (Former Mobil Depot)	107 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24441287	148.6111704
DUBBO	Former Shell Depot	109-111 Erskine STREET	Other Petroleum	Under assessment	-32.24470512	148.6124108
DUBBO	Caltex Service Station	119 Bourke STREET	Service Station	Under assessment	-32.24336464	148.6091931
DUBBO	Shell Coles Express Service Station	131-133 Cobra STREET	Service Station	Under assessment	-32.25511317	148.6126147
DUBBO	Dubbo Police Station	143 Brisbane STREET	Other Petroleum	Under assessment	-32.24652288	148.6034702
DUBBO	Former Ambulance Station	165 Brisbane STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-32.24850755	148.6031749
DUBBO	Service Station at Harvey Norman Centre	219-233 Cobra STREET	Service Station	Under assessment	-32.2565155	148.6228586
DUBBO	Former Mobil depot	40-44 Morgan STREET	Other Petroleum	Regulation under CLM Act not required	-32.23912277	148.6182711
DUBBO	Shell Coles Express Service Station	45-49 Whylandra STREET	Service Station	Under assessment	-32.2474598	148.5932769
DUBBO	Caltex Service Station, Dubbo	60 Windsor PARADE	Service Station	Regulation under CLM Act not required	-32.25459322	148.6318
DUBBO	Caltex Service Station, Dubbo	Cnr Brisbane Street and Cobra STREET	Service Station	Contamination currently regulated under CLM Act	-32.25322183	148.603164
DUBBO	Caltex Service Station	Phillip St Cnr Fitzroy STREET	Service Station	Under assessment	-32.24534863	148.6150144
DUBBO WEST	BP (Former Mobil Service Station)	51-63 Whylandra STREET	Service Station	Under assessment	-32.24827657	148.5927084
DULWICH HILL	Former Tyre Recapping	115-117 Constitution ROAD	Other Industry	Regulation under CLM Act not required	-33.90300876	151.1387724
DULWICH HILL	Denison Road Playground	194 Denison ROAD	Landfill	Regulation under CLM Act not required	-33.90121956	151.1404637
DUNEDOO	Former Shell Depot Dunedoo	Cnr Bolaro and Redbank STREET	Other Petroleum	Regulation under CLM Act not required	-32.01565761	149.3922418
DUNGOG	Lot 54 Common Rd	54 Common ROAD	Unclassified	Regulation under CLM Act not required	-32.39490989	151.739821
DUNGOG	Former HWC Maintenance Depot for Civil Engineering Works	86 Abelard STREET	Other Industry	Under assessment	-32.40429396	151.7514073
DUNMORE	Equestrian Centre	71 Fig Hill LANE	Unclassified	Regulation under CLM Act not required	-34.62313393	150.8421544
DURAL	Caltex Service Station	530 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716
DURAL	Woolworths Service Station	532 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716
DURAL	BP Dural Service Station	580 Old Northern ROAD	Service Station	Under assessment	-33.69569985	151.0283357
DURAL	Caltex Dural Service Station	917-923 Old Northern ROAD	Service Station	Under assessment	-33.68312075	151.0287519
EAGLE VALE	BP Service Station	Corner Eagle Vale Drive and Gould ROAD	Service Station	Under assessment	-34.03128043	150.816363
EARLWOOD	RTA Land	3 Jackson PLACE	Unclassified	Contamination currently regulated under CLM Act	-33.9272087	151.1432854
EARLWOOD	Wolli Creek Aqueduct	Unwin STREET	Unclassified	Regulation under CLM Act not required	-33.92788788	151.1480807
EAST BALLINA	Caltex East Ballina Service Station	34 Links AVENUE	Service Station	Regulation under CLM Act not required	-28.85009113	153.5829246

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EAST GOSFORD	Mobil Service Station	44 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.43804781	151.353303
EAST GOSFORD	Presbyterian Aged Care Facility	8-18 Enid CRESCENT	Landfill	Regulation under CLM Act not required	-33.4376675	151.3577947
EAST MAITLAND	United Maitland East	164 (also known as 250) Newcastle STREET	Service Station	Under assessment	-32.7530641	151.5871179
EAST MAITLAND	Former Gasworks Site	Corner Melbourne Street and Brisbane STREET	Gasworks	Regulation under CLM Act not required	-32.74939199	151.5788783
EAST MAITLAND	Caltex Service Station	Newcastle Road, Corner William STREET	Service Station	Under assessment	-32.74883712	151.5829296
EAST TAMWORTH	Caltex Service Station	358 New England HIGHWAY	Service Station	Under assessment	-31.11401974	150.9613327
EASTERN CREEK	Caltex Service Station M4 Motorway Westbound	M4 Westbound OTHER	Service Station	Regulation under CLM Act not required	-33.80255701	150.8829211
EASTERN CREEK	Caltex Service Station	M4Eastbound MOTORWAY	Service Station	Under assessment	-33.801607	150.8857989
EASTERN CREEK	Pioneer Road Services	Old Walgrove ROAD	Other Industry	Under assessment	-33.81190491	150.8392181
EASTLAKES	Budget Petroleum Eastlakes	102 Maloney STREET	Service Station	Regulation being finalised	-33.9316936	151.2093135
EASTLAKES	Former Shell Rosebery service station and adjacent land	275-279 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92470279	151.2100722
EASTLAKES	73 Gardeners Road	73 Gardeners ROAD	Unclassified	Regulation under CLM Act not required	-33.92541594	151.2182856
EASTLAKES	Eastlakes Reserve	Evans AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-33.92497291	151.2102725
EASTWOOD	Former Mobil Service Station Eastwood	3-5 Trelawney (Cnr Rutledge St) STREET	Service Station	Regulation under CLM Act not required	-33.79273381	151.079584
EDEN	Caltex Service Station	159 Imlay STREET	Service Station	Under assessment	-37.06324099	149.9044022
EDEN	Caltex Service Station	80-86 Imlay STREET	Service Station	Under assessment	-37.0570984	149.9038538
EDENSOR PARK	7-Eleven (former Mobil) Service Station	Corner Cowpasture Road and Elizabeth DRIVE	Service Station	Under assessment	-33.88326139	150.865591
EDGECLIFF	Shell Coles Express Service Station	67 New South Head ROAD	Service Station	Under assessment	-33.8769602	151.2311617
EDGEWORTH	Caltex Service Station	662 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92566329	151.6278888
EMERALD BEACH	Shell Coles Express Woolgoolga Service Station	1850 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.16450856	153.1826673
EMERTON	7-Eleven Emerton	135-137 Popondetta ROAD	Service Station	Regulation under CLM Act not required	-33.74463908	150.8102251
EMU HEIGHTS	7-Eleven Service Station	126 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.74299098	150.6547098
EMU HEIGHTS	Woolworths Service Station	132 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.7429739	150.6559655
EMU PLAINS	Woolworths Service Station	283 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.75371349	150.6530165
ENGADINE	BP Service Station	1234 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.07735416	151.01121
ENGADINE	BP Branded Service Station	963 Old Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.06428454	151.0167121
ENGADINE	Former Caltex Service Station	995 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.06413459	151.0155734
EPPING	7-Eleven (former Mobil) Service Station	246 Beecroft ROAD	Service Station	Under assessment	-33.77073552	151.080581

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
ERINA	Former Frozen Food Distribution Depot	1 Aston ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-33.434878	151.3845431
ERINA	Caltex Service Station	155 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43824871	151.3801096
ERINA	Coles Express Service Station Erina	211 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43547804	151.3850522
ERINA	7-Eleven Erina	214 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43494257	151.3879511
ERINA	7-Eleven Service Station	96 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43786868	151.3729331
ERMINGTON	Caltex Service Station	562 Victoria ROAD	Service Station	Under assessment	-33.81392814	151.0547543
ERSKINE PARK	Western Sydney Service Centre	25-55 Templar ROAD	Landfill	Under assessment	-33.81897822	150.7937394
ERSKINEVILLE	Redevelopment Site	36/1A Coulson STREET	Unclassified	Under assessment	-33.90325501	151.1855668
ERSKINEVILLE	Department of Housing	52 John STREET	Other Industry	Regulation under CLM Act not required	-33.8982925	151.1840284
ERSKINEVILLE	RailCorp land	Coulson STREET	Other Industry	Under assessment	-33.90279502	151.1846827
EUABALONG WEST	BP Euabalong West Depot (Reliance Petroleum)	Corner Illawong Street and Murrin STREET	Other Petroleum	Under assessment	-33.05720426	146.3946386
EVANS HEAD	Evans Head Residential subdivision	Bounded by Currajong, Woodburn, Carrabeen Streets and Tuckeroo CRESCENT	Unclassified	Regulation under CLM Act not required	-29.1080969	153.4243577
EVANS HEAD	Evans Head Aerodrome	Memorial Airport DRIVE	Other Industry	Regulation under CLM Act not required	-29.10389976	153.4216791
EVANS HEAD	Bundjalung National Park	The Gap ROAD	Unclassified	Under assessment	-29.24433977	153.3626472
EVELEIGH	Macdonaldtown Triangle	Burren STREET	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.89803492	151.186059
EVELEIGH	Australian Technology Park	Henderson ROAD	Other Industry	Regulation under CLM Act not required	-33.89634136	151.1944915
FAIRFIELD	Endeavour Energy Fairfield Zone Substation	22 Hedges STREET	Other Industry	Regulation under CLM Act not required	-33.86133019	150.9555899
FAIRFIELD	Speedway Petroleum	251 The Horsley DRIVE	Service Station	Under assessment	-33.8711661	150.9630077
FAIRFIELD HEIGHTS	7-Eleven Fairfield Heights	234 Hamilton (Cnr The Boulevarde) ROAD	Service Station	Under assessment	-33.87208474	150.9373134
FAIRY MEADOW	Caltex Fuel Depot and adjoining land	46 Montague STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.40050499	150.8953125
FAIRY MEADOW	Woolworths Petrol Service Station	49 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39399705	150.8925369
FAIRY MEADOW	Deynal (Seeman)	51-59 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39437085	150.8924666
FARLEY	Farley Waste Water Treatment Works	Owl Pen LANE	Other Industry	Under assessment	-32.74431314	151.5194217
FASSIFERN	Former Arsenic Smelter	Fassifern ROAD	Other Industry	Under assessment	-32.99649819	151.5618283
FASSIFERN	Newstan Colliery	Fassifern ROAD	Other Industry	Under assessment	-32.97942521	151.5660046
FEDERAL	Federal General Store	3-6 Federal DRIVE	Service Station	Contamination currently regulated under CLM Act	-28.65190728	153.4552976
FERN BAY	Former service station	37 Fullerton (1006 Nelson Bay Road) STREET	Service Station	Under assessment	-32.87245004	151.7939904
FIVE DOCK	7-Eleven Service Station	231-235 Great North ROAD	Service Station	Under assessment	-33.86488376	151.130002

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FIVE DOCK	Caltex Five Dock Service Station	47 Ramsay Road, corner Fairlight STREET	Service Station	Under assessment	-33.87002804	151.1301835
FORBES	Forbes Fuel Depot	13-15 Union STREET	Other Petroleum	Under assessment	-33.37751977	148.0101422
FORBES	Former Gasworks	24-26 Union STREET	Gasworks	Under assessment	-33.37752036	148.0090064
FORBES	Woolworths (Former Save on Fuel) Service Station	26 Dowling STREET	Service Station	Regulation under CLM Act not required	-33.38148764	148.0109845
FORBES	Caltex Forbes Service Station	Cnr Parkes Road and Wyndham Avenue OTHER	Service Station	Under assessment	-33.36333714	148.0223727
FORBES	BP Forbes Service Station (Reliance Petroleum)	Corner Johnson Street and Dowling STREET	Other Petroleum	Under assessment	-33.38121776	148.0100351
FORBES	Former Shell Depot	Stephen STREET	Other Petroleum	Regulation under CLM Act not required	-33.37704755	148.0103001
FORESTVILLE	BP Service Station	632 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75997969	151.2142944
FORESTVILLE	Shell Service Station	667 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.76035336	151.2184929
FORRESTERS BEACH	Caltex Service Station	The Entrance Rd Cnr Bellevue ROAD	Service Station	Regulation under CLM Act not required	-33.40057818	151.4687631
FORSTER	Caltex Service Station	16-18 Lake STREET	Service Station	Regulation under CLM Act not required	-32.18306967	152.5162492
FORSTER	Shell (Kneebone's) Service Station	2-6 The Lakes WAY	Service Station	Regulation under CLM Act not required	-32.1946108	152.5145662
FORSTER	United (Former Mobil) Service Station	86-88 Macintosh STREET	Service Station	Under assessment	-32.19079468	152.5154847
FREDERICKTON	Former Service station	2-4 Great North ROAD	Service Station	Regulation under CLM Act not required	-31.03513998	152.8794105
FRENCHS FOREST	Former 7-Eleven / Mobil Beacon Hill Service Station, Frenchs Forest	312 Warringah ROAD	Service Station	Under assessment	-33.75129647	151.2469656
FRENCHS FOREST	Former BP Service Station	Russell AVENUE	Service Station	Regulation being finalised	-33.75018093	151.2245005
FRESHWATER	Prime (former Mobil) Service Station Freshwater	117 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.77286748	151.2794354
GEORGETOWN	Caltex Service Station	4 Georgetown ROAD	Service Station	Under assessment	-32.91121105	151.7319693
GERRINGONG	Gerringong Cooperative	18 Belinda STREET	Other Petroleum	Regulation under CLM Act not required	-34.74518835	150.8181054
GILGANDRA	Mobil Service Station	15 Castlereagh STREET	Service Station	Under assessment	-31.71715641	148.6581574
GILGANDRA	Former Mobil Depot	2 Federation STREET	Other Petroleum	Under assessment	-31.70937362	148.6522102
GILGANDRA	Former Mobil Depot	20 Federation STREET	Other Petroleum	Under assessment	-31.70771744	148.6514198
GILGANDRA	Caltex Service Station Gilgandra	6425 Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-31.72545524	148.65281
GIRRAWEEN	Industrial Galvanizers site	20-22 Amax AVENUE	Metal Industry	Contamination currently regulated under POEO Act	-33.80500693	150.9396743
GLADESVILLE	Caltex Service Station	116 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.83575319	151.1277863
GLADESVILLE	Caltex Service Station	287-295 Victoria ROAD	Service Station	Under assessment	-33.8285374	151.1268639
GLADESVILLE	Glade View Business Park	436-484 Victoria ROAD	Other Industry	Under assessment	-33.82382382	151.1223941
GLADESVILLE	Road Reserve	Pittwater ROAD	Other Industry	Under assessment	-33.81603924	151.1355085
GLEBE	The Hill and Jubilee Embankment	12 Maxwell ROAD	Other Industry	Regulation under CLM Act not required	-33.87573032	151.1776027

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GLEN INNES	Ambulance Station	106 Bourke STREET	Unclassified	Regulation under CLM Act not required	-29.73805854	151.7313138
GLEN INNES	Telstra Depot Glen Innes	126 Lambeth STREET	Unclassified	Regulation under CLM Act not required	-29.73565341	151.7278271
GLEN INNES	Caltex Glen Innes Service Station	154 Church STREET	Service Station	Under assessment	-29.75608853	151.7344106
GLEN INNES	Caltex Glen Innes Service Station	Church St Cnr Meade STREET	Service Station	Under assessment	-29.73699014	151.7379335
GLEN INNES	Caltex Service Station	Cnr Taylor Street & Church STREET	Service Station	Regulation under CLM Act not required	-29.73289036	151.739653
GLEN INNES	Former Shell Depot	Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.7376309	151.7276309
GLEN INNES	Former Caltex Depot, Glen innes	Lot 1 DP785636 Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.73525485	151.7279167
GLEN INNES	Council-owned Laneway	Lot 2 Lang STREET	Gasworks	Regulation under CLM Act not required	-29.74385432	151.7323049
GLENBROOK	Caltex Service Station Glenbrook	78 Great Western HIGHWAY	Service Station	Under assessment	-33.76545234	150.6215447
GLENDALE	Former Service Station	334-342 Lake ROAD	Unclassified	Regulation under CLM Act not required	-32.92775076	151.6433463
GLENDALE	Coles Express Glendale	593 Main ROAD	Service Station	Under assessment	-32.92709242	151.637946
GLENDALE	Woolworths Service Station	Stockland DRIVE	Service Station	Regulation under CLM Act not required	-32.93250548	151.6404097
GLENDENNING	7-Eleven Plumpton Service Station Glendenning	1 Dublin (Cnr Richmond Rd) STREET	Service Station	Regulation under CLM Act not required	-33.73988232	150.8603323
GLENORIE	Caltex Glenorie Service Station	912 Old Northern ROAD	Service Station	Under assessment	-33.60550946	151.0126731
GLOUCESTER	Caltex Service Station	141 Church STREET	Service Station	Under assessment	-32.01222514	151.9579521
GOOLMANGAR	Goolmangar General Store	851 Nimbin ROAD	Service Station	Under assessment	-28.74694441	153.225401
GOONELLABAH	Invercauld Road Cattle Dip	161 Invercauld ROAD	Cattle Dip	Contamination currently regulated under CLM Act	-28.8308417	153.3098878
GOSFORD	United (former Mobil) Depot	Corner Merinee Road and Bowen CRESCENT	Other Petroleum	Under assessment	-33.41523225	151.3257069
GOULBURN	Former Goulburn Gasworks	1 Blackshaw ROAD	Gasworks	Contamination currently regulated under CLM Act	-34.75237525	149.725507
GOULBURN	Mobil Service Station	129 Lagoon STREET	Service Station	Contamination currently regulated under CLM Act	-34.74618793	149.7330484
GOULBURN	Goulburn Tannery	13 Gibson STREET	Other Industry	Regulation under CLM Act not required	-34.73756525	149.72059
GOULBURN	Caltex Depot	13 Sloane STREET	Other Petroleum	Regulation under CLM Act not required	-34.77423152	149.7088626
GOULBURN	Mobil Depot	23 Braidwood ROAD	Other Petroleum	Under assessment	-34.76217302	149.7170897
GOULBURN	Caltex Service Station	315 Auburn, corner Bradley STREET	Service Station	Regulation under CLM Act not required	-34.74942293	149.7232692
GOULBURN	Former Mobil Service Station Goulburn	422-426 Auburn STREET	Service Station	Regulation under CLM Act not required	-34.74869879	149.7229392
GOULBURN	Caltex Service Station	68 Goldsmith STREET	Service Station	Under assessment	-34.75054432	149.7192098
GOULBURN	Caltex Service Station	72-74 Clinton STREET	Service Station	Regulation under CLM Act not required	-34.75728157	149.7135824
GOULBURN	Coles Express Service Station	90 Cowper (Corner Clinton Street) STREET	Service Station	Regulation under CLM Act not required	-34.75566648	149.7107831

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
GOULBURN	Former Shell Autoport Service Station	Corner Bruce Street and Lagoon STREET	Service Station	Regulation under CLM Act not required	-34.74807885	149.7266246
GRAFTON	Lowes Petroleum (BP-Branded) Depot, Grafton	13 Orara STREET	Other Petroleum	Regulation under CLM Act not required	-29.67016421	152.918161
GRAFTON	Turf Street Shop	161 Turf STREET	Service Station	Under assessment	-29.67412811	152.9336609
GRAFTON	Caltex Service Station	179 Prince STREET	Service Station	Regulation under CLM Act not required	-29.68600117	152.9371093
GRAFTON	Former Shell Depot	2 Milton STREET	Other Petroleum	Regulation under CLM Act not required	-29.67723019	152.9205374
GRAFTON	Former BP Service Station (Reliance Petroleum)	202 Queen STREET	Service Station	Regulation under CLM Act not required	-29.67645469	152.9423977
GRAFTON	Former Mobil Depot Grafton	2-16 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.68093591	152.9231289
GRAFTON	Grafton Works Depot	26-28 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.67975507	152.9249357
GRAFTON	BP Service Station (Reliance Petroleum)	58 Fitzroy STREET	Service Station	Under assessment	-29.69345456	152.9373123
GRAFTON	Caltex Service Station	72 Swallow ROAD	Service Station	Under assessment	-29.73168549	152.944024
GRAFTON	Woolworths Petrol	75 - 77 Fitzroy Street Cnr of Duke STREET	Service Station	Under assessment	-29.69221713	152.9343562
GRAFTON	Shell Coles Express Service Station	91 Bent STREET	Service Station	Under assessment	-29.70605829	152.9400329
GRAFTON	Caltex Service Station	Corner Villiers St and Fitzroy STREET	Service Station	Regulation under CLM Act not required	-29.69296308	152.9366431
GRANVILLE	Caltex Service Station	144 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83039605	151.0109216
GRANVILLE	Australand	15-17 Berry STREET	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.83600073	151.0211988
GRANVILLE	7-Eleven Service Station	154-160 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83022685	151.0101322
GRANVILLE	Woolworths Granville	158 Clyde STREET	Service Station	Under assessment	-33.84623338	151.0124885
GRANVILLE	Old Granville Depot	23 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-33.83765925	151.008528
GRANVILLE	Evans Deacon Ind	2B Factory STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84173556	151.0165687
GRANVILLE	A'Becketts Creek	Albert STREET	Unclassified	Under assessment	-33.82735397	151.0113643
GREENACRE	Former Plating Works	12 Claremont STREET	Unclassified	Regulation under CLM Act not required	-33.89992254	151.0386128
GREENACRE	7-Eleven (former Mobil) Service Station	301-305 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90524488	151.0419971
GREENACRE	Caltex Service Station	87 - 91 Roberts ROAD	Service Station	Regulation under CLM Act not required	-33.90461089	151.0648581
GREENWICH	Gore Creek Reserve - Drainage Line	St Vincents ROAD	Other Industry	Regulation under CLM Act not required	-33.82888693	151.1819101
GRENFELL	Grenfell Gasworks	Corner Gooloogong Road & Bourke STREET	Gasworks	Regulation under CLM Act not required	-33.89006016	148.1615443
GRENFELL	Former SRA Fuel Depot	Grafton STREET	Other Petroleum	Regulation under CLM Act not required	-33.89351237	148.1560188

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GRETA	redevelopment site	112-114 High STREET	Other Industry	Regulation under CLM Act not required	-32.67706709	151.3876682
GRETA	Coles Express Greta	122 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.67656357	151.3872818
GRETA	Former landfill	Hollingshed ROAD	Landfill	Regulation under CLM Act not required	-32.66705287	151.3923474
GREYSTANES	United (former Mobil) Service Station	73 Ettalong ROAD	Service Station	Under assessment	-33.81822648	150.9513946
GRIFFITH	Landmark Fertiliser Storage	2 - 8 Jensen ROAD	Chemical Industry	Under assessment	-34.29365599	146.0536413
GRIFFITH	Caltex Service Station	2-4 Mackay AVENUE	Service Station	Under assessment	-34.2908766	146.0630815
GRIFFITH	Belford Petroleum (former Mobil) Depot	30 Banna AVENUE	Service Station	Under assessment	-34.29042827	146.0595497
GRIFFITH	Caltex Service Station	32-34 Mackay AVENUE	Service Station	Under assessment	-34.2933331	146.0679503
GRIFFITH	Former Murrumbidgee Irrigation Depot	55-77 Banna AVENUE	Other Industry	Regulation under CLM Act not required	-34.28858242	146.0567509
GRIFFITH	Shell Griffith CVRO	6-10 Mackay AVENUE	Other Petroleum	Under assessment	-34.2910045	146.063824
GRIFFITH	BP Service Station (Reliance Petroleum)	81 Banna AVENUE	Service Station	Under assessment	-34.28851251	146.0540815
GRIFFITH	Mobil Depot - Griffith Airport	Off Rememberance DRIVE	Other Petroleum	Regulation under CLM Act not required	-34.25618872	146.0620449
GUILDFORD	Rawson Road Service Station	2 Rawson ROAD	Service Station	Under assessment	-33.86366193	151.0088768
GUILDFORD WEST	7-Eleven Service Station	176 Fowler ROAD	Service Station	Under assessment	-33.85149493	150.9722491
GULGONG	Lowes Petroleum (former BP Depot) Gulgong	6 Railway STREET	Other Petroleum	Under assessment	-32.35950625	149.5461499
GULGONG	The Oval Site	Queen STREET	Unclassified	Under assessment	-32.36169815	149.531075
GULMARRAD	BP Service Station Maclean	3976 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-29.48537407	153.2004311
GUMLY GUMLY	Caltex Service Station	3723 Sturt HIGHWAY	Service Station	Regulation under CLM Act not required	-35.13590309	147.4424551
GUMLY GUMLY	Brick Kiln Reserve	Eunony Bridge ROAD	Landfill	Regulation under CLM Act not required	-35.12098411	147.4196309
GUNDAGAI	Former Mobil Depot	98 Mount STREET	Other Petroleum	Under assessment	-35.08206783	148.096221
GUNNEDAH	Mobil Gunnedah Depot	16-24 Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-30.98428725	150.260609
GUNNEDAH	Caltex Service Station	21 Abbott STREET	Service Station	Under assessment	-30.98021001	150.2561856
GUNNEDAH	Mobil Service Station	341 Conadilly STREET	Service Station	Contamination currently regulated under CLM Act	-30.9807394	150.2578428
GUNNEDAH	State Property Authority Site	35 -37 Abbott STREET	Other Petroleum	Under assessment	-30.9789841	150.25737
GUNNEDAH	Former Caltex Depot	61 Railway AVENUE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.97953242	150.2494457
GUNNEDAH	Former Telstra Line Depot	81 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97933809	150.2503121
GUNNEDAH	Former Shell Depot Gunnedah	85-89 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97949284	150.2507401
GUNNEDAH	BP Service Station	Corner Conadilly Street & Henry STREET	Service Station	Contamination currently regulated under CLM Act	-30.98116266	150.2583066
GUNNEDAH	Adjacent to Service Station	Intersection of Henry Street and Conadilly STREET	Service Station	Contamination currently regulated under CLM Act	-30.98072588	150.2582802
GUNNING	Gunning Motors	56 Yass STREET	Service Station	Under assessment	-34.78159326	149.2684791
GUYRA	Caltex-branded Service Station	4352 New England HIGHWAY	Service Station	Under assessment	-30.20601937	151.6757291

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GUYRA	StateRail land leased to Incitec	Starr ROAD	Other Industry	Regulation under CLM Act not required	-30.23157011	151.6707135
GWANDALAN	Metro Petroleum Gwandalan (Formerly Gwandalan Auto Care)	47 Orana ROAD	Service Station	Under assessment	-33.13632941	151.5813396
GWANDALAN	Former Gwandalan Landfill	Kanandra DRIVE	Landfill	Regulation under CLM Act not required	-33.17497722	151.5917107
GYMEA	7-Eleven (former Mobil) Gymea Service Station	110 Gymea Bay ROAD	Service Station	Regulation under CLM Act not required	-34.03745848	151.0848547
GYMEA BAY	Former Shell Gymea Bay Service Station	Gymea Bay ROAD	Service Station	Under assessment	-34.04129676	151.0841328
HABERFIELD	7-Eleven Haberfield	25-35 Parramatta ROAD	Service Station	Contamination currently regulated under CLM Act	-33.887956	151.142868
HALEKULANI	Former Halekulani Landfill	Macleay DRIVE	Landfill	Under assessment	-33.21446301	151.5527625
HAMILTON	SRA Land	10 Maitland ROAD	Unclassified	Regulation under CLM Act not required	-32.91994358	151.7512417
HAMILTON	Taxi Services	116 Tudor STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.92351606	151.7454742
HAMILTON	Caltex Hamilton	59-63 Tudor STREET	Service Station	Under assessment	-32.92498593	151.7509313
HAMILTON	Newcastle Toyota	65 Tudor STREET	Other Petroleum	Under assessment	-32.925171	151.7504048
HAMILTON	Hamilton Gasworks	Clyde STREET	Gasworks	Contamination currently regulated under CLM Act	-32.91362741	151.7406241
HAMILTON	Hamilton Bus Depot	Cnr Denison Street and Gordon AVENUE	Other Petroleum	Regulation under CLM Act not required	-32.92542648	151.7512512
HAMILTON NORTH	Shell Newcastle Terminal	5 Chatham STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.91630469	151.7408712
HAMILTON NORTH	ELMA	54 Clyde STREET	Other Industry	Contamination currently regulated under CLM Act	-32.91145768	151.7367691
HAMILTON NORTH	Black and Decker	56 Clyde STREET	Metal Industry	Contamination currently regulated under CLM Act	-32.91080413	151.7358236
HARBORD	Former Dry Cleaners	121 Wyndora AVENUE	Other Industry	Regulation under CLM Act not required	-33.77425321	151.2821553
HARDEN	SRA Site	31 Aurvill ROAD	Unclassified	Regulation under CLM Act not required	-34.54998656	148.3689577
HARDEN	SRA Site	51 Whitton LANE	Unclassified	Contamination formerly regulated under the CLM Act	-34.55396035	148.3713349
HARTLEY VALE	Former Shale Oil Refinery	Lot 52 Hartley Vale ROAD	Unclassified	Contamination currently regulated under CLM Act	-33.52925119	150.24216
HASTINGS POINT	Coles Express Hastings Point	99 Tweed Coast ROAD	Service Station	Regulation under CLM Act not required	-28.36914103	153.5725676
HAY	Former Shell Hay Depot	391 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.50028195	144.8463999
HAY	SRA Land	429, 431, 435, 437 & 439 Murray STREET	Other Industry	Regulation under CLM Act not required	-34.49965611	144.840976
HAY	SRA Land	443 Murray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-34.49966753	144.8410778
HAY	Former Mobil Hay Depot	Corner Lachlan Street and Murray STREET	Other Petroleum	Under assessment	-34.50019184	144.8456578
HAY SOUTH	Caltex Service Station	429-431 Moama STREET	Service Station	Under assessment	-34.52001427	144.8380121

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
HAZELBROOK	Caltex Service Station Hazelbrook	198 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.72106175	150.4520976
HEATHCOTE	Caltex Service Station	1344 Princes HIGHWAY	Service Station	Under assessment	-34.08841066	151.0072048
HEATHCOTE	Shell Coles Express Service Station	1355 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08780042	151.0069741
HEATHCOTE	Caltex Service Station	1403 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.09059834	151.003752
HEATHERBRAE	Shell Coles Express Motto Farm Service Station	2137 Pacific HIGHWAY	Service Station	Under assessment	-32.79835449	151.7176284
HEATHERBRAE	Bogas (Former Caltex) Service Station	3 Speedy Lock LANE	Service Station	Regulation under CLM Act not required	-32.78057822	151.7372135
HEXHAM	QR National - Hexham Precinct	179 & 3/67 Maitland ROAD	Other Industry	Regulation under CLM Act not required	-32.83474038	151.6821895
HEXHAM	Cummins Newcastle	21 Galleghan STREET	Other Industry	Under assessment	-32.83186739	151.686709
HEXHAM	Caltex-Bogas Warehouse	239 Old Maitland ROAD	Service Station	Under assessment	-32.82899942	151.6861849
HEXHAM	Industrial Galvanizers	312 Pacific HIGHWAY	Metal Industry	Contamination currently regulated under POEO Act	-32.83457186	151.6884941
HEXHAM	Caltex Service Station	360 Old Maitland ROAD	Service Station	Under assessment	-32.82844873	151.6851063
HEXHAM	BP Service Station (Reliance Petroleum)	Corner Pacific Highway and Old Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82756403	151.6846929
HEXHAM	Forgacs Site	Sparke STREET	Chemical Industry	Contamination currently regulated under CLM Act	-32.85464558	151.6988053
HILLSTON	Former BP Depot Hillston	141-143 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-33.48823546	145.5381623
HOLBROOK	Caltex Truckstop	Hume HIGHWAY	Service Station	Under assessment	-35.71332625	147.3207237
HOMEBUSH	Ausgrid Mason Park Substation	1 Underwood ROAD	Other Industry	Regulation under CLM Act not required	-33.85674677	151.0747044
HOMEBUSH BAY	WSN Auburn Waste and Recycling Centre	Corner Pondage Link and Hill ROAD	Landfill	Under assessment	-33.84359299	151.0593656
HOMEBUSH WEST	Former Ford Landfill	22 Mandemar AVENUE	Landfill	Under assessment	-33.86180526	151.0635664
HOMEBUSH WEST	Caltex Service Station Homebush West	334-336 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.8581543	151.0681261
HORNSBY	Coles Express Hornsby	194- 206 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7071993	151.0991452
HORNSBY	Hornsby Train Maintenance Centre	1B Stephen STREET	Other Industry	Under assessment	-33.69342449	151.1035295
HORNSBY	Midas Car Care Centre Hornsby	2A Linda STREET	Unclassified	Regulation under CLM Act not required	-33.70052215	151.1004786
HOXTON PARK	Endeavour Energy Hoxton Park	490 Hoxton Park ROAD	Other Industry	Regulation under CLM Act not required	-33.92766437	150.8689069
HUNTERS HILL	Coles Express Hunters Hill	4 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.8317985	151.141655
HUNTERS HILL	Former Radium Factory	7-9 Nelson PARADE	Other Industry	Under assessment	-33.84218911	151.164968
HUNTERS HILL	Foreshore Land	Rear of 7, 9 & 11 Nelson PARADE	Unclassified	Contamination currently regulated under CLM Act	-33.84248362	151.1649249
HURLSTONE PARK	Former Speedway Petroleum Service Station	610 - 618 New Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90541228	151.1322009
HURLSTONE PARK	7-Eleven Hurlstone Park	670 New Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90510388	151.1299825

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HURLSTONE PARK	Former Telstra Depot	82 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90803171	151.1258121
HURSTVILLE GROVE	Moore Reserve	Morshead DRIVE	Landfill	Contamination currently regulated under CLM Act	-33.97920603	151.0873578
INVERELL	Caltex Service Station	139-143 Otho STREET	Service Station	Under assessment	-29.77819403	151.1145699
INVERELL	Former Service Station	20 Oliver STREET	Service Station	Regulation under CLM Act not required	-29.77229743	151.1152692
INVERELL	Former Shell Depot	25 Edward STREET	Other Petroleum	Regulation under CLM Act not required	-29.76151684	151.1182033
INVERELL	Former Mobil Inverell Depot	29-33 Edward STREET	Other Petroleum	Under assessment	-29.76135322	151.1171412
INVERELL	Caltex Service Station	4 Edward STREET	Service Station	Under assessment	-29.76123104	151.1147983
INVERELL	Caltex Service Station	55-59 Ring STREET	Service Station	Under assessment	-29.76204512	151.1141737
INVERELL	Former Mobil Service Station	Corner Otho Street and Henderson STREET	Service Station	Under assessment	-29.7786926	151.1149921
ISLINGTON	Shell Pipeline Easement (vacant land)	24 Fern STREET	Other Petroleum	Under assessment	-32.91706254	151.7473809
ISLINGTON	Caltex Service Station	240 Maitland ROAD	Service Station	Under assessment	-32.91138644	151.7457701
JAMISONTOWN	BP Service Station Jamisontown	124 - 128 Mulgoa ROAD	Service Station	Under assessment	-33.76978323	150.6764977
JAMISONTOWN	Former Caltex Jamisontown	229-231 Mulgoa ROAD	Service Station	Under assessment	-33.76661447	150.6784735
JAMISONTOWN	7-Eleven Service Station	92 Mulgoa ROAD	Service Station	Contamination currently regulated under CLM Act	-33.7667231	150.6796488
JANNALI	Former Mobil Service Station	121 Georges River ROAD	Service Station	Regulation under CLM Act not required	-34.01614613	151.0681921
JENNINGS	Former Arsenic Poison Factory	Duke Street, Manor Street and King STREET	Chemical Industry	Under assessment	-28.92833023	151.9301552
JESMOND	Caltex Service Station	27 Bluegum ROAD	Service Station	Under assessment	-32.9029287	151.691164
JINDABYNE	Caltex Service Station	50 Kosciuszko ROAD	Service Station	Under assessment	-36.41395847	148.6225113
JINDABYNE	BP Service Station (Reliance Petroleum)	8 Kosciuszko ROAD	Service Station	Regulation under CLM Act not required	-36.41478692	148.6178882
JUNEE	Subdivision Proposal	5858 Gundagai ROAD	Unclassified	Regulation under CLM Act not required	-34.87783587	147.6067578
KANAHOOKA	Former Smelter Site	Kanahooka ROAD	Metal Industry	Under assessment	-34.49406369	150.8227583
KANDOS	Cement Australia Kandos Cement Works	1 Jamieson STREET	Other Industry	Under assessment	-32.86399912	149.9779259
KARIONG	Coles Express Kariong	6-8 Central Coast HIGHWAY	Service Station	Under assessment	-33.43443192	151.2963401
KARIONG	Caltex Service Station	Lot 2 Langford DRIVE	Service Station	Regulation under CLM Act not required	-33.43934827	151.2935447
KARUAH	BP Roadhouse Karuah	403 Tarean ROAD	Service Station	Under assessment	-32.65371781	151.9629963
KATOOMBA	Aldi Stores	201 Katoomba STREET	Service Station	Regulation under CLM Act not required	-33.71756625	150.3101649
KATOOMBA	Former Katoomba/Leura Gasworks	Megalong STREET	Gasworks	Contamination currently regulated under CLM Act	-33.71318559	150.3187284
KELLYVILLE	BP Service Station	19-21 Windsor ROAD	Service Station	Under assessment	-33.71280997	150.9590756
KELLYVILLE	Caltex Service Station	3-5 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71436125	150.9602175
KELSO	Caltex Service Station Kelso	19 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41904247	149.6023985
KELSO	BP Service Station (Reliance Petroleum)	63 Sydney ROAD	Service Station	Under assessment	-33.41925328	149.6076677

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KEMBLA GRANGE	ShawCor Australia	66 West Dapto ROAD	Other Petroleum	Regulation under CLM Act not required	-34.46875328	150.8106326
KEMBLAWARRA	Griffins Bay, Lake Illawarra	Shellharbour ROAD	Landfill	Regulation under CLM Act not required	-34.49653984	150.8943776
KEMPS CREEK	Caltex Service Station	1163 Mamre ROAD	Service Station	Under assessment	-33.86972102	150.7966074
KEMPSEY	Former Mobil Service Station NL3448	108-112 Smith STREET	Service Station	Under assessment	-31.07492508	152.8431945
KEMPSEY	Former Mobil depot	14 Hopetoun STREET	Other Petroleum	Regulation under CLM Act not required	-31.07603107	152.8350132
KEMPSEY	Mobil Depot	154 Belgrave STREET	Service Station	Regulation under CLM Act not required	-31.07965043	152.8326303
KEMPSEY	Kempsey Showground	19 Sea STREET	Unclassified	Contamination being managed via the planning process (EP&A Act)	-31.07334836	152.8308795
KEMPSEY	Former Shell Depot	43-51 Gladstone STREET	Other Petroleum	Regulation under CLM Act not required	-31.07500944	152.8346699
KEMPSEY	Shell Coles Express Service Station	Corner Pacific Highway and Cochrane STREET	Service Station	Under assessment	-31.07036743	152.8461571
KENSINGTON	Footpath adjacent to 10-20 Anzac Parade	10-20 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9032124	151.2237836
KENSINGTON	7-Eleven Kensington	135 Anzac PARADE	Service Station	Under assessment	-33.91035885	151.2228537
KENSINGTON	Caltex Service Station	219a Anzac PARADE	Service Station	Under assessment	-33.91460752	151.2251266
KENSINGTON	Former Ampol Service Station	76-82 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9059246	151.2242891
KENTHURST	Vacant Land	259 McCylmonts ROAD	Unclassified	Regulation under CLM Act not required	-33.61283529	150.9425303
KHANCOBAN	Khancoban Tip	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21994191	148.1542718
KIAMA	Former Gasworks	105 to 109 and 113 Shoalhaven STREET	Gasworks	Regulation under CLM Act not required	-34.67416881	150.8504143
KIAMA HEIGHTS	Former Mobil Service Station Kiama Heights	7-9 South Kiama DRIVE	Service Station	Under assessment	-34.69553931	150.8437977
KILLARA	Former BP Service Station Lindfield	478 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7719298	151.1613874
KILLARA	7-Eleven Service Station (Former Mobil)	496 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.77146554	151.1606903
KILLARA	Killara Garage	544 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76974164	151.1599696
KILLARA	Land Adjacent to Former Service Station Site	684-684a, 690, 692 and 696 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76312226	151.1549237
KILLARA	Former Caltex Service Station	692B-694 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76306802	151.1550109
KINGS PARK	Multi-Fill	14 Garling ROAD	Unclassified	Regulation being finalised	-33.74478046	150.9111964
KINGS PARK	Former Dow Corning Factory	21 Tattersall ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.75012653	150.9138477
KINGSFORD	Coles Express Service Station Kingsford	58 Gardeners ROAD	Service Station	Regulation under CLM Act not required	-33.9250054	151.2257601
KINGSFORD	Caltex Service Station	603-611 Anzac PARADE	Service Station	Under assessment	-33.93435787	151.2371198
KINGSGROVE	Shell Coles Express Service Station	137 Kingsgrove ROAD	Service Station	Regulation under CLM Act not required	-33.93276948	151.099026

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KINGSGROVE	State Transit Authority Depot	17-23 Richland STREET	Other Petroleum	Regulation under CLM Act not required	-33.93646086	151.0973617
KINGSGROVE	Caltex Kingsgrove	351-357 Stoney Creek ROAD	Service Station	Regulation under CLM Act not required	-33.95132175	151.0926872
KIRRAWEE	Caltex-branded Kirrawee Service Station	(1-3 Waratah Street) 487 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.02915971	151.0808279
KIRRAWEE	Ingal Civil Products	127-141 Bath ROAD	Metal Industry	Regulation under CLM Act not required	-34.03029516	151.0754469
KIRRAWEE	Coles Express Kirrawee	470 Princes HIGHWAY	Service Station	Under assessment	-34.02735302	151.0845079
KIRRAWEE	7-Eleven (former Mobil) Service Station	542 Princes HIGHWAY	Service Station	Under assessment	-34.03238179	151.0758071
KOGARAH	Caltex Service Station	29 President AVENUE	Service Station	Under assessment	-33.96516866	151.141145
KOGARAH	Woolworths Petrol Service Station	69 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.96330397	151.1371182
KOGARAH	7-Eleven Service Station	736 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.96406472	151.1376011
KOGARAH	Scarborough Park South	Production AVENUE	Landfill	Regulation being finalised	-33.97922253	151.140276
KOOLKHAN	Former Koolkhan Power Station	Summerland WAY	Other Industry	Regulation under CLM Act not required	-29.61688704	152.9300645
KOORAGANG	Orica Kooragang Island	15 Greenleaf ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-32.89654619	151.7771372
KOORAGANG	Former Boral Timber Export Facility	16 Heron ROAD	Other Industry	Regulation under CLM Act not required	-32.89710295	151.7739966
KOORAGANG	Industrial Facility	39 Heron ROAD	Chemical Industry	Under assessment	-32.891513	151.778663
KOORAGANG	NPC, berths 2 and 3	Heron ROAD	Metal Industry	Regulation being finalised	-32.89260063	151.7742527
KOORAGANG	Kooragang Island Waste Facillity	Lot 121 DP874949 OTHER	Metal Industry	Contamination currently regulated under POEO Act	-32.88250732	151.7466125
KOORAGANG	Transpacific Technical Services	Raven STREET	Unclassified	Under assessment	-32.8634857	151.7414904
KOORINGAL	Caltex Service Station	265-267 Lake Albert ROAD	Service Station	Under assessment	-35.14078443	147.3755442
KOSCIUSZKO	Sawpit Creek landfill	13km from Jindabyne, off Kosciuszko ROAD	Landfill	Regulation under CLM Act not required	-36.34858097	148.5673374
KOSCIUSZKO	Khancoban Spoil Dump	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21982803	148.1527401
KOSCIUSZKO	Smiggin Holes Snow Clearing Shed	Link ROAD	Landfill	Regulation under CLM Act not required	-36.39098211	148.4304981
KURMOND	BP Service Station	501 Bells Line of road ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.55096662	150.6911676
KURNELL	Caltex Refinery	2 Solander STREET	Other Petroleum	Contamination currently regulated under POEO Act	-34.0175214	151.2159572
KURNELL	Former Phillips Imperial Chemicals site	260 Captain Cook DRIVE	Chemical Industry	Regulation under CLM Act not required	-34.02493837	151.1952149
KURNELL	Abbott Australasia	Captain Cook DRIVE	Chemical Industry	Contamination formerly regulated under the CLM Act	-34.02339937	151.19921
KURNELL	Former Caltex Kurnell Service Station	Captain Cook Drive Corner Solander STREET	Service Station	Under assessment	-34.01269846	151.2094347
KURRI KURRI	Caltex Service Station	279-281 Lang STREET	Service Station	Contamination currently regulated under CLM Act	-32.82047175	151.477646
KURRI KURRI	Kurri Kurri Smelter	Hart ROAD	Metal Industry	Regulation under CLM Act not required	-32.7873063	151.4828827
KYOGLE	Caltex Service Station	26 Summerland WAY	Service Station	Under assessment	-28.61806766	153.003862

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LAKE HAVEN	Caltex Service Station	Goobarabah Ave Cnr Gorokan DRIVE	Service Station	Under assessment	-33.24337276	151.5065335
LAKE MUNMORAH	Caltex Service Station	1135 Pacific HIGHWAY	Service Station	Under assessment	-33.18501024	151.5526114
LAKEMBA	Former Lakemba Police Station	59 Quigg STREET	Unclassified	Regulation under CLM Act not required	-33.92199239	151.079412
LAKEMBA	Caltex Service Station - Corner Punchbowl Rd and Wangee Rd	81 Wangee ROAD	Service Station	Regulation under CLM Act not required	-33.91153044	151.073306
LAKEMBA	Caltex Service Station	961-967 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92671102	151.0814905
LAMBTON	Caltex Service Station	422 Newcastle ROAD	Service Station	Under assessment	-32.9095592	151.7109684
LANE COVE	7-Eleven Service Station	203 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81458334	151.1543844
LANE COVE	Coles Express Service Station Burns Bay	254 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81719214	151.1518774
LANE COVE	BP Service Station	62 Epping ROAD	Service Station	Under assessment	-33.81108427	151.1641531
LANE COVE	Pacific Power	Sirius ROAD	Landfill	Contamination formerly regulated under the CLM Act	-33.80701776	151.1449658
LANE COVE NORTH	Former Caltex Service Station	428-432 Mowbray ROAD	Service Station	Regulation under CLM Act not required	-33.80804563	151.1721538
LANE COVE WEST	Caltex Lane Cove West	235-245 Burns Bay ROAD	Service Station	Under assessment	-33.81719214	151.1518774
LANE COVE WEST	Ventemans Reach Bushland	Off Mars ROAD	Unclassified	Under assessment	-33.80615015	151.1451474
LANSVALE	Mobil Service Station	161 Hume HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.89442261	150.9571507
LANSVALE	Mobil Service Station	44 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89172416	150.9656537
LANSVALE	Coles Express Lansvale	65 Hume HIGHWAY	Service Station	Under assessment	-33.89295753	150.9606136
LAURIETON	Caltex Service Station	461 Ocean DRIVE	Service Station	Under assessment	-31.64367775	152.7977735
LAVENDER BAY	SRA Land	French STREET	Unclassified	Regulation under CLM Act not required	-33.84560621	151.2030148
LAVINGTON	Former Caltex Service Station	373-375 Wagga ROAD	Service Station	Regulation under CLM Act not required	-36.04797551	146.9385325
LAVINGTON	Caltex Service Station	436 Wagga (corner Dick Road) ROAD	Service Station	Regulation under CLM Act not required	-36.04500034	146.9444932
LAVINGTON	Former ERS liquid waste treatment and storage facility	819 Knights ROAD	Other Industry	Under assessment	-36.06763885	146.942143
LEETON	Yenda Producers (formerly Incitec) Leeton	1 - 2 Canal STREET	Other Petroleum	Under assessment	-34.55181457	146.3863516
LEETON	Caltex Service Station	1 Belah STREET	Service Station	Regulation under CLM Act not required	-34.55421752	146.3998431
LEETON	Former Mobil Depot	108 Calrose STREET	Other Petroleum	Under assessment	-34.55813326	146.3921296
LEETON	Former Fuel Depot, Leeton	1-3 Short St STREET	Other Petroleum	Under assessment	-34.55253237	146.3864507
LEICHHARDT	SRA Land	10-11 Balmain ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.87774852	151.1590952
LEICHHARDT	Former Kolotex site	22 George STREET	Other Industry	Contamination currently regulated under CLM Act	-33.888	151.148
LEICHHARDT	Former Labelcraft Site	30-40 George STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.887795	151.148486
LEICHHARDT	RailCorp Leichhardt	7 Darley ROAD	Other Industry	Regulation under CLM Act not required	-33.87520846	151.1539012

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LEICHHARDT	Bus Depot (Area E)	Cnr Balmain Rd and City West LINK	Other Industry	Under assessment	-33.87589727	151.1598073
LENNOX HEAD	Spoors Dip	13 Fig Tree Hill DRIVE	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.78258175	153.5752527
LENNOX HEAD	Former Caltex Lennox Head	Byron STREET	Service Station	Regulation under CLM Act not required	-28.79189328	153.5883225
LEPPINGTON	Coles Express Leppington	1443 Camden Valley WAY	Service Station	Regulation under CLM Act not required	-33.96631609	150.8154793
LEUMEAH	Caltex Service Station	6 Rudd ROAD	Service Station	Regulation under CLM Act not required	-34.05398325	150.8299209
LEURA	Former Leura Garage	126-128 Leura MALL	Service Station	Under assessment	-33.7125311	150.3315386
LIDDELL	Liddell Power Station	New England HIGHWAY	Other Industry	Under assessment	-32.37393962	150.9756283
LIDSDALE	Angus Place Colliery	Wolgan ROAD	Other Industry	Under assessment	-33.35274573	150.0996773
LIDSDALE	Kerosene Vale Colliery	Wolgan ROAD	Other Industry	Under assessment	-33.38145755	150.0940097
LIGHTNING RIDGE	Former Ambulance Station	18 - 42 Pandora STREET	Other Industry	Regulation under CLM Act not required	-29.43133877	147.9812981
LIGHTNING RIDGE	Caltex Service Station	Onyx St Cnr Morilla STREET	Service Station	Regulation under CLM Act not required	-29.42922885	147.9747954
LILLIAN ROCK	Former 'Peters Dip' Cattle Tick Dip Site	427 Lillian Rock ROAD	Cattle Dip	Regulation under CLM Act not required	-28.5314327	153.1556392
LINDFIELD	7-Eleven (former Mobil) Service Station	238 Pacific HIGHWAY	Service Station	Under assessment	-33.7788603	151.1689594
LISAROW	Lisarow Recycling Site	902-909 Pacific HIGHWAY	Metal Industry	Under assessment	-33.38420179	151.3655856
LISMORE	Shell Coles Express Service Station	100 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.81140865	153.2800472
LISMORE	Former Shell Depot	116 Wilson STREET	Other Petroleum	Regulation under CLM Act not required	-28.81070081	153.2621577
LISMORE	Caltex Lismore Service Station	136 Woodlark STREET	Service Station	Under assessment	-28.80807597	153.2807591
LISMORE	Caltex Service Station	73-75 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.80894415	153.2809619
LISMORE	Lismore Gasworks	Cnr John Street & Keen STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-28.81764489	153.2710196
LISMORE	SRA Land	Norco LANE	Unclassified	Regulation under CLM Act not required	-28.810742	153.2702306
LISMORE HEIGHTS	Coles Express Lismore Heights	426 Ballina ROAD	Service Station	Contamination currently regulated under CLM Act	-28.81068067	153.3053065
LITHGOW	Jasbe BP-branded Service Station (Former Reliance Petroleum)	1106 Great Western HIGHWAY	Service Station	Under assessment	-33.48426647	150.134992
LITHGOW	Former Mobil Depot	353 Main STREET	Other Petroleum	Under assessment	-33.48235166	150.1383012
LITHGOW	Lithgow Thales	4 Martini PARADE	Metal Industry	Contamination formerly regulated under the CLM Act	-33.49012248	150.1415389
LITHGOW	Former Shell Depot	6 Gasworks LANE	Other Petroleum	Under assessment	-33.47995091	150.162216
LITHGOW	Caltex Lithgow (Quota Park)	Adjacent to 1131 Great Western HIGHWAY	Unclassified	Regulation under CLM Act not required	-33.47927554	150.1366238
LITHGOW	Former Gasworks	Mort STREET	Gasworks	Regulation under CLM Act not required	-33.47995167	150.1635401
LIVERPOOL	AC McGrath (Wholesale) Pty Ltd	20 Shepherd (Cnr Atkinson St) STREET	Other Industry	Under assessment	-33.9320192	150.9236862

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
LIVERPOOL	Former Car Park	4 - 6 Rose STREET	Unclassified	Regulation under CLM Act not required	-33.93258955	150.9157936
LIVERPOOL	Woolworths Service Station	59-67 Orange Grove ROAD	Service Station	Regulation under CLM Act not required	-33.90711248	150.9178855
LOFTUS	BP Freedom Fuel Service Station Loftus	127 Loftus AVENUE	Service Station	Under assessment	-34.04570765	151.0508004
LONG JETTY	7-Eleven (former Mobil) Service Station	184-186 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.35089363	151.4924904
LONG JETTY	Westside Petroleum Service Station	290-294 The Entrance ROAD	Service Station	Under assessment	-33.35688982	151.4862246
LONG JETTY	Brocks Garage	326 The Entrance ROAD	Service Station	Under assessment	-33.35897356	151.4847709
LONG JETTY	Caltex Service Station	431 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.36022468	151.4826553
LONGUEVILLE	Caltex Service Station	5-7 Northwood ROAD	Service Station	Under assessment	-33.82452775	151.1725758
LUCAS HEIGHTS	Harringtons Quarry	access from Little Forest ROAD	Landfill	Contamination currently regulated under CLM Act	-34.03555347	150.9751826
LUCAS HEIGHTS	IWC landfill	Little Forest ROAD	Landfill	Contamination currently regulated under CLM Act	-34.03214889	150.9753474
LUDDENHAM	Caltex Service Station	3019-3035 The Northern ROAD	Service Station	Under assessment	-33.87536093	150.6888872
MACKSVILLE	Caltex Service Station	Pacific (22-24 Cooper Street) HIGHWAY	Service Station	Regulation under CLM Act not required	-30.70977455	152.9198448
MACLEAN	MacLean Outdoors	255 River STREET	Service Station	Under assessment	-29.45782683	153.1970725
MACQUARIE FIELDS	Caltex Service Station	68 Harold STREET	Service Station	Under assessment	-33.98557276	150.8933681
MACQUARIE PARK	Waterloo Road	1 Waterloo ROAD	Other Petroleum	Under assessment	-33.78806	151.133209
MACQUARIE PARK	Caltex North Ryde Service Station	41-43 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.79138236	151.1312248
MAITLAND	Coles Express Service Station	235 High STREET	Service Station	Regulation under CLM Act not required	-32.73923807	151.5620399
MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act	-32.73603658	151.5578926
MAITLAND	Hannan and High Street	Hannan Street and High STREET	Service Station	Regulation under CLM Act not required	-32.72731682	151.5515673
MALABAR	ANZAC Rifle Range former landfill	Franklin STREET	Landfill	Regulation being finalised	-33.95792671	151.2566373
MANDALONG	Mandalong Mine	Mandalong ROAD	Other Industry	Under assessment	-33.11725583	151.4616452
MANGROVE MOUNTAIN	Poultry Litter Containment Pit site	258 Waratah ROAD	Unclassified	Regulation under CLM Act not required	-33.28917277	151.167235
MANILLA	Tamworth Regional Council Works Depot - Manilla	73 River STREET	Other Petroleum	Regulation under CLM Act not required	-30.746085	150.725363
MANLY	St Patrick's Estate	151 Darley ROAD	Unclassified	Regulation under CLM Act not required	-33.8044568	151.2938595
MANLY	Caltex Service Station	86 Pittwater ROAD	Service Station	Under assessment	-33.79306889	151.2858638
MANLY	Former Little Manly Point Gasworks	End of Stuart STREET	Gasworks	Regulation under CLM Act not required	-33.80842005	151.2877784
MANLY	Little Manly Point	Stuart STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.80814626	151.2876245
MANLY VALE	Caltex Service Station Manly Vale	236-238 Condamine STREET	Service Station	Regulation under CLM Act not required	-33.78508231	151.2674386
MANLY VALE	Former Landfill Addiscombe Road	Addiscombe ROAD	Landfill	Contamination currently regulated under CLM Act	-33.78307439	151.2747846

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
MANNERING PARK	Parkview General Store (a former service station)	2 Vales ROAD	Service Station	Under assessment	-33.14753814	151.5387832
MANNERING PARK	Mannering Park Mini Mart	70 Vales ROAD	Service Station	Under assessment	-33.15236501	151.5371767
MARAYONG	7-Eleven (former Mobil Blacktown West) Service Station Marayong	173 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75472796	150.8913605
MARAYONG	Woolworths Petrol Service Station Marayong	Corner Vardys Road and Turbo ROAD	Service Station	Regulation under CLM Act not required	-33.7452356	150.9041601
MARDI	Former Mardi Landfill	70-90 McPherson ROAD	Landfill	Regulation under CLM Act not required	-33.29273289	151.4100941
MARKS POINT	Former Mobil Service Station (now 7-Eleven)	770-772 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.05646268	151.6533795
MARKS POINT	Former Mobil Aviation Depot Belmont Airport	864 Pacific HIGHWAY	Other Petroleum	Under assessment	-33.06657244	151.6497674
MAROUBRA	Coles Express Pagewood Service Station, Maroubra	299 Bunnerong PARADE	Service Station	Regulation under CLM Act not required	-33.94071282	151.2285063
MARRANGAROO	Mobil Service Station	394-398 Great Western HIGHWAY	Service Station	Under assessment	-33.45253322	150.1181023
MARRICKVILLE	2 Carrington Road	2 Carrington ROAD	Unclassified	Regulation under CLM Act not required	-33.91596071	151.1597199
MARRICKVILLE	TRW Steering and Suspension	22-28 Carrington ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.92012667	151.1566181
MARRICKVILLE	RailCorp	361 Victoria ROAD	Other Industry	Regulation under CLM Act not required	-33.91404835	151.1557132
MARRICKVILLE	Former Mobil Service Station	384 Illawarra ROAD	Service Station	Under assessment	-33.91534969	151.1506717
MARRICKVILLE	Woolworths Petrol Service Station Marrickville	490 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91845177	151.1459951
MARRICKVILLE	Mackey Park	Cnr Richardsons Crescent and Carrington ROAD	Landfill	Regulation under CLM Act not required	-33.9220263	151.1547903
MARRICKVILLE	Dry Cleaners and Loading Dock (adjacent Lot 1 DP612551)	Smidmore STREET	Other Industry	Under assessment	-33.90707592	151.171701
MARRICKVILLE	Cooks River Aqueduct	Thornley STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.92204604	151.1480332
MARSDEN PARK	226 Grange Avenue	226 Grange AVENUE	Unclassified	Under assessment	-33.70259609	150.83825
MARSFIELD	Coles Express Marsfield	189 Epping ROAD	Service Station	Under assessment	-33.77519246	151.1053691
MARULAN	BP Express Marulan (Northbound)	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.7188332	149.9949547
MARULAN	BP Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.71932066	150.0014827
MARYVILLE	7-Eleven (former Mobil) Service Station	184-188 Hannell STREET	Service Station	Under assessment	-32.91336028	151.7579315
MASCOT	Caltex Service Station	125 O'Riordan STREET	Service Station	Under assessment	-33.92309169	151.1911539
MASCOT	Former Zinc Smelter and Paint Manufacturing Facility	163 O'Riordan STREET	Metal Industry	Regulation under CLM Act not required	-33.92526513	151.1892582
MASCOT	Ing Industrial Fund (unoccupied Land and General Parking)	19-33 Kent ROAD	Landfill	Regulation under CLM Act not required	-33.922765	151.185262
MASCOT	Mascot Pioneer Plating	25-29 Ricketty STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92075288	151.1824801
MASCOT	Former Mascot Galvanising	336-348 King STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92902126	151.185874

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MASCOT	Sokol Corporation	50-56 Robey STREET	Other Industry	Regulation under CLM Act not required	-33.93162265	151.1904955
MASCOT	Business Centre	5-9 Ricketty STREET	Unclassified	Under assessment	-33.92029202	151.1816656
MASCOT	Former Shell Service Station Mascot	746 Botany ROAD	Service Station	Contamination currently regulated under CLM Act	-33.92352295	151.1955852
MASCOT	Telstra Exchange	904-922 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9293166	151.1942777
MATRAVILLE	Former Golden Fleece Terminal No1	133 -149 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95776666	151.2248518
MATRAVILLE	Former Golden Fleece Terminal No2	151 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95719404	151.2259884
MATRAVILLE	Vacant Lot	3 Wilkes AVENUE	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.96006406	151.2431087
MATRAVILLE	7-Eleven Service Station Matraville	515 Bunnerong ROAD	Service Station	Under assessment	-33.95943536	151.2317598
MATRAVILLE	Former Rieco Incinerator	Kain AVENUE	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.95980534	151.2423679
MAYFIELD	Waratah Steel Mill	23 Frith STREET	Metal Industry	Regulation under CLM Act not required	-32.89426592	151.7257429
MAYFIELD	7-Eleven (former Mobil) Service Station	412-416 Maitland ROAD	Service Station	Under assessment	-32.89292005	151.7300948
MAYFIELD	Shell Coles Express Service Station	63-69 Maud STREET	Service Station	Under assessment	-32.89358962	151.7221298
MAYFIELD	BHP Closure Site (Hunter River Sediments)	Bed Sediments of the Hunter adjacent to Lot 221 DP1013964 RIVER	Metal Industry	Contamination formerly regulated under the CLM Act	-32.89203741	151.7646702
MAYFIELD	Australian Tube Mills Newcastle Site	Industrial DRIVE	Metal Industry	Under assessment	-32.88835767	151.7450751
MAYFIELD	OneSteel (BHP)	Industrial DRIVE	Metal Industry	Contamination currently regulated under CLM Act	-32.88366987	151.7449491
MAYFIELD	Newcastle Wire Mill	Ingall STREET	Metal Industry	Under assessment	-32.89008485	151.752949
MAYFIELD	BHPB Supply site	Lot 223 South and West - Industrial DRIVE	Metal Industry	Contamination currently regulated under CLM Act	-32.88583041	151.7388423
MAYFIELD	BHP Steel River	The Buffer Zone' extending directly adjacent to the Hunter River; near the Tourle Street Bridge STREET	Metal Industry	Contamination currently regulated under CLM Act	-32.8773556	151.7252427
MAYFIELD WEST	Stevenson Park landfill	2/559 Maitland ROAD	Landfill	Regulation under CLM Act not required	-32.88472556	151.7224791
MAYFIELD WEST	Koppers Coal Tar	East of Woodstock Street and Tourle STREET	Other Industry	Contamination currently regulated under CLM Act	-32.88591801	151.7361906
MAYFIELD WEST	Tourle Street Bridge Project	Tourle STREET	Landfill	Regulation under CLM Act not required	-32.88075518	151.7330073
MCDOUGALLS HILL	Caltex Service Station	4949 New England HIGHWAY	Service Station	Under assessment	-32.54484714	151.1490757
MEADOWBANK	Former Council Works Depot	2 Parsonage STREET	Unclassified	Regulation under CLM Act not required	-33.82191421	151.0951974
MENAI	7-Eleven (former Mobil) Service Station	189-190 Menai ROAD	Service Station	Under assessment	-34.01579095	151.0131737

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
MENAI	Caltex Service Station	Corner of Menai Road and Carter ROAD	Service Station	Under assessment	-34.01654043	151.0124133
MEREWETHER	Merewether Childcare Centre	2/23 Caldwell STREET	Unclassified	Regulation under CLM Act not required	-32.94249653	151.7504279
MERIMBULA	Caltex Service Station	19-25 Merimbula DRIVE	Service Station	Under assessment	-36.88757881	149.9089159
MERIMBULA	Former Mobil Service Station	27 Market STREET	Service Station	Regulation under CLM Act not required	-36.88941693	149.9103485
MERRYLANDS	Society of St Vincent de Paul	11-19 Centenary ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83083025	150.9698915
MERRYLANDS	Caltex Merrylands	148 Woodville ROAD	Service Station	Under assessment	-33.83818499	150.9997199
MERRYLANDS	Former Stockfeed Manufacturing Site	1-7 & 9-11 Neil STREET	Other Petroleum	Regulation under CLM Act not required	-33.83390257	150.9947449
MERRYLANDS	Stockland Merrylands Court	227-259 Merrylands ROAD	Unclassified	Under assessment	-33.83560901	150.9875552
MERRYLANDS	Caltex Service Station	229 Woodville ROAD	Service Station	Under assessment	-33.84547463	150.9983413
MERRYLANDS	7-Eleven Service Station	295-297 Merrylands ROAD	Service Station	Under assessment	-33.83533205	150.9851801
MERRYLANDS WEST	Former Mobil Service Station	3 Centenary ROAD	Service Station	Regulation under CLM Act not required	-33.83214226	150.9698958
MILLER	Caltex Service Station	86 Cartwright AVENUE	Service Station	Under assessment	-33.91878146	150.8827514
MILLERS FOREST	Chichester Trunk Gravity Main	water pipeline	Other Industry	Contamination currently regulated under POEO Act	-32.772877	151.6826841
MILLERS POINT	Former AGL Gasworks	30 - 34 Hickson ROAD	Gasworks	Regulation under CLM Act not required	-33.86179594	151.2031726
MILLERS POINT	Former AGL Gasworks	36 Hickson ROAD	Gasworks	Contamination currently regulated under CLM Act	-33.86243824	151.2032514
MILLERS POINT	Former AGL Gasworks	38 Hickson ROAD	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.86280104	151.2032452
MILLERS POINT	Port Services (Moores) Facility	4 Towns PLACE	Other Petroleum	Contamination currently regulated under POEO Act	-33.85581123	151.2024759
MILLERS POINT	Former AGL Gasworks	Berths 5, 6 and 7 (already demolished) and part Hickson ROAD	Gasworks	Contamination currently regulated under CLM Act	-33.86053571	151.2015022
MILLERS POINT	Former AGL Gasworks	Road reserve fronting 30-38 Hickson ROAD	Gasworks	Contamination currently regulated under CLM Act	-33.86241531	151.2024634
MILPERRA	Caltex Service Station	264 Milperra ROAD	Service Station	Regulation under CLM Act not required	-33.93018101	150.9910964
MILPERRA	Heatcraft Australia Pty Ltd	286 Horsley ROAD	Other Industry	Under assessment	-33.94031556	150.9958606
MILPERRA	United Group Rail Pty Limited	373 Horsley ROAD	Landfill	Regulation under CLM Act not required	-33.93286283	150.9934071
MILTON	Caltex Milton Service Station and Depot	331 Princes HIGHWAY	Service Station	Under assessment	-35.33154474	150.4492852
MILTON	Former Sanitary Depot	Slaughterhouse ROAD	Other Industry	Regulation under CLM Act not required	-35.33819825	150.4471917
MINCHINBURY	BP Service Station	1055 Great Western Highway corner Archbold ROAD	Service Station	Under assessment	-33.78211857	150.8244185
MINCHINBURY	7-Eleven (former Mobil) Service Station	815 Great Western HIGHWAY	Service Station	Under assessment	-33.78812909	150.8495992
MINTO	Shell Coles Express Service Station	73 Pembroke STREET	Service Station	Regulation under CLM Act not required	-34.02316454	150.8503118

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MINTO	Land adjacent to Former Shell depot	Airds Road and Essex STREET	Other Petroleum	Regulation under CLM Act not required	-34.02110921	150.8414029
MINTO	Former Endeavour Energy's Depot	Pembroke ROAD	Unclassified	Regulation under CLM Act not required	-34.0331168	150.8464722
MIRANDA	Woolworth's Service Station	455 Kingsway OTHER	Service Station	Contamination currently regulated under CLM Act	-34.03492814	151.1124681
MITTAGONG	Enhance (former Coles Express) Service Station	224 Old Hume HIGHWAY	Service Station	Under assessment	-34.44746118	150.4326183
MITTAGONG	Caltex Service Station	65 Bowral ROAD	Service Station	Under assessment	-34.45245915	150.4381291
MITTAGONG	Lots 1 and 2 Alfred St.	Alfred STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-34.44738105	150.4565159
MOAMA	Caltex Service Station	73 Meninya STREET	Service Station	Under assessment	-36.10815134	144.752849
MOLONG	Cabonne BP Service Station	2 Gidley STREET	Service Station	Contamination currently regulated under CLM Act	-33.09026307	148.8695809
MOLONG	Former Gasworks	Hill STREET	Gasworks	Contamination currently regulated under CLM Act	-33.09074595	148.8703262
MONA VALE	BP Service Station Mona Vale	1721 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.68043443	151.3023553
MONA VALE	7-Eleven (former Mobil) Service Station	24 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.676909	151.3082515
MONA VALE	Mona Vale Bus Depot	58 Darley STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.67452414	151.3074246
MONA VALE	Former Caltex service station and adjacent properties	79 Barrenjoey Road, 2 Polo Avenue, 6 Polo Avenue, 45 Bassett STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.6743659	151.3096932
MONA VALE	BP Peninsula Express Service Station	Corner Barrenjoey Road and Darley Street East STREET	Service Station	Regulation under CLM Act not required	-33.67670799	151.3090068
MONA VALE	Caltex Investigation Area	Polo Ave, Perak STREET	Service Station	Regulation being finalised	-33.67431333	151.3091148
MOOBALL	Mooball General Store	5913 Tweed Valley WAY	Service Station	Under assessment	-28.44204594	153.4887648
MOONBI	Caltex Service Station	New England HIGHWAY	Service Station	Under assessment	-31.02264369	151.069094
MOORE PARK	Area 2, Moore Park	Driver AVENUE	Unclassified	Regulation under CLM Act not required	-33.89426868	151.2226839
MOOREBANK	ABB Australia Pty Ltd	(a) 1 Bapaume ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.94143741	150.9208754
MOOREBANK	ABB Australia Pty Ltd	1 Bapaume ROAD	Other Industry	Under assessment	-33.94140315	150.9209285
MOOREBANK	Caltex Service Station	2 Bridges ROAD	Service Station	Under assessment	-33.92839682	150.9327012
MOOREBANK	Caltex Service Station	216 Newbridge ROAD	Service Station	Under assessment	-33.92930835	150.9551469
MOOREBANK	Joyce Foam Products	5-9 Bridges ROAD	Chemical Industry	Regulation under CLM Act not required	-33.92596302	150.9335273
MOOREBANK	Former Landfill Site	Newbridge ROAD	Landfill	Under assessment	-33.93907207	150.9654125
MOORLAND	Caltex Service Station	99 Jericho ROAD	Service Station	Regulation under CLM Act not required	-31.79436622	152.6514849
MOREE	Former Freedom Service Station Site Moree	1 Dover STREET	Service Station	Contamination currently regulated under CLM Act	-29.4715814	149.8440279
MOREE	Caltex Depot	101 Gosport STREET	Other Petroleum	Under assessment	-29.47603684	149.8476728
MOREE	Caltex Service Station	54 Alice STREET	Service Station	Contamination currently regulated under CLM Act	-29.47158492	149.8433182
MOREE	Former Shell Depot	Adelaide STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47655335	149.8465698

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MOREE	Shell Coles Express Service Station	Corner Gwydir and Balo STREET	Service Station	Under assessment	-29.46081826	149.8419975
MOREE	Former Mobil Depot	Gosport STREET	Other Petroleum	Contamination currently regulated under CLM Act	-29.47771921	149.8478438
MOREE	Former Golden Fleece	Gosport STREET	Other Petroleum	Contamination currently regulated under CLM Act	-29.47698315	149.8477108
MOREE	Moree Airport Evaporation Pond	Newell HIGHWAY	Unclassified	Regulation under CLM Act not required	-29.50289837	149.8411301
MOREE	BP Truckstop and Depot Moree	Newell Highway - 423 Frome STREET	Service Station	Regulation under CLM Act not required	-29.48223274	149.8463679
MORISSET	Railcorp Station Masters Cottage	24 Dora STREET	Unclassified	Regulation under CLM Act not required	-33.10849681	151.4880317
MORPETH	Telstra Cable Installation and RTA Bridge work	Northumberland STREET	Other Petroleum	Regulation under CLM Act not required	-32.72489729	151.6266795
MORPETH	Former Service Station	Swan STREET	Service Station	Regulation under CLM Act not required	-32.72477413	151.6250642
MORTLAKE	Former Petroleum Storage Site	108-116 Tennyson ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83979033	151.1064889
MORTLAKE	Former AGL site	Tennyson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.84287407	151.1109313
MORTLAKE	Kendall Bay Sediments		Gasworks	Contamination currently regulated under CLM Act	-33.83905999	151.1120458
MORUYA	Former Fuel Depot Moruya	11 to 13 Ford STREET	Other Petroleum	Under assessment	-35.9112243	150.0826475
MORUYA	Caltex Service Station	26 Campbell STREET	Service Station	Under assessment	-35.9104985	150.0711419
MORUYA	Caltex Service Station	80-84 Campbell STREET	Service Station	Under assessment	-35.91195596	150.0824213
MOSMAN	7-Eleven Mosman	162A Spit Road Corner Mitchell ROAD	Service Station	Under assessment	-33.81747016	151.2433633
MOSMAN	BP Service Station	175 Ourimbah ROAD	Service Station	Under assessment	-33.82106757	151.233291
MOSMAN	7-Eleven Service Station Mosman	45 Spit ROAD	Service Station	Under assessment	-33.82302718	151.2435627
MOSS VALE	Coles Express Service Station	579 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55313422	150.364684
MOSS VALE	Woolworths Service Station Moss Vale	609 Argyle STREET	Service Station	Under assessment	-34.55409411	150.3609797
MOSS VALE	Moss Vale Refuelling Facility	Lackey ROAD	Other Petroleum	Under assessment	-34.54662421	150.3721525
MOUNT ANNAN	Great Southern Railways Aqueduct	Off Narellan ROAD	Unclassified	Regulation under CLM Act not required	-34.07308479	150.7707436
MOUNT COLAH	Caltex Service Station	603 Pacific HIGHWAY	Service Station	Under assessment	-33.67034662	151.1151861
MOUNT DRUITT	Caltex (former Mobil) Service Station	17 Mount STREET	Service Station	Under assessment	-33.76567994	150.8244544
MOUNT HUTTON	Woolworths Service Station	46 Wilsons ROAD	Service Station	Regulation under CLM Act not required	-32.9836378	151.67309
MOUNT PRITCHARD	7-Eleven Service Station	352 Elizabeth DRIVE	Service Station	Under assessment	-33.90260656	150.8963326
MOUNT THORLEY	Lowes Petroleum (Former BP) Depot Mount Thorley	74 Mount Thorley ROAD	Other Petroleum	Regulation under CLM Act not required	-32.62443074	151.1025122
MOUNT VICTORIA	Caltex Service Station	36a Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.58436517	150.2465528
MOUNT VICTORIA	Former Mobil Service Station	81 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.5889727	150.2511783

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MUDGEE	Caltex Service Station	114-116 Church STREET	Service Station	Regulation under CLM Act not required	-32.59428029	149.5876199
MUDGEE	Former Essential Energy Depot	27-31 Inglis STREET	Other Industry	Under assessment	-32.60073	149.585658
MUDGEE	Shell Coles Express Service Station	47 Church STREET	Service Station	Regulation under CLM Act not required	-32.59347493	149.5884623
MUDGEE	BP Service Station Mudgee	77 Church STREET	Service Station	Under assessment	-32.59545872	149.588123
MUDGEE	Mobil Depot	Cnr Inglis Street & Douro STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.60023979	149.5823448
MUDGEE	Former Caltex Depot Mudgee	cnr Nicholson Street & Atkinson STREET	Other Petroleum	Regulation under CLM Act not required	-32.60125298	149.5851398
MUDGEE	Mudgee Gasworks	Mortimer Street and Court STREET	Gasworks	Regulation under CLM Act not required	-32.59168859	149.5817705
MULGRAVE	7-Eleven (former Mobil) Service Station	Corner Windsor Road and Mulgrave ROAD	Service Station	Regulation under CLM Act not required	-33.61687781	150.8341809
MULWALA	Mulwala ADI Explosives Factory	Bayly STAIRS	Other Industry	Regulation being finalised	-35.97572689	145.9809786
MURWILLUMBAH	Puma Murwillumbah (formerly Matilda)	182 Tweed Valley WAY	Service Station	Contamination currently regulated under CLM Act	-28.3263681	153.4103824
MURWILLUMBAH	Caltex Service Station	204 Tweed Valley WAY	Service Station	Under assessment	-28.32687988	153.4093274
MURWILLUMBAH	Former Norco Butter Factory	230 Tweed Valley WAY	Other Petroleum	Under assessment	-28.32791359	153.4073052
MURWILLUMBAH	Murwillumbah Ambulance Depot	27 Queen STREET	Other Petroleum	Regulation under CLM Act not required	-28.32552576	153.4000182
MURWILLUMBAH	Caltex Service Station	32 Lundberg DRIVE	Service Station	Under assessment	-28.33246149	153.4195721
MURWILLUMBAH	Caltex Service Station	39-41 Lunderg DRIVE	Service Station	Under assessment	-28.33274114	153.4215186
MURWILLUMBAH	Former Mobil Depot	45 Wardrop STREET	Other Petroleum	Under assessment	-28.33421395	153.3993772
MUSWELLBROOK	Caltex Service Station	12-16 Sydney STREET	Service Station	Under assessment	-32.26789925	150.8879263
MUSWELLBROOK	Caltex Service Station	1-9 William STREET	Service Station	Under assessment	-32.26564196	150.8866925
MUSWELLBROOK	SRA Site	27 Brook STREET	Unclassified	Regulation being finalised	-32.26346086	150.8873181
MUSWELLBROOK	Former Mobil Depot Muswellbrook	43-51 Ford STREET	Other Petroleum	Under assessment	-32.2599725	150.887573
MUSWELLBROOK	Caltex Service Station	47-50 Victoria STREET	Service Station	Under assessment	-32.26788823	150.8930609
MUSWELLBROOK	Former Mobil Service Station	49-51 Maitland STREET	Service Station	Under assessment	-32.27218162	150.8900206
MUSWELLBROOK	Woolworths Petrol	72 Brook STREET	Service Station	Regulation under CLM Act not required	-32.26325377	150.8905966
MUSWELLBROOK	Caltex Muswellbrook Service Station	84-86 Maitland ROAD	Service Station	Under assessment	-32.27793094	150.8980938
MUSWELLBROOK	Former Gasworks	Cnr Carl St and Foley STREET	Gasworks	Regulation under CLM Act not required	-32.26672337	150.8935982
MUSWELLBROOK	Former Industrial Site	Lot 89 Rathmore STREET	Other Industry	Regulation under CLM Act not required	-32.30544071	150.8823657
MUSWELLBROOK	Bayswater Power Station	New England HIGHWAY	Other Industry	Under assessment	-32.3954046	150.9502683
NABIAC	Caltex Service Station	Pacific Hwy Cnr Krambach ROAD	Service Station	Under assessment	-32.09864883	152.3754346
NAMBUCCA HEADS	Former Mobil Service Station	6 Bowra STREET	Service Station	Under assessment	-30.64282127	153.0035884
NARELLAN	Former Landfill	1 Elyard STREET	Landfill	Regulation under CLM Act not required	-34.043474	150.7393256
NARELLAN	Caltex Service Station Narellan	1 George Hunter DRIVE	Service Station	Regulation under CLM Act not required	-34.03963992	150.7432386
NAROOMA	Narooma Service Station	60 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-36.21617955	150.126261
NAROOMA	Former Caltex - Narooma	82 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-36.21711766	150.1279305

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
NARRABEEN	7-Eleven Service Station	1234 Pittwater ROAD	Service Station	Under assessment	-33.71958892	151.298272
NARRABEEN	Shell Coles Express Service Station	1418 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70013931	151.3002782
NARRABEEN	Caltex Service Station	1509-1511 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70455756	151.2969352
NARRABRI	Caltex Service Station	12 Reid STREET	Service Station	Under assessment	-30.32282764	149.7901182
NARRABRI	Caltex Service Station	13 Doyle STREET	Service Station	Regulation under CLM Act not required	-30.3239182	149.7843052
NARRABRI	Lowes Petroleum (Former Mobil) Narrabri Depot	3 Old Gunnedah ROAD	Other Petroleum	Regulation under CLM Act not required	-30.33473586	149.789587
NARRABRI	Caltex Service Station	31-35 Cooma ROAD	Service Station	Regulation under CLM Act not required	-30.33968576	149.7657241
NARRABRI	Caltex Service Station	7-13 James STREET	Service Station	Under assessment	-30.33016168	149.7940732
NARRABRI	Caltex Narrabri Service Station	Anne St (Corner of Dangar Street) STREET	Service Station	Under assessment	-30.32989667	149.7756598
NARRABRI	Cargill Soapstock Disposal Site	Westport ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-30.4698458	149.6981931
NARRANDERA	Former Mobil Narrandera Depot	24 Whitton STREET	Other Petroleum	Regulation under CLM Act not required	-34.7410523	146.5620667
NARRANDERA	Former Mobil Emoleum Narrandera Depot	5-7 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-34.74105391	146.5628144
NARRANDERA	Caltex (Former Mobil) Service Station Narrandera	Newell HIGHWAY	Service Station	Under assessment	-34.76124219	146.5398604
NARROMINE	Caltex Service Station	60 Alagalah STREET	Service Station	Under assessment	-32.191182	148.261934
NELLIGEN	Former Clay Target Shooting Range	1398 Kings Highway and adjoining land on Old Bolaro Mountain ROAD	Unclassified	Contamination currently regulated under CLM Act	-35.64392469	150.0955224
NELLIGEN	Lot 2 Old Bolaro Road	Old Bolaro ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-35.64485609	150.0937341
NELSON BAY	Shell Coles Express Service Station	23 Stockton ROAD	Service Station	Under assessment	-32.72265762	152.1437317
NELSON BAY	Former Caltex Service Station Nelson Bay	38 Stockton STREET	Service Station	Regulation under CLM Act not required	-32.72335662	152.1429384
NEMINGHA	Caltex Service Station	16 New England HIGHWAY	Service Station	Under assessment	-31.12425169	150.9909054
NEUTRAL BAY	Caltex Service Station	16-38 Military ROAD	Service Station	Regulation being finalised	-33.82907162	151.2163342
NEUTRAL BAY	Shell Coles Express Service Station	200-204 Ben Boyd ROAD	Service Station	Regulation under CLM Act not required	-33.82915781	151.219437
NEW LAMBTON	BP Service Station	105 St James ROAD	Service Station	Regulation under CLM Act not required	-32.92910325	151.7155801
NEW LAMBTON	Caltex Service Station	148 Bridges ROAD	Service Station	Under assessment	-32.93283668	151.7141748
NEW LAMBTON	7-Eleven (former Mobil) Service Station	291 Turton ROAD	Service Station	Regulation under CLM Act not required	-32.91773864	151.7243096
NEWCASTLE	Reclaimed Land	26-28 Honeysuckle DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-32.92604705	151.7649508
NEWCASTLE	Wharf Road Newcastle Car Park	313-317 Wharf ROAD	Unclassified	Regulation under CLM Act not required	-32.92570385	151.7744076
NEWCASTLE	Newcastle Foreshore	40 Stevenson Place STREET	Other Industry	Regulation under CLM Act not required	-32.92556503	151.7876742

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
NEWCASTLE	BHP Steelworks (Closure site)	Bound by Hunter River, Selwyn Street & Industrial DRIVE	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-32.89439868	151.7591272
NEWCASTLE	SRA Land	Scott STREET	Gasworks	Regulation under CLM Act not required	-32.92641425	151.7837817
NEWCASTLE WEST	Former Mobil Service Station	113 Parry STREET	Service Station	Regulation under CLM Act not required	-32.92560628	151.7558542
NEWPORT	7-Eleven (former Mobil) Service Station	307-311 Barrenjoey ROAD	Service Station	Under assessment	-33.65632902	151.3182089
NEWPORT	Former Caltex Service Station Newport	316-324 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.65634516	151.3191571
NEWTOWN	Caltex Service Station Newtown	26 - 36 Enmore ROAD	Service Station	Regulation under CLM Act not required	-33.89851331	151.17714
NEWTOWN	Aluminium Enterprises	66 Brocks LANE	Metal Industry	Contamination was addressed via the planning process (EP&A Act)	-33.89467126	151.1847528
NEWTOWN	Adjacent to Former Service Station	79 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89630155	151.1826567
NEWTOWN	Former Service Station	81 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89626791	151.1827556
NORAVILLE	Former Toukley Landfill	Wilfred Barrett DRIVE	Landfill	Under assessment	-33.27734185	151.5537784
NORTH BOAMBEE VALLEY	Caltex Service Station	Cnr Pacific Hwy & Halls ROAD	Service Station	Regulation under CLM Act not required	-30.30639482	153.1007996
NORTH BONDI	Caltex Service Station North Bondi	321 Old South Head ROAD	Service Station	Under assessment	-33.88463526	151.268551
NORTH NARRABEEN	7-Eleven Service Station	1501-1503 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70749859	151.296351
NORTH RICHMOND	Caltex Service Station	50 Bells Line Of ROAD	Service Station	Regulation under CLM Act not required	-33.57991338	150.7202346
NORTH ROCKS	7-Eleven Service Station	340 North Rocks ROAD	Service Station	Under assessment	-33.76895144	151.0305952
NORTH ST MARYS	BP Service Station	76 Glossop STREET	Service Station	Under assessment	-33.76020183	150.7818149
NORTH STRATHFIELD	Budget Service Station	143 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.85945248	151.0927853
NORTH STRATHFIELD	Former Caltex Service Station	92a Concord ROAD	Service Station	Regulation under CLM Act not required	-33.86244297	151.0932434
NORTH SYDNEY	Iora	1 Kiara PLACE	Gasworks	Regulation under CLM Act not required	-33.843145	151.2161142
NORTH SYDNEY	Neutral Bay Sediments	Adjacent to HMAS Platypus, 118 High STREET	Gasworks	Contamination currently regulated under CLM Act	-33.842724	151.2174523
NORTH SYDNEY	HMAS Platypus Neutral Bay	High STREET	Gasworks	Contamination currently regulated under CLM Act	-33.84325935	151.2170347
NORTH WOLLONGONG	Former Mobil Depot	122-126 Montague STREET	Other Petroleum	Under assessment	-34.40988259	150.8939374
NORTH WOLLONGONG	Caltex Service Station	9 Flinders STREET	Service Station	Under assessment	-34.41505616	150.8932515
NORTHMEAD	Coles Express Service Station Northmead	197 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.77741733	151.0001719
NORTHMEAD	Former Prestige Plastics	1C Redbank ROAD	Other Industry	Under assessment	-33.79716925	150.989926
NORTHMEAD	Sydney Water Land	51c Hammers ROAD	Landfill	Regulation under CLM Act not required	-33.7887535	150.9858088
NORTHMEAD	7-Eleven (former Mobil) Service Station	56 Windsor ROAD	Service Station	Under assessment	-33.79090731	150.9967332

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NORTHMEAD	Caltex Service Station	98-100 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.78786563	150.9945909
NOWRA	Woolworths Service Station	2 Berry STREET	Service Station	Regulation being finalised	-34.87266278	150.6014052
NOWRA	Former Gasworks Managers Residence	24 Osborne STREET	Gasworks	Regulation under CLM Act not required	-34.8708875	150.5992586
NOWRA	Shell Coles Express Service Station	55 Kinghorne STREET	Service Station	Regulation under CLM Act not required	-34.87633757	150.6023481
NOWRA	Fire Station	69 Bridge ROAD	Gasworks	Regulation under CLM Act not required	-34.87081582	150.6004881
NOWRA	Historically Filled Land	70 Bridge ROAD	Unclassified	Regulation under CLM Act not required	-34.87081809	150.6013231
NOWRA	Former Hollingworth Scrap Yard	72-74 Jervis and 117 East STREET	Other Industry	Under assessment	-34.88324216	150.6034361
NOWRA	Harry Sawkins Park	Bounded by Princes Hwy, Graham St & McGrath AVENUE	Gasworks	Regulation under CLM Act not required	-34.87093993	150.6037157
NOWRA	Former gasworks	Lamonds LANE	Gasworks	Contamination currently regulated under CLM Act	-34.87111182	150.6000803
NOWRA EAST	Mobil Service Station	Lot 3 Kalandar STREET	Service Station	Contamination currently regulated under CLM Act	-34.88850535	150.6093504
NYNGAN	Caltex Service Station	126 Pangee STREET	Service Station	Under assessment	-31.56482841	147.2002892
NYNGAN	Caltex Service Station	39-41 Pangee STREET	Service Station	Under assessment	-31.56101006	147.1914997
OAK FLATS	Shellharbour City Works Depot	132 Industrial ROAD	Other Industry	Under assessment	-34.56546013	150.8087225
OBERON	Former Shell Depot	32 O'Connell ROAD	Other Petroleum	Regulation under CLM Act not required	-33.6997172	149.8450057
OBERON	Caltex Service Station	Lowes Mount ROAD	Service Station	Under assessment	-33.69509055	149.8570553
OBERON	Oberon Timber Complex	Lowes Mount ROAD	Other Industry	Regulation under CLM Act not required	-33.69264862	149.8564588
OBERON	CSR Ltd Property and King's Stockyard Creek	Off Endeavour STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.6922152	149.8686909
OCEAN SHORES	Former Ocean Shores Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-28.51270299	153.5301496
OLD GUILDFORD	Caltex Service Station	640-644 Woodville ROAD	Service Station	Under assessment	-33.86670857	150.9879189
ORANGE	Former Mobil Service Station	168 Peisley STREET	Service Station	Under assessment	-33.28525478	149.1037259
ORANGE	Caltex Orange Depot	184 Byng STREET	Service Station	Regulation under CLM Act not required	-33.28285589	149.1050273
ORANGE	BP-Branded Lowes Petroleum Depot	197 - 201 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-33.27145977	149.1078103
ORANGE	Former Mobil Service Station	24-28 Bathurst ROAD	Service Station	Under assessment	-33.2866912	149.1066505
ORANGE	Woolworths Orange Service Station	357-361 Summer (Cnr William St) STREET	Service Station	Regulation under CLM Act not required	-33.28445811	149.1053604
ORANGE	Electrolux Orange	5-17 Edward STREET	Other Industry	Regulation being finalised	-33.29874849	149.1038449
ORANGE	BP (Reliance Petroleum) Service Station Orange	56-60 Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.28980053	149.1086212
ORANGE	Caltex Summer Street Service Station Orange	70-74 Summer (Cnr Hill St) STREET	Service Station	Regulation under CLM Act not required	-33.28311722	149.0940712
ORANGE	BP Service Station (Reliance Petroleum)	76 Peisley STREET	Service Station	Under assessment	-33.29025034	149.1027194
ORANGE	BP Orange Service Station (Reliance Petroleum)	81 Summer STREET	Service Station	Under assessment	-33.2825884	149.0951535
OURIMBAH	Palmdale Service Centre Pty Ltd	3130 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3381336	151.374586

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OURIMBAH	Shell Coles Express Service Station	78-80 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3468202	151.3710098
OYSTER BAY	Shell Coles Express Service Station	20 Carvers ROAD	Service Station	Contamination currently regulated under CLM Act	-34.00934475	151.0758626
OYSTER COVE	Cove Marine Pty Ltd	60 Frederick STREET	Unclassified	Contamination currently regulated under POEO Act	-32.73549959	151.952446
PADDINGTON	7-Eleven Service Station	59 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-33.88322921	151.2205024
PADSTOW	Caltex Padstow	115 Fairford ROAD	Service Station	Regulation under CLM Act not required	-33.9434571	151.0345671
PADSTOW	Selleys / Dulux	1-29 Gow STREET	Unclassified	Under assessment	-33.93904125	151.0381725
PADSTOW	Galvatech	49 Gow STREET	Metal Industry	Contamination currently regulated under POEO Act	-33.93808679	151.0346862
PADSTOW	Foseco Australia Pty Ltd	7 Stuart STREET	Chemical Industry	Under assessment	-33.94342957	151.0377316
PADSTOW	Sebel Furniture	Parts 64 and 92 Gow STREET	Other Industry	Regulation under CLM Act not required	-33.93606752	151.0322057
PAGEWOOD	Former Email Site	Corner of Page Street and Holloway STREET	Other Industry	Contamination currently regulated under CLM Act	-33.94302462	151.2132036
PAMBULA	Offsite area (roadways) adjacent to United Service Station Pambula (former Shell Self Serve)	Corner Quondola Street and Bullara STREET	Service Station	Under assessment	-36.93104481	149.8746763
PARKES	BP Truckstop	(Newell Highway) 1 Forbes ROAD	Other Petroleum	Regulation under CLM Act not required	-33.14309226	148.1710282
PARKES	BP Service Station Telescope (Reliance Petroleum)	339 Clarinda STREET	Service Station	Under assessment	-33.13216152	148.1743239
PARKES	Caltex Service Station Parkes	352-360 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13317454	148.173643
PARKES	BP Reliance East End Service Station Parkes	46 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.14243539	148.1846227
PARKES	Caltex Service Station	Eugowra ROAD	Service Station	Under assessment	-33.19007031	148.224822
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Street) ROAD	Service Station	Under assessment	-33.72407662	150.9336021
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Under assessment	-33.80498714	151.0056151
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Under assessment	-33.80919769	151.0142894
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresent Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not required	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Under assessment	-33.8017814	150.9577994
PENDLE HILL	Caltex Service Station	602-606 Great Western HIGHWAY	Service Station	Under assessment	-33.80827518	150.9421511
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73936462	151.0680237
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Regulation under CLM Act not required	-33.74287244	150.6927071
PENRITH	Former Mobil Depot	174 Coreen AVENUE	Other Petroleum	Under assessment	-33.74484268	150.6980504

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PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Under assessment	-33.73059678	150.6952571
PENRITH	7-Eleven Service Station	30 Henry ROAD	Service Station	Under assessment	-33.75408799	150.7045594
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not required	-33.73426843	150.6933382
PENRITH	Crane Enfield Metals	Castlereagh ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.73734959	150.696442
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Regulation under CLM Act not required	-33.74385498	150.6925743
PENRITH	Jet 60 Dry Cleaners	Shop 3 134-138 Henry STREET	Unclassified	Under assessment	-33.75231953	150.6964541
PENSHURST	7-Eleven Service Station	612 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.96153533	151.0793525
PENSHURST	Caltex Service Station	641 King Georges ROAD	Service Station	Under assessment	-33.95985335	151.0891118
PERISHER VALLEY	Perisher Centre Loading Dock	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.40392862	148.4111593
PERISHER VALLEY	Perisher Ski Resort	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.41106374	148.4005469
PETERSHAM	Fanny Durack Aquatic Centre	Station STREET	Unclassified	Regulation under CLM Act not required	-33.89194583	151.151824
PHEASANTS NEST	7-Eleven (former Mobil) Service Station	(Northbound) Hume HIGHWAY	Service Station	Under assessment	-34.28274509	150.6394175
PHEASANTS NEST	7-Eleven Service Station	(Southbound) Hume HIGHWAY	Service Station	Under assessment	-34.28318211	150.6362986
PICTON	McDonalds	69 -71 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16711877	150.6121524
PICTON	Coles Express Picton	93-99 Argyle STREET	Service Station	Under assessment	-34.16844337	150.6114236
PLUMPTON	Woolworths Service Station Plumpton	Jersey ROAD	Service Station	Under assessment	-33.74478874	150.8369408
PORT BOTANY	Caltex Banksmeadow	1 -3 Penrhyn ROAD	Chemical Industry	Contamination currently regulated under POEO Act	-33.96335328	151.2171062
PORT BOTANY	Port Botany Bus Depot	1 Bumborah Point ROAD	Other Petroleum	Under assessment	-33.96880413	151.2255889
PORT BOTANY	Vopak B	20 Friendship ROAD	Chemical Industry	Under assessment	-33.97946548	151.2121752
PORT BOTANY	Smith Bros	4 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.9681757	151.2239505
PORT BOTANY	Terminals	45 Friendship ROAD	Chemical Industry	Under assessment	-33.97609287	151.2174402
PORT BOTANY	Vopak A	49 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97426175	151.2206228
PORT BOTANY	Bunnerong Canal	Between Brotherson Dock and Bumborah Point ROAD	Unclassified	Regulation under CLM Act not required	-33.96800557	151.2227633
PORT BOTANY	Sydney Ports Bulk Liquids Berth	Charlotte ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.97418047	151.2123791
PORT BOTANY	Port Botany Railway Corridors	Friendship ROAD	Unclassified	Under assessment	-33.95467008	151.2178012
PORT BOTANY	Sydney Ports Marine Services	Interterminal Access ROAD	Other Petroleum	Under assessment	-33.97214594	151.2173122
PORT KEMBLA	Coates Hire	1 Flinders STREET	Other Industry	Under assessment	-34.47104817	150.89162
PORT KEMBLA	Caltex Service Station	16 Flinders STREET	Service Station	Under assessment	-34.47058088	150.8945864
PORT KEMBLA	Shell Port Kembla CVRO	87-89 Flinders STREET	Other Petroleum	Regulation under CLM Act not required	-34.46964995	150.8953859
PORT KEMBLA	Darcy Road Rail Sidings	Darcy ROAD	Other Industry	Under assessment	-34.47792834	150.9105503

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PORT KEMBLA	No 2 Steelworks	Five Islands ROAD	Metal Industry	Contamination currently regulated under CLM Act	-34.45965024	150.8844432
PORT KEMBLA	Port Kembla Steelworks - No.1 Works Site	Five Islands ROAD	Metal Industry	Under assessment	-34.47386606	150.8794912
PORT KEMBLA	Port Kembla Steelworks - Steelhaven	Five Islands ROAD	Other Industry	Under assessment	-34.47605247	150.891144
PORT KEMBLA	Manildra Park	Flinders STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.46946878	150.8935731
PORT KEMBLA	Port Kembla Orica	Foreshore Road and Darcy ROAD	Other Industry	Contamination currently regulated under CLM Act	-34.47773583	150.9054545
PORT KEMBLA	Port Kembla, Auszinc Metals and Alloys	Lot 2 Shellharbour ROAD	Metal Industry	Regulation under CLM Act not required	-34.49335414	150.8961205
PORT KEMBLA	South Yard Rail Sidings	Lot 3 Old Port ROAD	Unclassified	Regulation under CLM Act not required	-34.47500551	150.8951759
PORT KEMBLA	Port Kembla Copper Smelter	Military ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-34.4810006	150.9063426
PORT KEMBLA	Commonwealth Rolling Mills (CRM)	Old Port ROAD	Metal Industry	Under assessment	-34.47476117	150.8974746
PORT KEMBLA	Port Kembla, Former Electricity Commission Site	Old Port Road/Christie Drive ROAD	Other Industry	Regulation under CLM Act not required	-34.46899143	150.8982854
PORT KEMBLA	BHP Area 21	Springhill ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-34.45244614	150.8676517
PORT KEMBLA	Port Kembla Springhill Works	Springhill ROAD	Metal Industry	Under assessment	-34.45905808	150.8749558
PORT KEMBLA	Port Kembla Steelworks Recycling Area	Springhill ROAD	Unclassified	Under assessment	-34.45271181	150.8677127
PORT MACQUARIE	Caltex Service Station	100 Hastings River DRIVE	Service Station	Under assessment	-31.42934052	152.8830188
PORT MACQUARIE	Caltex Service Station	112-114 Gordon STREET	Service Station	Under assessment	-31.43491709	152.9047618
PORT MACQUARIE	Shell Coles Express Port Macquarie Service Station	121 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.4343131	152.9046869
PORT MACQUARIE	Caltex Service Station	12-14 Bolwarra ROAD	Service Station	Under assessment	-31.45015286	152.8854769
PORT MACQUARIE	Former Mobil Depot	211 Lake ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44688513	152.8864499
PORT MACQUARIE	Car park	28 Hayward STREET	Other Industry	Regulation under CLM Act not required	-31.43385131	152.9072399
PORT MACQUARIE	Caltex Port Macquarie Service Station	29 Lord STREET	Service Station	Under assessment	-31.43326436	152.9169873
PORT MACQUARIE	Coles Myer	43 John Oxley DRIVE	Service Station	Regulation under CLM Act not required	-31.45741442	152.8739626
PORT MACQUARIE	Port Macquarie Airport	99 Boundary STREET	Other Petroleum	Under assessment	-31.43555856	152.868776
PORT MACQUARIE	Former Mobil Service Station	Corner Oxley Highway and Major Innes DRIVE	Service Station	Regulation under CLM Act not required	-31.45738931	152.873956
PORT MACQUARIE	Port Macquarie Council Depot	Koala STREET	Unclassified	Regulation under CLM Act not required	-31.45341586	152.9032764
PORTLAND	Mt Piper Power Station	350 Boulder ROAD	Other Petroleum	Under assessment	-33.35581541	150.0350801
PORTLAND	Mt Piper Power Station	350 Boulder Road (Power Station)	Other Industry	Under assessment	-33.349481	150.024182
PORTLAND	Ivanhoe Colliery	Pipers Flat ROAD	Other Industry	Under assessment	-33.36595748	150.0099577
PRAIRIEWOOD	7-Eleven (former Caltex) Service Station	485-487 Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.87102509	150.9031383

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
PROSPECT	7-Eleven (former Mobil) Service Station Prospect	354 Flushcombe ROAD	Service Station	Regulation under CLM Act not required	-33.79541624	150.9049417
PROSPECT	Gatehouse, 544 Reservoir Road	544 Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81049244	150.9157439
PROSPECT	Pincott's Cottage, Gate C1	Off Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81589773	150.9144343
PROSPECT	Cottage 3, William Lawson Drive	William Lawson DRIVE	Unclassified	Regulation under CLM Act not required	-33.81490331	150.9149885
PUNCHBOWL	Caltex Service Station	1285-1289 Canterbury ROAD	Service Station	Under assessment	-33.93146308	151.0596348
PUNCHBOWL	Former BP Service Station	1375 Corner Canterbury & Victoria ROADS	Service Station	Under assessment	-33.93170424	151.0537302
PUNCHBOWL	Punchbowl Laundry	42-44 Belmore ROAD	Chemical Industry	Under assessment	-33.93582701	151.0562638
PUTNEY	Putney Marina	20 Waterview STREET	Other Industry	Under assessment	-33.82608091	151.1003966
PYMBLE	Caltex Service Station	1117 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74102977	151.1385257
PYMBLE	Shell Coles Express Service Station	21 Ryde ROAD	Service Station	Under assessment	-33.75198512	151.1438115
PYRMONT	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Other Industry	Under assessment	-33.8752655	151.1942645
QUAKERS HILL	BP Parkway (former Caltex) Service Station	450 Quakers Hill PARKWAY	Service Station	Under assessment	-33.72998613	150.9023617
QUAKERS HILL	7-Eleven (former Mobil) Service Station	83 Lalor ROAD	Service Station	Under assessment	-33.72759077	150.8966764
QUEANBEYAN	Former Mobil Emoleum Depot	109-111 High STREET	Other Petroleum	Regulation under CLM Act not required	-35.3396115	149.237556
QUEANBEYAN	Former Mobil Service Station	151-153 Uriarra STREET	Service Station	Under assessment	-35.34425514	149.2148687
QUEANBEYAN	Bill Lilley Automotive	169 Crawford STREET	Service Station	Regulation under CLM Act not required	-35.35138121	149.232486
QUEANBEYAN	Woolworths Queanbeyan Service Station	196 Crawford (Cnr Morisset St) STREET	Service Station	Regulation under CLM Act not required	-35.35163055	149.2335759
QUEANBEYAN	Former Caltex Depot	20-30 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-35.34523	149.22333
QUEANBEYAN	Caltex Depot	5 Stephens ROAD	Service Station	Under assessment	-35.34615546	149.207807
QUEANBEYAN	BP Queanbeyan	50 Yass ROAD	Service Station	Under assessment	-35.34126641	149.2445103
QUEANBEYAN	Former BP Queanbeyan	64 Uriarra ROAD	Service Station	Under assessment	-35.34646177	149.2246263
QUEANBEYAN	Caltex Service Station	Bungendore ROAD	Service Station	Under assessment	-35.34930535	149.2438607
QUEANBEYAN WEST	Caltex Service Station	Lanyon Dr Cnr Mccrae St (1 Suraci Place) STREET	Service Station	Under assessment	-35.36372923	149.2067531
QUIRINDI	Tamarang Servicentre	113-117 Station STREET	Service Station	Under assessment	-31.50179204	150.6814611
QUIRINDI	Caltex Service Station, Quirindi	199-201 George STREET	Service Station	Regulation under CLM Act not required	-31.50654793	150.6803589
QUIRINDI	Former Mobil Depot, Quirindi	4-6 Cross STREET	Other Petroleum	Under assessment	-31.49903355	150.681972
RAMSGATE	Shell Coles Express Service Station	Grand Parade cnr Ramsgate ROAD	Service Station	Regulation under CLM Act not required	-33.98537988	151.1471234
RANDWICK	Caltex Service Station	2 Alison ROAD	Service Station	Regulation under CLM Act not required	-33.9065752	151.2320697
RANDWICK	Service Station, Randwick	33-37 Carrington ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90655015	151.2525065
RANDWICK	Metro Petroleum	345 Avoca STREET	Service Station	Regulation under CLM Act not required	-33.92544832	151.2396799

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RAVENSWORTH	Ravensworth Operations Narama Mine	Lemington ROAD	Other Industry	Under assessment	-32.47115903	151.0359579
RAVENSWORTH	Cumnock Colliery	Old New England HIGHWAY	Other Industry	Under assessment	-32.40218281	150.9960082
RAYMOND TERRACE	Shell Coles Express Raymond Terrace	107 Adelaide (formerly Pacific Highway) STREET	Service Station	Under assessment	-32.76110922	151.7492847
RAYMOND TERRACE	Former Motor Registry	53 William STREET	Other Petroleum	Under assessment	-32.76286473	151.7445839
RAYMOND TERRACE	Caltex Service Station	Cnr Adelaide Street & Glenelg STREET	Service Station	Under assessment	-32.76503842	151.7425264
REDFERN	Former Printing Works	101a Marriott STREET	Other Industry	Regulation under CLM Act not required	-33.89512556	151.2113422
REDFERN	BP Service Station	116 Regent STREET	Service Station	Under assessment	-33.89367876	151.1995256
REDFERN	BP-branded Jasbe Surry Hills	411 Cleveland STREET	Service Station	Under assessment	-33.89183974	151.2132466
REVESBY	Caltex Service Station Revesby	181 The River ROAD	Service Station	Under assessment	-33.95573605	151.0171779
REVESBY	Dorf Clark Industries	184-194 Milperra ROAD	Metal Industry	Regulation under CLM Act not required	-33.93387149	151.000553
REVESBY	Mirotone Pty Ltd	21 Marigold STREET	Chemical Industry	Contamination currently regulated under POEO Act	-33.93559608	151.0002207
REVESBY	Bituminous Products	33-35 Violet STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.93702092	151.0067896
RHODES	Former Glad factory site	10-16 Marquet STREET	Chemical Industry	Regulation under CLM Act not required	-33.82884048	151.0848716
RHODES	Homebush Bay sediments adjoining former Berger Paint factory	Oulton AVENUE	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.83535308	151.083238
RHODES	Former Allied Feeds site	Walker STREET	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-33.82465376	151.0870401
RHODES	Former UCAL site	Walker STREET	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82727505	151.0853195
RHODES	Homebush Bay Sediments adjoining the former UCAL and Allied Feeds sites		Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.8263749	151.0839216
RICHMOND	Caltex Richmond Service Station	98 March (Cnr East Market St) STREET	Service Station	Regulation under CLM Act not required	-33.59937996	150.7514483
RIVERSTONE	Woolworths Vineyard Service Station, Riverstone	1 Woodland Street, corner of Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65607641	150.8724067
RIVERSTONE	Axalta Coating Systems	15-23 Melbourne ROAD	Other Industry	Regulation under CLM Act not required	-33.6636649	150.8557519
RIVERSTONE	7-Eleven Riverstone	55 Garfield ROAD	Service Station	Under assessment	-33.677946	150.86367
RIVERSTONE	Vacant Commercial Land	88-94 Junction ROAD	Unclassified	Regulation under CLM Act not required	-33.66226398	150.8789967
RIVERWOOD	7-Eleven Riverwood	30 Bonds ROAD	Service Station	Regulation under CLM Act not required	-33.9523701	151.0583887
ROCKDALE	7-Eleven (former Mobil) Service Station	293 West Botany STREET	Service Station	Under assessment	-33.94995672	151.1484667
ROCKDALE	7-Eleven Service Station	99 Railway STREET	Service Station	Under assessment	-33.95247322	151.1356785
ROOTY HILL	7-Eleven (former Mobil) Service Station	1042 Great Western HIGHWAY	Service Station	Under assessment	-33.78214955	150.8287656

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ROOTY HILL	7-Eleven (former Mobil) Service Station	106 Rooty Hill Road South ROAD	Service Station	Under assessment	-33.78036181	150.8501998
ROSE BAY	Caltex Service Station	488 Old South Head ROAD	Service Station	Under assessment	-33.87475145	151.2723847
ROSE BAY	Rose Bay Budget Service station	638 -646 New South Head ROAD	Service Station	Contamination currently regulated under CLM Act	-33.87062149	151.2677617
ROSEBERY	Former Industrial Site (Former Electroplating Facility)	108 Dunning AVENUE	Other Industry	Under assessment	-33.91630811	151.201557
ROSEBERY	Autofoil P/L	2 Mentmore AVENUE	Other Industry	Regulation under CLM Act not required	-33.91121318	151.2054882
ROSEBERY	Caltex Service Station Rosebery	321 Gardeners ROAD	Service Station	Under assessment	-33.92302898	151.2059541
ROSEBERY	Rosebery Service Station	395 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92246784	151.2024589
ROSEHILL	James Hardie Factory (former, western portion)	181 James Ruse DRIVE	Other Industry	Contamination currently regulated under CLM Act	-33.81605834	151.0238145
ROSELANDS	7-Eleven (former Mobil) Service Station	91 Canary's ROAD	Service Station	Under assessment	-33.93362588	151.0736538
ROSELANDS	Roselands Shopping Centre	Roselands DRIVE	Service Station	Under assessment	-33.93499281	151.0691284
ROSEVILLE	Mobil Service Station	2 Boundary STREET	Service Station	Regulation under CLM Act not required	-33.78769177	151.1796011
ROSEVILLE CHASE	Coles Express Roseville Chase	388 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78337722	151.1973901
ROZELLE	Caltex Service Station	121 Victoria ROAD	Service Station	Under assessment	-33.86252996	151.168497
ROZELLE	Kennards Rozelle	15-39 Wellington STREET	Other Petroleum	Regulation under CLM Act not required	-33.86176757	151.1686519
ROZELLE	7-Eleven (former Mobil) Service Station	178-180 Victoria ROAD	Service Station	Under assessment	-33.8630268	151.1680857
ROZELLE	BP Service Station	Corner Darling Street and Thornton STREET	Service Station	Regulation under CLM Act not required	-33.8591647	151.1716591
ROZELLE	White Bay Power Station	Robert STREET	Other Industry	Regulation under CLM Act not required	-33.86674636	151.1772204
RUFUS RIVER	SA Water Depot - Rufus River	Old Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-34.04191512	141.2679475
RUSHCUTTERS BAY	d'Albora Marinas	1b New Beach ROAD	Other Industry	Contamination currently regulated under POEO Act	-33.87351297	151.2345082
RUTHERFORD	Rutherford Transpacific	11 Kyle STREET	Other Industry	Regulation under CLM Act not required	-32.71105203	151.500311
RUTHERFORD	Shell Coles Express Service Station Rutherford	118 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.7208703	151.5394595
RUTHERFORD	Caltex Service Station	134-138 New England HIGHWAY	Service Station	Under assessment	-32.7202589	151.5381526
RUTHERFORD	Transpacific Industrial Services/Nationwide Oil Pty Ltd	99 Kyle STREET	Chemical Industry	Under assessment	-32.71262159	151.5013865
RYDALMERE	Rheem Australia	1 Alan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.81545013	151.0295476
RYDALMERE	Former Service Station	262-272 Victoria ROAD	Service Station	Under assessment	-33.81006724	151.032377
RYDALMERE	BP Service Station	265 Victoria ROAD	Service Station	Under assessment	-33.8109483	151.0328101
RYDALMERE	Caltex Service Station	309 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81196193	151.0371185
RYDALMERE	Mitsubishi Electric	348 Victoria ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.81040138	151.0392812

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RYDALMERE	Hunter Douglas	Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81009112	151.0384732
RYDE	Caltex Service Station	110 Lane Cove ROAD	Service Station	Under assessment	-33.80142973	151.1137925
RYDE	7-Eleven (former Mobil) Service Station	326-328 Blaxland ROAD	Service Station	Under assessment	-33.80242183	151.1004278
RYDE	Shell Coles Express Ryde	45 Lane Cove ROAD	Service Station	Under assessment	-33.80726028	151.109981
RYDE	Ryde Bus Depot	49 - 75 Buffalo ROAD	Unclassified	Under assessment	-33.81679771	151.1225255
SANCTUARY POINT	United Service Station, Sanctuary Point	147 Larmer AVENUE	Service Station	Regulation under CLM Act not required	-35.09918861	150.6329537
SANDGATE	Caltex Service Station Sandgate	162 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.86501596	151.706161
SANDGATE	North Limited Storage Handling facility	Maitland ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-32.86598453	151.7012866
SANS SOUCI	Former 7-Eleven Ramsgate	368 Rocky Point ROAD	Service Station	Contamination currently regulated under CLM Act	-33.98631668	151.135849
SANS SOUCI	7-Eleven Service Station	474-478 Rocky Point ROAD	Service Station	Under assessment	-33.99088939	151.1333779
SANS SOUCI	Former Service Station	542-544 Rocky Point ROAD	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.99376148	151.1316131
SANS SOUCI	Kendall Street Reserve	Lawson Street and Kendall STREET	Landfill	Under assessment	-33.99966431	151.13005
SCONE	Scone Works Depot	220 Susan STREET	Other Petroleum	Regulation under CLM Act not required	-32.04444892	150.879152
SCONE	Shell Coles Express Service Station	91- 93 Kelly STREET	Service Station	Contamination currently regulated under CLM Act	-32.04715941	150.8676346
SCONE	BP - Former Depot	Scone St, Guernsey St & Susan STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.04599284	150.8662046
SCONE	Mobil Scone Airport Elt	Walter Pye AVENUE	Other Petroleum	Under assessment	-32.03596733	150.8323698
SEVEN HILLS	Transport Infrastructure Development Corporation	1 Powers ROAD	Other Industry	Regulation under CLM Act not required	-33.77387442	150.9379787
SEVEN HILLS	Caltex Service Station	105 Station ROAD	Service Station	Under assessment	-33.77435881	150.9448733
SEVEN HILLS	7-Eleven (former Mobil) Service Station	151 Prospect HIGHWAY	Service Station	Under assessment	-33.76894646	150.9427004
SEVEN HILLS	Former BP Service Station	154-156 Prospect HIGHWAY	Service Station	Under assessment	-33.76906502	150.9414821
SEVEN HILLS	Australian Waste Oil Refineries	27 Powers ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.77536127	150.9511122
SEVEN HILLS	Australia Post	3 Powers ROAD	Unclassified	Regulation under CLM Act not required	-33.77434009	150.9395495
SEVEN HILLS	Caltex Service Station	38 Abbott ROAD	Service Station	Regulation under CLM Act not required	-33.76692649	150.9548271
SHELLY BEACH	Former Shelly Beach Landfill	Oaks AVENUE	Landfill	Under assessment	-33.36700551	151.4913631
SHORTLAND	Former Astra St landfill	1, 2 & 28 Astra STREET	Landfill	Contamination currently regulated under CLM Act	-32.86716222	151.6966948
SHORTLAND	Tuxford Park landfill	10 King STREET	Landfill	Regulation under CLM Act not required	-32.87721139	151.6936837
SHORTLAND	7-Eleven (Former BP) Service Station	298-302 Sandgate ROAD	Service Station	Regulation under CLM Act not required	-32.8861645	151.6953912
SHORTLAND	Former Lorna St landfill	8/475 Sandgate ROAD	Landfill	Regulation under CLM Act not required	-32.87888726	151.7023245
SILVERWATER	Vacant property	103-105 Silverwater ROAD	Other Industry	Under assessment	-33.83831374	151.0472576

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SILVERWATER	Former Printing Facility	46-58 Derby STREET	Unclassified	Under assessment	-33.83855869	151.0478649
SILVERWATER	Storage Facility	54-58 Derby STREET	Unclassified	Under assessment	-33.83855869	151.0478649
SILVERWATER	Silverwater Landfill	Carnarvon ROAD	Landfill	Regulation under CLM Act not required	-33.83506394	151.033214
SINGLETON	Putty Saw Mill	(via Singleton) Putty ROAD	Unclassified	Contamination currently regulated under CLM Act	-32.99958725	150.7111684
SINGLETON	BP Service Station Singleton	53 George (Cnr Macquarie St) STREET	Other Petroleum	Regulation under CLM Act not required	-32.56182325	151.1748054
SINGLETON	Singleton Gasworks	55-57 John STREET	Gasworks	Contamination currently regulated under CLM Act	-32.56774715	151.1658188
SINGLETON	Shell Coles Express Service Station	69-73 George STREET	Service Station	Under assessment	-32.56297156	151.1755215
SINGLETON	Bulga Surface Operations	Broke ROAD	Other Industry	Under assessment	-32.68325751	151.1206158
SINGLETON	Mobil Singleton Airport Elt	Range ROAD	Other Petroleum	Under assessment	-32.60270846	151.1944828
SMITHFIELD	Freestones	1 Hume ROAD	Other Petroleum	Under assessment	-33.83577694	150.9310112
SMITHFIELD	Liquip International	13 Hume ROAD	Other Industry	Under assessment	-33.83802635	150.9319034
SMITHFIELD	Caltex Smithfield	16-18 Tait STREET	Service Station	Regulation under CLM Act not required	-33.84596441	150.9435497
SMITHFIELD	Coles Express (former Mobil) Service Station	678 The Horsley Drive, corner Smithfield ROAD	Service Station	Under assessment	-33.85376154	150.9400104
SMITHFIELD	Former Landfill	Little STREET	Landfill	Contamination being managed via the planning process (EP&A Act)	-33.85025253	150.9411561
SOUTH ALBURY	BP Border Service Station	Corner Ebden Street and Wodonga PLACE	Service Station	Contamination currently regulated under CLM Act	-36.08875942	146.9093882
SOUTH BOWENFELS	Shell Coles Express Service Station	Lot 1 Great Western HIGHWAY	Service Station	Under assessment	-33.50589001	150.1238487
SOUTH COOGEE	Caltex Service Station	169-173 Malabar ROAD	Service Station	Under assessment	-33.93233184	151.2574377
SOUTH GRAFTON	Caltex Service Station	46-58 Schwinghammer STREET	Service Station	Under assessment	-29.71128273	152.9458313
SOUTH GRAFTON	Mobil Service Station	Corner Pacific Highway and Charles STREET	Service Station	Under assessment	-29.70814828	152.9412928
SOUTH GRAFTON	Caltex Service Station	Pacific Hwy Cnr Gwyder HIGHWAY	Service Station	Under assessment	-29.70739015	152.9425508
SOUTH KEMPSEY	Caltex Service Station	52 Lachlan STREET	Service Station	Regulation under CLM Act not required	-31.09361084	152.8370796
SOUTH LISMORE	Former Mobil Service Station	126 - 128 Union STREET	Service Station	Regulation under CLM Act not required	-28.81242175	153.267541
SOUTH LISMORE	North Coast Petroleum (Former Mobil) Depot Lismore	19-21 Elliot ROAD	Other Petroleum	Regulation under CLM Act not required	-28.81212046	153.2661935
SOUTH LISMORE	Caltex Service Station	237 Union STREET	Service Station	Under assessment	-28.82052708	153.2648111
SOUTH LISMORE	Former Mobil Depot	26-32 Phyllis STREET	Other Petroleum	Regulation under CLM Act not required	-28.81005206	153.2660073
SOUTH NOWRA	Caltex South Nowra	100 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.90516081	150.6029621
SOUTH PENRITH	7-Eleven Service Station	45 Aspen STREET	Service Station	Regulation under CLM Act not required	-33.77727694	150.7107228
SOUTH TAMWORTH	Caltex Service Station	Kent Street Cnr Kathleen STREET	Service Station	Regulation under CLM Act not required	-31.10361712	150.9186343
SOUTH WENTWORTHVILLE	Caltex Service Station	313 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.81643692	150.9718802

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SOUTH WENTWORTHVILLE	Aldi Stores Development	331-339 Great Western HIGHWAY	Metal Industry	Regulation under CLM Act not required	-33.81605854	150.9697429
SOUTH WEST ROCKS	Former Shell Trial Bay Depot	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89273836	153.0612772
SOUTH WEST ROCKS	Former Trial Bay Caltex Depot	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89190078	153.0573056
SOUTH WEST ROCKS	Residential area and Reserve opposite Former Caltex terminal	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89172594	153.0573164
SPRINGVALE	Springvale Colliery	Castlereagh HIGHWAY	Other Industry	Under assessment	-33.40334736	150.1070462
ST CLAIR	7-Eleven (former Mobil) Service Station	4 Endeavour AVENUE	Service Station	Under assessment	-33.79430926	150.7885793
ST IVES	Mobil Service Station	157 Mona Vale ROAD	Service Station	Under assessment	-33.73265301	151.1563899
ST IVES	Caltex Service Station	164 Mona Vale ROAD	Service Station	Under assessment	-33.7307595	151.1570462
ST IVES	Shell Service Station	179-181 Mona Vale ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73124859	151.1575827
ST IVES	Caltex Service Station	363 Mona Vale ROAD	Service Station	Under assessment	-33.71737	151.17311
ST IVES	Caltex Service Station	452 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.70752272	151.187545
ST MARYS	Former Woolworths Service Station	120-128 Forrester ROAD	Service Station	Under assessment	-33.75525115	150.7752897
ST MARYS	Chemcolour Industries Ltd	19-25 Anne STREET	Chemical Industry	Under assessment	-33.75027071	150.7725397
ST MARYS	7-Eleven (former Mobil) Service Station	2 Christie STREET	Service Station	Under assessment	-33.74790843	150.7767667
ST MARYS	7-Eleven (former Mobil) Service Station	2 Wilson STREET	Service Station	Under assessment	-33.77790415	150.771689
ST MARYS	Integral Energy Mt Druitt Transmission Substation	69 Kurrajong North ROAD	Other Industry	Regulation under CLM Act not required	-33.76376093	150.7921691
ST MARYS	Caltex St Marys Service Station	Wordoo St Cnr Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75334263	150.7755489
ST PETERS	BP Express Service Station	2 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90982281	151.1809936
ST PETERS	Cooks River Rail Terminal	20 Canal ROAD	Unclassified	Regulation under CLM Act not required	-33.91943986	151.1726689
ST PETERS	Former Tidyburn Facility	53 Barwon Park ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.9130091	151.1809912
ST PETERS	Former Industrial Manufacturing Facility	75 Mary STREET	Other Industry	Regulation under CLM Act not required	-33.91307297	151.1731383
ST PETERS	Camdenville Park	May STREET	Other Industry	Regulation under CLM Act not required	-33.90911815	151.176951
STANMORE	125 Corunna Road	125 Corunna ROAD	Unclassified	Regulation under CLM Act not required	-33.88937382	151.1644589
STRATHFIELD	7-Eleven (former Mobil) Service Station	577 Liverpool ROAD	Service Station	Under assessment	-33.88736091	151.0743474
STRATHFIELD SOUTH	Former Landfill Site	7-9 Dunlop STREET	Landfill	Contamination being managed via the planning process (EP&A Act)	-33.89509698	151.0796751
STROUD	Caltex Service Station	1 Cowper STREET	Service Station	Under assessment	-32.39092749	151.9563089
SUFFOLK PARK	BP Service Station	207-209 Broken Head ROAD	Service Station	Regulation under CLM Act not required	-28.68800088	153.6083821

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
SUFFOLK PARK	Suffolk Park dip site	Cnr Broken Head Road & Beech DRIVE	Cattle Dip	Regulation under CLM Act not required	-28.6874242	153.6072824
SURRY HILLS	Woolworths Petrol Surry Hills	475 Cleveland STREET	Service Station	Under assessment	-33.89203644	151.216217
SURRY HILLS	Legion Cabs (Trading) Cooperative	69 - 81 Foveaux STREET	Service Station	Under assessment	-33.88470082	151.2107944
SURRY HILLS	Ausgrid Road Reserve	Mary STREET	Other Industry	Regulation under CLM Act not required	-33.88292195	151.2095176
SUTHERLAND	United Service Station and Sutherland Reservoir	1 to 3 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-34.029532	151.0579906
SUTHERLAND	7-Eleven Service Station	693 Old Princes HIGHWAY	Service Station	Under assessment	-34.02976735	151.0588789
SUTTON FOREST	Coles Express Sutton Forest West	Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.60808989	150.2250592
SWANSEA	Caltex Service Station	126 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.08811841	151.6381764
SYDENHAM	SRA Land	117 Railway PARADE	Other Industry	Regulation under CLM Act not required	-33.91560723	151.1656846
SYDENHAM	Sydenham XPT Maintenance Facility	Way STREET	Other Industry	Regulation under CLM Act not required	-33.91698468	151.1614089
SYDNEY	Interpro House (OSP 46581)	447 Kent STREET	Other Petroleum	Regulation under CLM Act not required	-33.87225413	151.204761
SYDNEY OLYMPIC PARK	RMS Western Precinct	14A-14E and 16 Hill ROAD	Other Petroleum	Regulation under CLM Act not required	-33.82239777	151.0758664
SYDNEY OLYMPIC PARK	Haslams Creek South Area 3	At Kronos Hill, Kevin Coombes AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.84113059	151.0602966
SYDNEY OLYMPIC PARK	Bicentennial Park	Bicentennial DRIVE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84456248	151.0788116
SYDNEY OLYMPIC PARK	Woo-la-ra Landfill	Hill ROAD	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82695807	151.07282
SYDNEY OLYMPIC PARK	Blaxland Common Landfill	Jamieson STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82638382	151.05972
SYDNEY OLYMPIC PARK	Kronos Hill Landfill	Kevin Coombes AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84014442	151.0649521
SYDNEY OLYMPIC PARK	Wilson Park (Former oil gas plant site)	Newington ROAD	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82633586	151.0534322
SYDNEY OLYMPIC PARK	Former Golf Driving Range Landfill	Sarah Durack AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85358517	151.0713987
SYDNEY OLYMPIC PARK	Aquatic Centre Carpark Landfill	Shane Gould AVENUE		Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85093439	151.0656713
SYLVANIA	Caltex Service Station - Sylvania Heights	414-416 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.02361051	151.0895394
SYLVANIA	Caltex Service Station	61 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.0140089	151.104212
TAHMOOR	Tahmoor Colliery	Remembrance DRIVE	Other Industry	Under assessment	-34.25090795	150.5793631

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TALBINGO	Old Town Landfill	Bridle STREET	Landfill	Regulation under CLM Act not required	-35.59018237	148.3041771
TALBINGO	T3 Spoil dump and adjoining river sediments	Off Snowy Mountains HIGHWAY	Landfill	Contamination formerly regulated under the CLM Act	-35.6177268	148.2926158
TALBINGO	Former grit blasting site	Old Damsite ROAD	Other Industry	Regulation under CLM Act not required	-35.60894551	148.3030165
TAMWORTH	Former Service Station Tamworth	(Cnr Scott Rd) 254-256 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.1118945	150.9228523
TAMWORTH	Caltex Tamworth Service Station	109 Gunnedah ROAD	Service Station	Under assessment	-31.09723226	150.8955299
TAMWORTH	Kensell's Mitsubishi	11-14 Kable AVENUE	Other Petroleum	Regulation under CLM Act not required	-31.08921565	150.9273063
TAMWORTH	Curlew Crescent	19-29 Curlew CRESCENT	Metal Industry	Regulation under CLM Act not required	-31.06963607	150.9069306
TAMWORTH	Caltex Star Tamworth	21 White STREET	Service Station	Under assessment	-31.09255137	150.9341709
TAMWORTH	Former Service Station, Fitzpatrick Super Fund, Tamworth	210 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.10613594	150.9234143
TAMWORTH	Coles Express Tamworth	251 - 253 Goonoo Goonoo ROAD	Service Station	Contamination currently regulated under CLM Act	-31.11058167	150.9236721
TAMWORTH	BP Tamworth Service Station and Depot	27-29 Gunnedah ROAD	Service Station	Under assessment	-31.09642128	150.9058193
TAMWORTH	Housing NSW	29 -33 White STREET	Other Petroleum	Regulation under CLM Act not required	-31.0915651	150.9357811
TAMWORTH	Former Mobil Service Station	373-375 Armidale ROAD	Service Station	Regulation under CLM Act not required	-31.10122679	150.9441341
TAMWORTH	Gunnedah Road Site	49 GUNNEDAH ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-31.09574904	150.9021583
TAMWORTH	Elovera Former Sheep Dip	730 Ascot Calala ROAD	Cattle Dip	Regulation under CLM Act not required	-31.1801846	150.962897
TAMWORTH	Mobil Depot	9 Hinkler ROAD	Other Petroleum	Under assessment	-31.09584286	150.9040493
TARCUTTA	Mobil Service Station	(Hume Highway) 32 Sydney STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.2772942	147.73574
TAREE	Caltex Service Station	104-106 Commerce STREET	Service Station	Regulation under CLM Act not required	-31.90720519	152.4500926
TAREE	Caltex Taree	12 Pitt STREET	Service Station	Regulation under CLM Act not required	-31.90551738	152.4783334
TAREE	Former BP Service Station (Reliance Petroleum)	150 Manning River DRIVE	Service Station	Under assessment	-31.93842026	152.4682056
TAREE	Caltex Service Station	44-46 Stevenson STREET	Service Station	Under assessment	-31.90563595	152.4640848
TAREE	Footpath in front of the former BP service station	53-55 Victoria STREET	Service Station	Regulation under CLM Act not required	-31.91015653	152.4659073
TAREE	Former Shell Depot	53-55 Stevenson STREET	Other Petroleum	Regulation under CLM Act not required	-31.90514622	152.4649706
TAREE	Former Mobil Depot	Corner Muldoon Street and Grey Gum ROAD	Other Petroleum	Under assessment	-31.89744109	152.4508569
TAREE SOUTH	Caltex Service Station	Corner Manning River Drive and Glenthorne ROAD	Service Station	Under assessment	-31.93842026	152.4682056

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TAREN POINT	Former Oyster Farmer	(formerly 98 Woodlands Rd) 2R Alexander AVENUE	Other Industry	Contamination being managed via the planning process (EP&A Act)	-34.01698788	151.1247494
TAREN POINT	Caltex Service Station	114 Taren Point ROAD	Service Station	Regulation under CLM Act not required	-34.02065958	151.1218938
TAREN POINT	Former Oyster Farmer	1A Atkinson ROAD	Other Industry	Regulation under CLM Act not required	-34.02081803	151.1283282
TAREN POINT	Former manufacturing site	46-50 Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.0236184	151.1231649
TAREN POINT	Shell Coles Express Service Station	99-103 Parraweena ROAD	Service Station	Regulation under CLM Act not required	-34.02630233	151.1200897
TAREN POINT	Mangrove Lane Cycle pathway	Mangrove LANE	Unclassified	Regulation under CLM Act not required	-34.02404025	151.1324783
TELARAH	Former Ausgrid Depot	Green STREET	Other Industry	Regulation under CLM Act not required	-32.7276446	151.5269745
TELARAH	ACIRL	Junction STREET	Other Industry	Under assessment	-32.73457183	151.5400128
TEMPE	Tempe Depot	1a Gannon STREET	Other Petroleum	Regulation under CLM Act not required	-33.92408255	151.1596469
TEMPE	Caltex Service Station	775 Princes HIGHWAY	Service Station	Under assessment	-33.9253681	151.1596532
TEMPE	Railcorp Site Renwick Street	Renwick STREET	Other Industry	Regulation under CLM Act not required	-33.91997709	151.1576058
TEMPE	Former Tempe Tip	South STREET	Landfill	Contamination currently regulated under CLM Act	-33.9255792	151.1668117
TERALBA	Teralba, Lucky's Scrap Metal	21 Racecourse ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.946805	151.61698
TERALBA	Lake Macquarie Teralba Sanitary Depot	Griffen ROAD	Landfill	Regulation under CLM Act not required	-32.9372059	151.6214528
TERANIA CREEK	Former Izzards Cattle Tick Dip	Wallace ROAD	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.65425776	153.2767438
THIRLMERE	Thirlmere Rail Heritage Museum	10 Barbour ROAD	Other Industry	Regulation under CLM Act not required	-34.20689245	150.5693902
THORNLEIGH	Shell Coles Express Thornleigh	188 - 190 Pennant Hills ROAD	Service Station	Under assessment	-33.72502184	151.0850569
THORNLEIGH	Caltex Service Station	200-202 Pennant Hills ROAD	Service Station	Under assessment	-33.72660793	151.08364
THORNTON	Energy Australia Thornton Pole Yard	55 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79973875	151.6374998
TIGHES HILL	Former Mobil Terminal	110 Elizabeth STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.90600406	151.7586907
TIGHES HILL	Holcim Australia Cement Batching Plant	340 Industrial DRIVE	Other Industry	Under assessment	-32.90532418	151.7574857
TIGHES HILL	SRA Land	73 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-32.90795794	151.754631
TIGHES HILL	Former Ampol Depot	94 Elizabeth STREET	Other Petroleum	Regulation being finalised	-32.90658137	151.757239
TOCUMWAL	Former Mobil Depot	(Murray Street) Newell HIGHWAY	Other Petroleum	Under assessment	-35.79180653	145.5648214
TOCUMWAL	Former Mobil Depot	79-83 Deniliquin ROAD	Other Petroleum	Under assessment	-35.80914914	145.5585528
TOMAGO	Minmet	25 School DRIVE	Metal Industry	Contamination currently regulated under POEO Act	-32.8301553	151.7300603
TOMAGO	Balcombe Sweat Furnace	26 Laverick AVENUE	Metal Industry	Regulation under CLM Act not required	-32.82557395	151.7056416

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TOMERONG	Log Cabin Service Station (United Petroleum)	D1300 Princes HIGHWAY	Service Station	Under assessment	-35.01820959	150.5779687
TOONGABBIE	7-Eleven (former Mobil) Service Station	3 Metella ROAD	Service Station	Under assessment	-33.78692357	150.9462837
TOORMINA	Caltex Service Station	2 Minorca PLACE	Service Station	Under assessment	-30.35229568	153.0906606
TORONTO	BP Toronto Service Station	132 Cary (Cnr Donnelly Ave) STREET	Service Station	Under assessment	-33.01144673	151.5937863
TORONTO	Coles XP (Former Mobil) Toronto Service Station	133-137 Cary (Cnr Thorne St) STREET	Service Station	Under assessment	-33.01187681	151.5930879
TORONTO	Caltex Service Station	147 Cary STREET	Service Station	Under assessment	-33.01288007	151.5928388
TORONTO	Toronto Hotel	74 Victory PARADE	Unclassified	Regulation under CLM Act not required	-33.01214835	151.5958127
TOUKLEY	Former Shell Toukley Autoport	211 Main ROAD	Service Station	Regulation under CLM Act not required	-33.26383791	151.5386268
TOUKLEY	Independent (Mobil) Toukley Service Station	287 Main ROAD	Service Station	Under assessment	-33.26469166	151.5462414
TRANGIE	Caltex Service Station	(Mitchell Hwy) 76 Narromine STREET	Service Station	Under assessment	-32.03234676	147.985164
TUGGERAH	BP Tuggerah	100 Pacific HIGHWAY	Service Station	Under assessment	-33.30578167	151.4198083
TUMBARUMBA	Caltex Service Station	150 Albury STREET	Service Station	Under assessment	-35.77024081	147.9927182
TUMBI UMBI	Former Tumbi Landfill	140 Bellevue ROAD	Landfill	Under assessment	-33.3993472	151.456471
TUMUT	Telstra Depot	26 Carey STREET	Other Industry	Under assessment	-35.29873079	148.2191122
TUMUT	CSR Railway cutting	Jepsen AVENUE	Unclassified	Regulation being finalised	-35.30422002	148.1942579
TUMUT	CSR Blue Dam	Jepsen AVENUE	Other Industry	Regulation being finalised	-35.30098337	148.1958308
TUROSS HEAD	Tern Inn Restaurant (abandoned UPSS)	2 Trafalgar ROAD	Service Station	Regulation under CLM Act not required	-36.05871059	150.1308443
TURRAMURRA	Woolworths Service Station (Former Mobil)	1243 Pacific HIGHWAY	Service Station	Under assessment	-33.73317594	151.1313195
TURRAMURRA	7-Eleven (former Mobil) Service Station	1408 Pacific HIGHWAY	Service Station	Under assessment	-33.73326389	151.1264194
TURRELLA	Tulloch Australia Pty Limited	61 Turrella STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92857213	151.1475387
TURVEY PARK	Former Mobil Depot	97 - 99 Coleman STREET	Other Petroleum	Under assessment	-35.12173871	147.3576651
TWEED HEADS	Former Mobil Quix Service Station	60 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-28.20143775	153.5445381
TWEED HEADS	Francis Street Road Reserve adjacent to 79-81 Wharf Street, Tweed Heads	79-81 Wharf STREET	Other Petroleum	Regulation under CLM Act not required	-28.17351959	153.542262
TWEED HEADS SOUTH	Former BP Depot	142 Minjungbal DRIVE	Other Petroleum	Regulation under CLM Act not required	-28.20860702	153.5455932
TWEED HEADS SOUTH	Woolworths Plus Petrol (Woolworths Caltex Tweed Heads South)	98-102 Pacific (100 Minjungbal Drive) HIGHWAY	Service Station	Regulation under CLM Act not required	-28.20488521	153.5448675
TWEED HEADS SOUTH	Coles Express Service Station	Corner Minjungbal Dr and Heffron STREET	Service Station	Under assessment	-28.19459987	153.5419978
TWEED HEADS WEST	Caltex Service Station	96 to 98 Kennedy DRIVE	Service Station	Regulation being finalised	-28.1871486	153.5229866
ULAN	Ulan Coal Mine	3600 Ulan ROAD	Other Industry	Under assessment	-32.25620603	149.7558075
ULLADULLA	Coles Express Ulladulla	153 Princes HIGHWAY	Service Station	Under assessment	-35.36288274	150.47272
ULLADULLA	Woolworths Petrol Station	155-157 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36316263	150.4725668

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ULLADULLA	Caltex Service Station	Princes Hwy Cnr Deering STREET	Service Station	Under assessment	-35.36258645	150.4727798
ULTIMO	Shell Coles Express Service Station	387-429 Wattle STREET	Service Station	Under assessment	-33.88138825	151.1966791
UNANDERRA	BlueScope Stainless Steel	13 Marley PLACE	Metal Industry	Contamination currently regulated under CLM Act	-34.44959798	150.8571632
UNANDERRA	Endeavour Energy Springhill Field Service Centre	195 Five Island ROAD	Other Industry	Regulation under CLM Act not required	-34.45837706	150.8598825
UNANDERRA	Unanderra Weekend Detention Centre	34-40 Lady Penryhn DRIVE	Landfill	Under assessment	-34.4620226	150.8473821
UNANDERRA	Former Prime Service Station and adjoining lands	41-49 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-34.45056105	150.8490833
UNANDERRA	Caltex Service Station	86-98 Princes HIGHWAY	Service Station	Under assessment	-34.45414951	150.845165
UNANDERRA	Veolia Environmental Services	9 Waynote PLACE	Other Industry	Regulation under CLM Act not required	-34.46042393	150.863232
URALLA	Caltex Service Station	103 Bridge STREET	Service Station	Under assessment	-30.64524911	151.4934484
URALLA	Phoenix Foundry	44 Duke STREET	Metal Industry	Regulation under CLM Act not required	-30.65093272	151.5004479
URUNGA	Former Antimony Process plant	Hillside DRIVE	Chemical Industry	Contamination currently regulated under CLM Act	-30.50422942	153.0132011
VALENTINE	BP Express Service Station	855 Macquarie DRIVE	Service Station	Regulation under CLM Act not required	-33.00801109	151.6425806
VALENTINE	Valentine Public School	Tallawalla ROAD	Unclassified	Regulation under CLM Act not required	-33.0091613	151.6423231
VILLAWOOD	Former Toll Site	110A Christina ROAD	Other Industry	Under assessment	-33.87919117	150.9812193
VILLAWOOD	Former Orica Crop Care	2 Christina ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.880329	150.9896329
VILLAWOOD	Former Defence Site	29 Biloela STREET	Landfill	Regulation under CLM Act not required	-33.88782978	150.9886275
VILLAWOOD	Former Siemens/Westinghouse	49 Miowera ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.87641909	150.9836746
VILLAWOOD	Former Electrical Component Manufacturer	66 Christina ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.88018315	150.9838773
VILLAWOOD	PPG Industries	9 Birmingham AVENUE	Chemical Industry	Under assessment	-33.87800757	150.9887929
VINEYARD	Shell Coles Express Service Station	731 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65780463	150.8753245
WAGGA WAGGA	Caltex Service Station	(Uranquinty Rd) 6876 Olympic HIGHWAY	Service Station	Under assessment	-35.15319793	147.3085469
WAGGA WAGGA	Caltex (former Mobil) Service Station	106 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11910909	147.3682364
WAGGA WAGGA	Former Shell Depot	11-15 Lake Albert ROAD	Other Petroleum	Under assessment	-35.12273113	147.3786005
WAGGA WAGGA	Caltex Service Station	170 Fitzmaurice STREET	Service Station	Regulation under CLM Act not required	-35.10289587	147.3679002
WAGGA WAGGA	BP Wagga Wagga	180 Edward STREET	Service Station	Under assessment	-35.11850802	147.3639619
WAGGA WAGGA	Former Dry Cleaning Facility	183 Fitzmaurice STREET	Other Industry	Under assessment	-35.102094	147.368398
WAGGA WAGGA	Former Iron Foundry	212-230 Hammond STREET	Metal Industry	Regulation under CLM Act not required	-35.12605478	147.4045461
WAGGA WAGGA	Former BP Service Station	31 Bourke STREET	Service Station	Under assessment	-35.12626628	147.3547199
WAGGA WAGGA	Former Caltex Service Station	343 Hammond AVENUE	Service Station	Regulation under CLM Act not required	-35.12420793	147.4157959

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WAGGA WAGGA	Coles Express Wagga Wagga	357-359 Edward STREET	Service Station	Under assessment	-35.11606625	147.3509339
WAGGA WAGGA	Former Gasworks	54 Chaston STREET	Gasworks	Contamination currently regulated under CLM Act	-35.12262069	147.3482778
WAGGA WAGGA	Former Caltex Depot	60 Lake Albert DRIVE	Service Station	Regulation under CLM Act not required	-35.12316794	147.37724
WAGGA WAGGA	Caltex-branded (former Mobil) Service Station	7 Lake Albert ROAD	Service Station	Under assessment	-35.12239591	147.3769936
WAGGA WAGGA	Former Gasworks	Cnr Tarcutta Street and Cross STREET	Gasworks	Contamination currently regulated under CLM Act	-35.10871183	147.3737933
WAGGA WAGGA	Ashmont Autoport	Cnr Tobruk Street and Bardia STREET	Service Station	Regulation under CLM Act not required	-35.12517373	147.329919
WAGGA WAGGA	Caltex Service Station	Docker St Cnr Edward STREET	Service Station	Under assessment	-35.11737947	147.3558145
WAGGA WAGGA	Former Wiradjuri landfill	Narrung STREET	Landfill	Under assessment	-35.09628532	147.3619535
WAHROONGA	7-Eleven Service Station	1579 Pacific HIGHWAY	Service Station	Under assessment	-33.71974617	151.1168106
WAHROONGA	Coles Express Wahroonga	1601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71945571	151.1163002
WAITARA	Caltex Service Station	59-61 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71064349	151.1024644
WALGETT	Former Shell Depot	Castlereagh HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.00861179	148.1239938
WALLERAWANG	Wallerawang Power Station	1 Main STREET	Other Petroleum	Under assessment	-33.40339296	150.0855101
WALLERAWANG	Lidsdale Coal Loading Facility	Main STREET	Other Industry	Under assessment	-33.39996523	150.0737717
WALLSEND	Coles Express Wallsend East	15 Thomas STREET	Service Station	Regulation under CLM Act not required	-32.90719444	151.6693426
WALLSEND	Caltex Maryland Service Station Wallsend	41 Minmi ROAD	Service Station	Regulation under CLM Act not required	-32.88967866	151.6619253
WALLSEND	OneSteel Recycling	64-80 Sandgate ROAD	Metal Industry	Regulation under CLM Act not required	-32.89425477	151.6799648
WALLSEND	Ausgrid Wallsend Depot	Abbott STREET	Other Industry	Regulation under CLM Act not required	-32.90162796	151.6857267
WAMBERAL	Caltex Service Station	654 The Entrance ROAD	Service Station	Under assessment	-33.42338668	151.4375685
WANGI WANGI	Myuna Colliery	Wangi Point ROAD	Other Industry	Under assessment	-33.06139532	151.5697186
WARATAH	Waratah Area Health	Turton ROAD	Unclassified	Regulation under CLM Act not required	-32.90961233	151.7260867
WARILLA	Woolworths Petrol Warilla	43 -57 Shellharbour ROAD	Service Station	Regulation under CLM Act not required	-34.5470966	150.863748
WARKWORTH	United Collieries	134 Jerry Plain ROAD	Other Industry	Under assessment	-32.5654356	150.9916698
WARKWORTH	Emulsion Plant, Dyno Nobel Asia Pacific Pty Ltd	186 Long Point ROAD	Chemical Industry	Under assessment	-32.5781708	151.0834387
WARNERS BAY	7-Eleven (former Mobil) Service Station	393 Hillsborough ROAD	Service Station	Regulation under CLM Act not required	-32.9659363	151.6543264
WARNERS BAY	Historically Filled Land	41-43 Charles STREET	Unclassified	Regulation under CLM Act not required	-32.97340461	151.6464383
WARNERS BAY	Caltex Service Station	55 King STREET	Service Station	Under assessment	-32.97418806	151.6476184
WARNERVALE	Former Timber Treatment Plant	Aldenham and Railway ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.24732018	151.4469037
WARRAGAMBA	Warragamba Dam Viewing Platform	Eighteenth STREET	Unclassified	Under assessment	-33.88546354	150.6024501
WARRAWONG	Caltex Service Station	75-77 King STREET	Service Station	Regulation under CLM Act not required	-34.49037817	150.888802

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WARREN	Caltex Warren Service Station	1 Coonamble ROAD	Service Station	Under assessment	-31.69508383	147.8405578
WARREN	Former Mobil Warren Depot	16 Dubbo STREET	Other Petroleum	Contamination currently regulated under CLM Act	-31.6943058	147.8314606
WARREN	Former Shell Depot	8 Dubbo STREET	Other Petroleum	Regulation under CLM Act not required	-31.69379262	147.8308088
WATERLOO	Diversity Waterloo	1-13 Archibald AVENUE	Other Industry	Under assessment	-33.90204305	151.2097328
WATERLOO	Proposed Construction Site	2 John STREET	Other Industry	Regulation under CLM Act not required	-33.89989686	151.2010324
WATERLOO	22-24 Archibald Avenue	22-24 Archibald AVENUE	Other Petroleum	Under assessment	-33.90263766	151.2132105
WATERLOO	Waverley Woollahra Process Plant	355 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9063092	151.2042672
WATERLOO	Shell Coles Express Service Station	867-877 South Dowling STREET	Service Station	Regulation under CLM Act not required	-33.90179774	151.2143789
WATERLOO	Lawrence Dry Cleaners	887-893 Bourke STREET	Unclassified	Contamination currently regulated under CLM Act	-33.89897433	151.2101436
WAUCHOPE	Expressway Spares UST	3 Sancrox ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44421922	152.8218723
WAUCHOPE	Former Shell Depot	56-64 High STREET	Other Petroleum	Regulation under CLM Act not required	-31.45804845	152.7314151
WAUCHOPE	Wauchope Service Station	57 High STREET	Service Station	Regulation under CLM Act not required	-31.45737022	152.7305018
WAUCHOPE	Shell Coles Express Service Station	64 High STREET	Service Station	Under assessment	-31.45764495	152.7315975
WAUCHOPE	Former Timber Treatment Site	Blackbutt DRIVE	Other Industry	Regulation under CLM Act not required	-31.46575645	152.7228555
WAVERTON	Berry's Bay Woodley's Marina	1 Balls Head DRIVE	Other Industry	Contamination formerly regulated under the POEO Act	-33.84441851	151.1947433
WAVERTON	Oyster Cove AGL	2 King STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.83637995	151.193541
WAVERTON	SRA Land	95 Bay ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-33.83716728	151.1969497
WELLINGTON	Former Caltex Service Station	124-128 Lee STREET	Service Station	Regulation under CLM Act not required	-32.55082729	148.9411537
WELLINGTON	BP Wellington Service Station	35A Maxwell STREET	Service Station	Under assessment	-32.55835121	148.9447284
WELLINGTON	Woolworths Petrol Wellington	79 Lee STREET	Service Station	Under assessment	-32.54874227	148.9408531
WENTWORTH	Caltex - Wentworth	110 Adams STREET	Service Station	Regulation under CLM Act not required	-34.1024927	141.9160539
WENTWORTH FALLS	Bodington Hospital	Bodington DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-33.73201608	150.3874102
WENTWORTH POINT	TNT Express	23 Bennelong Parkway PARK	Other Petroleum	Under assessment	-33.83115118	151.0726636
WENTWORTH POINT	RMS Eastern Precinct	3-7 Burroway ROAD	Other Petroleum	Regulation under CLM Act not required	-33.8233882	151.0815668
WENTWORTHVILLE	Former Workshop	2 Rawson Rd and 8 Barfil CRESCENT	Unclassified	Regulation under CLM Act not required	-33.81568808	150.9671853
WERRINGTON	Caltex Service Station	Cnr Dunheved Rd and Henry Lawson DRIVE	Service Station	Under assessment	-33.74577725	150.7409877
WERRINGTON	Claremont Meadows Former landfill	Gipps STREET	Landfill	Regulation under CLM Act not required	-33.77341076	150.7557628
WERRINGTON COUNTY	7-Eleven Werrington	Lot 122 Dunheved ROAD	Service Station	Regulation under CLM Act not required	-33.74699408	150.7428609

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
WEST BALLINA	Caltex Big Prawn Service Station	Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-28.86374913	153.5321482
WEST GOSFORD	Caltex Service Station	283 Manns ROAD	Service Station	Under assessment	-33.41659727	151.325219
WEST GOSFORD	Caltex Service Station	30a Pacific HIGHWAY	Service Station	Under assessment	-33.42778813	151.3190581
WEST GOSFORD	Caltex Service Station	69-71 Pacific HIGHWAY	Service Station	Under assessment	-33.42729985	151.3214621
WEST NOWRA	Endeavour Energy Nowra Field Service Centre	20 Depot ROAD	Other Industry	Regulation under CLM Act not required	-34.88993085	150.5878854
WEST PENNANT HILLS	7-Eleven (former Mobil) Service Station	552 Pennant Hills ROAD	Service Station	Under assessment	-33.74686545	151.0508067
WEST PYMBLE	West Pymble Dry Cleaners	6 Philip MALL	Other Industry	Under assessment	-33.76109009	151.1284329
WEST RYDE	JHM Property Development	2A Mellor Street STREET	Metal Industry	Under assessment	-33.81207534	151.094598
WEST RYDE	Pfizer Australia Pty Ltd	38-42 Wharf ROAD	Chemical Industry	Under assessment	-33.81021085	151.0693631
WEST RYDE	Reckitt Benckiser	44 Wharf ROAD	Chemical Industry	Under assessment	-33.81172205	151.0692752
WEST RYDE	7-Eleven (former Mobil) Service Station	917 Victoria ROAD	Service Station	Under assessment	-33.80921103	151.0932917
WEST TAMWORTH	Woolworths Petrol	119 Bridge STREET	Service Station	Regulation under CLM Act not required	-31.09358262	150.9167693
WEST WOLLONGONG	Woolworths Service Station	425 Crown STREET	Service Station	Contamination currently regulated under CLM Act	-34.42637378	150.8799288
WEST WYALONG	Caltex Depot	(Wyalong By-pass Rd) Lot 1-3 Showground ROAD	Service Station	Regulation under CLM Act not required	-33.92556	147.1981659
WEST WYALONG	Former Mobil Depot	104 Compton ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93449194	147.2147948
WEST WYALONG	Lowes Petroleum (Former BP) Depot West Wyalong	Compton (formerly known as Town Bypass/Railway Road) ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93440247	147.2154596
WESTON	Illegal Dumping Site	Corner Kline Street & First STREET	Unclassified	Regulation under CLM Act not required	-32.81367986	151.4551507
WETHERILL PARK	Former Fuel Storage Depot	200-212 Cowpasture ROAD	Other Petroleum	Regulation under CLM Act not required	-33.84568871	150.8764012
WETHERILL PARK	Sims Wetherill Park	35-37 Frank STREET	Metal Industry	Regulation under CLM Act not required	-33.84056122	150.9086265
WETHERILL PARK	BOC Sydney Operations Centre	428-440 Victoria STREET	Other Industry	Regulation under CLM Act not required	-33.84400237	150.8967556
WETHERILL PARK	Shell Coles Express Service Station	565 Polding STREET	Service Station	Regulation under CLM Act not required	-33.8569731	150.8992804
WETHERILL PARK	Nationwide Oil Pty Ltd/transpacific Industrial Services	6 Davis ROAD	Other Industry	Under assessment	-33.83770038	150.9045197
WETHERILL PARK	Camide Former Landfill	Newton ROAD	Landfill	Regulation under CLM Act not required	-33.83898879	150.8963813
WICKHAM	Former Warehouse	10 Dangar STREET	Unclassified	Regulation under CLM Act not required	-32.92383206	151.759761
WICKHAM	Caltex Terminal	156 Hannell STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.91520778	151.7563638
WICKHAM	Fuchs Lubricants (Australasia) Pty Ltd Wickham	2 Holland STREET	Other Industry	Under assessment	-32.9214709	151.7556928
WICKHAM	Former Wool Store Building	33 Annie STREET	Other Petroleum	Under assessment	-32.91585059	151.755215
WICKHAM	Railcorp Wickham	50 Railway STREET	Other Industry	Under assessment	-32.9210433	151.7544687

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
WICKHAM	Former Factory	57 Annie STREET	Other Industry	Regulation under CLM Act not required	-32.91524827	151.7539893
WILBERFORCE	Former Drum Reconditioners	12-14 Box AVENUE	Other Industry	Contamination formerly regulated under the CLM Act	-33.5453884	150.8587934
WILBERFORCE	Former Solvent Recycling Site	13 Box AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.54557427	150.8577006
WILEY PARK	Sydney Water Property	1B Hillcrest STREET	Other Industry	Under assessment	-33.92391634	151.0676256
WILLIAMTOWN	Hunter Land	38 Cabbage Tree ROAD	Other Industry	Under assessment	-32.80750069	151.8310107
WILLOUGHBY	Caltex Service Station	157 Penhur STREET	Service Station	Regulation under CLM Act not required	-33.79793513	151.1981926
WILLOUGHBY	Shell Coles Express Service Station	616-626 Willoughby ROAD	Service Station	Regulation under CLM Act not required	-33.80593769	151.1988559
WILLOUGHBY EAST	Willoughby Bus Depot	Corner Ann Street and Stan STREET	Other Industry	Regulation under CLM Act not required	-33.7982569	151.2038993
WILTON	Condell Park Homestead	(Part Lot 17 DP 270536) Condell Park ROAD	Unclassified	Regulation under CLM Act not required	-34.21910141	150.6837962
WINDANG	Caltex Service Station	244-248 Windang ROAD	Service Station	Under assessment	-34.5274434	150.8691161
WINDSOR	Former Caltex Service Station	46-52 Macquarie STREET	Service Station	Regulation under CLM Act not required	-33.60783315	150.8213428
WINDSOR	Former Caltex Windsor Depot and Service Station	48-50 Mileham STREET	Service Station	Regulation under CLM Act not required	-33.61538627	150.8157517
WINDSOR	Woolworths (former Caltex) Service Station	Cnr Macquarie Street & Baker STREET	Service Station	Regulation under CLM Act not required	-33.60569346	150.8232803
WINGHAM	Caltex Service Station	52 Wingham ROAD	Service Station	Under assessment	-31.86236594	152.3805752
WINGHAM	Bogas Service Station	Cnr Primrose Street and Isabella STREET	Service Station	Under assessment	-31.86833656	152.3716346
WINMALEE	Prime (Caltex supplied) (former Mobil) Winmalee Service Station	281 Hawkesbury ROAD	Service Station	Under assessment	-33.68223276	150.5997203
WIRLINGA	Former Liquid Waste Disposal Facility	704 Riverina ROAD	Unclassified	Regulation under CLM Act not required	-36.07103958	147.0193522
WOLLI CREEK	Former Ausgrid Substation 10061	13 Gertrude STREET	Other Industry	Regulation under CLM Act not required	-33.93364031	151.1543818
WOLLONGONG	Former Wollongong Gasworks	120 and 122 Smith STREET	Gasworks	Under assessment	-34.42030173	150.8906745
WOLLONGONG	Redevelopment site	33 - 39 Beatson STREET	Other Petroleum	Regulation under CLM Act not required	-34.43196083	150.8976661
WOLLONGONG	Greenhouse Park	Springhill ROAD	Landfill	Under assessment	-34.44119949	150.8931764
WOLLONGONG	Wollongong Harbour Central Spur	via Endeavour DRIVE	Other Petroleum	Under assessment	-34.42066879	150.906821
WOODBURN	Caltex Service Station	129 River STREET	Service Station	Under assessment	-29.07206887	153.3409769
WOODBURN	Crown Reserve 88037 Woodburn	Pacific HIGHWAY	Landfill	Under assessment	-29.06580577	153.3541886
WOOLGOOLGA	Caltex Woolgoolga Service Station	16-18 Bosworth ROAD	Service Station	Under assessment	-30.12569561	153.1946006
WOOLGOOLGA	United Petroleum	56 Clarence STREET	Service Station	Under assessment	-30.11045544	153.1904609
WOOLLAHRA	Caltex Woollahra Service Station	116 Old South Head ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.88959697	151.2553736
WOOLLAHRA	Former Service Station	20 Wallis STREET	Service Station	Regulation under CLM Act not required	-33.8901965	151.2372752

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
WOOLLAHRA	Proposed Jewish Care Centre	7 -21 Saber STREET	Unclassified	Regulation under CLM Act not required	-33.8904055	151.2480062
WOOLLOOMOOLOO	Former BP Service Station	2 Dowley STREET	Service Station	Contamination being managed via the planning process (EP&A Act)	-33.86940191	151.2218741
WOOLOMIN	Woolomin Gold Rush Store	65 - 67 Nundle ROAD		Regulation being finalised	-31.30415134	151.149729
WOOLOOWARE	Caltex Service Station	100 Woolooware ROAD	Service Station	Under assessment	-34.05274635	151.1408413
WOOLOOWARE	Oyster Farm	Captain Cook DRIVE	Other Industry	Under assessment	-34.03807914	151.1476055
WOONGARRAH	Former Warnervale Landfill	236-264 Hakone ROAD	Landfill	Regulation under CLM Act not required	-33.2376313	151.464362
WOOTTON	Former Chemical Spill Site	11859 Pacific HIGHWAY	Chemical Industry	Regulation under CLM Act not required	-32.28168548	152.3117819
WOY WOY	Mobil Former Woy Woy Service Station and adjacent land	177-181 Blackwall ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.49254403	151.3270829
WOY WOY	Barry Robertson Holden	231 Blackwall ROAD	Service Station	Regulation under CLM Act not required	-33.49621068	151.3285128
WOY WOY	Bogas Service Station	66 Memorial AVENUE	Service Station	Contamination currently regulated under CLM Act	-33.5069738	151.3315579
WYALONG	Caltex Service Station	50 Neeld (Newell Highway) STREET	Service Station	Under assessment	-33.92665025	147.2446546
WYOMING	Caltex Service Station Wyoming	465 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.40945391	151.3499812
WYONG	Wyong Bayer/Kemcon	16 Lucca ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.26192339	151.4429446
WYONG	IXOM Facility	8 Pavitt CRESCENT	Other Industry	Under assessment	-33.26379	151.448509
WYONG	Caltex Service Station	M1 Pacific (Northbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25641477	151.4024821
WYONG	Caltex Service Station	M1 Pacific (Southbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25330747	151.4053862
YAGOONA	Shell Coles Express Service Station	112 Rookwood ROAD	Service Station	Under assessment	-33.89856213	151.0370458
YAGOONA	Galserv Galvanising Services	117-153 Rookwood ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.89493085	151.0388013
YAGOONA	BP Potts Hill Service Station and Truckstop	155-159 Rookwood ROAD	Service Station	Under assessment	-33.89330525	151.0390969
YAGOONA	7-Eleven (former Mobil) Service Station	519 Hume HIGHWAY	Service Station	Under assessment	-33.90760623	151.0207783
YAGOONA	Sydney Water Potts Hill Complex	91 Brunker ROAD	Other Industry	Under assessment	-33.89887589	151.0289165
YALLAH	Tallawarra Power Station site	Princes HIGHWAY	Unclassified	Contamination formerly regulated under the CLM Act	-34.52412143	150.8062159
YALLAH	Tallawarra Lands	Yallah Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.52848931	150.8008925
YAMBA	Caltex Service Station	22 Treelands DRIVE	Service Station	Regulation under CLM Act not required	-29.42701701	153.3279204
YANCO	Former Service Station	14 Main AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-34.60356494	146.4105016
YASS	Caltex Service Station	1715 Yass Valley WAY	Service Station	Regulation under CLM Act not required	-34.80708856	148.8824228
YASS	Caltex Service Station	228 Comur STREET	Service Station	Under assessment	-34.84440036	148.9140179

Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
YASS	Former Mobil Depot Yass	54-58 Laidlaw STREET	Service Station	Contamination currently regulated under CLM Act	-34.83227507	148.9069678
YASS	Former Gasworks	Dutton STREET	Gasworks	Contamination currently regulated under CLM Act	-34.83982614	148.9060029
YENNORA	Former Caltex Service Station	137-141 Fairfield STREET	Service Station	Regulation under CLM Act not required	-33.86824768	150.9706137
YENNORA	Spicer Axle Australia Manufacturing Facility	205-231 Fairfield ROAD	Other Industry	Regulation under CLM Act not required	-33.85655114	150.9579167
YENNORA	Former Metal Plant	44 Larra STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-33.86340576	150.9764349
YENNORA	TetraPak Site	6 Foray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.8557183	150.9561605
YETHOLME	Yetholme CCA Timber Treatment Plant	351 Eusdale ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.45386256	149.8537787
YOUNG	Former Mobil Depot and Service Station Young	149 Lovell STREET	Service Station	Under assessment	-34.31024587	148.290424
YOUNG	Former Shell Depot	166 Nasmyth STREET	Other Petroleum	Regulation under CLM Act not required	-34.31025192	148.2931008
YOUNG	Mobil Depot	186 Nasmyth STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.30954389	148.2908476
YOUNG	Former battery recycler	45 Nasmyth STREET	Metal Industry	Contamination currently regulated under CLM Act	-34.31201571	148.306772
YOUNG	Adjacent to former battery recycler	47 Nasmyth STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-34.31176273	148.3064765
YOUNG	Former Caltex Depot	95 Lovell STREET	Service Station	Regulation under CLM Act not required	-34.31127119	148.2955092
ZETLAND	Energy Australia/ Ausgrid Zetland Depot	122 - 138 Joynton AVENUE	Other Industry	Regulation under CLM Act not required	-33.90883116	151.2101184
ZETLAND	Zetland, Goodrich Control Systems site	84 - 92 Epsom ROAD	Other Industry	Under assessment	-33.91025707	151.2078048

ATTACHMENT 7 – NSW OEH HERITAGE SEARCH

Search for NSW heritage

Your search did not return any matching results. Please refine your search and try again.

The State Heritage Inventory is a list of heritage items in New South Wales including Aboriginal Places, State Heritage Register, Interim Heritage Orders, State Agency Heritage Registers and Local Environmental Plans.

The Heritage Division is directly responsible for maintaining **Aboriginal Places** and the **State Heritage Register**. A new **combined map search** is now available. For further information about Aboriginal Places and Sites refer to **AHIMS Web Services**

Whilst the Heritage Division seeks to keep the Inventory up to date, it is reliant on State agencies and local councils to provide their data. Always check with the relevant State agency or local council for the most up-to-date information.

Visit **State Heritage Inventory help** if you are unfamiliar with this search facility.

Basic search criteria

Item name/database ID:	
Street name:	Tennyson Road
Suburb/town:	Gladesville
Local Government Area:	Ryde
Local Aboriginal Land Council (LALC):	Please Choose... (For Aboriginal Place and State Heritage Register only)
Heritage listings:	Please Choose...
SHR number:	

Additional search criteria

NOTE: For items listed by local councils, there may not be information in the additional search criteria fields.

Owner organisation*:	
Designer/builder:	
Year of construction:	from / to:
Item type:	Please Choose...
Item group:	Please Choose...
Item category:	Please Choose...
Australian historic theme:	Please Choose...
NSW historic theme:	Please Choose...
Significance, description, historical notes:	
Information complete:	☐

Search

Reset

***View owner organisation names for section 170 heritage and conservation registers**

Search Aboriginal Places & State Heritage Register

The combined map search below is for Aboriginal Places and State Heritage Register items only. It does not include Interim Heritage Orders, State Agency Heritage Registers and Local Environmental Plans.

The location of Aboriginal Places and State Heritage Register items are marked on the map as a single approximation point for general identification and research purposes only.

Location information for some Aboriginal Places (e.g. burial grounds and sacred sites) have been generalised because of their cultural sensitivity. Location information for restricted Aboriginal Places is not shown at all. If an activity or development is proposed that may potentially impact on or harm (i.e., damage, deface or destroy) an Aboriginal Place, then proponents must undertake a search for the exact boundaries of Aboriginal Places through **AHIMS Web Services**.

Downloading of State Heritage Register spatial datasets and associated metadata into a Geographical Information System (GIS) software package is available through **Data NSW**

Listing Type: (●) All ( ) Aboriginal Places ( ) State Heritage Register

Local government area: Please Choose...

Item name/Database ID:

SHR number:

Location:

Local Aboriginal Land Council (LALC): Please Choose...

State theme: Please Choose...

Item type: Please Choose...

Item Group: Please Choose...

Item category: Please Choose...

Search Reset

ATTACHMENT 8 – SECTION 149 (2) PLANNING CERTIFICATE

Locked Bag 2069, North Ryde NSW 1670
Facsimile 9952 8070
Telephone 9952 8222

City of Ryde

PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Cert No: PLN2017/1741
Date: Wednesday, 24 May 2017
Your Ref: 14 Tennyson Rd GLADESVILLE

Applicant: Mr Andrew Botfield (SNC Lavalin)
55 Clarence Street
Sydney NSW 2000

Property Address: 14 Tennyson Rd GLADESVILLE
Description: Lot 1 DP 549570

Property Reference: 527565
Land Reference: 30511

INFORMATION PROVIDED PURSUANT TO SECTION 149(2) OF THE ACT.

1. NAMES OF RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS, DRAFT INSTRUMENTS AND DEVELOPMENT CONTROL PLANS THAT APPLY TO THE CARRYING OUT OF DEVELOPMENT ON THE LAND

a) LOCAL ENVIRONMENTAL PLAN AND DEEMED ENVIRONMENTAL PLANNING INSTRUMENTS
Ryde Local Environmental Plan 2014

b) DRAFT LOCAL ENVIRONMENTAL PLANS
Nil

c) DEVELOPMENT CONTROL PLANS
City of Ryde Development Control Plan 2014

d) STATE ENVIRONMENTAL PLANNING POLICIES AND INSTRUMENTS (includes Draft Policies)
The Minister for Planning has notified Council that the following State Environmental Planning Policies and Deemed State Environmental Plans apply to the land and should be specified in this certificate:

State Environmental Planning Policies

State Environmental Planning Policy No 19 - Bushland in Urban Areas.
State Environmental Planning Policy No 21 - Caravan Parks.
State Environmental Planning Policy No 30 - Intensive Agriculture.
State Environmental Planning Policy No 33 - Hazardous and Offensive Development.
State Environmental Planning Policy No 50 - Canal Estate Development.
State Environmental Planning Policy No 55 - Remediation of Land.
State Environmental Planning Policy No 62 - Sustainable Aquaculture.
State Environmental Planning Policy No 64 - Advertising and Signage.
State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development.
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Major Development) 2005
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Temporary Structures) 2007

Deemed State Environmental Planning Policies
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Draft State Environmental Planning Policies
State Environmental Planning Policy No 66 - Integration of Land Use and Transport 2001
State Environmental Planning Policy (Competition) 2010
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

Note: Specific constraints and zoning of the land may affect the applicability of certain provisions within the Policies listed above.

2. ZONING AND LAND USE UNDER RELEVANT LOCAL ENVIRONMENTAL PLANS

(a) ZONING and ZONING TABLE

Ryde Local Environmental Plan 2014 - Zone IN2 - Light Industrial

1 Objectives of zone

- To provide a wide range of light industrial, warehouse and related land uses.
- To encourage employment opportunities and to support the viability of centres.
- To minimise any adverse effect of industry on other land uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- To support and protect industrial land for industrial uses.

2 Permitted without consent
Home occupations

3 Permitted with consent
Building identification signs; Business identification signs; Depots; Funeral Homes; Garden Centres; Hardware and building supplies; Industrial training facilities; Landscaping material supplies; Light industries; Neighbourhood shops; Places of Public Worship; Pubs; Recreation facilities (indoor); Roads; Warehouse or distribution centres; Wholesale supplies; Any other development not specified in item 2 or 4

4 Prohibited
Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations (sex services); Industries; Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Restricted premises; Rural industries; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water supply systems.

(b) DEVELOPMENT STANDARDS FOR THE ERECTION OF A DWELLING HOUSE
No development standards under the Local Environmental Plan apply to the land that fix minimum land dimensions for the erection of a dwelling house on the land.

(c) CRITICAL HABITAT
No. The land does not include or comprise critical habitat under the Local Environmental Plan.

(d) CONSERVATION AREA (however described)
No. The land has not been identified as being within a heritage conservation area under the Local Environmental Plan.

(e) ITEMS OF ENVIRONMENTAL HERITAGE (however described)
No. An item of environmental heritage is not situated on the land under the Local Environmental Plan.

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

This land **is not** subject to:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (the 2006 SEPP); or
(b) a Precinct Plan (within the meaning of the 2006 SEPP); or
(c) a proposed Precinct Plan (within the meaning of the 2006 SEPP) that is or has been the subject of community consultation or on public exhibition.

OTHER PRESCRIBED INFORMATION

3. COMPLYING DEVELOPMENT
Whether or not the land is land on which complying development may be carried out under each of the codes for complying development in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.* If complying development may not be carried out on that land because of one of the requirements under that Policy, the reason why it may not be carried out.

General Housing Code and Rural Housing Code
Complying Development under the General Housing Code and Rural Housing Code may be carried out on this land.

Housing Alterations Code and General Development Code
Complying Development under the Housing Alterations Code and General Development Code may be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code
Complying development under the Commercial and Industrial (New Buildings and Additions) Code may be carried out on the land.

Subdivisions Code, Commercial and Industrial Alterations Code, Demolition Code and Fire Safety Code
Complying development under the Subdivisions Code, Commercial and Industrial Alterations Code, Demolition Code, and Fire Safety Code may be carried out on the land.

Note : *It is necessary for the zoning, size of land and other criteria such as risk level of flood prone land and bushfire prone land to be in accordance with that specified in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 for certain types of development to occur under the Policy.*

4. COASTAL PROTECTION
Whether or not the land is affected by the operation of section 38 or 39 of the *Coastal Protection Act 1979*, but only to the extent that the council has been so notified by the Department of Services, Technology and Administration.

The land is not affected by the operation of section 38 or 39 of the Coastal Protection Act 1979.

4A Information relating to a coastal council
(1) Whether an order has been made under Part 4D of the *Coastal Protection Act 1979* in relation to temporary coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with.

NO

(2)(a) Whether the council has been notified under section 55X of the *Coastal Protection Act 1979* that temporary coastal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land), and
(b) If works have been so placed—whether the council is satisfied that the works have been removed and the land restored in accordance with that Act.

NO notification received

4B Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works
Whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

NO

Note. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of Section 553B of the *Local Government Act 1993.*

5. MINE SUBSIDENCE
Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961*.

No. The land has not been proclaimed to be a mine subsidence district.

6. ROAD WIDENING AND ROAD REALIGNMENT
Whether or not the land is affected by any road widening or road realignment.

The land is not affected by any road widening or road realignment under:
(a) Division 2 of Part 3 of the Roads Act 1993;
(b) any Environmental Planning Instrument.
(c) any resolution of Council.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS
Whether or not the land is affected by a policy adopted by the council, or adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by council, that restricts the development of the land because of the likelihood of:

(i) landslip — NO.
(ii) bush fire — NO.
(iii) tidal inundation — NO.
(iv) subsidence — NO.
(v) acid sulphate soil — YES
(vi) any other risk (other than flooding) — NO.

Note: *The fact that land has not been identified as being affected by a policy to restrict development because of the risks referred to does not mean that the risk is non-existent.*

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors) living is subject to flood related development controls - YES

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls - YES

(3) Words and expressions in this clause have the same meanings as in the instrument set out in the schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

8. LAND RESERVED FOR ACQUISITION

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in Clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

No Environmental Planning Instrument applying to the land provides for the acquisition of the land by a public authority pursuant to Section 27 of the Act.

9. CONTRIBUTIONS PLANS

The name of each contributions plan applying to the land:

City of Ryde Section 94 Development Contributions Plan 2007 – Interim Update (2014)

9A BIODIVERSITY CERTIFIED LAND

This land is not biodiversity certified land within the meaning of Part 7AA of the Threatened Species Conservation Act 1995.

10 BIOBANKING AGREEMENTS

The land is not the subject of a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The land described in this certificate is not bush fire prone land (as defined in the Act).

12. PROPERTY VEGETATION PLANS

The land is not subject to a property vegetation plan under the Native Vegetation Act 2003.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

There has not been an order made under the Trees (Disputes between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

14. DIRECTIONS UNDER PART 3A

There is no direction in force under section 75P (2)(c1) of the Environmental Planning and Assessment Act 1979.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Part A: There has been no Site Compatibility Certificate issued (of which Council is aware) under Clause 25 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

Part B: There has not been any development consent granted since 11 October 2007 for development to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

There is no valid Site Compatibility Certificate (Infrastructure) of which the Council is aware in respect of proposed development on the land.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

There is no current Site Compatibility Certificate (Affordable Rental Housing) that Council is aware in respect of proposed development on the land.

There are no terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 that have been imposed as a condition of consent to a development application in respect of the land.

18. PAPER SUBDIVISION INFORMATION

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot. NIL

(2) The date of any subdivision order that applies to the land. NIL

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

Note: *City of Ryde does not hold any paper subdivision within the meaning of this clause.*

19. SITE VERIFICATION CERTIFICATES

There is no current site verification certificate of which the Council is aware in respect of the land.

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

(a)The land to which this certificate relates IS NOT significantly contaminated land.

(b)The land to which this certificate relates IS NOT subject to a management order.

(c)The land to which this certificate relates IS NOT the subject of an approved voluntary management proposal.

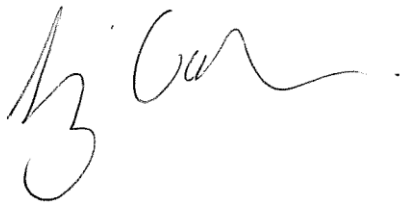
(d)The land to which this certificate relates IS NOT subject to an ongoing maintenance order .

(e)The land to which this certificate relates IS NOT subject to a site audit statement.

Note. *(i) Pursuant to Section 149(5) of the Environmental Planning and Assessment Act 1979, the City of Ryde may provide advice on additional matters affecting the land of which it may be aware. You are advised that information on either heritage, endangered or adequately conserved bushland, draft Development Control Plans, Master Plans or other relevant matters, applies to the land and is available on the s149(5) Certificate for the land*.

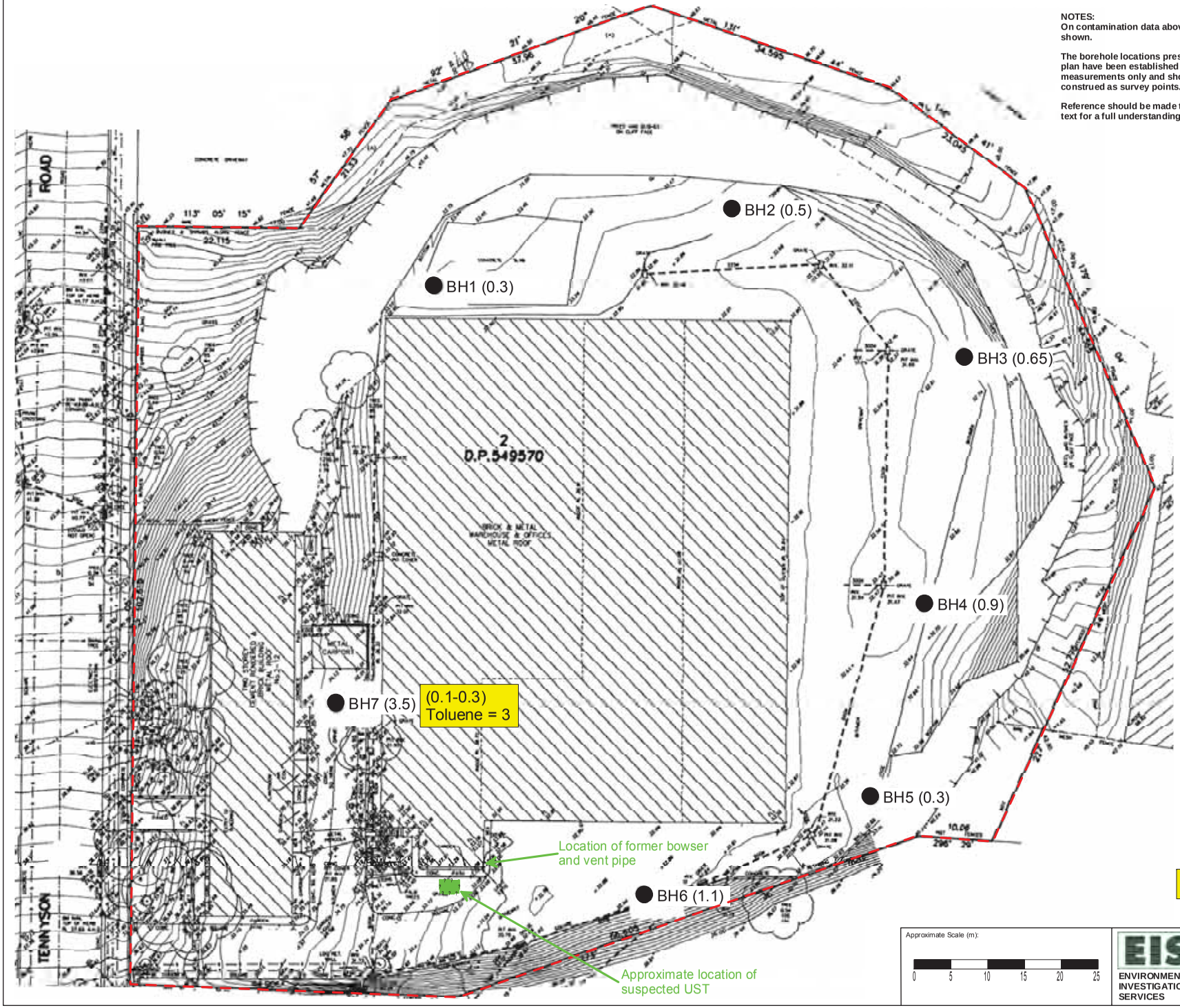
(ii) s149(5) Certificates under the Environmental Planning and Assessment Act 1979, contain all the information under s149(2) and as such, an application and fee for a combined s149 certificate must be applied for.

***Note**: The information in this certificate is current as of the date of the certificate.*



Liz Coad
Acting Director City Planning and Development

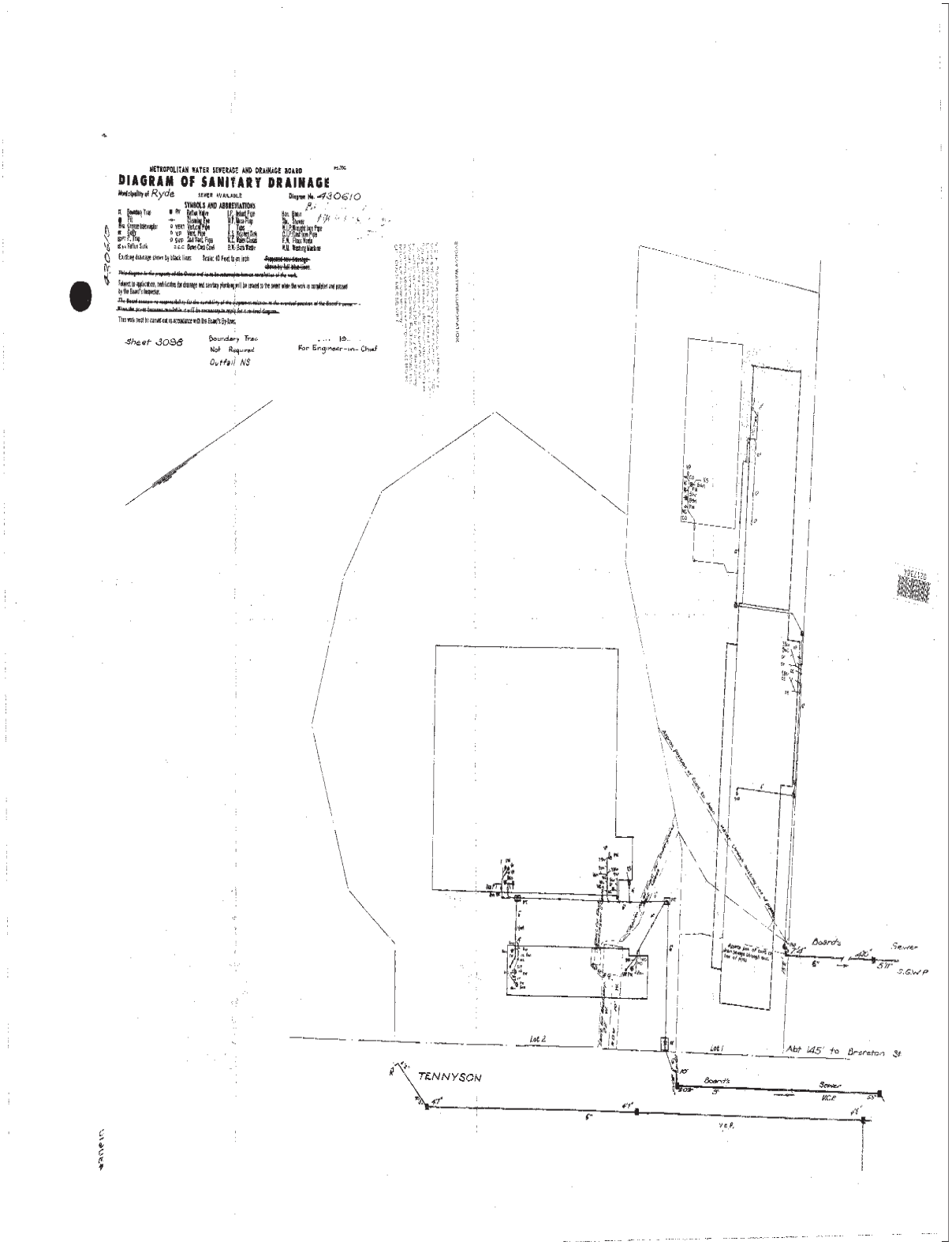
ATTACHMENT 9 – BOREHOLE LOCATION PLAN


NOTES:
On contamination data above the SAC are shown.
The borehole locations presented on this plan have been established from site measurements only and should not be construed as survey points.
Reference should be made to the report text for a full understanding of this plan.
N
Site North
BH1 (0.3)
BH2 (0.5)
BH3 (0.65)
BH4 (0.9)
BH5 (0.3)
BH6 (1.1)
BH7 (3.5)
(0.1-0.3)
Toluene = 3
2
D.P.549570
BRICK & METAL WAREHOUSE & OFFICES METAL ROOF
Location of former bowser and vent pipe
Approximate location of suspected UST
TENNYSON ROAD
LEGEND:
Approximate site boundary
BH1 (0.2) Borehole location, number and depth of fill (m)
Approximate location of suspected UST
(0.1-0.3) Toluene = 3 Sample Depth (m) Contaminant identified and concentration above SAC (mg/kg)
Approximate Scale (m):
0 5 10 15 20 25
EIS
ENVIRONMENTAL INVESTIGATION SERVICES
Project Number: E26029KP
Title: BOREHOLE LOCATION PLAN AND CONTAMINATION DATA
Figure: 2
Address: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

ATTACHMENT 10 – SEWAGE DIAGRAM

Sewer Service Diagram

Application Number: 248166



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

ATTACHMENT 11 – DANGEROUS GOODS SEARCH (EIS 2012 EXCERPT)

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/150338
Your Ref: Brendan Page

15 October 2012

17 OCT 2012

Attention: Brendan Page
Environmental Investigation Services
PO Box 976
North Ryde BC NSW 1670

Dear Mr Page,

RE SITE: 2-12 Tennyson Rd Gladesville NSW

I refer to your site search request received by WorkCover NSW on 28 September 2012 requesting information on licences to keep dangerous goods for the above site.

Enclosed are copies of the documents that WorkCover NSW holds on Dangerous Goods Licences 35/015697 relating to the storage of dangerous goods at the above-mentioned premises, as listed on the Stored Chemical Information Database (SCID).

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Notification Team

Reference

WORKCOVER AUTHORITY

Chemical Safety Unit
Locked Bag 10, P O CLARENCE STREET NSW 2000
Ph. (02) 370 5191 OR (02) 370 5192
Fax (02) 370 6105

Licensee
HOME YARDAGE (NSW) P/L
2-12"TENNYSON RD"
GLADESVILLE 2111

SCIENTIFIC SERVICES BRANCH
10 JUN 1992
DANGEROUS GOODS

25 MAY 1992

Dear Sir/Madam,

RE **APPLICATION FOR RENEWAL** OF LICENCE FOR THE KEEPING OF DANGEROUS GOODS

Our records indicate you hold licence number 35/015697 for keeping dangerous goods at 2-12 TENNYSON RD GLADESVILLE 2111.

Details of depots at site.

Depot No.	Depot type	Goods stored in depot	Quantity kg/litres/no.
1	UNDERGROUND TANK	FLAMMABLE LIQUIDS	10 000

DATA
-7 JUL 1992
ENTERED

This licence is now due for renewal. **TO RENEW YOUR LICENCE.** Please carefully check the details shown in this letter and make any required corrections. Then, **SIGN and DATE** the declaration below and return this letter to the WorkCover Authority, Chemical Safety Unit. **Fees for these licences have been abolished. DO NOT SEND ANY MONIES.**

Declaration: I wish to renew this licence to 15/06/93. I certify that the licence details shown in this letter are correct.

RECEIVED JUN

..........(Signature) ....4/6/92 (Date)

If you do not wish to renew the licence. Please provide the Chemical Safety Unit with a signed statement giving the reason why it is not to be renewed. If you have sold/vacated the site please provide the name and address of the new owner/occupier so we may contact them.

Yours faithfully

Chief Inspector of Dangerous Goods.

Form DG1

Department of Industrial Relations

DANGEROUS GOODS ACT, 1975

LICENCE No. 35—015697 3

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE)* FOR THE KEEPING OF DANGEROUS GOODS

(* delete whichever is not required)

DATA ENTERED 26 SEP 1985

VERIFIED DPS 28 AUG 1985

VERIFIED FEE $15.00 per Depot for new licence, $15.00 for amendment or transfer. 16C

Name of Applicant in full (see Item 1—Explanatory notes—page 4)	~~OPERATOR ONE~~ ~~OPERATOR ONE~~ ~~OF~~ HOME YARDAGE (NSW) PTY. LTD.
Trading name or occupier's name (if any)	
Postal Address	2-12 TENNYSON ROAD, GLADESVILLE Postcode 2111
Address of the premises to be licensed. (Including Street No.)	AS ABOVE Postcode
Nature of premises (See Item 2—Explanatory notes—page 4)	WAREHOUSE
Telephone number of applicant	STD Code 02 Number 816-5777

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (See item 3—Explanatory notes—page 4)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
1	UNDERGROUND TANK	12,000 LITRES	PETROL	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Has site plan been approved by the Dangerous Goods Branch? Yes✓ No — If yes, no plans required. 3236 9/10/85 03A — If no, please attach site plan, or provide sketch plan overleaf.

Have premises previously been licensed? Yes✓ No — If, yes, state name of previous occupier, and licence No. (if known). GOLDEN PRESS P/L. 35-0156973

Name of oil company supplying flammable liquid (if applicable). AMPOL LTD.

HOME YARDAGE (N.S.W.) PTY. LIMITED

Signature of applicant ..... Date 14/8/85

For external explosives magazine(s), please fill in page 3.

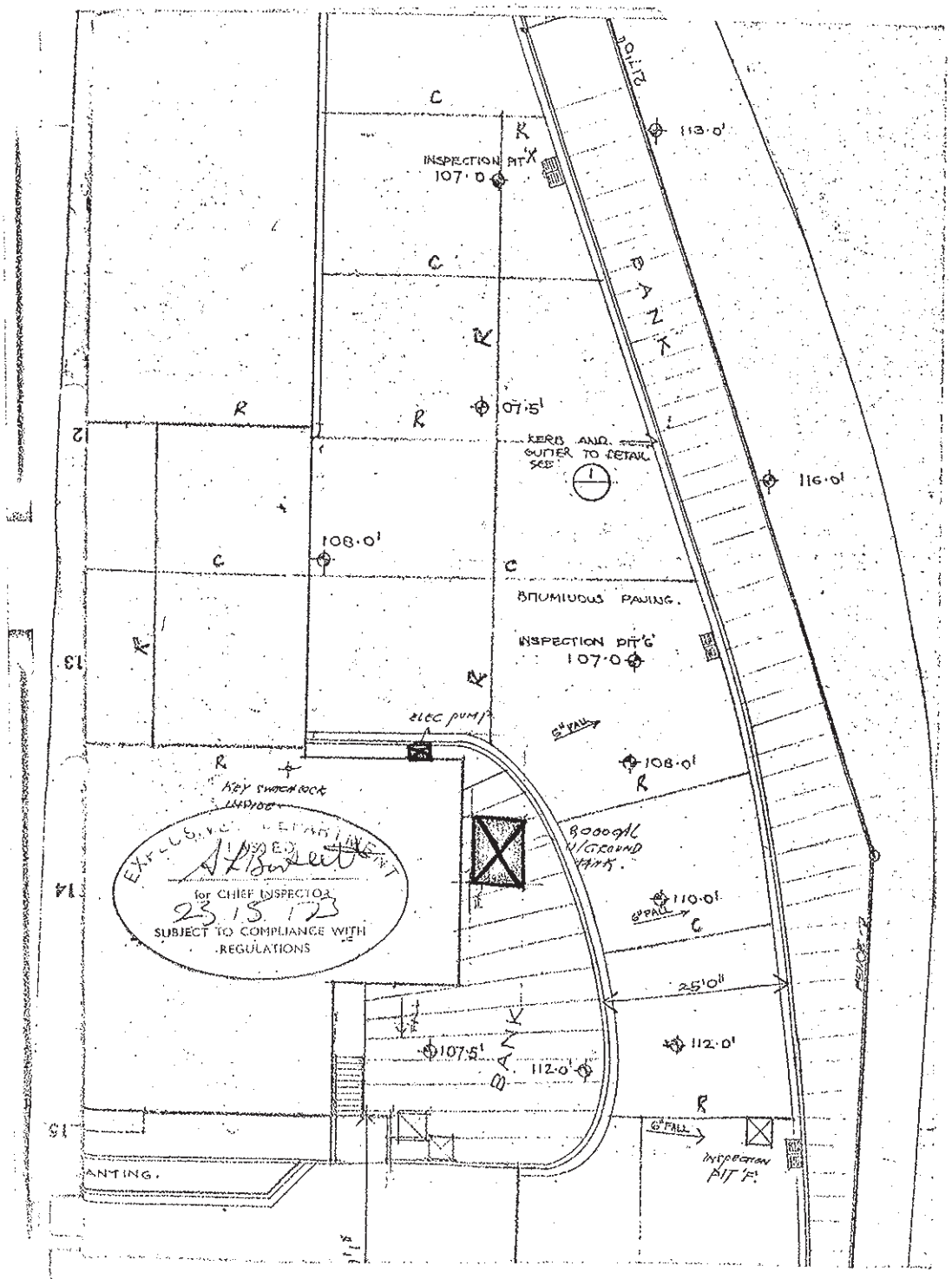
FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, John Richard Chilver being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector ..... Date 9.2.85

GOLDEN PRESS
TENNYSON Road
GLADESVILLE



1. Applications must be forwarded to the Chief Inspector of Inflammable Liquid, Explosives Department, Box R.216, Royal Exchange Sydney. N.S.W. 2000 and must be accompanied by the prescribed fee, as set out hereunder:

Registration of Premises (Fee $4.50 p.a.) – For quantities not exceeding 300 gallons of mineral oil and 100 gallons of mineral spirit, if kept together; or 800 gallons of mineral oil and 100 gallons of mineral spirit, if kept in separate depots; or 500 gallons of mineral spirit, if kept in an underground tank depot; or 800 gallons of mineral oil and 500 gallons of mineral spirit, if mineral spirit is kept in an underground tank depot.

In addition to, or in lieu of the above, similar quantities of Dangerous Goods of Classes 1 and 2 may be kept under the like conditions; reading Dangerous Goods of Class 1 for the words Mineral Spirit and Dangerous Goods of Class 2 for the words Mineral Oil

Store Licence, Div. A (Fee, $9.00 p.a.) – For quantities in excess of those stated above, but not exceeding 4,000 gallons mineral oil and/or mineral spirit, and/or Dangerous Goods of Classes 1, 2 and 9.

Store Licence, Div. B (Fee, See Regulation 7) – For quantities exceeding 4,000 gallons of mineral spirit, and/or dangerous goods of Classes 1 and 2, and/or dangerous goods of Class 3.

For the keeping of Dangerous Goods of Classes 3 and/or 4. ($18.00 p.a.).

Fees for the keeping of inflammable liquid and dangerous goods in excess of the above stated quantities and also for Liquid Petroleum Gas storage are set out in Regulotion 7.

1. Name of occupier including full christian names. — GOLDEN PRESS PTY LTD

2. Trading Name (if any) — AS ABOVE

3. Locality of the premises in which the depot or depots are situated — No. or Name 2-12 Street TENNYSON ROAD. Town GLADESVILLE. N.S.W. Postcode 2111.

4. Postal address — 6

5. Occupation — BOOK DISTRIBUTORS

6. Nature of premises (dwelling, gorage etc.) — WAREHOUSE

7. Particulars of construction of depots and maximum quantities of inflammable liquid and/or Dangerous Goods to be kept at any one time.

PLEASE ATTACH PLAN OF PREMISES

Depot No.	Construction of depots*			Inflammable liquid		Dangerous goods					
	Walls	Roof	Floor	Mineral spirit gallons	Mineral oil gallons	Class 1 gallons	Class 2 gallons	Class 3 lb	Class 4 cu ft	Class 5A water gal	Class 9 gallons
1	Underground tank			2000							
2					C 24 x 100 L			296 S			
3											
4											
5											
6											
7											
8											
9											
10											

PUBLIC REVENUE A/c
$ 9.00.
12/6/73
(Date)
Receipt No. 6296.

* If product is kept in tanks describe depots as underground or aboveground tanks.

FOR AND ON BEHALF OF
GOLDEN PRESS PTY. LIMITED
Signature of applicant .....
.....Secretary

Date of application 12th JUNE, 1973

CERTIFICATE OF INSPECTION

I, George Edward Brooks being an Inspector under the Inflammable Liquid Act, 1915 (as amended), do hereby certify that the premises or store herein referred to and described is suitable with regard to its situation and construction for the safe keeping of inflammable liquid and/or dangerous goods in quantity and nature specified.

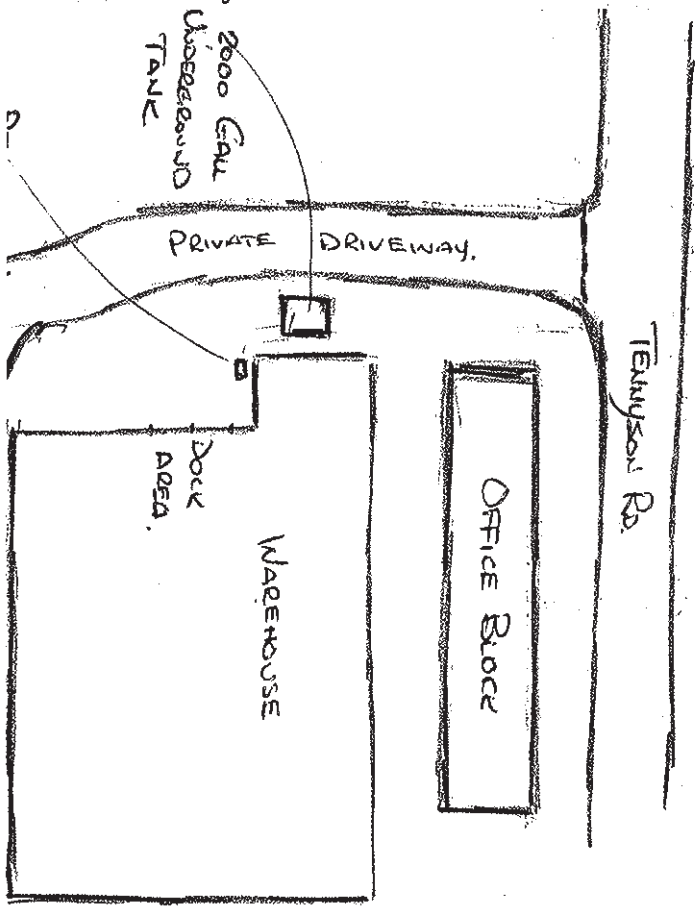
Place Sydney Signature of Inspector G E Brooks

Date 10-6-73

PLEASE TURN OVER

Make Rough Sketches showing:

Ground plans of premises showing position of depot or depots and adjacent buildings, also distances separating depots and buildings.



Sketch of depot or depots showing provision made for ventilation, also inside dimensions (length, width, and depth) of the pit or lower portion, designed to prevent outflow.

EXPLANATORY

Inflammable Liquid –

Mineral Oil - includes kerosene, mineral turpentine and white spirit (for cleaning), and compositions containing same.
Mineral Spirit - includes petrol, benzene, benzolene, benzol and naphtha, and compositions containing some.

Dangerous Goods -

Class 1 - acetal, acetaldehyde, acetone, acrolein, amyl mercaptan, butyl acetate, butyl mercaptan, butyl propionate, crotonaldehyde, dichloro-ethylene, diethylketone, dioxane, diethylamine, dimethyl hydrozine, dipropylamine, divinyl ether, dipropyl ether, ethyl acetate, ethyl acrylate, ethyl chloride, ethyl ether, dichloroethane (ethylene dichloride), ethyl mercaptan, ethyl methacrylate, ethyl methyl ether, ethyl propyl ether, ethyl propionate, methyl propyl ketone, methyl acetate, methyl acrylate, methylal, methyl ethyl ether, methyl ethyl ketone, methyl methacrylate, methyl vinyl ketone, methyl vinyl acetate, piperidine, propanal, propyl acetate, propylamine, propylene oxide, pyridine, tetrahydrofuran, thiophene, triethylamine, valeraldehyde, vinyl acetate, vinyl allyl ether, vinyl butyl ether, vinyl butyrate, vinyl cyanide (acrylonitrile), vinylidene chloride, vinyl ethyl ether, vinyl propyl ether, vinyl propionate, any combination of substances of an inflammable character suitable for use as an industrial solvent and having a true flashing point of less than 73 degrees Fahrenheit, manufactured products, containing organic solvents, having a true flashing point of less than 73 degrees Fahrenheit.

Class 2 - acetic acid, acetyl acetone, acetic anhydride, allyl alcohol, amyl acetate, amyl alcohol, butyl alcohol, butyl methacrylate, chlorobenzene, cyclohexanone, dibutyl ether, dibutyl ketone, dipentene, epichlorohydrin, ethanol (ethyl alcohol), ethyl benzene, ethylene diamine, furfural, mesityl oxide, methyl alcohol, methyl amyl ketone, methyl butyl ketone, pine oil (having a flashing point below 150°F), propyl benzene, propanol, vegetable turpentine, vinyl benzene, (styrene

APPENDIX C6

Site History Documents – NSW EPA Records

Appendix 7 – Geotechnical Assessment

mecone

REPORT

TO
DARCSOL PTY LTD

ON
GEOTECHNICAL INVESTIGATION

FOR
PROPOSED MIXED-USE DEVELOPMENT

AT
2-12 TENNYSON ROAD, GLADESVILLE, NSW

29 October 2012
Ref: 26029SPrpt

JK Geotechnics
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

PO Box 976, North Ryde BC NSW 1670
Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkgeotechnics.com.au
Jeffery & Katauskas Pty Ltd, trading as JK Geotechnics ABN 17 003 550 801

Date: 29 October 2012
Report No: 26029Prpt
Revision No: 0

Report prepared by:

Peter Wright
Senior Associate

Report reviewed by:

Paul Stubbs
Principal

For and on behalf of
JK GEOTECHNICS
PO Box 976
NORTH RYDE BC NSW 1670

TABLE OF CONTENTS

1 INTRODUCTION

This report presents the results of a geotechnical investigation for a proposed mixed use development at 2-12 Tennyson Road, Gladesville, NSW. The investigation was commissioned by Darcsol Pty LTD by return of a signed 'Acceptance of Proposal' form dated 12 September 2012. The investigation was completed in accordance with our proposal P35601Prev1 dated 3 September 2012.

The site is the location of a previous quarry pit, with previous excavations extending to depths of the order of 15m below the surrounding ground levels. While the final development details were not known at the time of reporting, we understand the proposed development will comprise two basement car parking levels with a lower floor level of approximately 30.6-31.2m AHD which will require excavation to depths of about 3m below the floor of the old quarry. There will then be commercial and residential levels constructed in towers above this basement. It is likely that the development will incorporate trimming the existing quarry faces back to the boundary, with long term stabilisation measures required.

The purpose of the investigation was to obtain geotechnical information on the subsurface conditions, and to use this as a basis for comments and recommendations on excavation, retention, footing design and hydrogeological considerations.

Preliminary information was forwarded to Grimshaw Architects by email dated 18 October 2012, and this report confirms and amplifies the preliminary information.

Jeffery and Katauskas Pty Ltd have previously completed reports at this site in 1987 (Reference 4967JS) to inspect the faces following a rock fall, and in 1990 (Reference 7979XS) where comprehensive mapping of the quarry faces was undertaken. The sections of the faces created at that time are attached in Appendix A, and the locations of the sections are provided in Figure 1.

An assessment of the potential contamination of the site soils was undertaken by Environmental Investigation Services (EIS) in conjunction with this report, and the results are provided in their report Reference E26029KPrpt.

2 INVESTIGATION PROCEDURE

The fieldwork for the investigation comprised the auger drilling of 7 boreholes to depths between 0.73m and 4.24m below the existing ground level using our truck mounted JK500 and track mounted JK305 drilling rigs and spiral auger techniques. The boreholes were then extended to depths between 6.85m and 10.19m using NMLC diamond coring techniques and water flush.

The borehole locations, as shown on the attached Figure 1, were set out by taped measurements from the existing buildings. The supplied survey plan by Stutchbury Jaques Pty Ltd (Ref: 5969/05, dated 19/10/05) forms the basis for Figure 1. Surface reduced levels (RL's) were interpolated between spot heights and contour lines on this survey plan and should therefore be considered approximate only.

The fieldwork was completed in the full time presence of a geotechnical engineer who set out the boreholes, nominated the sampling and testing locations and prepared the borehole logs. The borehole logs are attached to this report together with a glossary of terms and symbols used on the logs. The strength of the soil was assessed based on the results of Standard Penetration Test (SPT) 'N' values augmented by hand penetrometer readings on cohesive samples recovered in the SPT split spoon sampler. The strength of the rock in the augered portions of the boreholes was assessed by observation of the resistance to augering with a tungsten carbide drilling bit, and from examination of the recovered rock chips; the assessment of rock strength in such a way is subjective and variations of one strength order should not be unexpected. The strength the bedrock in the cored portions of the boreholes was assessed by inspection of the recovered core and correlation with the results of point load strength index tests completed on the core in the laboratory.

A Senior Engineering Geologist also visited the site to map the jointing observed in the quarry faces. The results of the mapping are provided in Section 3.1.

Selected samples were returned to a NATA registered laboratory, Soil Test Services Pty Ltd (STS), for moisture Atterberg limit, linear shrinkage, standard compaction and soaked CBR tests. The results of these tests are summarised in the attached Tables A and B. Additional samples were delivered to Envirolab Services Pty Ltd, a NATA registered analytical laboratory, for testing for soil pH, sulphate content and chloride content; the results of these tests are provided in the attached Envirolab Services Certificates of Analyses.

The core of the bedrock was also returned to STS where it was colour photographed, and where point load strength index tests were completed. Copies of the photographs are provided with the borehole logs, while the strength test results are summarised in Table C.

For further detail on the investigation procedures used reference should be made to the attached Report Explanation Notes.

3 RESULTS OF INVESTIGATION

3.1 Site Description

The site is located close to the top of a south facing hillside which slopes towards the Parramatta River. The area about the site generally slopes down to the south-west at about 5°.

The site itself is a former quarry which has been cut into the hillside. Shale bedrock is exposed in rock faces up to approximately 15m high along the northern and eastern edges of the site. The condition of these rock faces is described in more detail below. The western excavation face is concealed by an existing office building and vehicle access ramps. The lower southern face comprises a vegetated batter slope of 20° to 25°.

At the time of the fieldwork, the majority of the site was relatively level and was occupied by a single storey metal clad warehouse structure and associated asphaltic concrete driveway and hardstand areas. The north-western end of the site sloped down at between approximately 4° and 10° from the Tennyson Road site boundary. A two storey rectangular, cement rendered brick office building was located on this sloping portion of the site. Both the warehouse and office buildings appeared in good external condition based on a cursory inspection from the exterior. The asphaltic concrete driveway and hardstand areas appeared in poor condition with numerous repaired and delaminated areas observed.

Tennyson Road passes along the north-western site boundary and slopes down to the south-west at about 5°. There are existing hardstand areas with commercial building beyond to the north, east and south of the site. There are also numerous medium to tall trees around the toe and crest of the quarry faces.

Quarry Face Description

From assessment of the shale cuts surrounding the site both from our previous works in 1990 and from our current inspection, there are six major joint sets and three faults as detailed below.

Description	Dip	Dip Direction
Joint Set A	80° - 90°	290° - 300° / 110° - 120°
Joint Set B	80° - 85°	230° - 250°
Joint Set C	40° - 70°	025° - 040°
Joint Set D	85° - 90°	160°
Joint Set E	65°	140° - 160°
Joint Set G	35° - 50°	100° - 120°
Fault Plane F1	40° - 45 °	210° - 220°
Fault Plane F2	45°	285°
Fault Plane F3 (similar to JS C)	35° - 45°	020° - 030°

During the recent inspection of the face, we were unable to detect the previously mapped Joint Set G, as the two areas where it was picked up originally were very overgrown. However, as shown in the original Section 4 (7676XS, Fig 3), this is most likely at a similar dip/gradient to the scree slope locally.

The shale in the cut faces appeared to be predominantly of medium strength, and the faces ranged in height between 4m and 16m. During the recent inspection, there had been further degradation/spalling of the face since 1990 with a near continual scree pile of shale at the base of the cliff now being present. Less spalling was noted along the north-western portion of cliff, however seepage through bedding/jointing was noted in this area.

From the car park, up to the base of the cliff are old scree deposits or fill from clearing the lower portion of the site prior to construction. These slopes ranged in gradient between 25° - 50°, and up to 10 to 12m wide in places.

The ‘large slide debris’ noted in the 1987 report appeared to have been removed from site.

Approximately 50m section of the north-eastern shale cut/cliff face has been formed by a continuous joint belonging to Joint Set B, with the exposed portion of the joint being up to about 15m high. This joint was intersected by many joints belonging to Joint Set A along the majority of the face. At the south-eastern end of this exposed portion of joint, the cut face curves and the rock in front of the joint has separated from joint by about 100mm to 120mm.

Overhangs of the cliff face were up to 3m, and typically at the top of the cliff faces near the soil/rock interface. With undercutting of the cliff face quite prevalent to the eastern and north-western faces where undercuts were mostly 1m to 1.5m deep.

At north-western corner of the quarry there was a large detached block 4m × 6m about mid-height of the face, with trees growing behind the block.

3.2 Subsurface Conditions

In general terms, the investigation has disclosed a relatively thin layer of residual soil at the crest of the cut faces, with fractured shale forming the majority of the previous quarry cuts. The conditions encountered in the boreholes drilled in the floor of the quarry comprise concrete and asphaltic concrete pavements over a thin layer of fill which overlies high and very high strength sandstone bedrock; the bedrock also contains minor bands of interbedded sandstone and shale. The exception was in BH7 which was drilled in an elevated vehicle access area where deeper fill was encountered.

Some of the characteristic features of the strata encountered are described below. For further details of the conditions encountered at each location, reference should be made to the borehole logs. A graphical summary of the strata encountered in the boreholes is presented in Figure 2.

Pavements

The boreholes were drilled through pavements comprising up to 100mm of concrete, or 40mm to 60mm of asphaltic concrete. No crushed igneous rock roadbase was encountered in these pavements. The exception was BH3 where there was no pavement.

Fill

The pavements were overlying fill comprising sandy gravel (comprising crushed shale gravel) and gravelly silty clay of generally medium and high plasticity. The fill extended to depths ranging between 0.3m and 1.1m, with the exception of BH7 which was drilled in an elevated area and contained fill to a depth of 3.5m. The fill assessed as being moderately to well compacted.

Bedrock

The shale bedrock in the excavation faces is assessed as being moderately weathered and of medium strength, though the faces themselves are relatively fractured. The bedrock below the floor of the quarry comprises fine and medium grained sandstone, generally slightly weathered or fresh, with strengths ranging from high to very high, with sometimes a thin capping of low to medium strength rock. The sandstone contains bands which are interbedded with shale. There were very few defects encountered in the cored boreholes, and these were mostly near horizontal

bedding partings and crushed seams; there were also several joints with inclinations of between 45° and subvertical, and these were within the upper 3m of the boreholes.

Laboratory Test Results

The moisture content test results correlated well with the field logging assessments of rock strength, and the Atterberg limits tests showed the samples tested to be of low to medium plasticity, correlating with a low to moderate for shrink-swell movements with changes in moisture content. The soaked CBR values were 3% and 8%, indicating the subgrade is fair.

The samples of the weathered shale tested were found to be slightly alkaline with pH ranging from 8.1 to 9.2, and very low sulphate and chloride contents with all results less than 150mg/kg.

The point load strength tests completed on the recovered core showed the sandstone and shale to have strengths generally of high and very high strength, with correlated UCS ranging between 12MPa and greater than 112MPa, with an average value of 50MPa.

4 COMMENTS AND RECOMMENDATIONS

4.1 Project Overview

The majority of this project will be relatively standard in terms of the geotechnical issues. The excavation for the floor of the quarry will require the use of large equipment and maybe require sawing due to the strength of the rock likely to be encountered, and some stabilisation of new rock cuts such as by rock bolts will be required to stabilise wedges formed by the inclined joints encountered in the upper portions of the boreholes. We expect conventional pad and strip footings will be suitable due to the very high quality of the rock encountered.

By far the most difficult part of this project will be the safe excavation and support of the shale faces where it is proposed to excavate the site back to the boundaries. These activities will require careful consideration during the design process, and possibly significant geotechnical review during the construction phase.

4.2 Excavation of Quarry Faces

The excavation of the existing quarry faces back to the boundary will extend through the upper residual soils, and through shale bedrock which is likely to be of medium strength. This is likely to require moderate ripping with tracked excavators of say 30 tonne size. However gaining access

to the excavation area will be difficult and will require the placement of a large fill platform against the existing cut faces.

It will also be difficult to undertake this excavation in a safe manner as it will be necessary to protect the existing properties, infrastructure and buildings beyond the site boundary. The shale faces currently expose relatively major continuous joints which are inclined, and if these daylight in the final excavation face, they could collapse into the excavation unless properly restrained. Some concepts for appropriate restraint are provided below, though it is likely that there will be additional information required by the structural engineers when the general concept of the shoring has been decided.

Anchored Shotcrete Facing Approach

We expect the preferred way to undertake this excavation and shoring would be to progressively excavate and install an anchored reinforced shotcrete facing to the batters. The shotcrete facing could then be used both in the short term and long term, provided the reinforcement is designed to suit both cases. In the short term, the shotcrete would need to be designed to span between the anchor locations, while in the long term, it would need to span between the floor slabs and/or shear walls in the adjacent building.

We expect that it would be advantageous to use large excavator mounted rock grinders to grind the shale face following the bulk excavation of each lift to provide a shotcrete facing of relatively uniform thickness and geometry.

The soils and weathered shale to low strength should be excavated in vertical lifts not exceeding 1.5m, with anchors in the upper 2.5m (but in any case to the bottom of any low strength shale) not being spaced more than 1.5m vertical height apart. Where the excavation is in shale of medium strength or greater, it would be suitable to undertake the excavation in 2.5m vertical lifts with anchors at no more than 2.5m vertical centres.

The temporary anchors would extend through to the outside face of the shotcrete to allow them to be de-stressed following the bracing of the walls by the structures. These anchors should have a bond zone entirely behind a line drawn upward at 1V in 1H from the toe of the proposed excavation, and the bond length may provisionally be designed for an allowable bond of 150kPa in shale of at least low strength and 250kPa in shale of at least medium strength. All anchors should then be proof loaded to at least 130% of their working load, and 50% of anchors subjected to lift off tests approximately three days after lock-off to confirm the anchors are holding their load.

If any of these anchors show a load loss of more than 10% from their lock-off load, then all anchors should be lifted-off. It will be necessary to obtain permission from the owners of the adjacent properties prior to the installation of anchors beyond the boundary. It is normal practice for anchors to be a design and construct package so that the risk of anchor failure is balanced against the cost of drilling and replacing any anchors that fail load tests.

Soldier Pile Wall

An alternative excavation support system would be to install soldier piles around the site perimeter prior to the commencement of excavation. These would then be restrained with multi-level temporary anchors installed progressively with the excavation. Following approximately each 1.0m of vertical excavation in the residual soils and shale of extremely and very low strength, and each 2.5m of vertical excavation in the shale of low strength or stronger, reinforced shotcrete panels should be sprayed between the soldier piles to prevent localised collapse resulting from small scale joints and wedges.

The installation of the piles themselves would be problematic as they will either require the use of a piling rig in the adjacent properties which is unlikely to be possible, or the installation of a high working platform to provide safe access to the work site. The piling rig would also need to be large to be able to reach the required founding depth, and drill through the shale which is expected to be of medium or higher strength. It is also likely there would be some degree of wander in such long piles, and so these may cut into the proposed basement area. The likelihood of wander may be able to be reduced by using large diameter down-hole hammers for the piling, though we note their use is not common at this point in time.

Design Pressures

If no other investigation work is done, the shoring should be designed for a semi-trapezoidal lateral earth pressure with a maximum magnitude of 7H kPa (where H is the depth of excavation in metres) applying over the lower 75% of the face, tapering to zero at the crest. .

These pressures are relatively conservative, and it is likely that they could be reduced following further detailed investigation of the perimeter conditions to prove that any jointing is relatively step (about 75º from the horizontal) rather than being closer to 55º which causes the highest shoring loads. It would then be likely to be able to reduce the pressures to say the same pressure distribution but with a maximum pressure of about 5H. Such investigation would likely be completed following removal of vegetation and cleaning debris from the face, and involve inspecting the faces from a boom lift, combined with drilling some inclined cored boreholes from

the toe of the existing cut to look for defects which dip at around 55º which may not be evident in the face. The investigation could not be undertaken with a fixed scope as the program would need to be amended based upon the results obtained during the fieldwork.

The above pressures are based upon the rock mass stabilisation only, and appropriate surcharge loads and hydrostatic pressures should also be taken into account in the design.

Drainage

Irrespective of the retention system used, drainage must be installed behind the facing to allow the permanent dissipation of the pore water pressures.

4.3 Excavation Below Quarry Floor

It appears that it will be necessary to excavate to a depth of about 3m below the floor of the quarry to achieve the required basement levels. This excavation will be through the pavements and fill, and into the sandstone bedrock of up to very high strength.

The removal of the concrete pavements will require the use of rock hammer attachments to hydraulic excavators for effective excavation. The fill below would then be readily excavated using buckets on tracked excavators.

Some of the upper rock in the boreholes has strength ranging from extremely low to low to medium strength. Any sandstone to low strength and shale to medium is likely to be rippable using ripping tynes on large (say 30 tonne or larger) tracked excavators.

Higher strength rock will require the use of rock breaker attachments to the excavators, and even then productivity may be very low due to the high and very high strength of the rock. It may be necessary to saw cut the sandstone and break blocks of rock from the excavation. The use of an impact ripper on a heavy (D10 or D11 sized) tractor should also be considered.

There is the potential for inclined defects to form wedges of rock in the excavation faces which could be unstable. Therefore the excavation faces should be inspected following each 1.5m vertical lift of excavation to assess the presence of any such features, If these features are present, it is likely that stabilisation will be required, such as by the installation of rock bolts.

Provided the sandstone can be appropriately crushed, it is likely to produce an ideal engineered fill material.

If there is any rock of less than low strength exposed at the perimeter of the excavation, this should be supported by a reinforced shotcrete panel, which could be laterally restrained by rock bolts in the short term, and by bracing from the structure in the long term.

4.4 Footing Design

It is likely that sandstone and shale of high and very high strength will be encountered at the bulk excavation levels, and so pad and strip footings would be considered to be feasible. Footings founded with an embedment of at least 0.5m below the surrounding ground level in the shale or sandstone of high or very high strength may be designed for an allowable bearing pressure of 3,500kPa based upon visual inspection of each footing excavation by a geotechnical engineer. Undertaking spoon testing in one in three footing excavations and visually inspecting the remainder would allow the adoption of an allowable bearing pressure of 6,000kPa.

It may in fat be feasible to use even higher bearing pressures, possibly to 10,000 kPa, though this will require significant additional diamond coring, and we do not expect that such pressures would be advantageous for the proposed development.

4.5 Subgrade Preparation

It is expected that the subgrade to the proposed lower basement floor slabs will comprise high and very high strength sandstone and shale bedrock. Therefore, unless there is significant excavation below the proposed floor slabs such as for the installation of services etc, detailed preparation of the subgrade is unlikely to be required. We recommend the placement of a crushed rock separation layer between the rock and the concrete floor slabs to prevent curling of slabs associated with concrete shrinkage where the underside of the slabs has a rough contact with the rock and to permit drainage.

Where such excavation of the rock occurs, or if pavements are deleted such that the existing soils form the subgrade, the pavements should be provisionally designed for a soaked CBR value of 3.0%. This may well be a conservative, and should be confirmed by geotechnical inspection and possibly additional testing when final development details are known.

When details of the proposed development have been finalised, further advice should be obtained with regard to subgrade preparation, as it may be necessary to excavate some of the fill soils from site and rework it as engineered fill placed and compacted in layers.

4.6 Hydrogeological Considerations

Seepage is currently occurring at least through the north-western portion of the quarry face. Also, the total excavation depth will be relatively deep, and it will be necessary to incorporate drainage into the proposed retaining walls and below the lower basement floor slab. This could comprise vertical lengths of strip drain installed behind retaining wall elements, combined with a subsoil drain around the perimeter of the lower basement level, and also either a gravel drainage blanket or a grid of subsoil drains below the proposed lower basement floor slabs.

4.7 Soil Aggression

The weathered shale is alkaline, and has very low sulphate and chloride contents. These conditions must be taken into account in the design of metal or reinforced concrete elements in contact with the shale.

5 GENERAL COMMENTS

The recommendations presented in this report include specific issues to be addressed during the construction phase of the project. As an example, geotechnical inspection of the footing excavations prior to pouring, etc. In the event that any of the construction phase recommendations presented in this report are not implemented, the general recommendations may become inapplicable and JK Geotechnics accept no responsibility whatsoever for the performance of the structure where recommendations are not implemented in full and properly tested, inspected and documented.

Occasionally, the subsurface conditions between the completed boreholes may be found to be different (or may be interpreted to be different) from those expected. Variation can also occur with groundwater conditions, especially after climatic changes. If such differences appear to exist, we recommend that you immediately contact this office.

This report provides advice on geotechnical aspects for the proposed civil and structural design. As part of the documentation stage of this project, Contract Documents and Specifications may be prepared based on our report. However, there may be design features we are not aware of or have not commented on for a variety of reasons. The designers should satisfy themselves that all the necessary advice has been obtained. If required, we could be commissioned to review the geotechnical aspects of contract documents to confirm the intent of our recommendations has been correctly implemented.

If there is any change in the proposed development described in this report then all recommendations should be reviewed.

This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose. Copyright in this report is the property of JK Geotechnics. We have used a degree of care, skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report. The report shall not be reproduced except in full.

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SOIL TEST SERVICES

ABN 43 002 145 173

TABLE A
MOISTURE CONTENT, ATTERBERG LIMITS AND LINEAR SHRINKAGE TEST REPORT

Client: JK Geotechnics
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville

Ref No: 26029SP
Report: A
Report Date: 10/10/2012

AS 1289	TEST METHOD	2.1.1	3.1.2	3.2.1	3.3.1	3.4.1
BOREHOLE NUMBER	DEPTH m	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	LINEAR SHRINKAGE %
1	0.60-0.78	1.5				
2	0.30-0.50	14.6				
2	0.60-0.73	2.6				
3	0.00-0.20	7.9	33	16	17	7.5
3	0.50-0.65	13.5				
4	0.50-0.90	14.6				
4	1.10-1.28	2.7				
5	0.60-0.80	1.7				
6	0.85-0.95	9.0				
6	1.35-1.55	4.1				
7	0.70-0.95	13.9				
7	1.30-1.50	15.8				
7	1.70-1.95	19.7				
7	3.00-3.45	10.4	28	19	9	5.0
7	4.00-4.24	6.3				

Notes:

- The test sample for liquid and plastic limit was air-dried & dry-sieved
- The linear shrinkage mould was 125mm
- Refer to appropriate notes for soil descriptions
- Date of receipt of sample: 24/09/2012

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SOIL TEST SERVICES

ABN 43 002 145 173

TABLE B
FOUR DAY SOAKED CALIFORNIA BEARING RATIO TEST REPORT

Client: JK Geotechnics
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville

Ref No: 26029SP
Report: B
Report Date: 10/10/2012
Page 1 of 1

BOREHOLE NUMBER		3	4
DEPTH (m)		0.00 - 0.50	0.10 - 0.90
Surcharge (kg)		9.0	9.0
Maximum Dry Density (t/m^3)		1.89 STD	1.93 STD
Optimum Moisture Content (%)		12.3	12.6
Moulded Dry Density (t/m^3)		1.86	1.89
Sample Density Ratio (%)		98	98
Sample Moisture Ratio (%)		102	102
Moisture Contents			
Insitu (%)		11.8	13.5
Moulded (%)		12.5	12.8
After soaking and			
After Test, Top 30mm(%)		19.7	16.0
Remaining Depth (%)		15.8	13.7
Material Retained on 19mm Sieve (%)		0	0
Swell (%)		2.5	0.0
C.B.R. value:	@2.5mm penetration		8
	@5.0mm penetration	3.0	

NOTES:

- Refer to appropriate notes for soil descriptions
- Test Methods :
  - (a) Soaked C.B.R. : AS 1289 6.1.1
  - (b) Standard Compaction : AS 1289 5.1.1
  - (c) Moisture Content : AS 1289 2.1.1
- Date of receipt of sample: 24/09/2012

NATA

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Authorised Signature / Date
(A. Tatikonda) 10/10/12

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SOIL TEST SERVICES

ABN 43 002 145 173

TABLE C
POINT LOAD STRENGTH INDEX TEST REPORT

Client:	JK Geotechnics	**Ref No:**	26029SP
Project:	Proposed Development	**Report:**	C
Location:	2-12 Tennyson Road, Gladesville	**Report Date:**	
		Page 1 of 4	

BOREHOLE NUMBER	DEPTH m	$I_{S(50)}$ MPa	ESTIMATED UNCONFINED COMPRESSIVE STRENGTH (MPa)
1	0.81-0.85	2.4	48
	1.38-1.41	2.6	52
	2.10-2.14	2.2	44
	2.90-2.93	3.9	78
	3.51-3.54	2.4	48
	4.21-4.25	3.4	>68
	4.89-4.92	3.8	76
	5.53-5.58	0.9	18
	6.18-6.21	1.4	28
	6.78-6.82	1.0	20
2	1.05-1.08	3.4	68
	1.73-1.75	3.7	74
	2.39-2.42	4.2	84
	3.05-3.07	3.4	68
	3.77-3.80	1.7	34
	4.40-4.42	2.4	48
	5.04-5.08	2.0	40
	5.70-5.74	1.1	22
	5.56-5.60	0.9	18
3	0.81-0.84	0.6	12
	0.84-0.87	0.6	12
	1.47-1.51	3.5	>70
	1.96-1.99	3.3	66
	2.58-2.61	3.5	70
	3.20-3.22	4.7	94

NOTES: See Page 4 of 4

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TABLE C
POINT LOAD STRENGTH INDEX TEST REPORT

Client:	JK Geotechnics	**Ref No:**	26029SP
Project:	Proposed Development	**Report No:**	C
Location:	2-12 Tennyson Road, Gladesville	**Report Date:**	
		Page 2 of 4	

BOREHOLE NUMBER	DEPTH m	$I_{S(50)}$ MPa	ESTIMATED UNCONFINED COMPRESSIVE STRENGTH (MPa)
3	3.86-3.89	2.9	58
	4.54-4.57	1.8	36
	5.09-5.12	1.7	34
	5.81-5.84	2.2	44
	6.59-6.62	0.9	18
4	1.47-1.51	1.0	20
	2.17-2.21	3.7	>74
	2.84-2.87	3.0	60
	3.51-3.55	4.1	>82
	4.18-4.20	4.2	84
	4.92-4.95	5.4	108
	5.50-5.53	2.7	54
	6.15-6.19	3.3	66
	6.81-6.84	0.9	18
	7.35-7.40	1.1	22
	8.04-8.07	1.3	26
	8.70-8.73	1.5	30
	8.73-8.76	0.6	12
5	0.87-0.91	1.5	30
	1.55-1.58	1.3	26
	2.19-2.23	0.9	18
	2.86-2.89	1.5	30
	3.52-3.56	3.7	74
	4.24-4.27	3.2	64
	4.96-4.99	4.6	>92

NOTES: See Page 4 of 4

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TABLE C
POINT LOAD STRENGTH INDEX TEST REPORT

Client: JK Geotechnics
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville

Ref No: 26029SP
Report No: C
Report Date:

BOREHOLE NUMBER	DEPTH m	$I_{S(50)}$ MPa	ESTIMATED UNCONFINED COMPRESSIVE STRENGTH (MPa)
5	5.62-5.65	5.1	>102
	6.31-6.33	5.0	100
	7.02-7.06	2.2	44
	7.71-7.74	1.2	24
	8.40-8.44	1.4	28
	9.03-9.06	1.2	24
6	2.13-2.16	4.5	90
	2.83-2.86	4.2	84
	3.50-3.53	4.2	84
	4.15-4.17	1.9	38
	4.80-4.83	5.6	>112
	5.45-5.48	3.5	70
	6.07-6.09	1.2	24
	6.69-6.73	1.4	28
	7.43-7.46	0.9	18
	8.07-8.10	1.3	26
	8.74-8.78	1.6	32
	9.52-9.55	1.1	22
7	4.31-4.34	4.1	82
	4.97-5.00	2.4	48
	5.64-5.68	2.8	56
	6.29-6.32	2.1	42
	6.97-7.00	2.5	50
	7.68-7.72	3.0	60
	8.32-8.34	1.9	38

NOTES: See Page 4 of 4

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POINT LOAD STRENGTH INDEX TEST REPORT

Client:	JK Geotechnics	**Ref No:**	26029SP
Project:	Proposed Development	**Report No:**	C
Location:	2-12 Tennyson Road, Gladesville	**Report Date:**	
		Page 4 of 4	

BOREHOLE NUMBER	DEPTH m	$I_{S(50)}$ MPa	ESTIMATED UNCONFINED COMPRESSIVE STRENGTH (MPa)
7	9.00-9.03	1.8	36
	9.78-9.82	1.1	22

NOTES:

1. In the above table testing was completed in the Axial direction.
2. The above strength tests were completed at the 'as received' moisture content.
3. Test Method: RTA T223.
4. The Estimated Unconfined Compressive Strength was calculated from the point load Strength Index by the following approximate relationship and rounded off to the nearest whole number :
   U.C.S. = 20 $I_{S(50)}$

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 79191-A

Client:
Jeffery & Katauskas Pty Ltd
PO Box 976
North Ryde BC
NSW 1670

Attention: Rob Cater

Sample log in details:

Your Reference:	**E26029KP, Gladesville**
No. of samples:	Additional testing on 2 soils
Date samples received / completed instructions received	21/09/2012 / 25/09/12

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	3/10/12 / 3/10/12
Date of Preliminary Report:	Not issued

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Results Approved By:

Nick Sarlamis
Inorganics Supervisor

Miscellaneous Inorg - soil			
Our Reference:	UNITS	79191-A-4	79191-A-11
Your Reference	----------	BH2	BH5
Depth	----------	0.6-0.73	0.4-0.6
Date Sampled		19/09/2012	19/09/2012
Type of sample		Soil	Soil
Date prepared	-	27/09/2012	27/09/2012
Date analysed	-	27/09/2012	27/09/2012
pH 1:5 soil:water	pH Units	8.9	9.2
Chloride, Cl 1:5 soil:water	mg/kg	50	31
Sulphate, SO4 1:5 soil:water	mg/kg	87	94

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 22nd ED, 4110 -B.

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			27/09/2012	[NT]	[NT]	LCS-1	27/09/2012
Date analysed	-			27/09/2012	[NT]	[NT]	LCS-1	27/09/2012
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-1	102%
Chloride, Cl 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	116%
Sulphate, SO4 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	119%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Aileen Hie

From: Brendan Page [bpage@jkgroup.net.au]
Sent: Tuesday, 25 September 2012 1:56 PM
To: Aileen Hie
Cc: 'Robert Cater'; 'Peter Wright'
Subject: Additional Analysis 79306 and 79191

Hi Aileen,

Could you please schedule the following additional analysis on the samples in Envirolabs custody (please issue as separate 'A' reports):

79306-5 (BH7 4-4.25): pH, sulfate and chloride
79191-4 (BH2 0.6-0.73): pH, sulfate and chloride
79191-11 (BH5 0.4-0.6): pH, sulfate and chloride

Note sure if its possible, however, could you arrange for this **additional analysis to be invoiced under JK project reference 26029SP** and attention it to Rob Cater.

The invoice for the remaining analysis can come to me.

Give me a buzz if there are any issues.

79191 A
std = 1A
due 3/10

Regards,

Brendan Page
Senior Environmental Scientist

EIS Environmental Investigation Services
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Tel: 02 9888 5000 PO Box 976 115 Wicks Road
Fax: 02 9888 5001 North Ryde BC NSW 1670 Macquarie Park NSW 2113
bpage@jkgroup.net.au
www.jkgeotechnics.com.au

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 79306-A

Client:
Jeffery & Katauskas Pty Ltd
PO Box 976
North Ryde BC
NSW 1670

Attention: Rob Cater

Sample log in details:

Your Reference:	**E26029KP, Gladesville**
No. of samples:	Additional testing on 1 soil
Date samples received / completed instructions received	24/09/2012 / 25/09/2012

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	3/10/12 / 3/10/12
Date of Preliminary Report:	Not issued

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

Results Approved By:

Nick Sarlamis
Inorganics Supervisor

Miscellaneous Inorg - soil		
Our Reference:	UNITS	79306-A-5
Your Reference	----------	BH7
Depth	----------	4-4.25
Date Sampled		24/09/2012
Type of sample		Soil
Date prepared	-	27/09/2012
Date analysed	-	27/09/2012
pH 1:5 soil:water	pH Units	8.1
Chloride, Cl 1:5 soil:water	mg/kg	93
Sulphate, SO4 1:5 soil:water	mg/kg	140

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 22nd ED, 4110 -B.

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			27/09/2012	[NT]	[NT]	LCS-1	27/09/2012
Date analysed	-			27/09/2012	[NT]	[NT]	LCS-1	27/09/2012
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-1	102%
Chloride, Cl 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	116%
Sulphate, SO4 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	120%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
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Aileen Hie

From: Brendan Page [bpage@jkgroup.net.au]
Sent: Tuesday, 25 September 2012 1:56 PM
To: Aileen Hie
Cc: 'Robert Cater'; 'Peter Wright'
Subject: Additional Analysis 79306 and 79191

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The invoice for the remaining analysis can come to me.

Give me a buzz if there are any issues.

79306 A
std = 1A
due 3/10

Regards,

Brendan Page
Senior Environmental Scientist

Environmental Investigation Services
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS

Tel: 02 9888 5000 PO Box 976 115 Wicks Road
Fax: 02 9888 5001 North Ryde BC NSW 1670 Macquarie Park NSW 2113
bpage@jkgroup.net.au
www.jkgeotechnics.com.au

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 1
1/2

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 19-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 33.4m
Datum: AHD

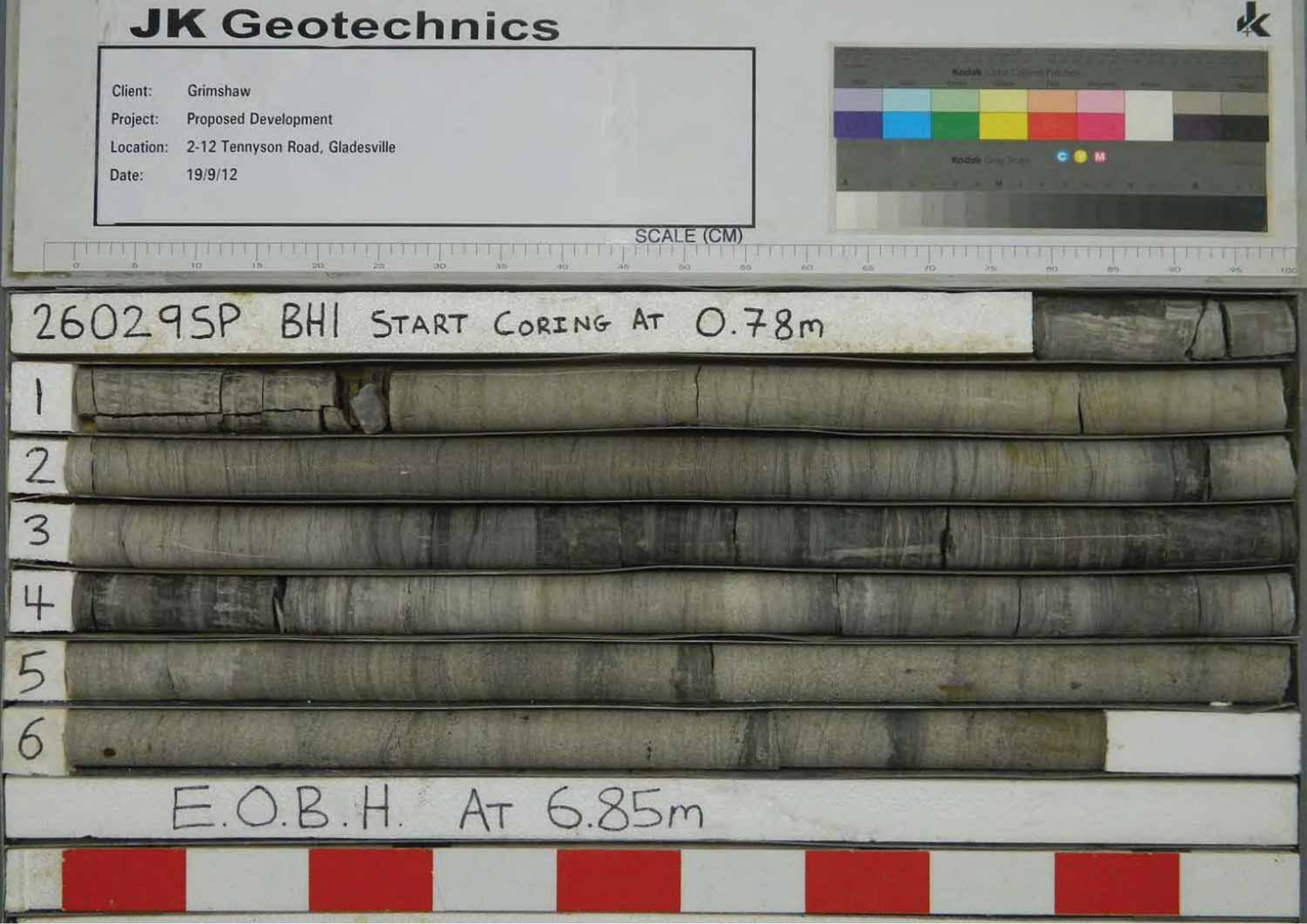
Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING	■			■		0		-	CONCRETE: 100mm.t				10mm DIA. REINFORCEMENT
								-	FILL: Sandy gravel, fine to coarse grained crushed shale, fine to medium grained sand, trace of silt.	W			
	■			■					SHALE: dark grey.	DW	L-M		BANDED LOW TO MODERATE 'TC' BIT RESISTANCE
									REFER TO CORED BOREHOLE LOG				
						1							
						2							
						3							
						4							
						5							
						6							
						7							

JK Geotechnics

Client: Grimshaw
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville
Date: 19/9/12

SCALE (CM)



JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **1** **2/2**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 33.4m

Date: 19-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ (EL, VL, L, M, H, VH, EH)	DEFECT DETAILS: DEFECT SPACING (mm) (500, 300, 100, 50, 30, 10)	DEFECT DETAILS: DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		0		START CORING AT 0.78m					
FULL RET-URN		1		SHALE: dark grey.	FR	H			- J, 85°, P, R, IS, 345mm.t
		2		SANDSTONE: fine grained, light grey, with dark grey laminae, bedded at 0-10°.					
		3				H-VH			
		4		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-10°.					
		5		SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-10°.		H			- Be, 0°, 4mm.t
		6		SANDSTONE: medium grained, light grey, bedded at 0-10°.					
		7		END OF BOREHOLE AT 6.85m					

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **2** 1/2

Client: **Darcsol Ltd Pty**

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 19-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 33.1m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING	■			■		0		-	ASPHALTIC CONCRETE: 60mm.t	M			
									FILL: Sandy gravel, fine to coarse grained crushed shale gravel and fine to medium grained sand, trace of silt and clay.	MC>PL			
	■			■	SPT 4/100mm REFUSAL			-		DW	M-H		MODERATE TO HIGH 'TC' BIT RESISTANCE
						1			FILL: Gravelly silty clay, low to medium plasticity, dark grey, fine to coarse grained shale gravel, trace of fine grained sand.				'TC' BIT REFUSAL
									SHALE: dark grey.				
									REFER TO CORED BOREHOLE LOG				
						2							
						3							
						4							
						5							
						6							
						7							

UK Geotechnics

Client: Grimshaw
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville
Date: 19/9/12

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **2** **2/2**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 33.1m

Date: 19-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ (EL VL L M H VH EH)	DEFECT DETAILS DEFECT SPACING (mm) (500 300 100 50 30 10)	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		0		START CORING AT 0.73m					
		1		SHALE: dark grey.	FR	VH			- Cr, 25mm.t, IS
				SANDSTONE: fine grained, light grey, with dark grey laminae, bedded at 0-10°.					
		2							
		3		INTERBEDDED SANDSTONE: light grey, and SHALE: dark grey, bedded at 0°.		H			
FULL RET-URN		4		SANDSTONE: fine to medium grained, light grey, with occasional dark grey laminae, bedded at 0-10°.					
				as above, but cross bedded at 20°.					
		5							
				SANDSTONE: medium grained, light grey, bedded at 0-10°.					
		6		END OF BOREHOLE AT 6.87m					
		7							

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **3** 1/2

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 19-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 32.7m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING	■		■	■		0			FILL: Gravelly silty clay, low to medium plasticity, brown and grey, fine to coarse grained shale and ironstone gravel.	MC<PL	(H)		
				■	N > 13 3,13/50mm REFUSAL			-	SHALE: dark grey.	DW	M	400 520 460	
						1			REFER TO CORED BOREHOLE LOG				
						2							
						3							
						4							
						5							
						6							
						7							

JK Geotechnics

Client: Grimshaw
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville
Date: 19/9/12

SCALE (CM)

26029SP BH3 START CORING AT 0.81m

1

2

3

4

5

6

E.O.B.H. AT 6.93m

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **3** **2/2**

Client: Darcsol Ltd PtyProject PRO POSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP **Core Size:** NMLC **R.L. Surface:** ≈ 32.7m

Date: 19-9-12 **Inclination:** VERTICAL **Datum:** AHD

Drill Type: JK500 **Bearing:** - **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ EL VL L M H VH EH	DEFECT SPACING (mm) 500 300 100 50 30 10	DEFECT DESCRIPTION: Type, inclination, thickness, planarity, roughness, coating. Specific	General
		0		START CORING AT 0.81m						
		1		SHALE: dark grey, bedded at 0°.	DW	M			- Cr, 34mm.t, IS	
				SANDSTONE: fine grained, light grey, bedded at 0-5°.	FR	VH				
		2								
		3		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-5°.		H				
FULL RET URN		4							- Cr, 4mm.t	
				SANDSTONE: fine to medium grained, light grey.						
		5		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-5°.						
				SANDSTONE: fine to medium grained, light grey, bedded at 5-15°.						
		6								
				END OF BOREHOLE AT 6.93m						
		7								

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **4** 1/3

Client: **Darcsol Ltd Pty**

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 20-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 32.7m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING						0		-	ASPHALTIC CONCRETE: 60mm.t				
									FILL: Gravelly silty clay, medium plasticity, dark grey, grey and orange brown, fine to coarse grained crushed shale gravel.	MC>PL			APPEARS MODERATELY COMPACTED
					N = 11 3,4,7							240 210 220	
						1		-	SHALE: dark grey.	DW	L-M		LOW 'TC' BIT RESISTANCE
									REFER TO CORED BOREHOLE LOG				MODERATE TO HIGH RESISTANCE
						2							
						3							
						4							
						5							
						6							
						7							

Client: Grimshaw

Project: Proposed Development

Location: 2-12 Tennyson Road, Gladesville

Date: 20/9/12

SCALE (CM)

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **4** **2/3**

Client: Darcsol Ltd Pty Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP **Core Size:** NMLC **R.L. Surface:** ≈ 32.7m

Date: 20-9-12 **Inclination:** VERTICAL **Datum:** AHD

Drill Type: JK500 **Bearing:** - **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_{S(50)}$ EL VL L M H VH EH	DEFECT SPACING (mm) 500 300 100 50 30 10	DEFECT DETAILS: DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		1		START CORING AT 1.28m					
FULL RET-URN		2		SHALE: dark grey.	FR	H			- HIGHLY FRACTURED ZONE, 136mm.t - Cr, 30mm.t
				SANDSTONE: fine grained, light grey, with dark grey laminae.		VH			DEFECTS NOT INDIVIDUALLY DESCRIBED ARE Be, 0°, P, S
		3							
		4		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-5°.					- Cr, 17mm.t
		5		SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-5°.					
		6							
				SANDSTONE: medium grained, light grey, with dark grey laminae, bedded at 0-10°.		H			- Be, 4°, 3mm.t, P, S
		7		as above, but cross bedded at 15-20°.					
		8							

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **4** **3/3**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 32.7m

Date: 20-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength		POINT LOAD STRENGTH INDEX $I_S(50)$ (EL VL L M H VH EH)	DEFECT DETAILS: DEFECT SPACING (mm) (100 50 30 10)	DESCRIPTION: Type, inclination, thickness, planarity, roughness, coating. Specific	General
				SANDSTONE: medium grained, light grey, with dark grey laminae, bedded at 0-10°.		FR	H				
		9		END OF BOREHOLE AT 8.85m							
		10									
		11									
		12									
		13									
		14									

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **5** 1/3

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 20-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 32.7m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING	■			■		0		-	ASPHALTIC CONCRETE: 40mm.t over CONCRETE: 70mm.t				6mm DIA. REINFORCEMENT
	■			■				-	FILL: Clayey gravel, fine to coarse grained crushed shale.	SW	H		MODERATE TO HIGH 'TC' BIT RESISTANCE
									SHALE: dark grey.				
									REFER TO CORED BOREHOLE LOG				
						1							
						2							
						3							
						4							
						5							
						6							
						7							

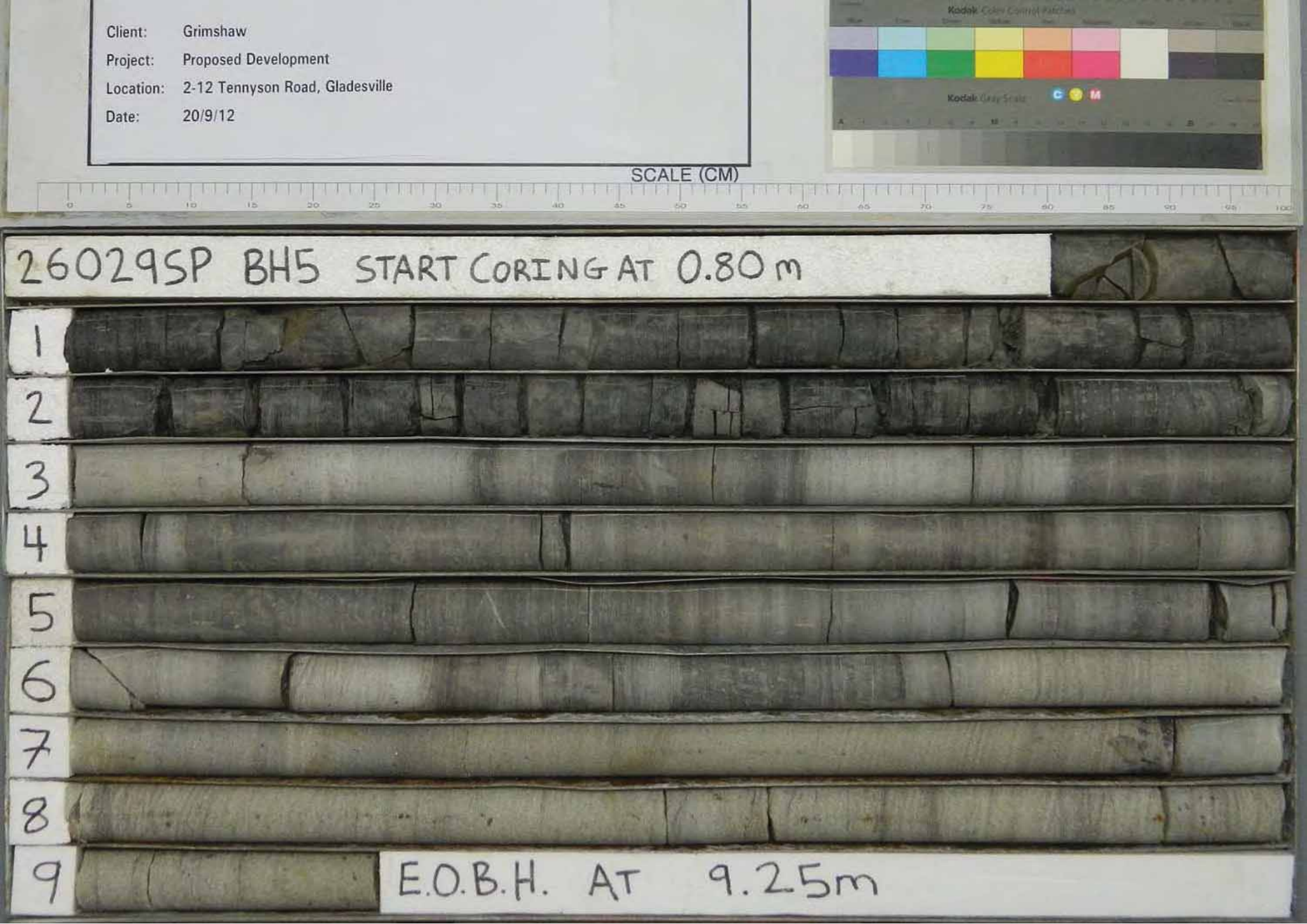
Client: Grimshaw

Project: Proposed Development

Location: 2-12 Tennyson Road, Gladesville

Date: 20/9/12

SCALE (CM)



JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **5** **2/3**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 32.7m

Date: 20-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ (EL VL L M H VH EH)	DEFECT DETAILS DEFECT SPACING (mm) (500 300 100 50 30 10)	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		0		START CORING AT 0.80m					
		1		SHALE: dark grey, bedded at 0°.	FR	H			- J, 60°, P, S, IS - J, 45°, P, S, IS - J, 70°, P, S, IS - J, 80°, P, S, IS
		2		as above, but with numerous crushed seams between 35mm and 160mm spacing.					
				SHALE: dark grey.					
		3		SANDSTONE: fine grained, light grey, with dark grey laminae, bedded at 0-10°.		VH			
80% RET-URN		4							
		5		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-5°.					
		6		SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-5°.		H			
		7							

JK **Geotechnics**
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **5** **3/3**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP **Core Size:** NMLC **R.L. Surface:** ≈ 32.7m

Date: 20-9-12 **Inclination:** VERTICAL **Datum:** AHD

Drill Type: JK500 **Bearing:** - **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ EL VL L M H VH EH	DEFECT DETAILS DEFECT SPACING (mm) 500 300 100 50 30 10	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		8		SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-5°	FR	H			
		9		SANDSTONE: medium grained, light grey, with dark grey laminae, bedded at 0-10°.					
		10		END OF BOREHOLE AT 9.25m					
		11							
		12							
		13							
		14							

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BOREHOLE LOG

Borehole No. **6** 1/3

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 20-9-12

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 32.9m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING						0		-	ASPHALTIC CONCRETE: 60mm.t				
									FILL: Silty sandy gravel, fine to coarse grained crushed shale, dark grey, fine grained sand.	M			
					N = 18 4,7,11				FILL: Gravelly silty clay, medium plasticity, orange brown, grey and dark grey, fine to coarse grained shale and ironstone gravel.	MC<PL		440 550 600	HP READINGS AFFECTED BY GRAVEL
						1		-	SHALE: dark grey.	DW	L-M		LOW 'TC' BIT RESISTANCE
									REFER TO CORED BOREHOLE LOG				
						2							
						3							
						4							
						5							
						6							
						7							

Client: Grimshaw

Project: Proposed Development

Location: 2-12 Tennyson Road, Gladesville

Date: 20/9/12

SCALE (CM)

CORED BOREHOLE LOG

Borehole No. **6** **2/3**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 32.9m

Date: 20-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ EL VL L M H VH EH	DEFECT DETAILS DEFECT SPACING (mm) 500 300 100 50 30 10	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		1		START CORING AT 1.55m					
		2		SHALE: dark grey and orange brown, highly weathered and fractured.	XW-DW	EL-VL			FRAGMENTED TO 2.15m DEPTH
				SANDSTONE: fine grained, light grey, with orange brown staining.	DW	VH			- J, 70-90°, UN, R, IS
				as above, but light grey, with dark grey laminae.	FR				
		3		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-10°.					
		4							
		5		SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-10°. Shale band, 0.2m.t.		H			
		6							
		7		SANDSTONE: medium grained, light grey, with dark grey laminae, bedded at 10-15°.					
		8							

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CORED BOREHOLE LOG

Borehole No. **6** **3/3**

Client: **Darcsol Ltd Pty**

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 32.9m

Date: 20-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK500 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ EL VL L M H VH EH	DEFECT DETAILS DEFECT SPACING (mm) 500 300 100 50 30 10	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		9		SANDSTONE: medium grained, light grey, with dark grey laminae, bedded at 10-15°.	FR	H	•		
		10		END OF BOREHOLE AT 9.68m					
		11							
		12							
		13							
		14							

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BOREHOLE LOG

Borehole No. **7** 1/2

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP
Date: 24-9-12

Method: SPIRAL AUGER
JK305

R.L. Surface: ≈ 35.1m
Datum: AHD

Logged/Checked by: R.V.C./P.W.

Groundwater Record	SAMPLES ES	U50	DB	DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION OF AUGER-ING						0			ASPHALTIC CONCRETE: 60mm.t				
									FILL: Gravelly silty sand, fine to medium grained, grey brown, fine to medium grained shale and sandstone gravel.	M			APPEARS MODERATELY TO WELL COMPACTED
					N = 16 7,8,8					MC<PL		280 350 280	
						1			FILL: Silty clay, medium to high plasticity, grey and orange brown, with fine to coarse grained shale and ironstone gravel.	MC>PL			
									as above, but dark brown, grey and red brown.				
					N = 16 6,7,9							240 400 310	
						2				MC<PL			
					N = 26 7,14,12	3						390 290 280	
						4		-	SHALE: dark grey.	DW	L-M		BANDED LOW 'TC' BIT RESISTANCE
									REFER TO CORED BOREHOLE LOG				
						5							
						6							
						7							

JK Geotechnics

Client: Grimshaw
Project: Proposed Development
Location: 2-12 Tennyson Road, Gladesville
Date: 24/9/2012

SCALE (CM)

260295P BH7 START CORING AT 4.24m

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

CORED BOREHOLE LOG

Borehole No. **7** **2/2**

Client: Darcsol Ltd Pty

Project: PROPOSED DEVELOPMENT

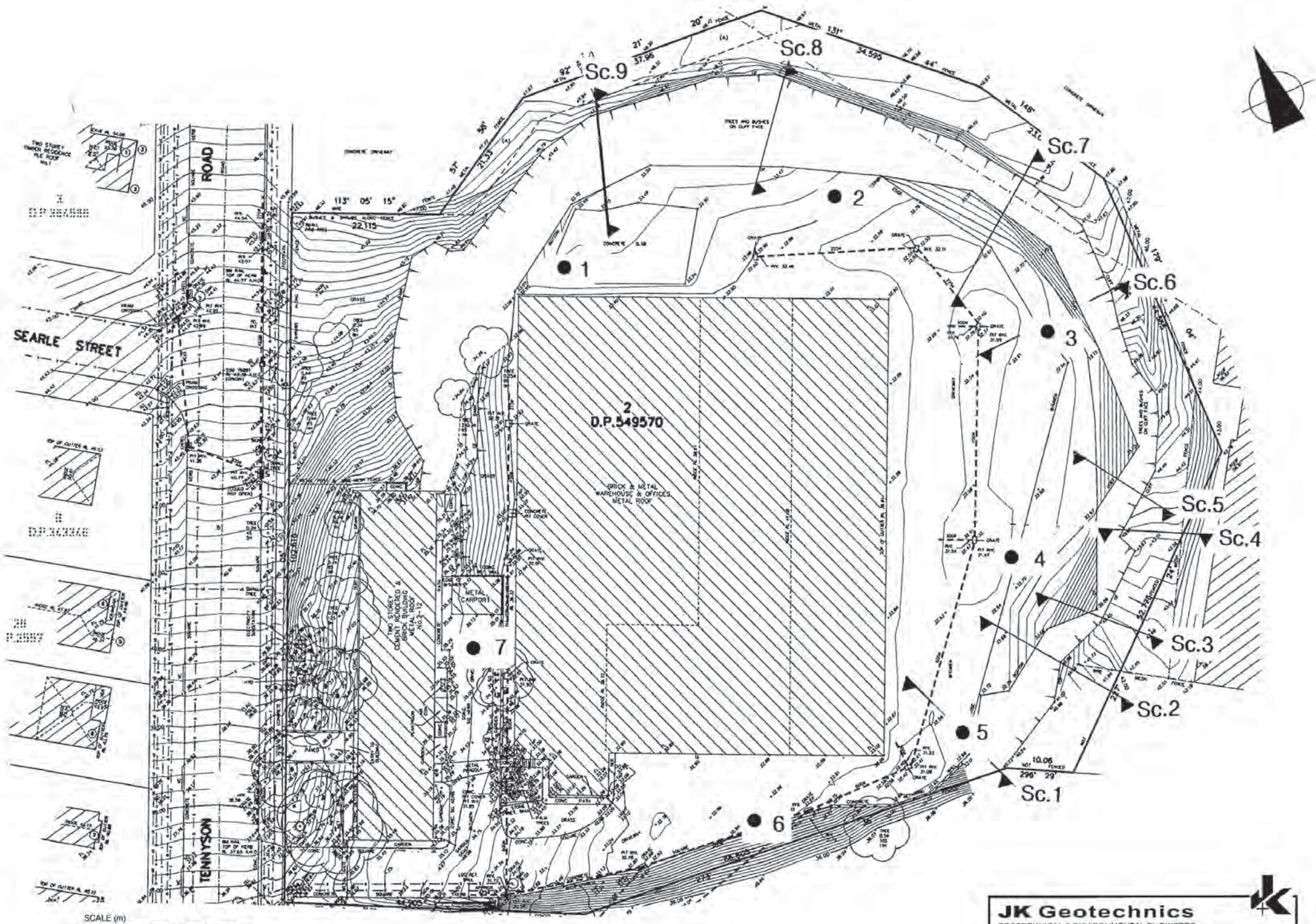
Location: 2-12 TENNYSON ROAD, GLADESVILLE, NSW

Job No. 26029SP | **Core Size:** NMLC | **R.L. Surface:** ≈ 35.1m

Date: 20-9-12 | **Inclination:** VERTICAL | **Datum:** AHD

Drill Type: JK350 | **Bearing:** - | **Logged/Checked by:** R.V.C./P.W.

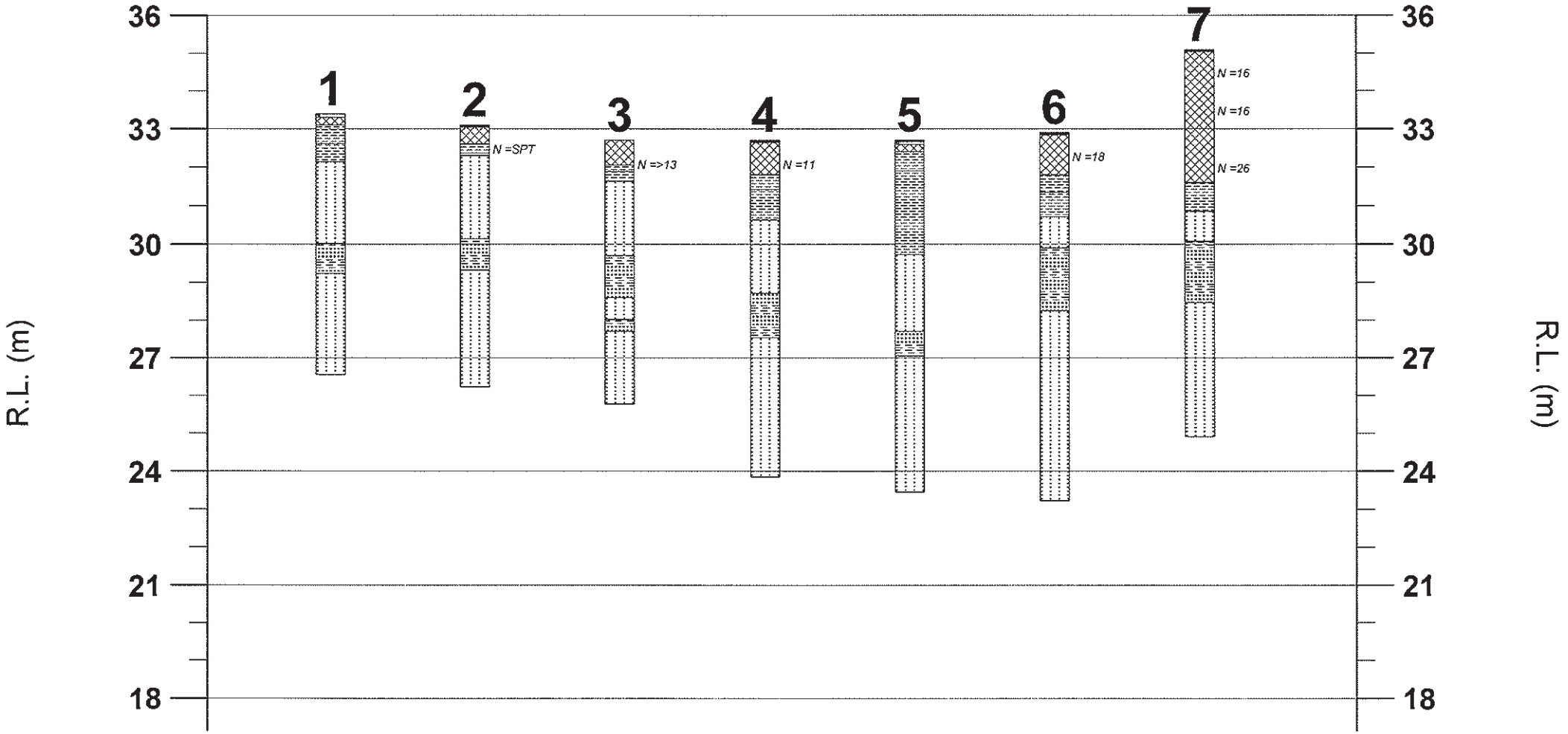
Water Loss/Level	Barrel Lift	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_S(50)$ (EL, VL, L, M, H, VH, EH)	DEFECT DETAILS: DEFECT SPACING (mm) (500, 300, 100, 50, 30, 10)	DEFECT DETAILS: DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. Specific / General
		4		START CORING AT 4.24m					
FULL RET-URN		5		SANDSTONE: fine grained, light grey, with dark grey laminae, bedded at 0-10°.	SW / FR	H-VH			
		6		INTERBEDDED SANDSTONE: fine grained, light grey, and SHALE: dark grey, bedded at 0-10°.					- Be, 10°, 5mm.t, Un, S, IS - XWS, 0°, 13mm.t, P, S - Cr, 15mm.t
		7		SANDSTONE: fine grained, light grey, with dark grey laminae, bedded at 0-10°.		H			
		8							
		9							- XWS, 0°, 4mm.t
		10							
				END OF BOREHOLE AT 10.19m					



BOREHOLE LOCATION PLAN

JK Geotechnics
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
Report No 26029SP Figure No. 1

GRAPHICAL BOREHOLE SUMMARY



Shale
Sandstone/ Greywacke
Interbedded Sandstone and shale
Concrete
Fill
Asphaltic/ Bituminous Paving or Coal

N SPT "N" VALUE
Nc SOLID CONE BLOW COUNTS PER 150mm

NOTE: REFER TO BOREHOLE LOGS

Scale: 1 : 150 (vert) ; NTS (horiz)

JK Geotechnics

Job No.: 26029SP

Figure No.: 2

REPORT EXPLANATION NOTES

INTRODUCTION

These notes have been provided to amplify the geotechnical report in regard to classification methods, field procedures and certain matters relating to the Comments and Recommendations section. Not all notes are necessarily relevant to all reports.

The ground is a product of continuing natural and man-made processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Geotechnical engineering involves gathering and assimilating limited facts about these characteristics and properties in order to understand or predict the behaviour of the ground on a particular site under certain conditions. This report may contain such facts obtained by inspection, excavation, probing, sampling, testing or other means of investigation. If so, they are directly relevant only to the ground at the place where and time when the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, the SAA Site Investigation Code. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geotechnical practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the grading of other particles present (eg sandy clay) as set out below:

Soil Classification	Particle Size
Clay	less than 0.002mm
Silt	0.002 to 0.06mm
Sand	0.06 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose	less than 4
Loose	4 – 10
Medium dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) either by use of hand penetrometer, laboratory testing or engineering examination. The strength terms are defined as follows.

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 – 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 – 400
Hard	Greater than 400
Friable	Strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'Shale' is used to describe thinly bedded to laminated siltstone.

SAMPLING

Sampling is carried out during drilling or from other excavations to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on plasticity, grain size, colour, moisture content, minor constituents and, depending upon the degree of disturbance, some information on strength and structure. Bulk samples are similar but of greater volume required for some test procedures.

Undisturbed samples are taken by pushing a thin-walled sample tube, usually 50mm diameter (known as a U50), into the soil and withdrawing it with a sample of the soil contained in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Details of the type and method of sampling used are given on the attached logs.

INVESTIGATION METHODS

The following is a brief summary of investigation methods currently adopted by the Company and some comments on their use and application. All except test pits, hand auger drilling and portable dynamic cone penetrometers require the use of a mechanical drilling rig which is commonly mounted on a truck chassis.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the insitu soils if it is safe to descend into the pit. The depth of penetration is limited to about 3m for a backhoe and up to 6m for an excavator. Limitations of test pits are the problems associated with disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as hard clay, gravel or ironstone, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock fragments. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (eg from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel, which gives a core of about 50mm diameter, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS. The location of losses are determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the top end of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposes" – Test F3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of, say, 4, 6 and 7 blows, as

  N = 13
  4, 6, 7

- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as

  N>30
  15, 30/40mm

The results of the test can be related empirically to the engineering properties of the soil.

Occasionally, the drop hammer is used to drive 50mm diameter thin walled sample tubes (U50) in clays. In such circumstances, the test results are shown on the borehole logs in brackets.

A modification to the SPT test is where the same driving system is used with a solid 60° tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as "N_c" on the borehole logs, together with the number of blows per 150mm penetration.

Static Cone Penetrometer Testing and Interpretation: Cone penetrometer testing (sometimes referred to as a Dutch Cone) described in this report has been carried out using an Electronic Friction Cone Penetrometer (EFCP). The test is described in Australian Standard 1289, Test F5.1.

In the tests, a 35mm diameter rod with a conical tip is pushed continuously into the soil, the reaction being provided by a specially designed truck or rig which is fitted with an hydraulic ram system. Measurements are made of the end bearing resistance on the cone and the frictional resistance on a separate 134mm long sleeve, immediately behind the cone. Transducers in the tip of the assembly are electrically connected by wires passing through the centre of the push rods to an amplifier and recorder unit mounted on the control truck.

As penetration occurs (at a rate of approximately 20mm per second) the information is output as incremental digital records every 10mm. The results given in this report have been plotted from the digital data.

The information provided on the charts comprise:

- Cone resistance – the actual end bearing force divided by the cross sectional area of the cone – expressed in MPa.
- Sleeve friction – the frictional force on the sleeve divided by the surface area – expressed in kPa.
- Friction ratio – the ratio of sleeve friction to cone resistance, expressed as a percentage.

  The ratios of the sleeve resistance to cone resistance will vary with the type of soil encountered, with higher relative friction in clays than in sands. Friction ratios of 1% to 2% are commonly encountered in sands and occasionally very soft clays, rising to 4% to 10% in stiff clays and peats. Soil descriptions based on cone resistance and friction ratios are only inferred and must not be considered as exact.

Correlations between EFCP and SPT values can be developed for both sands and clays but may be site specific.

Interpretation of EFCP values can be made to empirically derive modulus or compressibility values to allow calculation of foundation settlements.

Stratification can be inferred from the cone and friction traces and from experience and information from nearby boreholes etc. Where shown, this information is presented for general guidance, but must be regarded as interpretive. The test method provides a continuous profile of engineering properties but, where precise information on soil classification is required, direct drilling and sampling may be preferable.

Portable Dynamic Cone Penetrometers: Portable Dynamic Cone Penetrometer (DCP) tests are carried out by driving a rod into the ground with a sliding hammer and counting the blows for successive 100mm increments of penetration.

Two relatively similar tests are used:

- Cone penetrometer (commonly known as the Scala Penetrometer) – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS1289, Test F3.2). The test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various Road Authorities.
- Perth sand penetrometer – a 16mm diameter flat ended rod is driven with a 9kg hammer, dropping 600mm (AS1289, Test F3.3). This test was developed for testing the density of sands (originating in Perth) and is mainly used in granular soils and filling.

LOGS

The borehole or test pit logs presented herein are an engineering and/or geological interpretation of the sub-surface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will enable the most reliable assessment, but is not always practicable or possible to justify on economic grounds. In any case, the boreholes or test pits represent only a very small sample of the total subsurface conditions.

The attached explanatory notes define the terms and symbols used in preparation of the logs.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than "straight line" variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open.
- A localised perched water table may lead to an erroneous indication of the true water table.
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction.
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must be washed out of the hole or 'reverted' chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after stabilising at intervals ranging from several days to perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (eg bricks, steel etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably determine the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density, strength and material type is much greater than with natural soil deposits. Consequently, there is an increased risk of adverse engineering characteristics or behaviour. If the volume and quality of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes.

LABORATORY TESTING

Laboratory testing is normally carried out in accordance with Australian Standard 1289 *'Methods of Testing Soil for Engineering Purposes'*. Details of the test procedure used are given on the individual report forms.

ENGINEERING REPORTS

Engineering reports are prepared by qualified personnel and are based on the information obtained and on current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal (eg. a three storey building) the information and interpretation may not be relevant if the design proposal is changed (eg to a twenty storey building). If this happens, the company will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical aspects and recommendations or suggestions for design and construction. However, the Company cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions – the potential for this will be partially dependent on borehole spacing and sampling frequency as well as investigation technique.
- Changes in policy or interpretation of policy by statutory authorities.
- The actions of persons or contractors responding to commercial pressures.

If these occur, the company will be pleased to assist with investigation or advice to resolve any problems occurring.

SITE ANOMALIES

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, the company requests that it immediately be notified. Most problems are much more readily resolved when conditions are exposed that at some later stage, well after the event.

REPRODUCTION OF INFORMATION FOR CONTRACTUAL PURPOSES

Attention is drawn to the document *'Guidelines for the Provision of Geotechnical Information in Tender Documents'*, published by the Institution of Engineers, Australia. Where information obtained from this investigation is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. The company would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Copyright in all documents (such as drawings, borehole or test pit logs, reports and specifications) provided by the Company shall remain the property of Jeffery and Katauskas Pty Ltd. Subject to the payment of all fees due, the Client alone shall have a licence to use the documents provided for the sole purpose of completing the project to which they relate. License to use the documents may be revoked without notice if the Client is in breach of any objection to make a payment to us.

REVIEW OF DESIGN

Where major civil or structural developments are proposed or where only a limited investigation has been completed or where the geotechnical conditions/ constraints are quite complex, it is prudent to have a joint design review which involves a senior geotechnical engineer.

SITE INSPECTION

The company will always be pleased to provide engineering inspection services for geotechnical aspects of work to which this report is related.

Requirements could range from:

i) a site visit to confirm that conditions exposed are no worse than those interpreted, to

ii) a visit to assist the contractor or other site personnel in identifying various soil/rock types such as appropriate footing or pier founding depths, or

iii) full time engineering presence on site.

GRAPHIC LOG SYMBOLS FOR SOILS AND ROCKS

SOIL


FILL


TOPSOIL


CLAY (CL, CH)


SILT (ML, MH)


SAND (SP, SW)


GRAVEL (GP, GW)


SANDY CLAY (CL, CH)


SILTY CLAY (CL, CH)


CLAYEY SAND (SC)


SILTY SAND (SM)


GRAVELLY CLAY (CL, CH)


CLAYEY GRAVEL (GC)


SANDY SILT (ML)


PEAT AND ORGANIC SOILS

ROCK


CONGLOMERATE


SANDSTONE


SHALE


SILTSTONE, MUDSTONE, CLAYSTONE


LIMESTONE


PHYLLITE, SCHIST


TUFF


GRANITE, GABBRO


DOLERITE, DIORITE


BASALT, ANDESITE


QUARTZITE

DEFECTS AND INCLUSIONS


CLAY SEAM


SHEARED OR CRUSHED SEAM


BRECCIATED OR SHATTERED SEAM/ZONE


IRONSTONE GRAVEL


ORGANIC MATERIAL

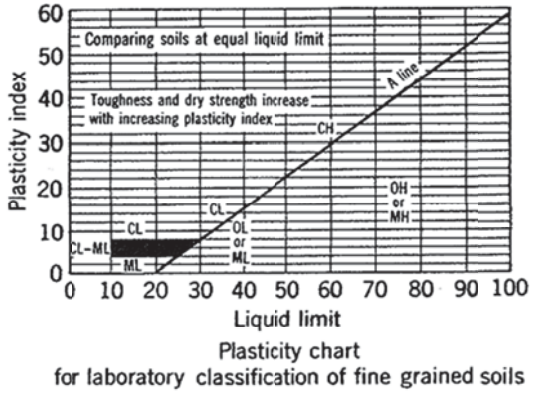
OTHER MATERIALS


CONCRETE


BITUMINOUS CONCRETE, COAL


COLLUVIUM

Field Identification Procedures (Excluding particles larger than 75 μm and basing fractions on estimated weights)				Group Symbols [a]	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria
Coarse-grained soils More than half of material is *larger* than 75 μm sieve size[b] (The smallest particle visible to naked eye)	Gravels More than half of coarse fraction is larger than 4 mm sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	*GW*	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics Example: *Silty sand*, gravelly; about 20% hard, angular gravel particles 12 mm maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (*SM*)	Use grain size curve in identifying the fractions as given under field identification Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than 75 μm sieve size) coarse grained soils are classified as follows: Less than 5% *GW, GP, SW, SP* More than 12% *GM, GC, SM, SC* 5% to 12% *Borderline* cases requiring use of dual symbols $C_U = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *GW* Atterberg limits below "A" line, or *PI* less than 4 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits above "A" line, with *PI* greater than 7 $C_U = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *SW* Atterberg limits below "A" line or *PI* less than 5 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits below "A" line with *PI* greater than 7
		Gravels with fines (appreciable amount of fines)	Predominantly one size or a range of sizes with some intermediate sizes missing	*GP*	Poorly graded gravels, gravel-sand mixtures, little or no fines		
			Nonplastic fines (for identification procedures see *ML* below)	*GM*	Silty gravels, poorly graded gravel-sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)	*GC*	Clayey gravels, poorly graded gravel-sand-clay mixtures		
	Sands More than half of coarse fraction is smaller than 4 mm sieve size	Clean sands (little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes	*SW*	Well graded sands, gravelly sands, little or no fines		
			Predominantly one size or a range of sizes with some intermediate sizes missing	*SP*	Poorly graded sands, gravelly sands, little or no fines		
		Sands with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures, see *ML* below)	*SM*	Silty sands, poorly graded sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)	*SC*	Clayey sands, poorly graded sand-clay mixtures		
Fine-grained soils More than half of material is *smaller* than 75 μm sieve size (The 75 μm sieve size is about the smallest particle visible to naked eye)	Identification Procedures on Fraction Smaller than 380 μm Sieve Size						
		Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)			
	Silts and clays liquid limit less than 50	None to slight	Quick to slow	None	*ML*	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions Example: *Clayey silt*, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (*ML*)
		Medium to high	None to very slow	Medium	*CL*	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		Slight to medium	Slow	Slight	*OL*	Organic silts and organic silt-clays of low plasticity	
	Silts and clays liquid limit greater than 50	Slight to medium	Slow to none	Slight to medium	*MH*	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		High to very high	None	High	*CH*	Inorganic clays of high plasticity, fat clays	
		Medium to high	None to very slow	Slight to medium	*OH*	Organic clays of medium to high plasticity	
Highly Organic Soils		Readily identified by colour, odour, spongy feel and frequently by fibrous texture			*Pt*	Peat and other highly organic soils	



Plasticity chart
for laboratory classification of fine grained soils

Note: 1 Soils possessing characteristics of two groups are designated by combinations of group symbols (eg. GW-GC, well graded gravel-sand mixture with clay fines).
2 Soils with liquid limits of the order of 35 to 50 may be visually classified as being of medium plasticity.

LOG SYMBOLS

LOG COLUMN	SYMBOL	DEFINITION
Groundwater Record	▼	Standing water level. Time delay following completion of drilling may be shown.
	C	Extent of borehole collapse shortly after drilling.
	▶	Groundwater seepage into borehole or excavation noted during drilling or excavation.
Samples	ES	Soil sample taken over depth indicated, for environmental analysis.
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.
	DB	Bulk disturbed sample taken over depth indicated.
	DS	Small disturbed bag sample taken over depth indicated.
	ASB	Soil sample taken over depth indicated, for asbestos screening.
	ASS	Soil sample taken over depth indicated, for acid sulfate soil analysis.
	SAL	Soil sample taken over depth indicated, for salinity analysis.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration. 'R' as noted below.
	N_c = 5 7 3R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60 degree solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25	Vane shear reading in kPa of Undrained Shear Strength.
	PID = 100	Photoionisation detector reading in ppm (Soil sample headspace test).
Moisture Condition (Cohesive Soils)	MC>PL	Moisture content estimated to be greater than plastic limit.
	MC≈PL	Moisture content estimated to be approximately equal to plastic limit.
	MC<PL	Moisture content estimated to be less than plastic limit.
(Cohesionless Soils)	D	DRY – Runs freely through fingers.
	M	MOIST – Does not run freely but no free water visible on soil surface.
	W	WET – Free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS	VERY SOFT – Unconfined compressive strength less than 25kPa
	S	SOFT – Unconfined compressive strength 25-50kPa
	F	FIRM – Unconfined compressive strength 50-100kPa
	St	STIFF – Unconfined compressive strength 100-200kPa
	VSt	VERY STIFF – Unconfined compressive strength 200-400kPa
	H	HARD – Unconfined compressive strength greater than 400kPa
	( )	Bracketed symbol indicates estimated consistency based on tactile examination or other tests.
Density Index/ Relative Density (Cohesionless Soils)		**Density Index (I_D) Range (%)** / **SPT 'N' Value Range (Blows/300mm)**
	VL	Very Loose <15 0-4
	L	Loose 15-35 4-10
	MD	Medium Dense 35-65 10-30
	D	Dense 65-85 30-50
	VD	Very Dense >85 >50
	( )	Bracketed symbol indicates estimated density based on ease of drilling or other tests.
Hand Penetrometer Readings	300 250	Numbers indicate individual test results in kPa on representative undisturbed material unless noted otherwise.
Remarks	'V' bit	Hardened steel 'V' shaped bit.
	'TC' bit	Tungsten carbide wing bit.
	T 60	Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.

LOG SYMBOLS continued

ROCK MATERIAL WEATHERING CLASSIFICATION

TERM	SYMBOL	DEFINITION
Residual Soil	RS	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
Extremely weathered rock	XW	Rock is weathered to such an extent that it has "soil" properties, ie it either disintegrates or can be remoulded, in water.
Distinctly weathered rock	DW	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by ironstaining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores.
Slightly weathered rock	SW	Rock is slightly discoloured but shows little or no change of strength from fresh rock.
Fresh rock	FR	Rock shows no sign of decomposition or staining.

ROCK STRENGTH

Rock strength is defined by the Point Load Strength Index (Is 50) and refers to the strength of the rock substance in the direction normal to the bedding. The test procedure is described by the International Journal of Rock Mechanics, Mining, Science and Geomechanics. Abstract Volume 22, No 2, 1985.

TERM	SYMBOL	Is (50) MPa	FIELD GUIDE
Extremely Low:	EL		Easily remoulded by hand to a material with soil properties.
----------	----------	0.03	
Very Low:	VL		May be crumbled in the hand. Sandstone is "sugary" and friable.
----------	----------	0.1	
Low:	L		A piece of core 150mm long x 50mm dia. may be broken by hand and easily scored with a knife. Sharp edges of core may be friable and break during handling.
----------	----------	0.3	
Medium Strength:	M		A piece of core 150mm long x 50mm dia. can be broken by hand with difficulty. Readily scored with knife.
----------	----------	1	
High:	H		A piece of core 150mm long x 50mm dia. core cannot be broken by hand, can be slightly scratched or scored with knife; rock rings under hammer.
----------	----------	3	
Very High:	VH		A piece of core 150mm long x 50mm dia. may be broken with hand-held pick after more than one blow. Cannot be scratched with pen knife; rock rings under hammer.
----------	----------	10	
Extremely High:	EH		A piece of core 150mm long x 50mm dia. is very difficult to break with hand-held hammer. Rings when struck with a hammer.

ABBREVIATIONS USED IN DEFECT DESCRIPTION

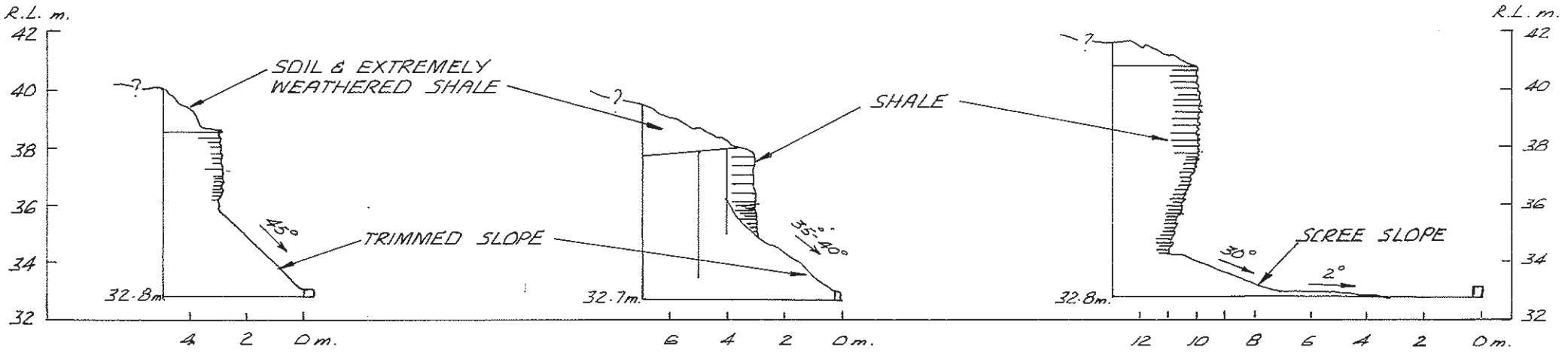
ABBREVIATION	DESCRIPTION	NOTES
Be	Bedding Plane Parting	Defect orientations measured relative to the normal to the long core axis (ie relative to horizontal for vertical holes)
CS	Clay Seam	
J	Joint	
P	Planar	
Un	Undulating	
S	Smooth	
R	Rough	
IS	Ironstained	
XWS	Extremely Weathered Seam	
Cr	Crushed Seam	
60t	Thickness of defect in millimetres	

APPENDIX A

SECTION 1

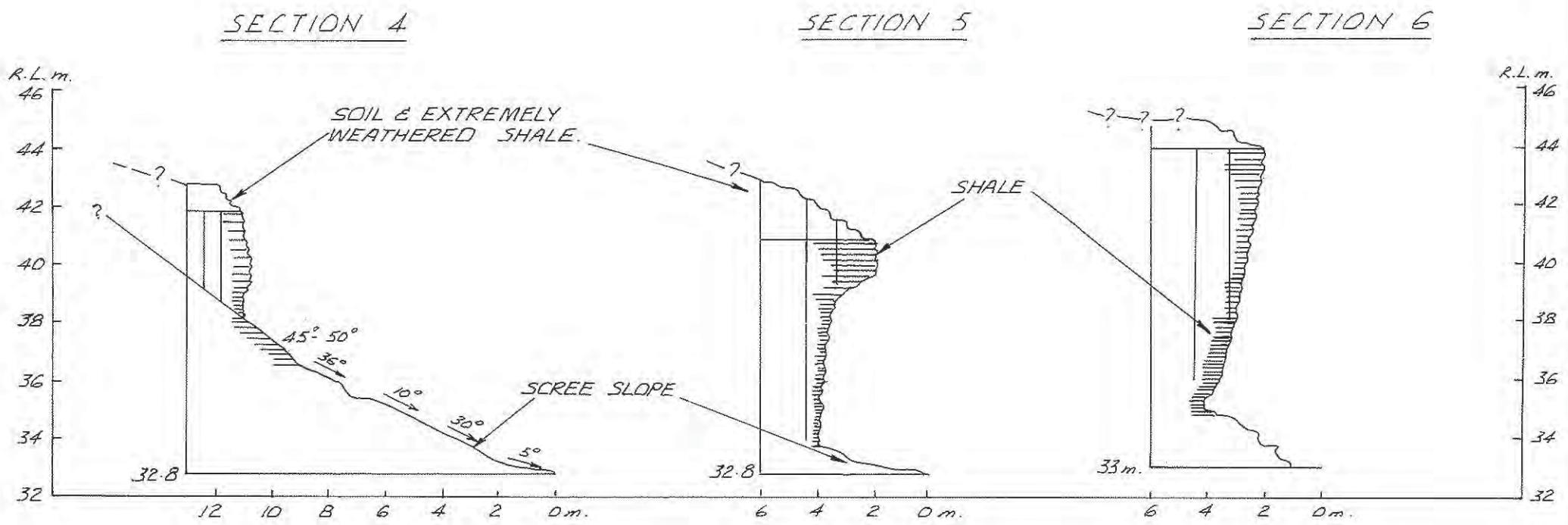
SECTION 2

SECTION 3



Jeffery and Katauskas Pty Ltd

Report No. 7676XS Figure No. 2



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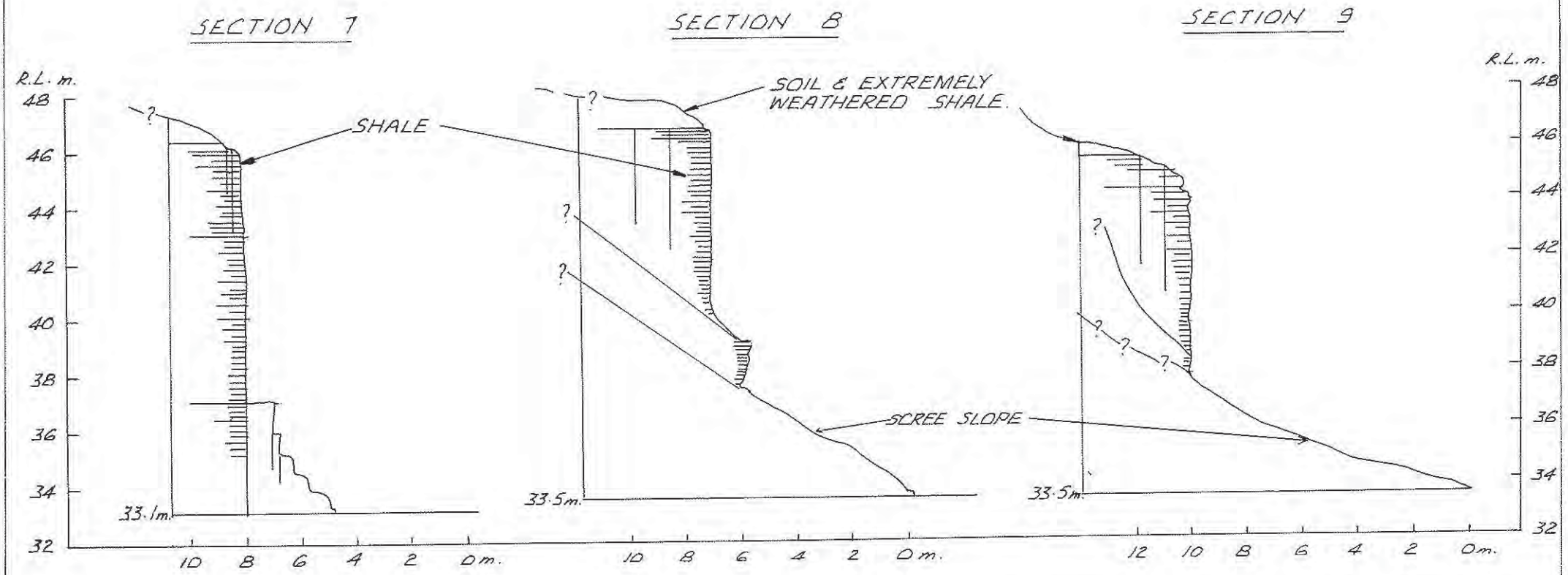
Report No. 7676KS Figure No. 3



Jeffery and Katauskas Pty Ltd

Report No. 76765 Figure No. 4

Appendix 8 – Traffic Impact Assessment

mecone

Traffic Impact Assessment

Proposed Mixed-Use Development
2-14 Tennyson Road, Gladesville

Reference: 16.560r01v02 TRAFFIX TIA
Date: December 2016

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Surry Hills NSW 2011
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traffix
traffic & transport planners

Document Verification

Job Number:	16.560			
Project:	Proposed Leisure Centre Expansion 2-14 Tennyson Road, Gladesville			
Client:	Grimshaw Architects Pty Ltd (Sydney)			
Revision	Date	Prepared By	Checked By	Signed
v01DRAFT	13/12/2016	Alexandra Kavanagh	Alexandra Kavanagh	
v02DRAFT	13/12/2016	Alexandra Kavanagh	GP	

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Contents

Appendices

1. Introduction

TRAFFIX has been commissioned by Grimshaw Architects Pty Limited to undertake a Traffic Impact Assessment of a Planning Proposal for the proposed Tennyson Village Development. The planning proposal seeks to rezone the light industrial site to mixed residential and commercial uses with a view to accommodating growth in the region.

The property is situated in Ryde Council Local Government Area and has been assessed under that Council's controls. The report documents the findings of our investigations and should be read in the context of the Planning Proposal, prepared separately.

The objective of this report is to test the traffic impacts of the concept plan that has been adopted for assessment purposes. In this regard, further detailed investigations will be undertaken at the future development application stage/s, at which time changed to the land use mix and intensity would be reasonably expected.

The report is structured as follows:

- Section 2: Describes the site and its location;
- Section 3: Documents existing traffic conditions;
- Section 4: Describes the proposed development;
- Section 5: Assesses the parking requirements;
- Section 6: Assesses traffic impacts;
- Section 7: Discusses access and internal design aspects;
- Section 8: Presents the overall study conclusions.

2. Location and Site

The site is located within the Gladesville business area and adjoins Gladesville Town Centre which lies generally to the east and southeast of the site, along the Victoria Road corridor. It is located to the east of Tennyson Road generally opposite Searle Street. The site currently comprises two separate Lots known as 2-12 Tennyson Road and 14 Tennyson Road. These Lots currently comprise light industrial, warehouse and commercial land uses with a total combined site area of 23,690m^2.

The site has an irregular configuration with a northern boundary of approximately 296 metres to a neighbouring commercial development, a southern boundary of approximately 169 metres to multiple residential developments, an eastern boundary of approximately 66 metres to multiple residential developments and a western frontage of approximately 140 metres to Tennyson Road.

There are currently two driveway crossings serving the site located immediately adjacent one another approximately 35 metres north of the Tennyson Road intersection with Potts Street. The northern driveway is 6.5 metres wide and currently serves the Lot 2-12 Tennyson Road and the southern driveway is 6.5 metres wide and serves the Lot 14 Tennyson Road.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**. Reference should also be made to the Photographic Record presented in **Appendix A**, which provides an appreciation of the general character of roads and other key attributes in proximity to the site.

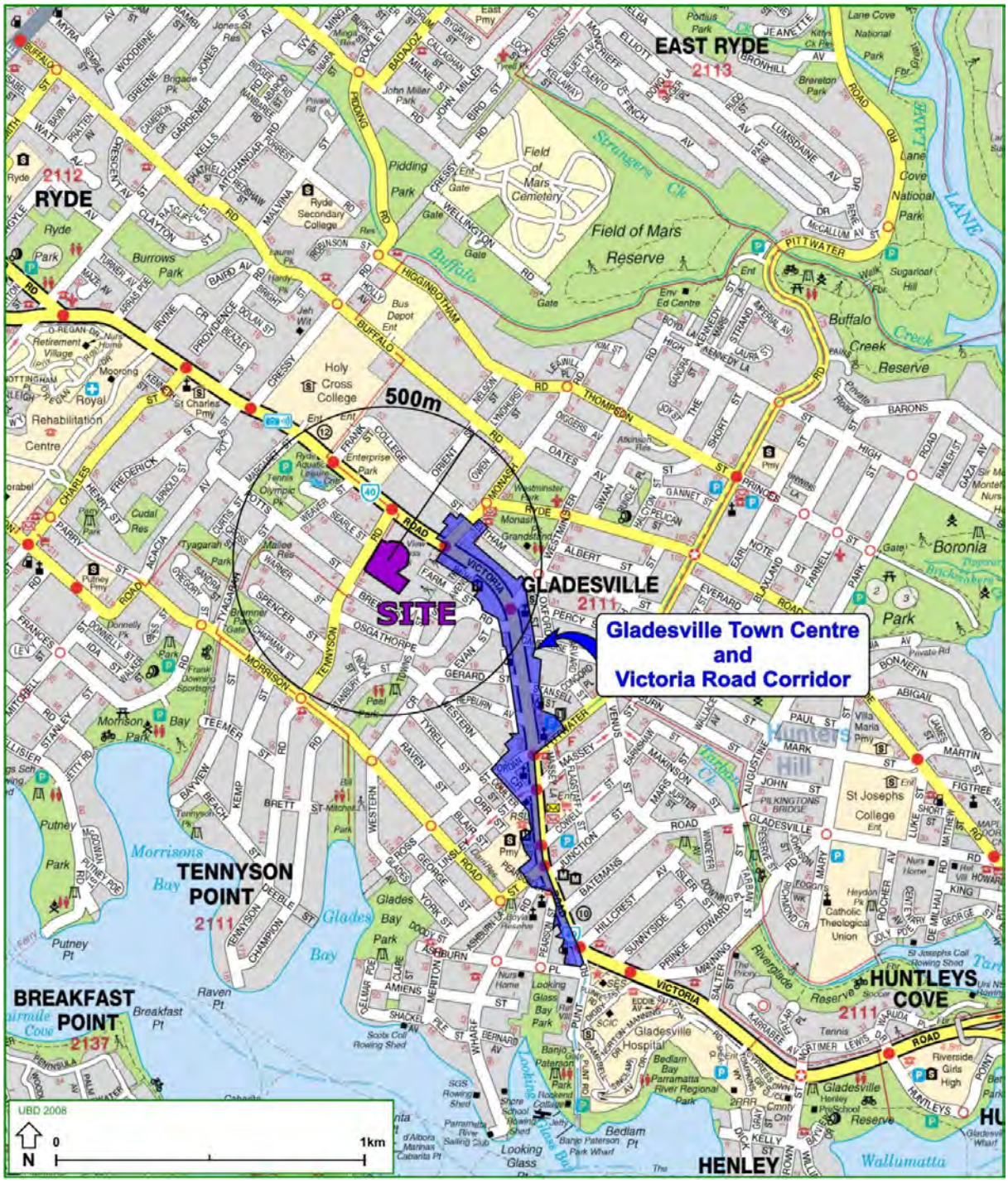


Figure 1: Location Plan

Figure 2: Site Plan

3. Existing Traffic Conditions

3.1 Road Network

The road hierarchy in the locality is shown in **Figure 3** with the following roads of particular interest:

- Victoria Road: an RMS Main Road (MR 165) that generally runs in an east-west direction between Parramatta in the west and Pyrmont and the Western Distributor in the east. Victoria Road is subject to clearway restrictions and does not provide any on-street parking. In the vicinity of the site Victoria Road is subject to a 60km/h speed zoning and generally carries two lanes of traffic and two bus lanes, one in each direction, within a divided carriageway.

- Tennyson Road: a local collector road that generally runs in a north-south direction from Victoria Road in the north to its termination just to the south of its intersection with Champion Road. It generally permits unrestricted kerbside parallel parking and is subject to a 50km/h speed zoning. Tennyson Road carries a single lane of traffic in either direction along an undivided carriageway. Access to the subject site is provided via Tennyson Road.

- Searle Street: a local road that runs in an east-west direction between Tennyson Road in the east and Weaver Street in the west. Searle Street is subject to a 50km/h speed zoning and carries a single lane of traffic in either direction.

- Morrison Road: a local collector road that generally runs in an east-west direction between Church Street in the west and Pyrmont and Victoria Road in the east. Morrison Road intersects with Tennyson Road in the form of a roundabout about 500 metres southwest of the subject site. In the vicinity of the roundabout, Morrison Road is subject to a 50km/h speed zoning, carries two lanes of traffic (one in each direction) and provides unrestricted parking on both sides.

It can be seen from **Figure 3** that the site is conveniently located with respect to the arterial and local road systems serving the region, in particular the Victoria Road corridor to the north of the site and the Morrison Road corridor to the south of the site. It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts. Indeed, the site is a logical extension of the existing Gladesville Town Centre.

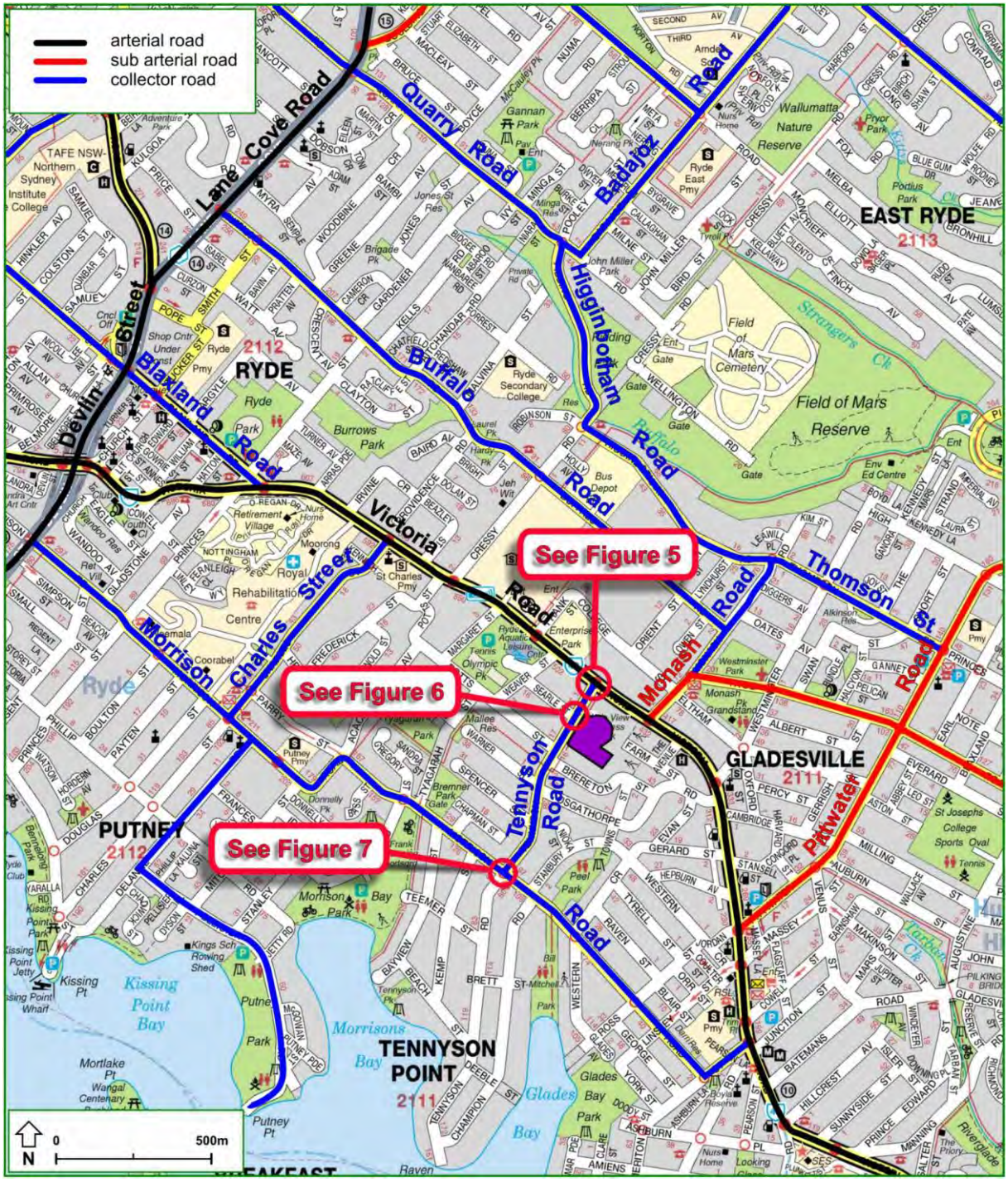


Figure 3: Existing Road Hierarchy

3.2 Public Transport

3.2.1 Bus Services

Numerous bus services operate along Victoria Road as shown on **Figure 4**. It is noteworthy that the target walking distance to bus stops is 400 metres. In this regard, two bus stops (one in each direction) are located within this 400 metre target walking distance as shown on Figure 4. Bus routes servicing these stops are summarised as follows:

- M52 – Metrobus Parramatta to Circular Quay via Drummoyne;
- x00,500 – Ryde to City;
- 501, 510, 515 – Ryde to City;
- 507, X18, 518 – Macquarie University to City;
- 520 – Parramatta to City via West Ryde.

The weekday frequencies of the more significant services are summarised in **Table 1**.

Table 1: Bus Routes and Service Attributes

Route Number	via	AM Peak Hour	Off-Peak Hour	PM Peak Hour
M52	Victoria Road	12	8	12
X,00,500	Victoria Road	4	1	2
501	Victoria Road	7	3	3
510	Victoria Road	13	0	5
515	Victoria Road	2	2	2
X18,518	Victoria Road	4	2	2
520	Victoria Road	2	1	0

Table 1 shows that the site is well serviced by buses along Victoria Road, with (on average) more than one bus service every two (2) minutes during the morning peak hour.

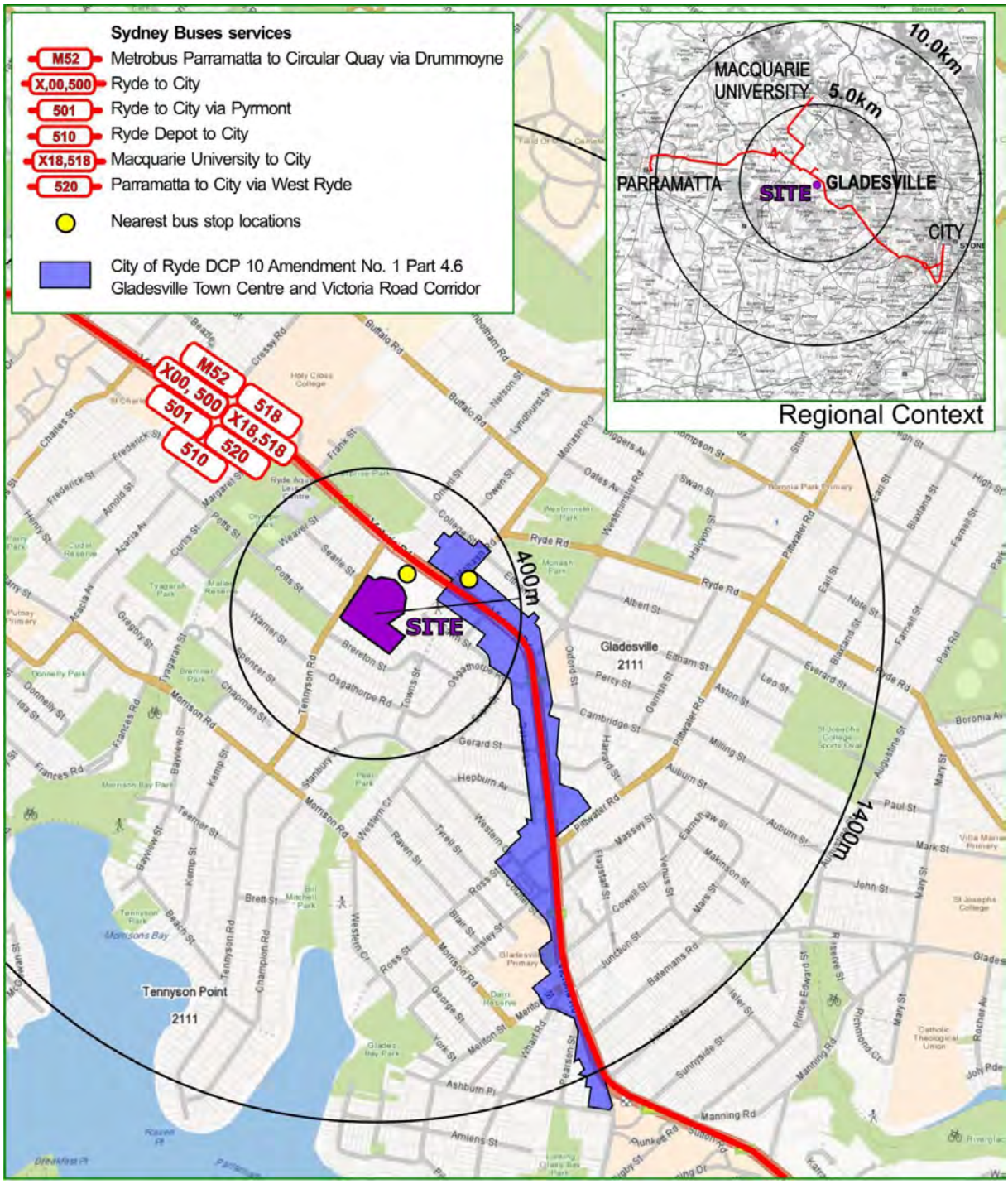


Figure 4: Existing Public Transport Services

3.3 Walking and Cycling

The site is located just on the outskirts of the Gladesville town centre footprint which itself is a growing retail and commercial centre. Its close proximity to the town centre means walking and cycling are viable forms of transport for commuting purposes. The nearest marked on-street cycling route is located to the south of the site along Morrison Road this links into the larger cycleway network providing routes to the Sydney CBD and Parramatta in the west. Footpaths are provided along both sides of Tennyson and Victoria Road providing safe pedestrian travel corridors.

3.4 Key Intersections

The key intersections in the vicinity of the site are shown below and provide an understanding of the existing road geometry and alignment:

Figure 5: Intersection of Victoria Road & Tennyson Road

It can be seen from **Figure 5** that Victoria Road carries two lanes of traffic in either direction and an additional bus lane in either direction in the vicinity of the site. Tennyson Road forms a 'T' intersection with Victoria Road, providing adequate sightlines in both directions. Pedestrian crossings are provided on all approaches except the Victoria Road east approach.

Figure 6: Intersection of Tennyson Road & Searle Street

It can be seen from **Figure 6** that Searle Street forms a roundabout intersection with Tennyson Road which is located immediately adjacent the subject site. Both Morrison Road and Tennyson Road carry a single lane of traffic in either direction.

Figure 7: Intersection of Tennyson Road & Morrison Road

It can be seen from **Figure 7** that Morrison Road forms a roundabout intersection with Tennyson Road which is located approximately 450 metres from the subject site. It is evident from the above figure that both Morrison and Tennyson Road carry a single lane of traffic in either direction.

3.5 Existing Intersection Performances

For the purposes of assessing the traffic impacts of the proposed rezoning, traffic surveys which were undertaken by R.O.A.R Data in 2013 have been reviewed. The traffic surveys were undertaken at the following intersections during a typical evening peak period in a previous assessment undertaken by TRAFFIX:

- The signalised intersection of Victoria Road with Tennyson Road;
- The roundabout intersection of Tennyson Road with Searle Street; and
- The existing site accesses to 2-12 Tennyson Road and 14 Tennyson Road.
- The priority controlled roundabout intersection of Tennyson Road with Morrison Road.

To establish the traffic conditions for this planning proposal TRAFFIX undertook a survey of the most critical intersection, being the signalised intersection of Victoria Road with Tennyson Road. This was undertaken to determine whether conditions had changed since the 2013 surveys, with the intention that significant changes would have triggered the need for more comprehensive surveys. That is, this methodology aimed to establish the growth on the network over the last three years. The results of the 2013 and 2016 survey are presented in **Figure 8** and **9** below.

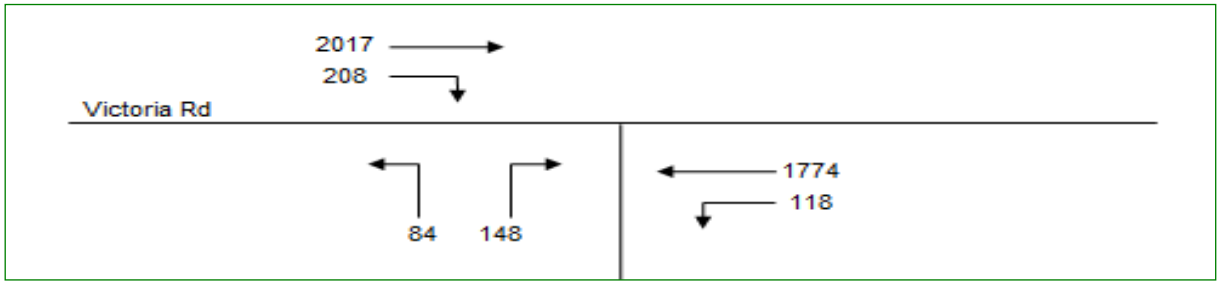


Figure 8: 2013 PM Peak Surveyed Traffic Counts

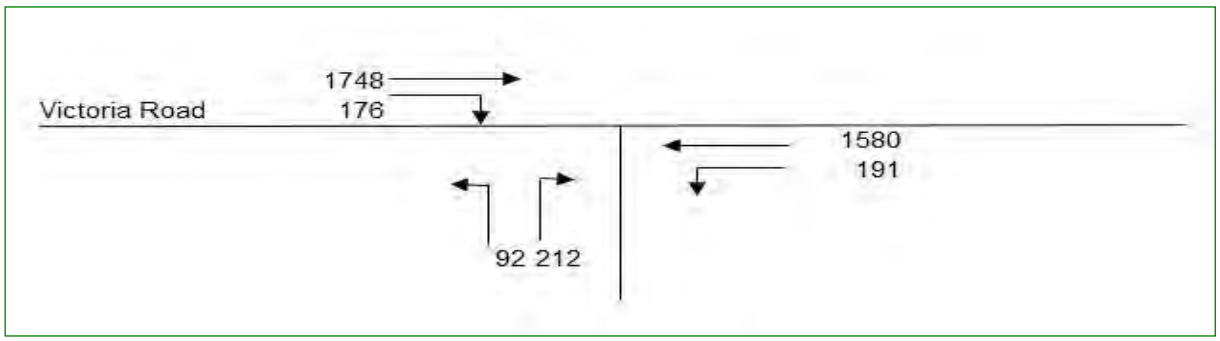


Figure 9: 2016 PM Peak Surveyed Traffic Counts

It is evident from Figures 8 and 9 that the volumes of traffic over the three (3) year period decreased for all manoeuvres on Victoria Road with the exception of the left turn from Victoria Road to Tennyson Road. Similarly, the left out and right out manoeuvres from Tennyson Road onto Victoria Road have also increased in volume during the PM peak period.

Based on the higher volumes for the critical turns associated with this development, the 2016 surveys were adopted as a worst case scenario. These turning counts were analysed using the SIDRA computer program to determine their performance characteristics under existing traffic conditions. The SIDRA model produces a range of outputs, the most useful of which are the Degree of Saturation (DOS) and Average Vehicle Delay per vehicle (AVD). The AVD is in turn related to a level of service (LOS) criteria. These performance measures can be interpreted using the following explanations:

DOS – the DOS is a measure of the operational performance of individual intersections. As both queue length and delay increase rapidly as DOS approaches 1, it is usual to attempt to keep DOS to less than 0.9. When DOS exceeds 0.9 residual queues can be anticipated, as occurs at many major intersections throughout the metropolitan area during peak periods. In this regard, a practical limit at 1.1 can be assumed. For intersections controlled by roundabout or give way/stop control, satisfactory intersection operation is generally indicated by a DOS of 0.8 or less.

AVD – the AVD for individual intersections provides a measure of the operational performance of an intersection. In general, levels of acceptability of AVD for individual intersections depend on the time of day (motorists generally accept higher delays during peak commuter periods) and the road system being modelled (motorists are more likely to accept longer delays on side streets than on the main road system)..3

LOS – this is a comparative measure which provides an indication of the operating performance of an intersection as shown below:

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

A summary of the modelled results are provided in Table 2 for the 2013 survey of all intersections and the 2016 survey results of the critical Victoria Road and Tennyson Road intersection. Reference should also be made to the SIDRA outputs attached at **Appendix B**, which provide detailed results for all approaches.

Table 2: Existing Intersection Performance

Intersection Description	Survey Year	Peak Period	Control Type	Degree of Saturation(DOS)	Average Delay(sec)	Level of Service
Victoria Road x Tennyson Road	2016	PM	Signalised	0.763	8.2	A
	2013	PM		0.786	8.8	A
Tennyson Rd x Searle St	2013	PM	Roundabout	0.239	9.8	A
Tennyson Rd x Morrison Rd	2013	PM	Roundabout	0.620	13.3	A

The results in Table 2 show that in terms of delays, all intersections currently operate well with a Level of Service of A.

4. Description of Concept Development

4.1 Development Schedule

The Planning Proposal adopts a concept development for assessment purposes which is intended to secure Ryde Council support for the proposed 'Tennyson Village' residential development. A detailed description of the proposal is provided in the Planning Report prepared separately and the key aspects are summarised below:

- To establish for site 2-12 Tennyson Road a residential development comprising:
  - 288 residential units, consisting of:
    - 90 one-bed units;
    - 176 two-bed units;
    - 22 three- bed units.
  - 1,329m^2 GFA commercial component.
- To establish for site 14 Tennyson Road a residential development comprising:
  - 104 residential units, consisting of:
    - 28 one-bed units;
    - 50 two-bed units;
    - 26 three- bed units.
  - 685m^2 GFA commercial component.

Reference should be made to the architectural plans issued separately, which are attached to this report at reduced scale in **Appendix D**.

4.2 Vehicular Access

The proposed site access arrangement is premised on the assumption that the two-lot site will be developed in one stage. Under this scenario, two accesses would be constructed, as follows:

- Northern Site Access – consisting of a new fourth arm on to the existing roundabout of Tennyson Road with Searle Street, this direct access in to 2-12 Tennyson Road would provide access for the servicing vehicles and the loading requirements of the site.

- Southern Site Access – connecting to the road network via a priority (Give Way) T-intersection with Tennyson Road, this access would be located generally on the boundary of Lot 2-12 and Lot 14 Tennyson Road and would provide access to up to 659 car parking spaces for both Lot 2-12 and 14 Tennyson Road.

The design requirements of these proposed vehicular accesses would be compliant with AS2890.1 and AS2890.2 as well as Austroads Guidelines, as appropriate. Detailed design of the two access points will be confirmed in a subsequent Traffic Impact Assessment to accompany a development application/s for the site.

5. Parking Requirements

Parking requirements of the concept development adopted for the site for planning proposal purposes are subject to Ryde Council's Development Control Plan. This incorporates parking requirements for residential and commercial developments within the LGA as per **Table 4** below.

Table 4: Car Parking Rates and Provision

Type	No. / Area	Ryde Council DCP Parking Rate	Minimum Spaces Required	Maximum Spaces Required
One-bedroom unit	90	0.6 to 1 space	54	90
Two-bedroom unit	176	0.9 to 1.2 spaces	158	211
Three-bedroom unit	22	1.4 to 1.6 spaces	31	35
Visitor	288	1 space per 5 dwellings	58	58
		Total:	301	394
GFA	1,508m^2	1 space per 40m^2	38	
		Total:	38	
One-bedroom unit	28	0.6 to 1 space	17	28
Two-bedroom unit	50	0.9 to 1.2 spaces	45	60
Three-bedroom unit	26	1.4 to 1.6 spaces	36	42
Visitor	104	1 space per 5 dwellings	21	21
		Totals:	119	151
GFA	685m^2	1 space per 40m^2	18	
		Total:	18	
		Totals:	**476**	**601**

The site is capable of accommodating this range of parking supply and this will be assessed in further detail at subsequent development stage, when the proposed uses and yields will be further considered and refined.

6. Traffic Impacts

6.1 Traffic Generation

The proposed (concept) development will provide 392 residential apartments and 2,355 m^2 of commercial gross floor area. The trip generation calculate from the RMS Guide to Traffic Generating Developments is set out below.

Table 5: RMS Guide to Traffic Generating Developments

Development Type	Peak Period	RMS Rate	Indicative Development Yield	Calculated Trip Generation
Residential Trips	AM peak period	0.19 trips per unit	392 apartments	75
	PM peak period	0.15 trips per unit		59
Commercial Trips	AM peak period	1.2 trips per 100m^2 of GFA	2,355 m^2	29
	PM peak period	1.6 trips per 100m^2 of GFA		38

Application of the rates presented in Table 5 results in 104 vehicle trips in the AM peak period and 97 vehicle trips in the PM peak period. When an '80 out / 20 in' directional split is applied to the residential trips and a '20 out / 80' in directional split is applied to the commercial component is applied to these rates, the following traffic generation results:

- 104 vehicle trips during the AM peak period (38 in, 66 out)
- 97 vehicle trips in the PM peak period (55 in, 42 out)

It is noted that this is a very moderate level of generation compared with previous schemes for the site, which had a high proportion of non-residential uses, including higher retail component. In this regard, the predominant residential uses now sought are low traffic generating uses. Specifically, the previous scheme resulted in unacceptable queuing in Tennyson Road. To ensure that the revised Planning proposal does not have the same impact our distributions for the revision has been assessed with 100% of development traffic utilising the intersection of Tennyson Road and Victoria Road. Our assessment is discussed in further detail below.

6.2 Traffic Distribution

The above generations are a net increase over and above existing conditions. The AM and PM peak increase of 104 and 97 vehicle trips, respectively. The additional trips will be split in both directions (in / out) and distributed to the north and south along Tennyson Road, However, to maintain a conservative assessment on the development 100% of traffic has been assumed to travel through the critical intersection of Victoria Road and Tennyson Road. The distribution of this traffic is as follows:

- 40% of development traffic westbound towards Parramatta via Victoria Road
- 60% of development traffic eastbound toward the City via Victoria Road.

The same distribution has been applied to both the AM and PM Peak above the surveyed 2016 conditions. The results are provided in **Table 6** below.

Table 6: AM & PM Peak Hour Intersection Performances

Intersection Description	Development Stage	Control Type	Period	Intersection Delay (sec)	Level of Service	Degree of Saturation
Victoria Road / Tennyson Road	Existing	Signals	AM	9.2	A	0.743
			PM	12.3	A	0.796
	Existing + Development		AM	13.0	A	0.814
			PM	15.8	B	0.859

It is evident from the SIDRA modelling results included in Table 6 that the proposed development will have negligible impacts on the performance of both key intersections in the vicinity of the site. Indeed, the results confirm that all intersections modelled will continue to operate with existing Levels of Service A and B and that only very minor increases in delays would be experienced. Furthermore the right hand turn movements at the critical intersection have also been compared for:

- Existing Conditions
- The 2013 Planning Proposal Scenario; and
- The 2016 (current) Planning Proposal Scenario.

Table 7: Right Turn Movement Performance Summary

Leg/ Movement	Scenario	Period	Lane Delay (sec)	Level of Service	Degree of Saturation
Western Leg; Victoria Road	Existing	AM	27.8	B	0.661
		PM	36.9	C	0.669
	2013 Planning Proposal	AM	Not assessed		
		PM	89.6	F	1.031
	2016 Planning Proposal	AM	43.0	D	0.699
		PM	50.1	D	0.724
Southern Leg; Tennyson Road	Existing	AM	73.1	F	0.738
		PM	70.8	F	0.795
	2013 Planning Proposal	AM	Not assessed		
		PM	115.1	F	0.992
	2016 Planning Proposal	AM	71.4	F	0.809
		PM	71.6	F	0.841

As can be seen from Table 7 above, the previous 2013 planning proposal saw significant delays on the right turn movements at the intersection of Victoria Road and Tennyson Road. The results show the revised 2016 Planning Proposal will result in increases in delay for the western leg of Victoria Road's right turn to Tennyson Road during the AM and PM peak period. However, an acceptable Level of Service of D will be experienced for the movement. During the AM and PM peak, the right turn movement from Tennyson Road onto Victoria Road will continue to experience a Level of Service F with delays considered comparable to existing conditions.

The traffic impacts of the proposed (concept) development are therefore considered acceptable and will be accommodated by the existing road network, with no external improvements required. Notwithstanding, this is a matter that will be further considered at development application stage when the development will need to be assessed on its merits.

8. Conclusions

In summary:

- This report has been structured and is intended as a 'high level' assessment report, which is considered sufficient for achieving Council approval. The proposal primarily seeks to rezone a light industrial site to a mixed residential and commercial use in close proximity to the Gladesville Town Centre and Victoria Road Corridor. The revised proposal
- Vehicular Access
  - Northern Site Access – consisting of a new fourth arm on to the existing roundabout of Tennyson Road with Searle Street, this direct access in to 2-12 Tennyson Road would provide access for the servicing vehicles and the loading requirements of the site.
  - Southern Site Access – connecting to the road network via a priority (Give Way) T-intersection with Tennyson Road, this access would be located generally on the boundary of Lot 2-12 and Lot 14 Tennyson Road and would provide access to up to 659 car parking spaces for both Lot 2-12 and 14 Tennyson Road.
- The proposed development will be require a provision of 476 to 601 parking spaces under Ryde Council's Development Control Plan (DCP) 2011.
- Traffic Generation
  - Based on the latest RMS Guidance, the development is forecast to generate an additional 104 vehicle trips and 97 vehicle trips in the AM and PM peak periods, respectively.
- Network Performance Testing
  - Intersection of Victoria Road with Tennyson Road:
    - Under all scenarios tested, the intersection is forecast to operate with an acceptable delays and Levels of Service of A or B;
- Internal Design
  - The internal access arrangements, including car parking ,will be designed in accordance with the Australian Standard requirements of AS2890.1 (2004) *Part 1: Off-street car parking*,

AS2890.2 (2002) *Part 2: Off-street commercial vehicle facilities,* AS2890.6 (2009) *Part 6: Off-street parking for people with disabilities* and AS4299 (1995) *Adaptable housing*.

This report demonstrates that the proposed rezoning is supportable on traffic planning grounds, based on the concept plan that has been adopted for assessment purposes, recognising that further detailed investigations will be undertaken at the future development application stage. It is therefore concluded that the Planning Proposal is supportable on traffic and transport planning grounds, subject to further detailed traffic and transport modelling as part of a subsequent detailed assessment and consultation process.

Appendix A

Photographic Record

View looking east towards the site at the current site accesses to 2-12 Tennyson Road and 14 Tennyson Road

View looking south along Tennyson Road from the proposed southern site access location

View looking north along Tennyson Road from the proposed southern site access location

View looking north along Tennyson Road towards its roundabout intersection with Searle Street

View looking south along Tennyson Road towards its roundabout intersection with Searle Street

View looking north along Tennyson Road towards its signalised intersection with Victoria Road

View looking west along Victoria Road towards its signalised intersection with Tennyson Road

View looking east along Victoria Road towards its signalised intersection with Tennyson Road

Appendix B

Survey Results

R.O.A.R. DATA

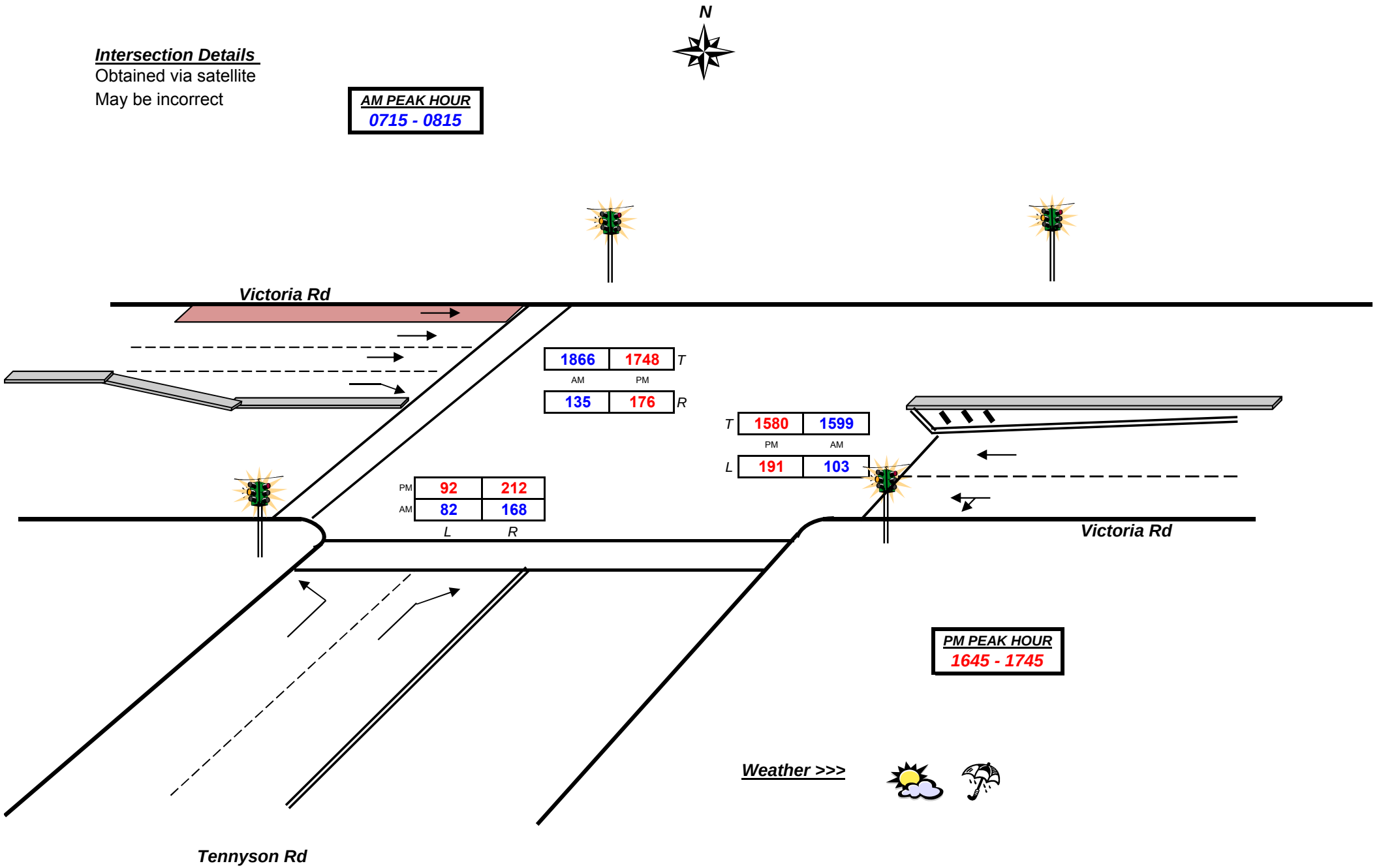
Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Traffix
Job No/Name : 6301 GLADESVILLE Tennyson Rd
Day/Date : Wednesday 23rd November 2016

Intersection Details
Obtained via satellite
May be incorrect

AM PEAK HOUR
0715 - 0815



PM PEAK HOUR
1645 - 1745

Weather >>>

Appendix C

SIDRA Outputs

MOVEMENT SUMMARY

Site: 1 [2013 Existing (PM Peak)]

INT: Victoria x Tennyson
SCENARIO: 2013 Existing Traffic (Existing Layout)
PERIOD: Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 144 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Tennyson Rd											
1	L2	88	2.0	0.160	43.4	LOS D	4.5	31.9	0.77	0.74	19.2
3	R2	156	2.0	0.691	72.1	LOS F	10.9	77.5	1.00	0.83	11.9
Approach		244	2.0	0.691	61.7	LOS E	10.9	77.5	0.92	0.80	14.0
East: Victoria Rd											
4	L2	124	5.0	0.878	20.7	LOS B	45.4	331.6	0.70	0.69	30.6
5	T1	1867	5.0	0.878	15.3	LOS B	46.5	339.6	0.70	0.68	37.8
Approach		1992	5.0	0.878	15.7	LOS B	46.5	339.6	0.70	0.68	37.4
West: Victoria Rd											
11	T1	2123	5.0	0.729	0.9	LOS A	5.1	37.1	0.08	0.07	58.1
12	R2	219	5.0	0.689	52.8	LOS D	11.6	84.8	1.00	0.98	17.0
Approach		2342	5.0	0.729	5.7	LOS A	11.6	84.8	0.16	0.16	48.9
All Vehicles		4578	4.8	0.878	13.0	LOS A	46.5	339.6	0.44	0.42	39.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	13.8	LOS B	0.1	0.1	0.44	0.44
P4	West Full Crossing	53	66.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		105	40.0	LOS E			0.70	0.70

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1 [2016 Existing (AM Peak)]

INT: Victoria x Tennyson
SCENARIO: 23rd November 2016
PERIOD: AM
Signals - Fixed Time Coordinated Cycle Time = 145 seconds (Optimum Cycle Time - Minimum Degree of Saturation)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Tennyson Rd											
1	L2	86	0.0	0.180	48.8	LOS D	4.7	32.8	0.81	0.75	17.8
3	R2	177	0.0	0.738	73.1	LOS F	12.6	88.2	1.00	0.85	11.8
Approach		263	0.0	0.738	65.1	LOS E	12.6	88.2	0.94	0.82	13.4
East: Victoria Rd											
4	L2	201	0.0	0.743	12.4	LOS A	21.8	152.7	0.37	0.43	39.0
5	T1	1663	0.0	0.743	7.2	LOS A	23.3	163.3	0.38	0.40	46.5
Approach		1864	0.0	0.743	7.8	LOS A	23.3	163.3	0.38	0.40	45.8
West: Victoria Rd											
11	T1	1840	0.0	0.616	0.7	LOS A	3.2	22.4	0.06	0.05	58.4
12	R2	185	0.0	0.661	27.8	LOS B	10.1	70.7	1.00	0.91	25.4
Approach		2025	0.0	0.661	3.2	LOS A	10.1	70.7	0.14	0.13	53.1
All Vehicles		4153	0.0	0.743	9.2	LOS A	23.3	163.3	0.30	0.29	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	11.2	LOS B	0.1	0.1	0.39	0.39
P4	West Full Crossing	53	65.8	LOS F	0.2	0.2	0.95	0.95
All Pedestrians		105	38.5	LOS D			0.67	0.67

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1 [2016 Existing (PM Peak)]

INT: Victoria x Tennyson
SCENARIO: 2013 Existing Traffic (Existing Layout)
PERIOD: Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 144 seconds (Optimum Cycle Time - Minimum Degree of Saturation)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Tennyson Rd											
1	L2	97	0.0	0.173	43.5	LOS D	4.9	34.5	0.77	0.74	19.2
3	R2	223	0.0	0.795	70.8	LOS F	15.8	110.8	1.00	0.89	12.1
Approach		320	0.0	0.795	62.5	LOS E	15.8	110.8	0.93	0.84	13.8
East: Victoria Rd											
4	L2	201	0.0	0.796	17.1	LOS B	32.6	228.1	0.56	0.58	33.6
5	T1	1663	0.0	0.796	12.0	LOS A	33.9	237.6	0.57	0.56	40.8
Approach		1864	0.0	0.796	12.5	LOS A	33.9	237.6	0.57	0.56	40.2
West: Victoria Rd											
11	T1	1840	0.0	0.645	0.8	LOS A	3.4	24.0	0.06	0.06	58.2
12	R2	185	0.0	0.669	36.9	LOS C	9.6	66.9	1.00	0.92	21.6
Approach		2025	0.0	0.669	4.1	LOS A	9.6	66.9	0.15	0.13	51.5
All Vehicles		4209	0.0	0.796	12.3	LOS A	33.9	237.6	0.39	0.38	40.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	13.8	LOS B	0.1	0.1	0.44	0.44
P4	West Full Crossing	53	60.6	LOS F	0.2	0.2	0.92	0.92
All Pedestrians		105	37.2	LOS D			0.68	0.68

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1 [2016 Existing + Development (AM Peak)]

INT: Victoria x Tennyson
SCENARIO: 23rd November 2016
PERIOD: AM
Signals - Fixed Time Coordinated Cycle Time = 142 seconds (Optimum Cycle Time - Minimum Degree of Saturation)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Tennyson Rd											
1	L2	114	0.0	0.201	42.9	LOS D	5.7	40.1	0.78	0.75	19.3
3	R2	219	0.0	0.809	71.4	LOS F	15.5	108.6	1.00	0.90	12.0
Approach		333	0.0	0.809	61.6	LOS E	15.5	108.6	0.92	0.85	14.0
East: Victoria Rd											
4	L2	225	0.0	0.814	17.7	LOS B	34.7	243.0	0.60	0.62	32.9
5	T1	1663	0.0	0.814	12.6	LOS A	36.1	253.0	0.61	0.59	40.1
Approach		1888	0.0	0.814	13.2	LOS A	36.1	253.0	0.60	0.59	39.4
West: Victoria Rd											
11	T1	1840	0.0	0.642	0.8	LOS A	3.4	23.5	0.06	0.06	58.2
12	R2	201	0.0	0.699	43.0	LOS D	10.4	73.1	1.00	0.95	19.6
Approach		2041	0.0	0.699	5.0	LOS A	10.4	73.1	0.15	0.14	50.1
All Vehicles		4262	0.0	0.814	13.0	LOS A	36.1	253.0	0.41	0.40	39.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	14.0	LOS B	0.1	0.1	0.44	0.44
P4	West Full Crossing	53	60.6	LOS F	0.2	0.2	0.92	0.92
All Pedestrians		105	37.3	LOS D			0.68	0.68

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1 [2016 Existing + Development (PM Peak)]

INT: Victoria x Tennyson
SCENARIO: 2013 Existing Traffic (Existing Layout)
PERIOD: Evening Peak Hour
Signals - Fixed Time Coordinated Cycle Time = 142 seconds (Optimum Cycle Time - Minimum Degree of Saturation)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Tennyson Rd											
1	L2	115	0.0	0.186	39.8	LOS C	5.5	38.8	0.75	0.74	20.3
3	R2	249	0.0	0.841	71.6	LOS F	17.9	125.6	1.00	0.92	12.0
Approach		364	0.0	0.841	61.6	LOS E	17.9	125.6	0.92	0.86	14.0
East: Victoria Rd											
4	L2	236	0.0	0.859	22.0	LOS B	43.2	302.1	0.73	0.73	29.2
5	T1	1663	0.0	0.859	16.9	LOS B	44.4	311.0	0.73	0.71	36.2
Approach		1899	0.0	0.859	17.5	LOS B	44.4	311.0	0.73	0.71	35.5
West: Victoria Rd											
11	T1	1840	0.0	0.661	1.1	LOS A	4.2	29.1	0.07	0.07	57.7
12	R2	208	0.0	0.724	50.1	LOS D	10.6	74.2	1.00	0.96	17.7
Approach		2048	0.0	0.724	6.0	LOS A	10.6	74.2	0.17	0.16	48.4
All Vehicles		4312	0.0	0.859	15.8	LOS B	44.4	311.0	0.48	0.46	36.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	15.8	LOS B	0.1	0.1	0.47	0.47
P4	West Full Crossing	53	57.8	LOS E	0.2	0.2	0.90	0.90
All Pedestrians		105	36.8	LOS D			0.69	0.69

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Appendix D

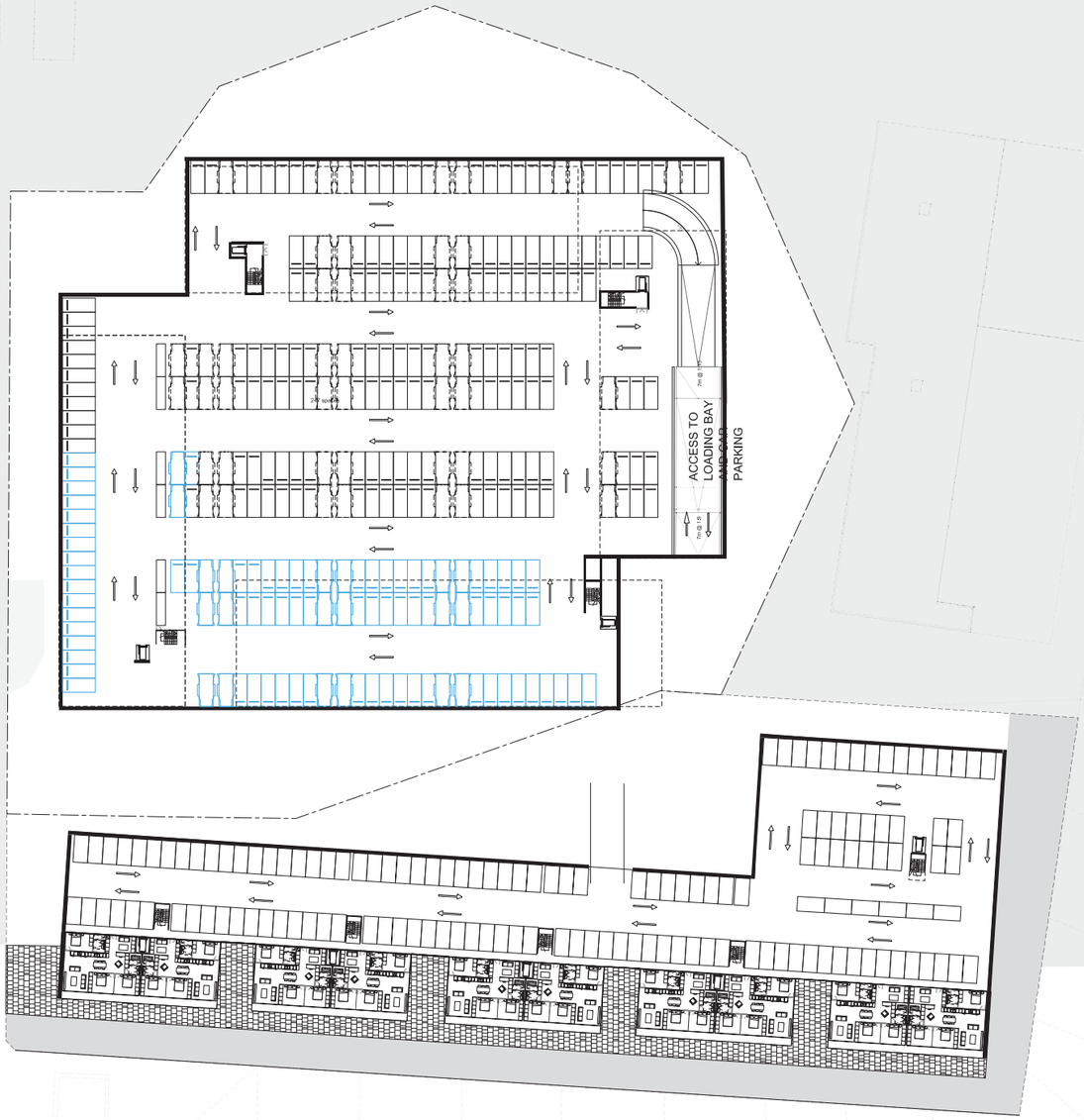
Reduced Architectural Plans

2-12 TENNYSON ROAD TOTAL GFA SUMMARY

BASEMENT	= 0,00m²
L GROUND	= 1595.00m²
GROUND	= 4328,00m²
LEVEL 01	= 4404,00m²
LEVEL 02	= 4404,00m²
LEVEL 03	= 4404,00m²
LEVEL 04	= 4404,00m²
LEVEL 05	= 2887.00m²
LEVEL 06	= 1092.00m²

14 TENNYSON ROAD TOTAL GFA SUMMARY

BASEMENT	= 1215,00m²
L GROUND	= 2890.00m²
GROUND	= 2890.00m²
LEVEL 01	= 2156,00m²



GRIMSHAW

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REV.	DATE	FOR
A	03-08-2016	CLIENT APPROVAL

CONSULTANT
JOANDARC KHOUZAME
1, 17/90-96 BOURKE ROAD
ALEXANDRIA, NSW 201

DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD
GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

SCALE
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PLANNING PROPOSAL

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RP	MG	—

DRAWING NUMBER
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REVISION
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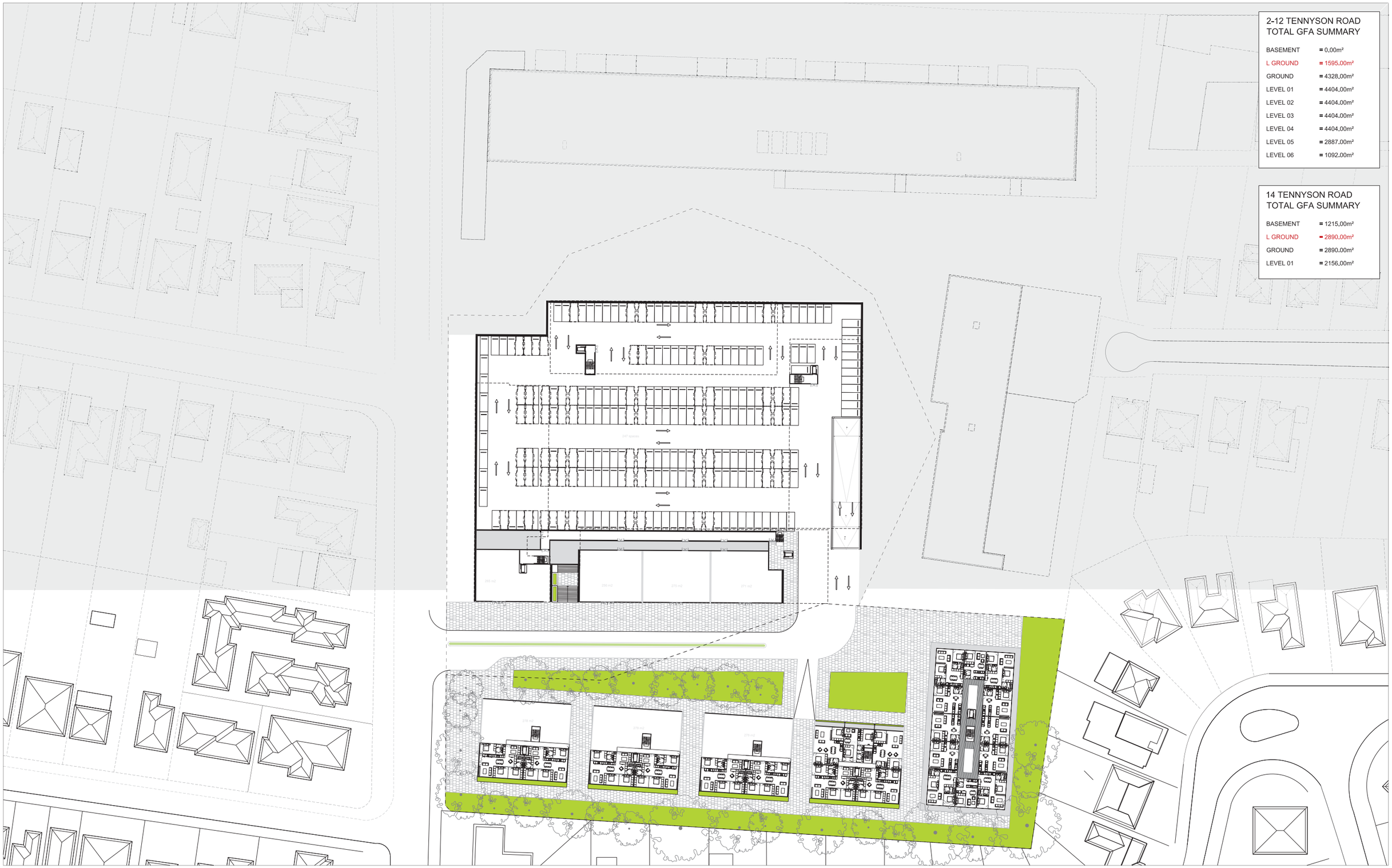

2-12 TENNYSON ROAD TOTAL GFA SUMMARY

BASEMENT	= 0.00m²
L GROUND	= 1595.00m²
GROUND	= 4328.00m²
LEVEL 01	= 4404.00m²
LEVEL 02	= 4404.00m²
LEVEL 03	= 4404.00m²
LEVEL 04	= 4404.00m²
LEVEL 05	= 2887.00m²
LEVEL 06	= 1092.00m²

14 TENNYSON ROAD TOTAL GFA SUMMARY

BASEMENT	= 1215.00m²
L GROUND	= 2890.00m²
GROUND	= 2890.00m²
LEVEL 01	= 2156.00m²

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REV.	DATE	FOR
A	03-08-2016	CLIENT APPROVAL

CONSULTANT
JOANDARC KHOUZAME
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ALEXANDRIA, NSW 201

DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

SCALE
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STATUS
PLANNING PROPOSAL

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DRAWN	CHECKED	AUTHORISED
RP	MG	AC

DRAWING NUMBER
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REVISION
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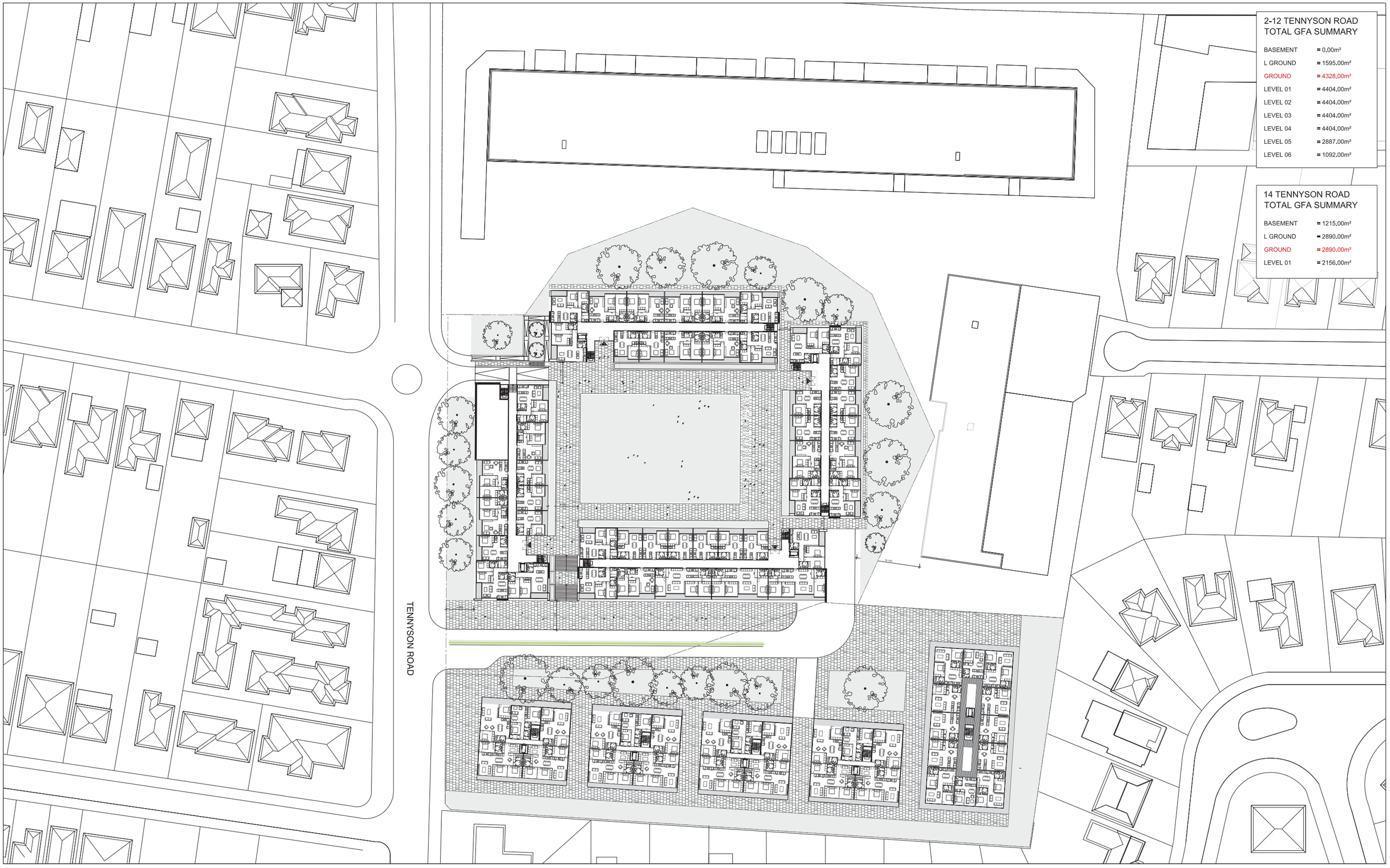

2-12 TENNYSON ROAD TOTAL GFA SUMMARY

BASEMENT	= 0.00m²
L GROUND	= 1595.00m²
GROUND	= 4328.00m²
LEVEL 01	= 4404.00m²
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A	03-08-2016	CLIENT APPROVAL

CONSULTANT
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ALEXANDRIA, NSW 201

DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

SCALE
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STATUS
PLANNING PROPOSAL

DRAWING
GROUND FLOOR

DRAWN	CHECKED	AUTHORISED
RP	MG	AC

DRAWING NUMBER
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REVISION
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SSWSTEP05

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TOTAL GFA SUMMARY

BASEMENT	= 0.00m²
L GROUND	= 1595.00m²
GROUND	= 4328.00m²
LEVEL 01	= 4404.00m²
LEVEL 02	= 4404.00m²
LEVEL 03	= 4404.00m²
LEVEL 04	= 4404.00m²
LEVEL 05	= 2887.00m²
LEVEL 06	= 1092.00m²

14 TENNYSON ROAD
TOTAL GFA SUMMARY

BASEMENT	= 1215.00m²
L GROUND	= 2890.00m²
GROUND	= 2890.00m²
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REV.	DATE	FOR
A	03-08-2016	CLIENT APPROVAL

CONSULTANT
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DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD
GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

SCALE
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STATUS
PLANNING PROPOSAL

DRAWING
TYPICAL FLOOR

DRAWN	CHECKED	AUTHORISED
RP	MG	AC

DRAWING NUMBER
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REVISION
A

SHEET PDF05

2-12 TENNYSON ROAD
TOTAL GFA SUMMARY

BASEMENT	= 0.00m²
L GROUND	= 1595.00m²
GROUND	= 4328.00m²
LEVEL 01	= 4404.00m²
LEVEL 02	= 4404.00m²
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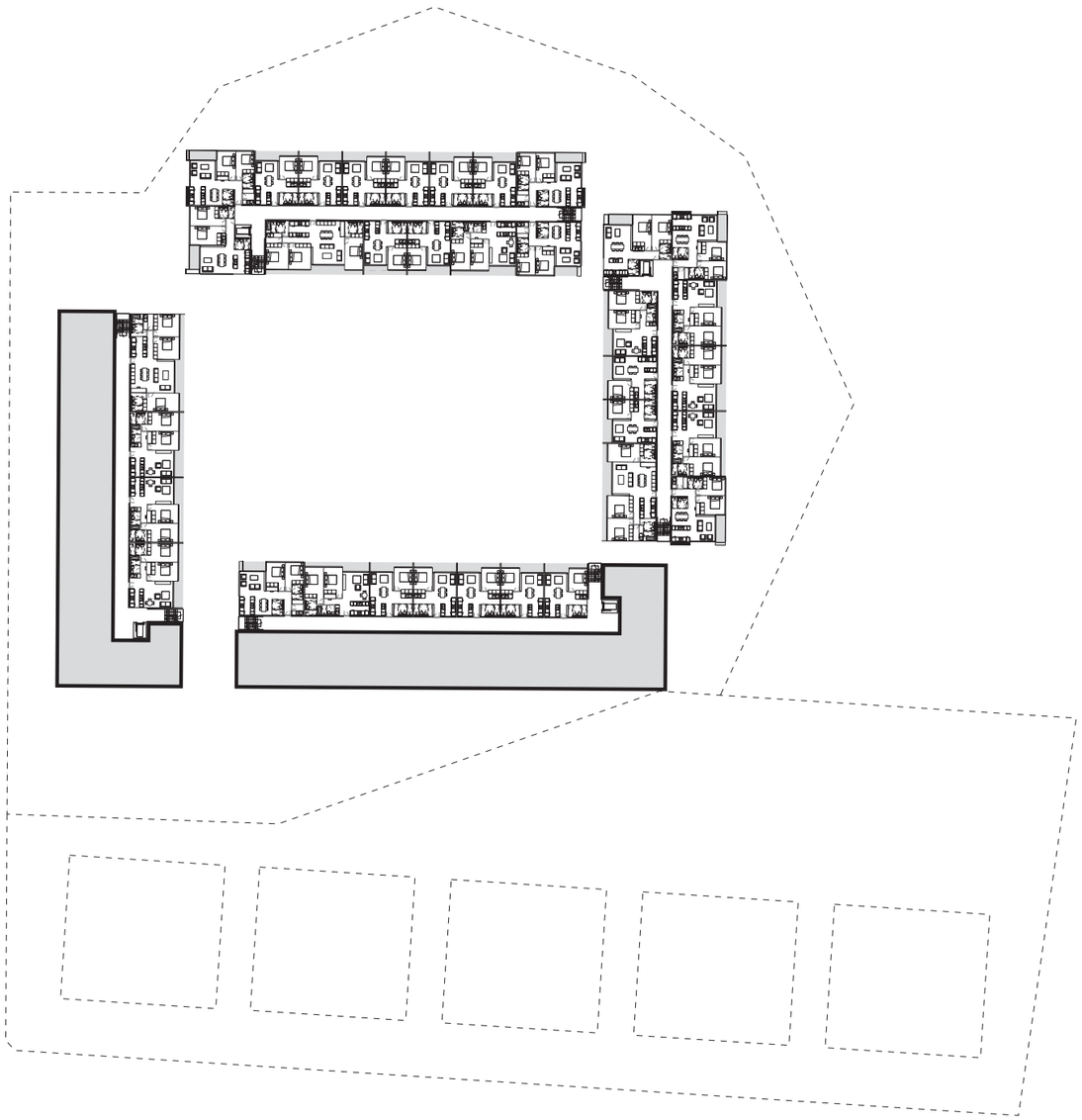

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A	03-08-2016	CLIENT APPROVAL

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ALEXANDRIA, NSW 201

DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD
GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

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STATUS
PLANNING PROPOSAL

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LEVEL 05

DRAWN	CHECKED	AUTHORISED
RP	MG	AC

DRAWING NUMBER
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REVISION
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SHEET INFOS

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TOTAL GFA SUMMARY

BASEMENT	= 0.00m²
L GROUND	= 1595.00m²
GROUND	= 4328.00m²
LEVEL 01	= 4404.00m²
LEVEL 02	= 4404.00m²
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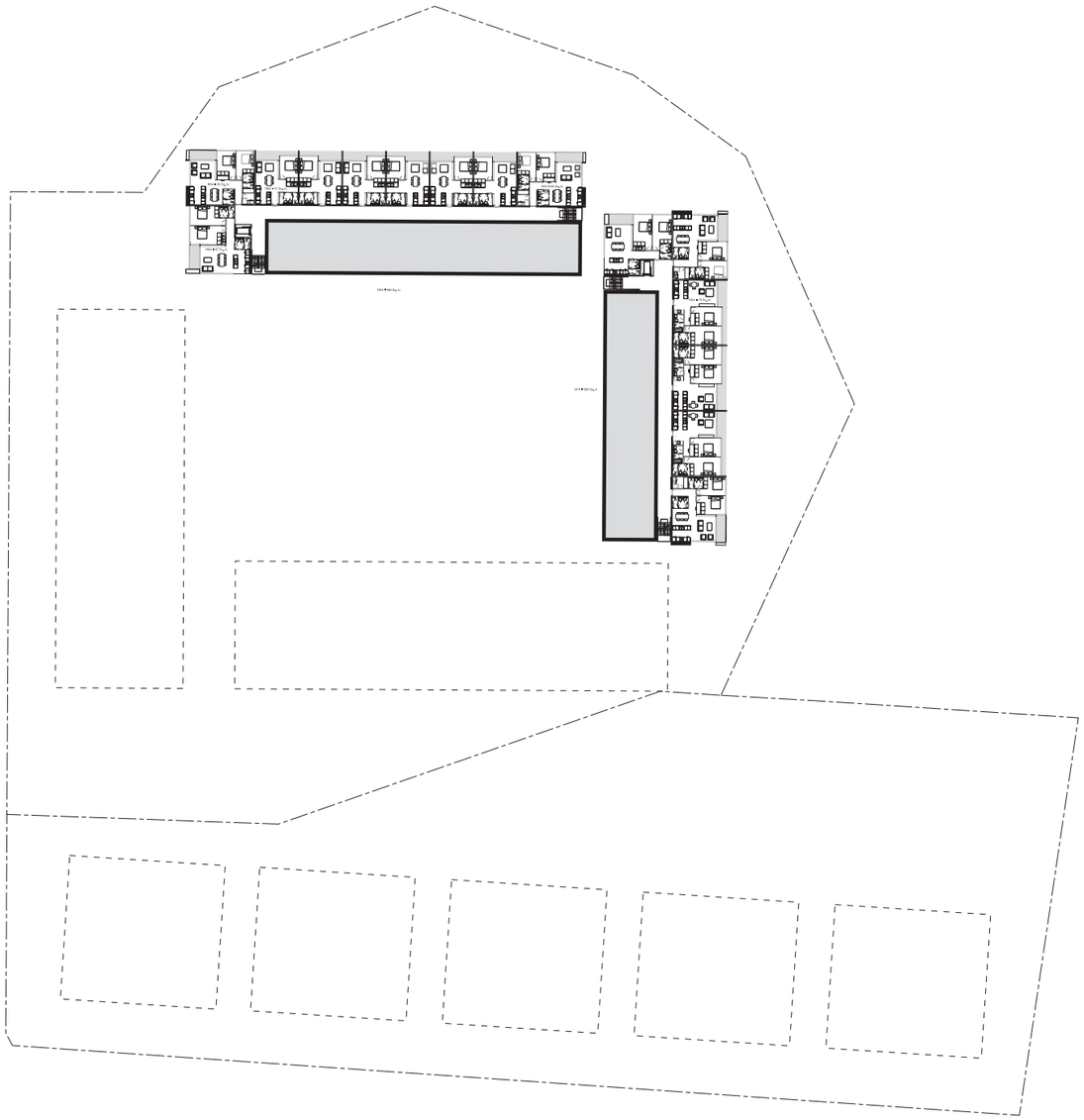

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REV.	DATE	FOR
A	03-08-2016	CLIENT APPROVAL

CONSULTANT
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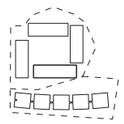
1.17/90-96 BOURKE ROAD
ALEXANDRIA, NSW 201

DRAWING KEY



PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD
GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

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STATUS
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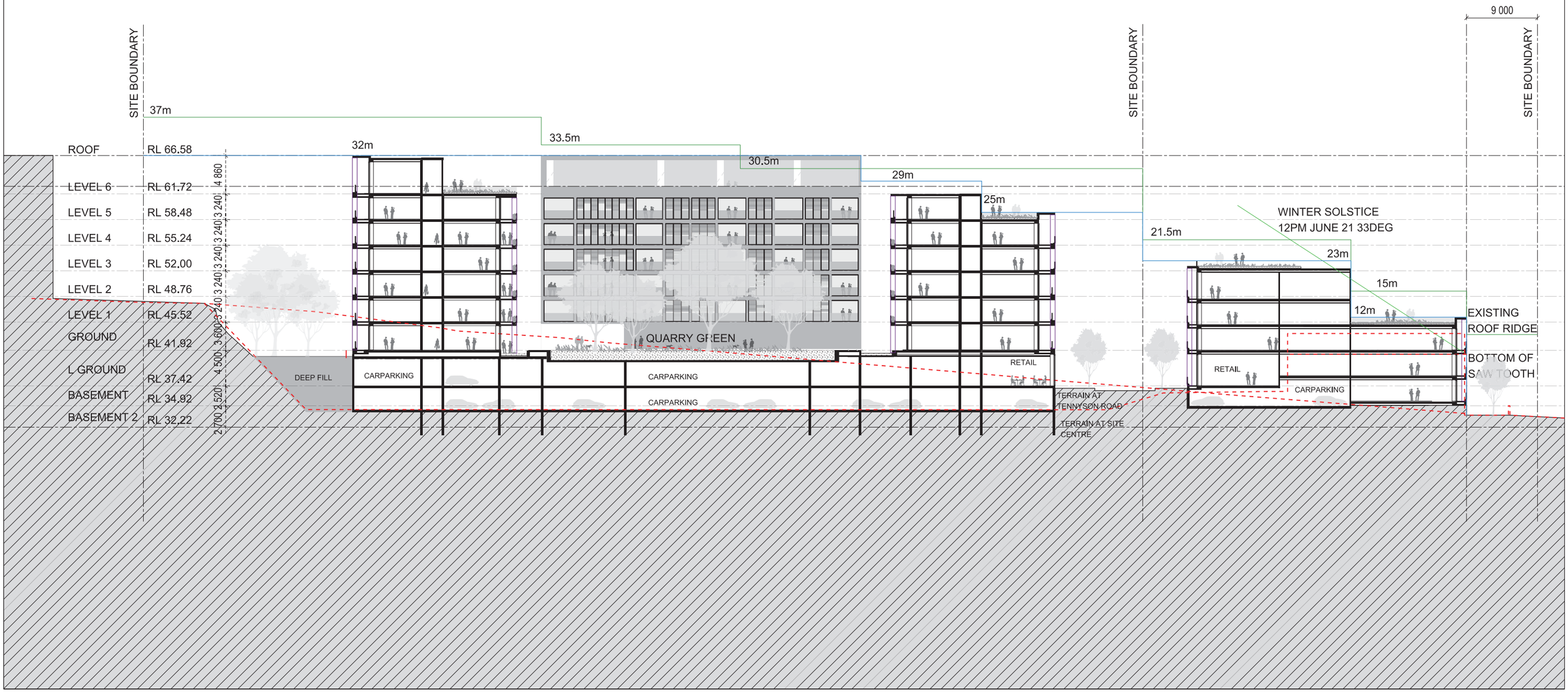

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REV.	DATE	FOR
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DRAWING KEY

PROJECT
TENNYSON ROAD

ADDRESS
2-14 TENNYSON ROAD
GLADESVILLE, NSW 2111

GRIMSHAW PROJECT NO.
12024

NORTH

SCALE
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STATUS
PLANNING PROPOSAL

DRAWING
SECTION A

DRAWN	CHECKED	AUTHORISED
RP	MG	AC

DRAWING NUMBER	REVISION
A04_1000	A

SCHEDTEMP05

Appendix 9 – Stormwater Management Plan

mecone

Civil

TaylorThomsonWhitting

Stormwater Management Plan 2-12 & 14 Tennyson Road, Gladesville

for Darcsol Pty Ltd

22 April 2013

121409

Taylor Thomson Whitting (NSW) Pty Ltd Consulting Engineers ACN 113 578 377

48 Chandos Street St Leonards NSW 2065 PO Box 738 Crows Nest 1585

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TABLE OF CONTENTS

1.0 INTRODUCTION

This stormwater management plan is submitted by Engineering Consultancy firm Taylor Thomson Whitting (TTW) who have been engaged by Darcsol Pty Ltd to investigate and design the storm water for the redevelopment of sites 2-12 & 14 Tennyson Road, Gladesville. The purpose of this plan is to satisfy council requirements so that future development will not have an adverse impact on stormwater runoff for the existing site and the downstream catchment.

2.0 DEVELOPMENT SITE

The sites are located on the east side of Tennyson Road in Gladesville, Sydney. The sites are bounded by commercial buildings in the north and east, and with residential properties on the southern side. The sites are currently occupied with a number of commercial buildings, factories, car parking, roads and landscaping with a total combined area of approximately 2.4ha. An aerial image of the site is shown below in Figure 1.

Figure 1. Development Site

3.0 LOCAL TOPOGRAPHY

The local topography slopes from north to south. The intersection of Victoria and Monash Roads is roughly where the crest exists. Contours of the land can be seen in Figure 2. Site 2-12 is a former quarry. It is lower than the surrounding properties of about 5m to 15m. As site 2-12 is lower than all surrounding properties it has no overland flow path for stormwater.

Site 14 sits higher than property 2-12 and the residential properties on the east and southern sides. Site 14 has overland flow which falls to the rear of the residential properties.

Figure 2. Topography

4.0 EXISTING STORMWATER

The existing stormwater on the development site drains existing buildings, car parks and roads. There are two sub catchment areas. The first sub catchment relates to site 2-12 and includes the south western part of site 14. The second sub catchment relates to the northern and eastern parts of site 14.

Site 2-12 drains under site 14 to the council system on western section of Brereton Street. Site 2-12 does not have any water attenuation tanks.

Site 14 discharges to the council system from two connections. The first connection drains east through residential properties to council's stormwater system in Brereton Street. The second is assumed to connect to the same line from site 2-12.

Site 14 has at least one water attenuation tank with storage volume of about 80m^3. This tank discharges to council stormwater system located on the east side of the property on Brereton Street.

A plan showing outfall locations and existing sub catchment areas are shown in Figure 3 below.

Figure 3. Existing Catchments and Outfall Locations

5.0 PROPOSED DEVELOPMENT

The proposed redevelopment of the site includes; demolition of existing buildings with construction of buildings, roadways, landscaping and includes a below ground carpark. The proposed site plan is shown in Figure 4 below. The proposed building will be multi-storey with a combination of commercial, residential and industrial.

The design of the stormwater system will ensure that the development does not lead to;

- An increase in stormwater runoff from the site
- An increase in the risk of downstream flooding
- An increase in the risk of on-site flooding

In accordance with Ryde Council's stormwater policy (DCP10 8-2-1) peak flow for storms 5 year up to the 100 year are not to increase for all storm durations.

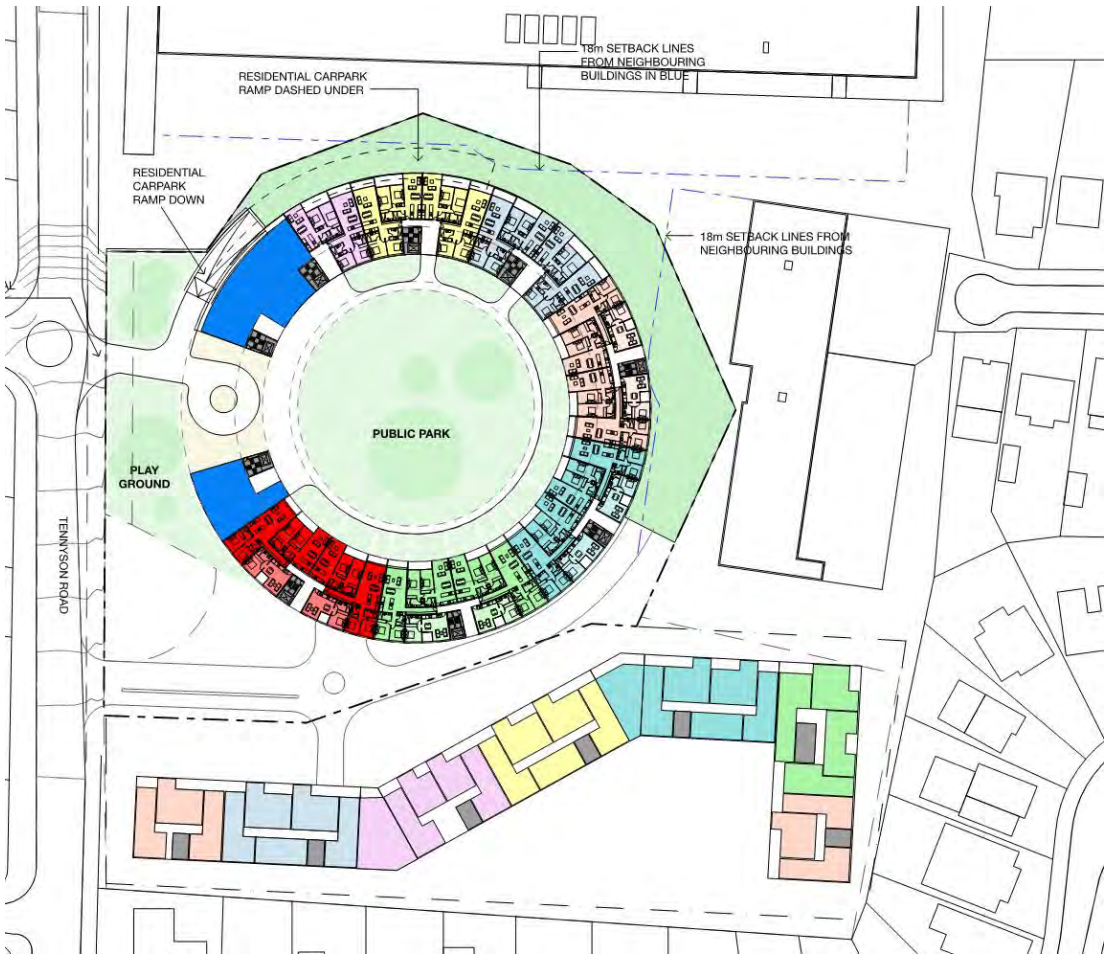

Figure 4. Proposed Site Plan

6.0 PROPOSED CATCHMENTS

The proposed development will alter the existing catchment characteristics. The characteristics that will change include the total area of impervious surfaces and type of surface. As a result of these changes the proposed stormwater system will ensure that the development does not have a negative impact on the runoff as detailed in section 5 above.

Catchments Comparison

A comparison of the pre and post-development catchments has been made to ensure that any impacts from runoff are addressed as part of the stormwater management.

The proposed development will not change the site's total catchment area however there will be an overall increase in impermeable area. After the development is constructed, the catchments will change in the following ways:

- Catchment for site 2-12 increases in impermeable area by 27%
- Catchment for site 14 has a decrease in impermeable area by 18%.
- As mentioned in section 5 there must be no increase in runoff. Therefore due to the increase in impermeable area on-site detention is required.

7.0 STORMWATER RUNOFF ANALYSIS

Site 2-12

The stormwater runoff has been analysed using DRAINS for the 5, 10, 20, 50 and 100 year ARI's, with multiple storm durations between 5 and 120 minutes. The proposed storm water design for the development ensures that the piped system for the whole development does not surcharge up to the 100 year ARI. This site has no overland flow path possible as it is significantly lower than the surrounding properties. If the piped systems blocks there will be ponding on the proposed site.

Preliminary DRAINS analysis indicates that 270m^3 of detention storage will be required for site 2-12.

Site 14

14 Tennyson Road has a reduction in impervious area and from this no increase in on-site detention is required. However, due to the proposed building footprint and road works, the existing tanks may need to be reconstructed to suit the proposed works.

The stormwater runoff for 14 Tennyson Road has been analysed using DRAINS for the 5, 10, 20, 50 and 100 year ARI's, with multiple storm durations between 5 and 120 minutes. The proposed stormwater design for the development ensures that the piped system for the whole development does not surcharge up to the 100 year ARI.

Preliminary DRAINS analysis indicates that 135m^3 of detention storage will be required for the property.

The existing tank on eastern side of the site has a volume of about 80m^3.

The design will ensure that during the 100 year ARI storm event, overland flow is directed away from buildings.

Connection to existing stormwater system

The new stormwater system within site 2-12 will maintain the existing connection under site 14 down to Brereton Road. It is assumed that this pipe has no capacity issues and is able to take the existing flow (and future) without surcharge.

The new stormwater system within 14 Tennyson Road will maintain the two existing connections. Both pipes connect to Brereton Road – one pipe connects in the east and the other in south western. It is assumed that these pipes have no capacity issues and is able to take the existing flow (and future) without surcharge.

Refer to **Appendix A** for Stormwater Concept plan.

8.0 SUMMARY OF DEVELOPMENT IMPACT

The proposed development alters the catchment characteristics and increases the impervious areas of the site. This results in an increase in surface water runoff from the site that could potentially lead to an increase in the risk of downstream flooding. The implementation of stormwater management controls will ensure that;

- The peak runoff from the site is not increased
- The risk of downstream and on-site flooding is reduced
- The quality of the stormwater runoff is improved
- Risk of stormwater inundation on the proposed development is minimised

The overland flow routes from site 14 will be maintained, whereas site 2 – 12 will continue to have no overland flow path due to being several metres lower than the surrounding properties.

Prepared by:
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Kelvin Holey
Senior Civil Engineer

Authorised by:
TAYLOR THOMSON WHITTING (NSW) PTY LTD

Stephen Brain
Technical Director

P:\2012\1214\121409\Reports\TTW\Civil\20130322_Stormwater Management Plan-14 + 2-12.doc

APPENDIX A – STORMWATER CONCEPT PLANS

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING SKC001

Rev	Description	Eng	Draft	Date
P1	ISSUE FOR COORDINATION	SB	JT	17.04.13

Project

2-12 TENNYSON ROAD, GLADESVILLE

Sheet Subject

OVERALL SITE PLAN

Architect

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Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : A1	Drawn	Authorised
1:500, 1:1000	JT	

Job No	Drawing No	Revision
121409	SKC010	P1

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Appendix 10 – Economic Impact Assessment

mecone

Tennyson Rd, Gladesville

Economic Impact Assessment

Prepared for Darcsol Pty Ltd

July 2017

HillPDA CONSULTING

QUALITY ASSURANCE

Report Contacts

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Principal Urban and Retail Economics
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Quality Control

This document is for discussion purposes only unless signed and dated by a Principal of HillPDA.

Reviewed by:

Dated 12 July 2017

Report Details

Job Ref No:	C17166
Version:	**Final**
File Name:	Tennyson Rd, Gladesville EIA
Date Printed:	12/07/2017

CONTENTS

TABLES

FIGURES

EXECUTIVE SUMMARY

HillPDA was commissioned by Darcsol Pty Ltd to undertake an economic impact assessment (EIA) in relation to a Planning Proposal (PP) for a site located at 2-12 and 14 Tennyson Road, Gladesville (subject site).

HillPDA previous completed an EIA for the subject site in 2013 (2013 EIA). The 2013 EIA had a particular focus on assessing the effects that the amount of retail floorspace proposed would have on the surrounding retail hierarchy.

The 2013 EIA also concluded that increased residential supply within the local area would increase housing affordability and contribute towards the LGA meeting housing targets. A range of economic benefits such as employment, retail expenditure and construction multipliers were also quantified.

The PP has now been amended. Of particular note, there is a significant reduction in amount of retail floorspace and number of apartments proposed.

On the 20th of June 2016, a letter was received from the City of Ryde (Council) which detailed a number of additional conditions that the PP would need to address for the PP to proceed to public exhibition.

Of relevance to this EIA were the following conditions:

- Address the inconsistency with Section 117 Direction 1.1 Business and Industrial Zones; and
- Demonstrate consistency with *A Plan for Growing Sydney*.

This EIA addresses the above conditions and assesses the economic contribution of the amended scheme.

Section 117 Direction 1.1 business and industrial zones

The Section 117 Ministerial Directions apply to industrial and business zoned land. The objectives of the direction are as follows:

a) Protect employment land in business and industrial zones;
b) Encourage employment growth within suitable locations; and
c) Support the viability of identified strategic centres.

The PP would **NOT** result in any net loss of land zoned for business purposes. Rather, it seeks the transition of an existing employment zone, that of an IN2 – General Industrial, to a B4 -Mixed Use zoning (business zoning). This reclassification would allow for an “intensification” of employment uses on site.

Providing more flexible planning frameworks that increase the opportunity for the development of more "intensive" commercial activities, such as that sought in the PP, is in accordance with the directions within the *A Plan for Growing Sydney*.

The subject site is a small proportion of the Gladesville industrial precinct on the south side of Victoria Road. The TPA forecasts that this section of the precinct would accommodate **no additional employment** related to traditional industrial industries (manufacturing and transport/warehousing) between 2016 and 2031.

Redevelopment of the subject site for a complying industrial use is problematic due to the sloping typography, site attributes, locational disadvantages, lack of agglomeration with existing businesses, sloping access issues through residential areas and hence land use conflicts with residential immediately surrounding the site on three sides. Rezoning to mixed use would allow more flexibility and incentivise redevelopment for more intensive employment and housing.

This would reduce future land use conflict, provide employment opportunities and increase the viability and vibrancy of Gladesville and Ryde local centres through increased resident retail expenditure.

A Plan for Growing Sydney

The PP is in accordance with several directions and actions identified within *A Plan For Growing Sydney (*the Plan*).* Specifically the PP is in accordance with:

- Direction 2.1 – *Accelerate housing supply across Sydney*

  This direction empathises accelerating the delivery of housing across Sydney. The direction aims to achieve this through identifying where development is feasible, where there is existing infrastructure and the targeting of areas where the delivery of homes is in close proximity to employment areas. The subject site is in close proximity to surrounding employment precincts and Gladesville local centre. Furthermore, the existing public transport in the area links the site to the Parramatta CBD, Sydney CBD and Macquarie Business Park. As such the development of residential uses ion the site further is in line with this direction;

- Direction 2.2 – *Accelerate urban renewal across Sydney*

  This direction focuses housing within centres with high connectivity through public transport. The subject site is in close proximity to Victoria Road which provides frequent bus services to Parramatta and

Sydney CBD. Additionally, services to Macquarie Business Park and Macquarie University are also provided. Transport for NSW is investigating a Bus Rapid transit along Victoria Road which would provide increased public transit services to the area.

The connectivity of the subject site to surrounding economic centres emphasises the sites suitable candidacy to provide urban renewal opportunities for additional housing;

- Direction 2.3 – *Improve housing choice to suit different needs and lifestyle*

  This direction emphasises increased housing diversity across Sydney. The provision and mixture of apartments within the PP would increase dwelling diversity within the area, providing a range of housing options and price points for persons downsizing or entering the market;

- Action 2.3.3 – *Deliver more opportunities for affordable housing*

  The action recognises that the Government needs to be more proactive in ensuring that more is done to meet the housing needs of persons on very low, low and moderate income. The action requires local councils to include affordable housing in their local housing strategies, to respond to local demand. Of the 383 dwelling proposed in the PP, it's likely that a proportion of 5% or more would be provided as affordable housing for low income households.

- Action 1.9.2 - *Support key industrial precincts with appropriate planning controls*

  The Action states that the Government "*would identify where improved and innovative planning controls would allow for the ongoing evolution of industrial activities to more intensive commercial activities*".

  Employment projections for the site forecast no additional industrial jobs over the next 15 years. As such, the more flexible planning controls in a B4 – Mixed Use zoning would allow for the ongoing evolution of the site, allowing for the development of more intensive commercial and retail uses.

Increased residential provision

Increased housing affordability (sale value)

Analysis of median end sale values highlights the affordability of apartment style dwellings within Ryde LGA, compared to separate houses. This is evident in the median sale value for strata dwellings being

$733,000 or half the median price for non-strata dwellings ($1.5 million in 2016). The median sale value of apartments in the LGA in 2016 was also 5% higher than Greater Sydney of $700,000.

Increased dwelling supply, like that proposed within the PP, would further contribute to the relative affordability of apartment dwellings within Ryde LGA.

Housing targets

The North District Plan sets a target of 7,600 additional dwellings for the LGA by 2031, while Forecast.id projects an additional 6,640 over the period. Analysis of the development pipeline reveals that without additional supply the LGA is not set to meet either of these targets. The 383 additional dwellings within the PP would make a contribution to the LGA meeting these targets.

Increased dwelling choice

Analysis of the last three census periods reveals that in Ryde LGA, the majority of household types are increasingly transition to live in apartments. Of the 15,452 additional households forecast to be accommodated in the LGA by 2031, 66% or 10,147 households will be couples without dependents, one parent families and lone person households. These household types have an increasingly propensity to reside within apartments style dwellings.

The number and bedroom configurations proposed would increase the choice of dwellings for these households.

Increased housing affordability (very low and low income households)

A household classified as earning a low income would only be able to afford 95% of the market rent for a one bedroom and 87% of market rent for a two bedroom apartment. A household classified as earning a very low income in Ryde LGA would only be able to afford 59% of the market rent for a one bedroom apartment and 55% of market rent for a two bedroom apartment.

Advancement of the PP would increase dwelling supply and capacity within the LGA helping to alleviate this housing affordability gap and rental stress.

The PP would also directly provide a proportion of dwellings for affordable housing – likely to be 5% or more.

Economic assessment

Current economic contribution

The subject site currently provides an estimated 73 jobs related to manufacturing and warehousing. Based on this estimate the subject site currently contributes:

- $5 million per annum in wages to the workers on site;
- $10.1 million per annum to the local gross regional product (GRP); and
- $30,650 in retail expenditure per annum from workers on site.

Economic assessment of the Planning Proposal

The construction of a mixed use development would provide economic benefits during and post construction phases. These economic benefits are estimated as follows:

During construction

- Estimated construction cost of $160 million;
- Construction would generate a further $203 million of activity in production induced effects;
- A further $151 million in consumption induced effects;
- Total economic activity of $514 million;
- 376 job years generated directly in construction;
- Due to multiplier impacts the proposal is estimated to generate a total of 1,485 job years directly and indirectly; and
- Construction workers are likely to spend $1.3 million in retail goods and services within the local area during the construction phase. Supporting the viability of Gladesville town centre.

Post construction

- The PP would facilitate the creation of an estimated 96 jobs, a net increase of 23 jobs;
- Workers located within the subject site would generate an estimated $6 million in salaries annually, a net increase of $1 million;
- Workers would contribute $7.8 million annually to the local GRP, a net decrease of $2.3 million;
- The PP would generate a further $86 million in Government revenue including development contributions, stamp duty and GST;

- Residents and workers on site would generate $11 million in retail expenditure annually. A large proportion of this would likely be captured in the commercial centres of Gladesville and Ryde – further supporting their viability and vibrancy which is one of the directions of "*A Plan For Growing Sydney"*;
- The development of commercial, retail and residential uses on the subject site would improve street activation. The benefits of this activation would be increased security, increased passing traffic for local retailers and increased investment in the locality;
- Significant property investment decisions are generally viewed as a strong positive commitment for the local area;
- The direct investment proposed by the development would, through a wide range of economic multipliers as outlined above, support investment in associated industries;
- The PP would create additional business opportunities in this locality;
- The PP would facilitate urban renewal and contribute to the LGA meeting its housing targets while also increasing affordability, a direction of *A Plan For Growing Sydney*; and
- The inclusion of the residential component is necessary to ensure development feasibility. Redevelopment for commercial proposes only is highly improbable in the foreseeable future due to the lack of development feasibility.

1 INTRODUCTION

HillPDA was commissioned by Darcsol Pty Ltd to undertake an economic impact assessment (EIA) in relation a Planning Proposal (PP) for a site located at 2-12 and 14 Tennyson Road, Gladesville (subject site). The PP would facilitate the mixed use redevelopment of the subject site to accommodate retail and residential uses.

Tennyson Road, 2013 EIA

HillPDA previous completed an EIA for the subject site in 2013 (2013 EIA). The 2013 EIA had a particular focus on assessing the effects that the amount of retail floorspace proposed would have upon the surrounding retail hierarchy.

The 2013 EIA found that there was a historic undersupply of retail floorspace within the trade area for Gladesville, calculated at around 8,200sqm. As such, the proposed development would be addressing some of this undersupply through the provision of 5,800sqm net saleable area (NSA) of retail space.

The 2013 EIA also concluded that increased residential supply within the local area would help address housing affordability and contribute towards the LGA meeting housing targets. A range of economic benefits such as employment, retail expenditure and construction multipliers was also quantified.

Since completion the 2013 EIA, the proposed development scheme has been amended. Of particular note has been the reduction in amount of retail floorspace and number of apartments proposed.

The amount of retail floorspace has reduced from a proposed 5,800sqm NSA to around 1,785sqm NSA, while the number of residential apartments has been reduced from 539 to 383 apartments.

This revised EIA would assess the economic contribution of the amended scheme.

The need for a revised EIA

On the 20th of June 2016, a letter was received from the City of Ryde (Council) which detailed a number of conditions that the PP would need to address to enable the PP to proceed to public exhibition.

Of relevance to this EIA were the following conditions:

- Address the inconsistency with Section 117 Direction 1.1 Business and Industrial zones; and

- Demonstrate consistency with *A Plan for Growing Sydney*.

In response to this letter, this EIA addresses the above conditions. This report further assesses the contribution of the amended scheme to the local and wider economy.

The subject site

The subject site comprises 2.38ha of land area. It is bounded by existing commercial uses fronting Victoria Road to the north, Tennyson Road to the north east, residential uses fronting Brereton Street to the south and commercial and residential uses to the east. It is situated within the City of Ryde local government area (LGA).

2-12 Tennyson Road currently comprises a two-storey commercial building on the side fronting Tennyson Road and a large portal frame clear span warehouse to the rear, in addition to surface level car parking. Existing tenants include Assetlink and GH Packaging International. 14 Tennyson Road comprises light industrial warehousing and is occupied by Latham Australia.

The location of the Subject Site is shown in the figure below.

Figure 1: Subject site boundary (red)

Source: HillPDA

The subject site is zoned IN2 Light Industrial in the Ryde local environmental plan (LEP) 2014. The proposed rezoning seeks to incorporate a B4 - Mixed Use on the subject site.

Proposed development

The PP seeks to facilitate the redevelopment of the subject site to incorporate the following uses:

- 1,785sqm NSA of employment floorspace;
- 383 residential apartments;
- 723 car spaces; and
- 9,274sqm of open space.

Report structure

To address the conditions set out in Council's letter, the EIA is set out in the following manner:

- **Chapter 2** |undertakes a review of the planning and legislative background relevant to PP. Particularly the Chapter demonstrates consistency with *A Plan for Growing Sydney* and Section 117 Direction 1.1;
- **Chapter 3** | assesses need for increased housing supply within the locality which satisfy directives set out in the *A Plan for Growing Sydney*; and
- **Chapter 4** | assesses the economic implications of retaining the current zone versus rezoning and developing the site under the PP.

2 CONTETUAL REVIEW

This Chapter undertakes an appraisal of the planning and legislative context for the proposed rezoning based on State, Subregional and local planning guidelines. It considers matters relating to the proposed rezoning and development from an economic perspective only.

A Plan for Growing Sydney 2031 (2014)

The Department of Planning and Environment (DPE) published the A Plan for Growing Sydney to 2031 (the Plan) in December of 2014. It seeks to achieve the following outcomes:

- A competitive economy with world-class services and transport;
- A city of housing choice, with homes that meet our needs and lifestyles;
- A great place to live with communities that are strong, healthy and well connected; and
- A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

By 2031, Sydney's economic output will almost double to $565 billion a year, with this economic growth being fuelled partly by an additional 689,000 new jobs over the period. Sydney will also experience a population growth of about 1.6 million persons. To meet this population growth, an additional 664,000 new dwellings will need to be constructed.

Specific to this EIA are:

- Direction 2.1 – *Accelerate housing supply across Sydney*

  This direction empathises accelerating the delivery of housing choice across Sydney. The direction aims to achieve this through identifying where development is feasible, where there is existing infrastructure and the targeting of areas where the delivery of homes is in close proximity to employment areas. The subject site is in close proximity to surrounding employment precincts and Gladesville local centre. Furthermore, the existing public transport in the area links the site to the Parramatta CBD, Sydney CBD and Macquarie Business Park. As such the development of residential uses ion the site further is in line with this direction;

- Direction 2.2 – *Accelerate urban renewal across Sydney*

  This direction focuses housing within centres with high connectivity through public transport. The subject site is in close proximity to Victoria Road which provides frequent bus services to Parramatta and

Sydney CBD. Additionally, services to Macquarie Business Park and university are also provided. Transport for NSW is investigating a Bus Rapid transit along Victoria Road which would provide increased public transit services to the area.

The connectivity of the subject site to surrounding economic centres emphasises the sites suitable candidacy to provide urban renewal opportunities for additional housing;

- Direction 2.3 – *Improve housing choice to suit different needs and lifestyle*

  This direction emphasises increased housing diversity across Sydney. The provision and mixture of apartments within the PP would increase dwelling diversity within the area, providing a range of housing options and price points for persons downsizing or entering the market;

- Action 2.3.3 – *Deliver more opportunities for affordable housing*

  The action recognises that the Government needs to be more proactive in ensuring that more is done to meet the housing needs of persons on very low, low and moderate income. The action requires local councils to include affordable housing in their local housing strategies, to respond to local demand. Of the 383 dwelling proposed in the PP, a proportion would be provided as affordable rental housing. Increasing the amount of affordable housing within the locality for persons on very low and low household incomes.

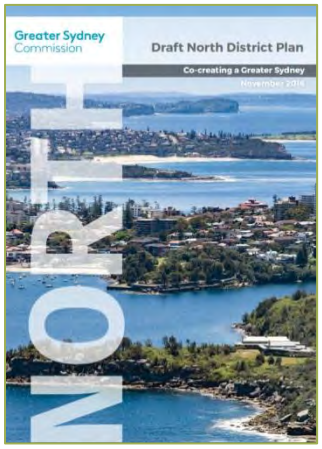
- Action 1.9.2 - *Support key industrial precincts with appropriate planning controls*

  Action 1.9.2 within the Plan, states that an industrial lands strategic assessment checklist would be "*developed to guide the proposed rezoning of industrial lands*". The Action also states that the Government "*would identify where improved and innovative planning controls would allow for the ongoing evolution of industrial activities to more intensive commercial activities*".

In the absence of this checklist this EIA refers to the criteria set out in the Ministerial Section 117 Direction 1.1.

Draft North District Plan (November 2016)

The draft North District Plan was released by the Greater Sydney Commission (GSC) in 2016. The GSC is leading metropolitan planning to make Greater Sydney more productive, sustainable and liveable. Its role is to coordinate and align the planning that will shape the future of Greater Sydney.



The North District encompasses the LGAs of Hornsby, Hunters Hill, Ku-ring-gai, Lane Cove, Northern Beaches, Mosman, North Sydney, Ryde and Willoughby. By 2036 it is projected that the District will have a population of 1.08 million residents, representing an additional 196,350 residents over the 20 year period from 2016[1].

To house this growth an additional 97,000 dwellings are required representing an average annual rate of 4,850 dwellings. Specifically, the District Plan targets an additional 25,950[2] dwellings to be provided within the District over the next five years. Of this 7,600 dwellings or 29% are to be constructed in the City of Ryde, representing an additional 1,520 dwellings per annum.

Direction 4.3 of the District Plan aims to support improved housing choice and capacity through a four pronged approach:

1. Increased delivery: aims to create conditions to support the supply of housing in well planned locations served by sufficient local and regional infrastructure. The subject site is well located in close proximity to Gladesville and Ryde local centres and the three employment centres of Parramatta CBD, Sydney CBD and Macquarie Business Park. The subject site is also along the proposed Victoria Road Rapid Bus transit corridor which would improve its connectivity;
2. Capacity: insure that existing planning controls and new investigation areas are create sufficient opportunity for housing supply targets by 2036. The PP would allow for the development of residential uses on the site contributing to the District meet its dwelling target of 97,000 additional dwellings;
3. Diversity and adaptability: provide increased diversity of housing types including… apartments in a variety of configurations (one, two and three+ bedrooms). The provision of 383 additional residential dwellings comprising 115 one bedroom, 222 two bedroom and 46 the bedroom apartments would increase dwelling diversity within the local area, providing increased options for the District's current and future population;
4. Affordability: building on the Action 2.3.3 in *A Plan for Growing Sydney* a target of 5% to 10% of new residential floorspace would be proportioned to affordable housing and applied to new developments at the rezoning stage.
   This provision of affordable rental housing in new urban renewal and land release areas would be set aside for low and very low income households which are the most vulnerable. There should also be

[1] Draft North District Plan, Table 4-1 , page 76
[2] Draft North District Plan Table 4.2 page 89

increased supply of diverse housing types in the private market that are more affordable to key workers.
Of the 383 residential dwellings proposed within the PP, a proportion is likely to be provided for affordable housing, ranging from 19 to 38 dwellings.
Increased dwelling supply would also increase dwelling affordability from an end sale value perspective, further creating a more affordable market for key workers.

The District Plan also states that Council will:

- Monitor and support the delivery of Ryde's five-year housing target of 7,600 dwellings. The PP would contribute to 5% of Ryde's five year housing target; and
- Investigate local opportunities to address demand and diversity in and around local centres and infill areas. The subject site is an infill area that anchors the northern edge of Gladesville local centre. The additional 383 residential dwellings in the PP would contribute to addressing local demand and diversity of housing while also increasing the viability and opportunity for increased revenue capture of local retailers.

Ministerial Section 117 Direction 1.1 (2009)

Section 117 Direction 1.1 relates to Business and Industrial zones. The objectives of the direction are as follows:

- Encourage employment growth in suitable locations;
- Protect employment land in business and industrial zones; and
- Support the viability of identified strategic centres.

This Direction applies when a planning proposal would affect land within an existing or proposed business or industrial zone. As such this report addresses the five key requirements of Direction 117 these being:

- Follow the objectives of the Direction;
- Retention of existing business and industrial zones;
- No net loss of potential floorspace for employment uses and related public services in business zones;
- Not reduce the potential floorspace area for industrial uses in industrial zones; and
- Be in accordance with a Strategy approved by the Director General of DP&I (now DPE).

The following table assesses the consistency of mixed use development on the subject site, against the five key requirements of the Direction for PPs concerning employment lands.

Table 1: Consistency of planning proposal with Ministerial Direction 1.1 business & industrial zones

Relevant Matters	Comment and Consistency
Objectives of the Direction	The development of a mixed use development on the subject site would not result in a net loss in land zoned for employment uses. The PP seeks a rezoning to B4 - Mixed Use which would allow for the provision of employment floorspace within the development. This zoning further provides a more flexible planning framework increasing the opportunity for the development of more "intensive" commercial activities. This is in accordance with the directions within the *A Plan for Growing Sydney*. The proposed development would also generate additional demand for retail and business services which would help to support the viability of Gladesville and Ryde local centres.
Retain existing business and industrial zones	The proposed rezoning would result in a loss in industrial zoned land (specifically IN2- Light Industrial). However, the PP seeks the rezoning of the subject site to B4 – Mixed Use. This would **not** result in loss of employment zoned land within the Ryde LGA. As stated above, the more flexible planning framework under a B4 zoning would allow for more intensive employment uses on the subject site which are more compatible with the surrounding land uses (i.e. residential uses). The subject site is also unlikely to be redeveloped for traditional industrial uses as a consequence of the subject site being surrounded by residential uses. The slopping topography of the site is also not ideal for industrial uses, which predominantly prefer level ground for warehousing and manufacturing. The site is further accessed by local residential roads which would increase land use conflicts if heavy vehicles needed to access the site. The subject site is located within the Gladesville industrial precinct as identified within the 2016 employment lands development monitor (ELDM). As of 2016, the Gladesville precinct comprised 20.1ha of land, of which, 0.1ha was undeveloped. The subject site accounts for 1% of the precinct. The Transport Performance and Analytics (TPA) projects that the precinct is forecast to increase employment by 905 jobs between 2011 and 2031[3]. Of these only 24 jobs or 3% of additional jobs are attributed to the industries of manufacturing and transport/warehousing. To meet the projected increase in employment, flexible planning controls are needed that would encourage redevelopment of existing buildings to allow more intensive employment uses, such as commercial and retail uses, are likely to be needed. As such, rezoning of the subject site to allow the proposed development would be addressing both of these issues while absorbing some of this projected employment growth.

[3] The precinct is comprised of the travel zones 1516 and 1518

Relevant Matters	Comment and Consistency
No net loss of potential floorspace for employment uses and related public services in business zones	The PP is not currently within a business related zone and would **not result in any net loss** of floorspace related to public services. However, the PP proposes a transition of the subject site to a B4 - Mixed Use zone, as such, the PP would increase the amount of business related zoned land within the LGA.
Not reduce the potential floorspace area for industrial uses in industrial zones	The proposed rezoning would result in the loss of floorspace that could be utilised for traditional industrial uses. Despite this, industrial redevelopment on the subject site is problematic as a result of the slopping topography of the land, surrounding residential uses and access issues that would increase the potential for land use conflicts. As stated, the subject site is located within the Gladesville industrial precinct. The southern section of the precinct, that is, the proportion south of Victoria Road, is located within the travel zone[4] known as 1518 (refer to Figure 5). The TPA forecasts that the precinct would accommodate no additional employment within the industries of manufacturing and transport/warehousing between 2016 and 2031[5]. Given that the subject site has reached its development potential under its current zoning, there is no forecast increase in related employment and that redevelopment for traditional industrial uses is unlikely. Rezoning of the subject site to allow more flexible planning controls, would incentivise redevelopment of the site to include more intensive employment and residential use. This would reduce future land use conflict, provide employment opportunities and increase the viability of Gladesville and Ryde local centres through increased resident retail expenditure.
In accordance with a Strategy approved by the Direction General of DPE	The proposed rezoning and subsequent mixed use development responds and accords with Directive 2.1, 2.2, 2.3 and Action 1.9.2 of the *A Plan to Growth Sydney* 2031 as well as supporting the indicative targets for population, housing and employment growth.

[4] Travel Zones (TZs) are the spatial base of the TPA data collection, transport modelling and analysis
[5] TPA September 2014 Release Employment Forecasts by Industry

3 INCREASED RESIDENTIAL PROVISION

The following Chapter undertakes a review and analysis of the demographic and housing characteristics within Ryde LGA. The intent of the Chapter is to provide justification for the provision of additional residential supply within the LGA to meet the current and future needs of the resident population.

The basis for this justification is sourced from the *A Plan for Growing Sydney* which provides there core directions in the provision of housing within Sydney. These directions are:

1. Direction 2.1: Accelerate housing supply across Sydney;
2. Direction 2.2: Accelerate urban renewal across Sydney; and
3. Direction 2.3: Improve housing choice to suit different needs and lifestyles.

Dwelling price growth

A Plan for Growing Sydney acknowledges that Sydney's housing prices are high compared to other Australian capital cities. The Plan highlights that governments can "*help to put downward pressure on prices (by) accelerating the supply and the variety of housing across Sydney, such as apartments and townhouses, will make it easier for people to find homes to suit their lifestyle and budget.*

Delivering houses in greenfield and urban renewal locations will help people to live closer to family and friends, to workplaces and schools, and to the services they use on a daily or weekly basis".

In 2016, the median sale price for non-strata dwellings within Ryde LGA reached over $1.5 million. This was $670,000 or 77% higher than the median non-strata dwelling in Greater Sydney ($865,000).

Regarding strata dwellings, the median sale price in the LGA in 2016 was $733,000. Although the median price had increased at a greater proportion when compared to Greater Sydney, it was still comparable, being only $33,000 or 5% higher than Greater Sydney.

Strata dwelling provide a more affordable option for LGA residents and key workers. This is evident with strata dwellings having a median value of $733,000 in 2016 which was half the median price of non-strata dwellings.

Table 2: Median sale price ($'000) by September quarter

	2010	2016	Growth ($)	Growth (%)
Ryde LGA (non-strata)	890	1,535	645	72%
Ryde LGA (strata)	457	733	276	60%
Greater Sydney (non-strata)	578	865	287	50%
Greater Sydney (strata)	479	700	221	46%

Source: NSW Rent and Sales Report

Need for increased capacity

Projected dwelling growth

Forecast .id project that Ryde LGA would require an additional 16,434 dwellings between 2016 and 2031, to house the additional 37,108 residents projected to reside within the LGA by 2031.

This represents an annual dwelling increase of 1,090 dwellings need to be completed each year to meet this target.

Additionally, 1,328 dwellings per annum would need to be completed over the five years between 2016 and 2021. This is 192 dwellings less per annum than that projected in the North District Plan.

Table 3: Projected dwellings Ryde LGA

	2016	2021	2026	2031	Growth	Growth %	Annual increase
Ryde LGA	46,554	53,194	58,481	62,897	16,343	35%	1,090

Source: Forecast .id

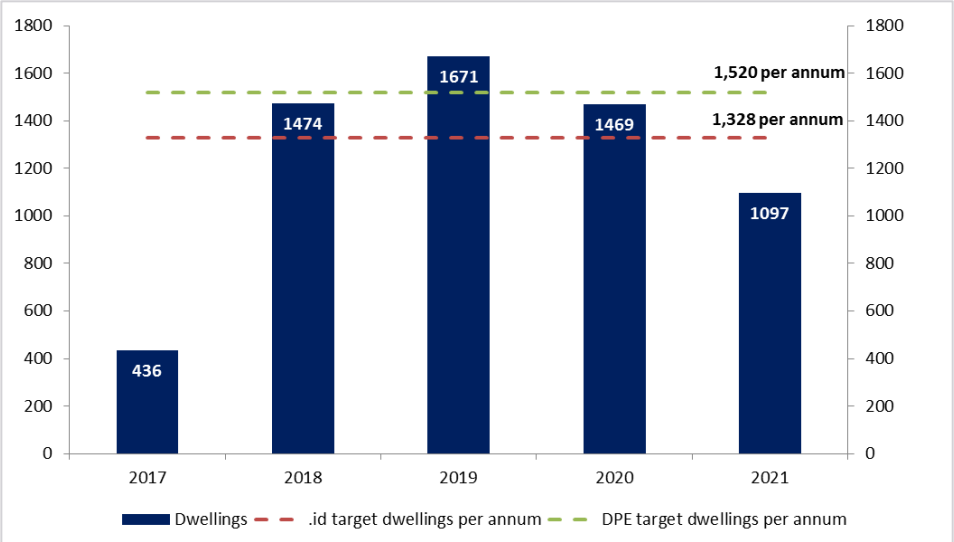
Residential dwelling pipeline

As discussed previous the LGA would need to provide 1,328 to 1,520 dwellings per annum to meet the targets of Forecast.id and the North District Plan over the five year period from 2016.

If all dwellings that are either completed (2017), under construction, approved or DA submitted were constructed the LGA would be around 500 to 1,450 dwellings short of its targets.

As such, increased residential supply is needed in order for the LGA to meet its dwelling targets. This can be achieved through accelerating urban renewal area, including the subject site.

Figure 2: Residential pipeline (strata)



Source: CordellsConnect, HillPDA – count of dwellings stated as completed (2017), under construction, development application or development approval

Increased dwelling choice

Dwelling composition Ryde LGA

Separate houses have remained the dominant dwelling type within the LGA, comprising 48% of all dwellings in 2016.

Despite this, there has been strong growth in apartments increasing from 29% of dwelling stock in 2006 to 36% in 2016, while separate houses experienced a 9% decrease over the period.

In fact between the census periods, of the 5,606 additional occupied dwellings, 4,514 dwellings or 81% were apartments.

The strong growth in apartments has likely been one factor contributing to the affordability of housing in the LGA. The PP would further continue this trend by increasing supply.

Table 4: Historic dwelling structure, occupied dwellings, Ryde LGA

	2006	2011	2016	Growth #	Growth %
Separate house	20,011	19,884	19,528	-483	-2%
Semi-detached	5,387	5,689	6,739	1,352	25%
Apartment	10,162	12,019	14,676	4,514	44%

Source: 2016 Census, excludes other dwelling and not stated categories

Apartment dwellings by household type

The 2016 Census reveals that the majority of household types have increasingly been transitioning to living within apartment style dwellings.

Of note is the significant proportional increase in couples without dependants, where 42% of households resided in apartment dwellings – up from 26% in 2006.

Around half of 'group households', 'lone person households' and 'other families' households lived in apartments in 2016. The PP would be providing a dwelling type and mixture that would be catering to the changing preferences of the local community.

Table 5: Proportion of households living in Apartments by Household Type

Household type	2006	2011	2016
Couple families with dependents	11%	15%	20%
Couples without dependents	26%	34%	42%
Group households	49%	53%	55%
Lone person households	50%	51%	50%
One parent family	21%	25%	29%
Other families	42%	43%	48%

Source: 2016 Census, occupied apartment dwellings

One parent families have also increasingly been moving towards apartments, from 21% in 2006 to 29% in 2016. Even couples with dependents have moved towards apartments largely due to affordability reasons.

Household type projections

Forecast.id projects that the LGA will accommodate an additional 15,452 households by 2031. Of this growth, 66% or 10,147 households is attributed to couples without dependents, one parent families and lone person households. As identified above, these household types have an increasingly propensity to reside within apartments style dwellings. This propensity would also be reasons of affordability, as discussed previously.

The PP would be providing a product with a range of bedroom types and configurations that would be catering for these future household types.

Figure 3: Household type projections Ryde LGA

Household type	2016	2021	2031	Growth #	Growth %
Couples with dependents	15,010	16,764	18,593	3,583	24%
Couples without dependents	11,355	13,217	15,802	4,447	39%
Group households	2,497	3,028	3,733	1,236	49%
Lone person households	11,048	12,533	15,685	4,637	42%
One parent family	3,809	4,193	4,872	1,063	28%
Other families	1,704	1,936	2,190	486	29%
Total	**45,423**	**51,671**	**60,875**	**15,452**	**34%**

Source: Forecast .id

Housing stress and affordability

Rental growth

Analysis reveals that median rents within the LGA have increased at a faster proportion when compared to the wider Greater Sydney Region. Increased

Table 6: Median rental growth 2006-2016

	2006	2016	Growth	Growth %
Ryde LGA	$255	$460	$205	80%
Greater Sydney	$250	$440	$190	76%

Source: 2016, time series data

Rental and mortgage stress

Housing stress is a metric used to describe a situation where the cost of housing is high relative to the household income. As a rule of thumb, housing stress is defined as where housing costs (rent or mortgage repayments) are 30% or more of gross household income[6].

While this figure provides a useful benchmark of housing affordability, the definition of affordability varies according to a household's individual circumstances.

As seen in the table below, housing mortgage stress within Ryde LGA has decreased from 2006 to 2016. As of 2016 the median mortgage repayment is just below 30% of the median household income. Of course with the median cost so close to the 30% benchmark there will be a fair proportion of households under stress.

The trend in the rental market is considerably more negative with rents increasing at a faster rate than household income as shown in the table below.

Table 7: Rental and mortgage stress

	2006	2016
Ryde LGA median household income	$61,412	$92,612
Ryde LGA median mortgage repayment	$22,884	$26,400
Ryde LGA mortgage repayment as proportion of income	37%	29%
Greater Sydney median mortgage repayment as % of income	35%	29%
Ryde LGA median rent	$13,260	$23,920
Median rent repayment as proportion of median income	22%	26%

Source: 2016 ABS time series data, HillPDA

[6] NSW Affordable Housing Ministerial Guidelines 2016-2017

Although increased dwelling supply is not a silver bullet in addressing housing stress, as recognised in "*A Plan for Growing Sydney*" increased supply can put downward pressure on dwelling prices and the number of households experiencing stress.

Rental affordability

NSW Family and Community Services outline the eligibility criteria for affordable housing in their 2016/17 NSW Affordable Housing Ministerial Guidelines. In this document household income is the defining criteria for affordable housing eligibility, with the median income for Greater Sydney used as a bench mark.

The 2016/17 Guidelines define affordable housing for very low, low, and moderate income households. These categories have been applied to this analysis and are as follows:

- Very low-income household is less than 50% of Greater Sydney median household income;
- Low-income household is more than 50% but less than 80% of Greater Sydney median household income; and
- Moderate income household is between 80% and 120% of Greater Sydney median household income.

The median household income for Ryde LGA was $92,612 per in 2016[7]. Based household income the affordable housing thresholds have been calculated as follows.

Table 8: Household income and affordability Ryde LGA

Category	Household income	
	Weekly	Yearly
Median income	$1,781	$92,612
Very low household income (50% of median household income)	$891	$46,306
Low household income (80% of median household income)	$1,425	$74,090
Moderate income household (120% of median household income)	$2,137	$111,134

Source: 2016 ABS Census, HillPDA

To assess the ability of very low income and low income household's to meet the median rental repayment for the LGA, we applied the following methodology:

- Multiplied household incomes by 30% and divide by 52 to calculate the weekly rent that household can reasonably afford to pay without experiencing housing stress; and
- Compared Step 1 to the LGA market rent in that year.

[7] 2016 Ryde LGA time series data

Very low income household rental affordability

A very low income household within Ryde LGA, that is, a household that earns 50% of the median household income could afford to pay $267/week[8] on rental repayments in 2016.

This was only 59% of the median market rent for a one bedroom apartment in and 55% of market rent for a two bedroom apartment within the LGA.

Low income household rental affordability

A low income household, that is, a household that earns 80% of the household median income could afford to pay $427/week[9] on rental repayments.

This was only 95% of the median market rent for a one bedroom apartment and 87% of market rent for a two bedroom apartment within the LGA.

Table 9: Rental affordability against Ryde LGA median household income - 2016

Year	Median household income (2016)	Median household at affordability category	Rental affordability at 30% of median income	1 bedroom apartment market rent	Rental affordability as proportion of market rent	2 bedroom apartment market rent	Rental affordability as proportion of market rent
Very low household income at 50% of median household income	$92,612	$46,306	$267	$450	59%	$490	55%
Low household income at 80% of median household income	$92,612	$74,090	$427	$450	95%	$490	87%

Source: 2016 ABS, NSW Department of Housing rent tables, HillPDA *30% of household income directed towards rental repayment

If left unabated the housing affordability gap will continue to widen. Increased residential supply can place downward pressure on housing prices and rents as acknowledged in the "*A Plan For Growing Sydney*". Advancement of the PP would increase dwelling supply and capacity within the LGA helping to alleviate the housing affordability gap and rental stress.

Locational considerations

In providing justification for the provision of residential dwellings on the subject site, there are a few other locational factors for consideration. These include the following:

- The subject site is located in close proximity to existing transport infrastructure, this is the subject site is within 1km of 55 state bus stops. The site is also in close proximity to Victoria Road which is being

[8] 30% of annual income directed towards rental repayment
[9] 30% of annual income directed towards rental repayment

considered for a rapid bus transit route. The connectivity of the subject site through existing transport infrastructure allows future residents increased accessibility to employment, retail facilities and public infrastructure;

- The subject site is within 1km of surrounding schools including St Charles Catholic Primary School, Our Lady Queen of Peace Catholic Primary School and Holy Cross College.
- The subject site anchors the northern edge of Gladesville Local Centre. increased residential densities within the local area would increase the potential for the local centre to capture additional retail expenditure, increasing its viability and attracting investment;
- The site is in close proximity to surrounding public and private recreation areas such as the Ryde Aquatic Centre, Tyagarah Park, Bremner Park, Monash Park, Westminister Park, Putney Park, Grove Creek Park, Bill Mitchell Park and Peel Park.

Figure 4: Surrounding characteristics of subject site

Source: HillPDA

Key findings

- The median sale value for a non-strata dwelling was within Ryde LGA was $1.5 million in 2016, this was $670,000 or 72% higher than the median recorded for Greater Sydney;

- Compared to non-strata dwellings, strata dwellings were more affordable with a median value of $733,000 in 2016. This was comparable to the wider Greater Sydney region ($700,000);
- Over the next five years the LGA would need to complete 1,328 to 1,520 dwelling per annum to achieve the targets/projections provided by Forecast .id and the DPE;
- Analysis of the development pipeline reveals that without an increase in supply, the LGA is currently unlikely to meet its five year dwelling targets;
- Over the last ten years apartment dwellings have increased by 4,514 dwellings or 44%. The increase in supply has contributed to the improving housing affordability;
- Couples without dependants have increasingly transitioned into living within apartment dwellings over the ten year period from 2006. One parent families and couples with dependents have also increasingly been moving into apartments;
- Around half of group households, lone person households and other family households are living in apartments;
- By 2031 the LGA would accommodate 15,452 households with, 66% or 10,147 households being classified as couples without dependents, one parent families and lone person households. As identified above, these household types have an increasingly propensity to reside in apartments largely due to affordability;
- The PP would provide housing with a range of bedroom mix and configurations that would cater for these future household types;
- Advancement of the PP would increase dwelling supply and capacity within the LGA helping to alleviate this housing affordability gap and rental stress.

4 ECONOMIC IMAPCT ASSESSMENT

This Chapter examines the economic impacts of the planning proposal against the base case (or "do nothing" option). Economic impacts include employment generation, increased spend from workers and local residents, economic multipliers and impacts on government revenue.

Current economic contribution

Employment generation

To assess the current employment generation on site HillPDA has used TPA journey to work data 2011. The subject site forms part of a wider industrial precinct known as Gladesville. As seen in Figure 5, the part of the Gladesville industrial precinct, south of Victoria Road, forms part of the TPA TZ known as 1518.

HillPDA has used 2011 JTW data to calculate the number of persons working within the industries of manufacturing and transport, postal and warehousing in the TZ.

Given that the subject site contains the majority of warehousing and industrial floorspace, with the only other building within the IN2 zoning being a commercial building, it has been assumed that persons working in these industries within the TZ are employed on the subject site.

Figure 5: TPA travel zone 1518

Source: HillPDA

Using this methodology it is estimated that 73 persons are employed on the subject site. That is, 67 working within manufacturing and 6 within transport, postal and/or warehousing.

Salaries

Based on ABS average weekly earnings, HillPDA has estimated the currently annual worker salary generated for workers within the subject site at approximately $5.1 million. The details are shown in the table below.

Table 10: Estimated current salary contribution ($2017m)

Industry	No. Workers	Average Wage	Total Remuneration
Manufacturing	67	$68,911	$4.62
Transport, Postal and Warehousing	6	$75,125	$0.45
Total	**73**		**$5.07**

Source: HillPDA, ABS Average Weekly Earnings, Australia, Nov 2016, indexed against CPI

Industry Value Added

Industry value added (IVA) of an industry refers to the value of outputs less the costs of inputs. It measures the contribution that the industry makes to the country's wealth or gross domestic product (GDP). We estimate that the current land uses potentially contribute $10.2 million every year based on the following table.

Table 11: Estimated industry value add ($2017m)

Industry	No. Workers	Industry / Value Add / Worker	Industry Value Add ($m)
Manufacturing	67	$142,012	$9.51
Transport, Postal and Warehousing	6	$106,451	$0.64
Total	**73**		**$10.15**

Source: Forecast .id economy, , indexed against CPI

Expenditure from workers

A recent survey conducted by URBIS found that Sydney CBD workers spend an average of $230 a week or $11,000 per annum on retail goods and services in the CBD. For centres outside of the CBD average spend is likely to be lower due to the reduced retail offer. Gladesville local centre provides some range of retail offering from food, restaurants, cafes and takeaway food. The ALDI store is within 200m and the Coles supermarket is 900m from the subject site.

For the purpose of the assessment HillPDA has made a more conservative assumption of $50 spend per worker on site per week in the locality.

The combined total retail expenditure generated by workers on site is approximate $30,650 per annum. This would likely be captured by surrounding retailers and would comprise predominately food and beverage expenditure.

Construction Economic Benefits

Estimated Construction Cost

Construction cost is estimated at $160 million based on the following:

Table 12: Capital investment estimation

Component	Units	$/unit	$m
Demolition and clearing (sqm)	8,800	150	1
Residential apartments (units)	383	300,000	115
Non-residential (sqm)	1,785	2,000	4
Car Parking (spaces)	723	50,000	36
Site Costs, External works, Misc.	1	4,000,000	4
Total			**160**

Source: Rawlinsons Construction Handbook 2017, RLB Digest 2017 and HillPDA

Construction Multiplier Effects

The construction industry is a significant component of the economy accounting for 6.7% of Gross Domestic Product (GDP) and employing almost one million workers across Australia.[10] The industry has strong linkages with other sectors, so its impacts on the economy go further than the direct contribution of construction. Multipliers refer to the level of additional economic activity generated by a source industry.

There are two types of multipliers:

- **Production induced**: which is made up of:
  - first round effect: which is all outputs and employment required to produce the inputs for construction; and
  - an industrial support effect: which is the induced extra output and employment from all industries to support the production of the first round effect; and
- **Consumption induced**: which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment.

The source of the multipliers adopted in this report is ABS Australian National Accounts: Input-Output Tables 2012-13 (ABS Pub: 5209.0). These

[10] Source: IBIS World Construction Industry Report 2015

tables identify first round effects, industrial support effects and consumption induced multiplier effects at rates of $0.65, $0.67 and $0.99 respectively to every dollar of construction.

The table below quantifies associated economic multipliers resulting from the construction process.

Table 13: Construction multipliers ($m)

	Direct Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support Effects		
Output multipliers	1	0.620	0.647	0.945	3.212
Output ($million)	$160	$98.8	$103.2	$150.8	$512.4

Source: HillPDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2012-13 (ABS Pub: 5209.0)

The estimated direct construction costs will generate a further $203 million of activity in production induced effects and $151 million in consumption induced effects. Total economic activity generated by construction of the proposal is estimated at $514 million.

Note that the multiplier effects are national, and not necessarily local. The ABS states that:

> *"Care is needed in interpreting multiplier effects; their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction activity to the rest of the economy. Clearly, through its multipliers, construction activity has a high impact on the economy."*

In particular the multiplier impacts can leave the impression that resources would not have been used elsewhere in the economy had the development not proceeded. In reality many of these resources would have been employed elsewhere. Note that the NSW Treasury guidelines state:

> *"Direct or flow on jobs will not necessarily occur in the immediate vicinity of the project – they may be located in head office of the supplier or in a factory in another region or State that supplies the project".*[11]

[11] Source: Office of Financial Management Policy & Guidelines Paper: Policy & Guidelines: Guidelines for estimating employment supported by the actions, programs and policies of the NSE Government (TPP 09-7) NSW Treasury

Nevertheless, economic multiplier impacts represent considerable added value to the Australian economy.

Construction Related Employment

Every one million dollars of construction work undertaken generates 2.35 job years directly in construction[12]. Based on $160 million estimated construction cost 376 job years[13] would be directly generated by the PP as shown in the table below.

Table 14: Construction employment

	Direct Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support		
Multipliers	1	0.620	0.647	0.945	3.212
Employment No. per $million	2.352	1.713	1.869	3.347	9.280
Total job years created	376	274	299	535	1,485

Source: Hill PDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2008-09 (ABS Pub: 5209.0) adjusted by CPI to 2014

The ABS Australian National Accounts: Input-Output Tables 2012-13 identified employment multipliers for first round, industrial support and consumption induced effects of 0.64, 0.70 and 1.34 respectively for every job year in direct construction. Including the multiplier impacts the PP is estimated to generate a total of 1,485 job years directly and indirectly.

Retail expenditure from construction workers

Construction workers on site would generate additional sources of retail expenditure. This would be spent predominately on convenience-related items such as lunches, coffees, snacks and so on. A recent survey conducted by URBIS found that workers in Sydney CBD on average spent $230 per week on retail items. This average spend encompasses clothing, internet and supermarket purchases. For construction workers HillPDA has applied a more conservative spend of $15 a day or $75 a week for 46 working weeks generated by each worker during the construction period.

We have estimated that:

- 375 construction job years would be directly supported on the subject site over the course of the development; and
- The workers on site will spend an average of $3,450 per annum in the Gladesville / Top Ryde locality.

[12] Source: ABS Australian National Accounts: Input – Output Tables 2012-13 (ABS Pub: 5209.0) adjusted to 2016 dollars
[13] Note: One job year equals one full-time job for one year

On this basis existing retailers in the local area of the subject site would enjoy $1.3 million revenue from construction workers on site during the period of construction.

Other Construction Impacts

The construction process may lead to short-term negative impacts in the locality such as increased traffic, noise, dust and so on. We have assumed that the development would take necessary steps to mitigate the extent of these impacts.

Economic Impacts of the Planning Proposal

Following construction, the PP would provide around 1,785sqm of employment floorspace. We have assumed that half of this would be occupied by retail services while the remaining half would be commercial services. This floorspace would generate employment onsite.

The residential component would also accommodate some jobs. According to ABS 7.6% of workers undertake the majority of work at home (ABS Locations of Work 2008, Cat 6275.0). Given that there are an average of 1.3 working residents per household in Ryde LGA (ABS Census 2011) then almost one in 10 dwellings is expected to provide employment.

HillPDA has applied a more conservative rate of 1.1 workers per household given smaller household sizes living in apartments.

The table below provides an estimate of the number of jobs that would be supported on site following construction and occupation.

Table 15: Estimated employment generation of PP

	Floorspace (NLA)	Sqm/Employee	No. of Workers
Retail general	893	30	30
Commercial general	893	25	36
Home Based Businesses	364 apartments*	1 worker / 8.4 apartments	30
Total Employment			**96**

Source: HillPDA *assumes 5% vacancy rate

As indicated in the table above, the proposed development would facilitate the creation of 96 jobs on site, an increase of 23 jobs more than the current uses on site.

Salaries

Based on IBIS World Industry Reports, HillPDA has estimated a combined annual remuneration at approximately $6 million for workers on site, which is $1 million more than the remuneration of current workers on site. The details by land use are provided in the table below.

Table 16: Estimated salaries ($2017)

Land use	No. of Workers	Average Wage	Remuneration ($m)
Retail general	30	$34,007	$1.01
Commercial general	36	$90,305	$2.71
Home Based Businesses	30	$62,400	$2.25
Total	**96**		**$5.97**

Source: IBIS World Industry Reports 2015; and ABS Average Weekly Earnings (Cat 6302), indexed to CPI

Industry value added

Based on IBIS World Industry Reports, HillPDA has estimated the combined IVA from land uses proposed in the Planning Proposal at approximately $7.8 million per annum, representing a decrease of $2.3 million from that currently generated. Notwithstanding an increase in jobs on site the IVA is a little lower due to the nature of the businesses – away from manufacturing (which has a high IVA impact) and towards service industries.

Table 17: Estimated industry value add of proposal ($2017)

	No. of Workers	Industry / Value Add / Worker	Industry Value Add ($m)
Retail general	30	$48,550	$1.44
Commercial general	36	$119,973	$3.60
Home Based Businesses	30	$77,376	$2.79
Total	**96**		**$7.83**

Source: IBIS World Industry Reports, indexed against CPI

Expenditure from workers

HillPDA has applied a $10 per day retail expenditure for retail workers and $15 per day for commercial workers, the combined total retail expenditure for non-residential workers is an estimated $35,200 an increase of approximately $4,550 from that currently generated.

Expenditure from residents

The PP would benefit Gladesville local centre and its existing retailers by increasing the resident population and hence retail expenditure. HillPDA

estimates an additional 764 residents would live on site based on an average occupancy of 2.1[14] and a 5% vacancy rate.

Assuming an average spend of $14,305[15] total retail spend generated by residents on site would be $10.9 million ($2016).

Of course not all of this expenditure will be captured by existing retailers in the locality (Gladesville, Putney and Top Ryde), but HillPDA would expect a rate of around 60% would be captured in the local area.

When combined with workers on site, the PP would provide sources for an increase in retail sales captured by Gladesville, Putney and Top Ryde retailers in the order of $6 million to $7 million per annum.

Impact on whole-of-government revenue

Based on the table below the PP is likely to contribute an additional $86 million to government revenue.

Table 18: Impact on whole-of-government revenue

Source of Revenue	Total ($m)
GST from Residential Apartments *1	31.3
Stamp Duty Revenue *2	29.2
Developer Contributions *3	12.5
Payroll Tax during Construction *4	2.8
Payroll Tax over 10yrs post construct *5	1.0
Land Tax Revenue (over 10yrs) *6	9.2
Total	**86.0**

*1 Assuming average apartment sale price of $900,000
*2 Assuming average apartment sale price of $900,000
*3 Section 94 (Ryde Council Section 94 Plan)
*4 Assuming 50% of workers do not attract payroll tax due to varying business sizes
*5 Assuming 50% of workers do not attract payroll tax due to varying business sizes
*6 Assuming 20% of buyers are subject to land tax

Other economic benefits

Investment stimulus

Where a significant property investment decision has been made, it is generally viewed as a strong positive commitment for the local area. Such an investment can in turn stimulate and attract further investment. The direct investment in the Planning Proposal would support a wide range of economic multipliers which would in turn support investment in

[14] ABS 2016 Ryde LGA community profile – average number of persons in occupied apartments
[15] Mapinfo Anysite 2016 Expenditure Data – assumed impact year of 2021

associated industries. It would also raise the profile of Gladesville and Ryde LGA to potential investors.

The provision of a mixed use development on the subject site would increase the economic benefits of the scheme to surrounding businesses, services and the financial feasibility of public transport. The benefits of residential uses in the Ryde LGA are recognised in increasing the demand for retail, commercial and transport services and hence increasing the viability of these services.

The PP would create additional business opportunities in this locality associated with future residents and employment floorspace on site. It would increase the profile of this area and, in so doing, increase the financial feasibility of mixed use developments, potentially acting as a catalyst on surrounding sites.

Street activation

The construction of a mixed use development comprising uses such as commercial, retail and residential located on the subject site would create increased pedestrian traffic having the effect of further activating the local area. This street activation would have the benefits of increasing security, increasing trade for retailers through increased passing trade and increase investment within the local area.

Replacing old with new

The redevelopment of the subject site would replace existing industrial and warehouse buildings with a modern mixed use development which is in line with the planning objectives of urban renewal projects. The new employment floorspace would be more attractive to potential tenants while increasing worker densities through increased efficiencies.

Conclusion

The PP would create opportunities for local employment and increase housing supply and choice. As such, the Planning Proposal is in accordance with State and local planning strategies (reviewed in Chapter 2) for Greater Sydney.

Increased residential densities in the area would also increase the opportunity of local retailers to capture additional retail expenditure, further increasing their viability and the vibrancy of the area.

Furthermore, upon completion, the PP would advance the profile of the Gladesville and Ryde LGA and, in so doing, increase the financial feasibility of mixed use developments, potentially acting as a catalyst on surrounding sites.

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