

Preliminary Site Investigation

18 - 40 Anderson St Parramatta

80217054

Prepared for
Landream Melbourne Pty Ltd

28 February 2018



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Executive Summary

Cardno (NSW/ACT) Pty Ltd ("Cardno") was engaged by Landream Melbourne Pty Ltd ("the Client") to prepare a Preliminary Site Investigation (PSI) for the property located at 18 to 40 Anderson Street, Parramatta, NSW ("the Site"). The location and features of the site are shown in **Figure 1** and **2** in **Appendix A**.

The objectives of the PSI are to:

- > Identify the potential for past or present activities on the Site and to the extent practicable surrounding the Site to cause contamination of land or groundwater at the Site;
- > Identify potential areas and contaminants of concern at the Site (if any);
- > Identify potential receptors of concern and assess the potential for the protected beneficial uses of the land and groundwater to be impacted due to contamination; and
- > Assess the requirement, if any, for further environmental investigation to assess or make the Site suitable for the proposed land use.

During preparation of this PSI, Cardno reviewed historical and current background information, publically available databases and conducted a site inspection to provide a preliminary determination if there are potential sources of contamination at the Site or immediate vicinity.

The review of the site history identified the following:

- > Prior to the establishment of the Holiday Inn in 1991 land use of the Site was as a car sales yard dating back to 1965 and;
- > Prior to 1965 dating to 1943, the site use was for residential purposes.

The proposed development is intended to be for mixed use as residential and commercial including five star hotel, business centre, residential apartments, serviced apartments, cafes and recreational facilities.

Based on the review of the site history and the on-site inspection, it does not appear that there are any significant sources of contamination present at the Site currently or historically. Impacts of potential contaminants of concern are expected be localised and low due to limited receptor pathways.

Given the results of this assessment, Cardno recommends the following:

- > Any future works involving soil disturbance should incorporate an unexpected finds protocol to facilitate the identification and management of potential sources not identified during this assessment.
- > Any soil proposed for excavation and off-site disposal should be classified in accordance with the NSW EPA *Waste Classification Guidelines (2014)*.
- > Obtain a dangerous goods certificate (Section 149) to confirm the presence or absence of tanks within the Site currently or historically.

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1 Introduction

1.1 Background

Cardno (NSW/ACT) Pty Ltd ("Cardno") was engaged by Landream Melbourne Pty Ltd ("the Client") to prepare a Preliminary Site Investigation (PSI) for the property located at 18 to 40 Anderson Street, Parramatta, NSW ("the Site"). The location and features of the site are shown in **Figure 1** and **2** in **Appendix A**.

The PSI was prepared in accordance with the scope presented in Cardno's proposal dated 05 February 2018.

1.2 Purpose and Objectives

The purpose of this PSI is to provide the Client with preliminary advice on the contamination status of the Site and any consequent implications for the proposed redevelopment of the site. During preparation of the PSI, Cardno reviewed current and historical activities undertaken at the Site to provide a preliminary environmental assessment of the potential for soil and/or groundwater contamination to be present on the Site.

The objectives of the PSI are to:

- > Identify the potential for past or present activities on the Site and to the extent practicable surrounding the Site to cause contamination of land or groundwater at the Site;
- > Identify potential areas and contaminants of concern at the Site (if any);
- > Identify potential receptors of concern and assess the potential for the protected beneficial uses of the land and groundwater to be impacted due to contamination; and
- > Assess the requirement, if any, for further environmental investigation to assess or make the Site suitable for the proposed land use.

1.3 Scope

Cardno carried out the following scope of work to meet the objectives of the PSI:

- > Defined the Site, features and surrounds:
 - Listed the property title description and zoning;
 - Defined site boundaries based on land title information;
 - Defined site features including services, main buildings and other infrastructure;
 - Defined topography, surface water flows and drainage;
 - Identified nearby sensitive receivers; and
 - Reviewed regional and local geology and hydrogeology, including details on registered bores.
- > Assessed site conditions and the surrounding environment from the following sources:
 - Site inspection to confirm site features including visible evidence of fuel storage, cutting or filling of the site, subsidence, placement of wastes;
 - Inspected the surrounding area (within approximately 200m of the Site) for potential sources of soil or groundwater contamination; and
 - Site interviews.
- > Completion of searches and review of historical information from the following sources:
 - Land titles;
 - Aerial photographs;
 - NSW EPA maintained registers.
 - Soil and groundwater sampling at specified locations across the Site;
 - Assessment of the requirements (if any) for further investigations; and

- Preparation of this report detailing the findings of the PSI and recommendations for further works.
- > Preparation of a PSI report.

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2 Site Condition and Surrounding Environment

2.1 Site Definition

The Site is located at 18 to 40 Anderson Street, Parramatta NSW, approximately 20km southwest of Sydney Central Business District. The Site location is shown in **Figure 1** and a site plan is presented in **Figure 2**, **Appendix A**, respectively with Site details presented in **Table 2-1**.

The Site, legally described as Lot 20 in DP 792518, operates as the Holiday Inn (Parramatta) and is owned by Landream Melbourne Pty Ltd. The Site provides for accommodation as well as recreational and parking uses summarised in **Table 2-2**.

Table 2-1 Site Identification

Item	Details
Site Address	Holiday Inn (Parramatta), 18 – 40 Anderson St, Parramatta NSW 2150
Approximate Site Area (ha)	0.8 ha
Title Details	Lot 20 DP 792518
Local Government Area	Parramatta
Parish and County	St John, Cumberland
Current Site Owners	Landream Melbourne Pty Ltd

2.2 Site Description

The Site is occupied by the Holiday Inn, a multistorey hotel and facilities including a pool, eatery and multi storey on-site parking. The Site operates as a business providing temporary accommodation and recreational use.

The proposed development is intended to be for mixed use as residential and commercial including five star hotel, business centre, residential apartments, serviced apartments, cafes and recreational facilities.

Development plans are included in **Appendix B**.

An inspection of the Site was undertaken on 14 February 2018 with photographs from the site contained in **Appendix C**. Details of observations made during the site inspection are provided in **Table 2-2**.

Table 2-2 Site Inspection

Item	Observations
Site use	Business operations of the Holiday Inn providing accommodation and recreational facilities as well as parking. Photograph 1, Appendix B
Weather condition	Sunny and warm.
Site slope and drainage features	Mostly flat with drainage toward the stormwater channel and associated drains. Photograph 2, Appendix B
Nearby water bodies	The closest water body is Parramatta River approximately 900m north.
Site surface coverings	Concrete hard stand and bitumen driveway and parking lot. Photograph 1 and 3, Appendix B
Surface soils	Not observed due to hardstand.

Item	Observations
Site cut and fill	No indications of significant cut and fill at the site.
Buildings	Hotel building which includes a reception lobby, restaurant, gym facilities and 6 level of guest rooms A detached, open two storey carpark is located in the northern portion of the site. There is also a small shed that houses pool equipment and chemicals located east of the main hotel building.
Potential asbestos in building materials	None observed.
Manufacturing, industrial or chemical processes and infrastructure	None observed.
Fuel storage tanks (USTs/ASTs)	None observed.
Dangerous goods	None observed.
Solid waste deposition	Typical waste produced by an operating hotel.
Liquid waste disposal features	Typical waste produced by an operating hotel.
Evidence of previous site contamination investigations	None observed.
Evidence of land contamination (staining or odours)	None observed.
Evidence of groundwater contamination	None observed.
Groundwater use	None observed.
Vegetation	Typical landscaping, trees located on perimeter. Photograph 4, Appendix B.

2.3 Surrounding Land Uses

The Site is located within the suburb of Parramatta and is in an area of business development with public recreational land to the east. Land uses around the site are detailed in **Table 2-3**. The Site and surrounding uses are shown in the Site Plan in **Figure 2** in **Appendix A**.

Table 2-3 Surrounding Land Use

Direction	Land Use or Activity
North	Currently a vacant lot for proposed development as high density residential.
West	Anderson Street and associated businesses.
East	A storm water channel followed by a public recreational area of Jubilee Park.
South	Various car dealership businesses and Marion St.

Public roads service the area and access to the site is available from Anderson Street. Public transport is available within the local area via bus services and trains arriving at Parramatta or Harris Park station, serviced by the Western, Cumberland and Inner West & Leppington Lines.

2.4 Topography and Drainage

The Site is mostly flat and ground level generally falls from west to east with ground levels on the western boundary varying from 10.1 m AHD – 10.7 m AHD. Ground levels on the eastern boundary vary from approximately 9.76 m AHD to 10.0 m AHD. Surface water is expected to drain toward the storm water channel to the east or migrate to onsite drains.

2.5 Flood Potential

The Site is located in the Sydney Harbour and Parramatta River Catchment. Cardno has previously provided the Client with a Flood Impact Assessment dated 29 June 2017 (Cardno 2017) that identifies the Site as being in a high flood hazard zone with the Site experiencing inundation by overflows from Clay Cliff Creek and overland flows. The Flood Impact Assessment (Cardno 2017) should be consulted for additional information on the flood potential of the site.

2.6 Regional Geology and Hydrogeology

The Sydney 1:100,000 Geological Map indicates that the Site and surrounds are situated on Wianamatta Group rock strata Ashfield Shale characterised by black to dark grey shale and lamina

The Soil Landscapes of Sydney 1:100,000 Sheet shows the Site being mostly Birrong alluvial soils and partially Blacktown residual soils. The Atlas of Australian Soils classifies these soils as Kurosol which are typically hard acidic red soils with hard neutral and acidic yellow mottled soils on lower slopes and in valleys.

2.6.1 Groundwater Database

A search of the NSW Groundwater Database using NRATLAS provided by LotSearch identified no bores within a 500m radius of the Site. See summary in **Appendix C**.

Based on the bores identified within the surrounding area regional groundwater is primarily for environmental monitoring and expected to occur around approximately 5.0 to 9.0m below the ground level.

2.6.2 Acid Sulphate Soils

Based on the Acid Sulphate Soils Map with the Parramatta LEP 2011 the conditions at the Site are mostly within the class 4. Works more than 2 metres below natural ground surface or are likely to lower the water table more than 2 metres below natural ground surface present an environmental risk.

2.6.3 Salinity

Based on the Dryland Salinity Potential of Western Sydney the potential of saline soil conditions at the Site are considered moderate. Additionally, the Atlas of Australian Acid Sulphate Soils lists the potential to be low to extremely low.

2.7 EPA Records Search

2.7.1 Contaminated Land Record of Notices

The Contaminated Land Record of Notices is maintained by the Office of Environment and Heritage (OEH) in accordance with Part 5 of the *Contaminated Land Management (CLM) Act 1997* and contains regulatory notices issued by the Environment Protection Authority (EPA) in relation to contaminated sites. The Record of Notices identified no current notices within a 1km radius of the Site. A summary of EPA record of notices is presented in **Appendix C** in the LotSearch Report.

2.7.2 PoEO Public Register

The PoEO Public Register under Section 308 of the *Protection of the Environment Operations (PoEO) Act 1997* contains Environment Protection Licences (EPLs), applications and notices issued by the EPA. The Public Register current on the 29 January 2018 was searched within a 1km radius of the Site to identify any issues of relevance to the Site. The results of the search are summarised in the LotSearch report in **Appendix C**.

Two sites within the search radius have active PoEO Licences with a further 11 sites holding former licences. The nearest operation with a current licence is Sydney Trains. The licenced is supplied for railway systems activities issued December 2004. This licenced activity is located approximately 167m south of the subject

Site. Former licenced activities within 200m of the Site include herbicide application along waterways and extractive activities undertaken by John Holland Pty Ltd with the licence expiring in 2015.

2.7.3 List of NSW Contaminated Sites Notified to the EPA

In response to 2008 amendments to the CLM Act clarifying the Section 60 duty to report contaminated sites, the EPA has received approximately 1,000 notifications from owners or occupiers of sites where they believe the sites are contaminated. Sites appearing on this list indicate that the notifiers consider that the sites are contaminated and warrant reporting to 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 sites warrant regulation.

The List of NSW Contaminated Sites Notified to the EPA as current on the 2 February 2018 and summarised on the LotSearch report in **Appendix C** identified one contaminated sites within a 1km search radius however the location of the site is not considered to pose a potential risk of impact at the Site.

2.7.4 EPA Other Sites of Contamination Issues

Other sites identified on the EPA website as having contamination issues are summarised in **Appendix C**. Data provided on the James Hardie Asbestos Waste Sites identifies four locations within a 1km radius of the Site. The closest potential disposal location is a stormwater canal embankment approximately 500m southeast. Due to the distance and direction of these sites, Cardno considers there is a negligible potential that they will impact the subject site.

2.8 Planning Information

The Site is zoned as B5 - Business Development under the Parramatta Local Environment Plan (LEP) which include the following objectives::

- > To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of, centres.
- > To maintain the economic strength of centres by limiting retailing activity.
- > To enable land uses that provide facilities or services to meet the day to day needs of workers in the area.
- > To encourage a range of tourism, recreation, function and entertainment uses in proximity to the Rosehill Racecourse, the Parramatta River and the Western Sydney University.
- > To provide for automotive businesses, trades and services to reinforce the existing functions of land within the zone.
- > To ensure that development is arranged and carried out in a way that does not intrude on the amenity of adjoining residential areas or detract from the function of commercial development in the commercial core.

Current and proposed uses of the Site are permissible under the Parramatta LEP 2011.

3 Site History

3.1 Historical Information Sources

Cardno reviewed and obtained information from the historical information sources listed in **Table 3-1**.

Table 3-1 Historical and Background Information Sources

Information	Source	Details
Historical Title Search	NSW Land and Property Information	Searched Lot 20 DP 792518
Historical Aerial Photographs	NSW Land and Property Information	Obtained scanned high resolution aerials for 1943, 1956, 1961, 1965, 1970, 1982, 1991, 2003, 2009, 2015.
Heritage Council of NSW	NSW Office of Environment and Heritage	Searched the area of the Site within a 1km radius.

3.2 Historical Certificates of Title Review

Cardno was provided with land title search from InfoTrack on the 28 February 2018 for Lot 20 DP 792518. Copies of the current and historical land titles are provided in **Appendix D**.

3.3 Historical Aerial Photograph Review

The LotSearch report includes ten historical aerial photographs ranging from 1943 to 2015 and are included in the LotSearch report in **Appendix C**. An interpretation of the aerial photography is presented in **Table 3-2**.

3.4 Heritage Council

Cardno searched the State Heritage Inventory (current as of the 5 February 2018) within a 1km radius of the Site. The search indicated 277 items listed under the *NSW Heritage Act 1977* with 255 items listed by local government and twenty-two by state agencies the in the suburb of Parramatta. All Sites are greater than 60m from the site and are mostly comprised of single story residence, road and rail structures of local significance summarised in **Appendix D**. These Heritage items do not impact the proposed redevelopment or the conclusions of this report.

3.5 Summary of Relevant Historical Activities

Historical land uses and activities occurring at the Site are summarised in Error! Reference source not found.. Activities with the potential to cause contamination are in bold text.

Table 3-2 Land Use History and Activities

Year	Information Source	Interpretation
1920 - 1943	Historical Title	Earliest records of registered proprietors are assumed to be residential property owners.
1943 - 1961	Historical Aerial Photography	<p>The Site and surrounds are typical of residential properties with some larger structures to the east assumed to be commercial or industrial.</p> <p>A stormwater drainage channel runs east to west within the southern portion of the site. It continues parallel to the north east of the site boundary.</p> <p>Site adjacent is vacant land assumed to be of recreational use which is in the current alignment of Jubilee Park</p>
	Historical Title	The north of the Site is owned by the YMCA of Sydney from 1949 - 1963.
1961 - 1965	Historical Aerial Photography	<p>By 1961, Hillsdons Holdens car sales is established with a sealed car yard to the north of the Site and commercial building on the eastern boundary of the Site.</p> <p>Residential properties are still present at the north and south of the Site.</p> <p>Surrounding areas are mostly unchanged.</p>
	Historical Title	Hillsdons Pty Limited owns part or all of the Site from 1955 -1987.
1965 - 1970	Historical Aerial Photography	<p>A large building structure has been constructed on site adjacent to Hilldons Holdens commercial building.</p> <p>Residential properties are still observed at the northwest and south of the Site</p> <p>The road to the north of the Site has been realigned.</p> <p>Some of the residential properties in the surrounding area have been demolished.</p>
1970 - 1982	Historical Aerial Photography	A sealed surface car yard with multiple vehicles has been established within the south and northern portion of the site replacing previous residential buildings.
1982 -1991	Historical Aerial Photography	<p>The Site remains as described above.</p> <p>Residential properties directly north of the Site are no longer observed and large buildings with potential car park have been constructed in their place.</p>
	Historical Title	1987 - 1989 Barlile Corporation Limited is the registered proprietor.
1991 - 2018	Historical Aerial Photography	Current alignment of Holiday Inn is apparent from 1991 including multi-story parking lot.

Year	Information Source	Interpretation
	Historical Title	Landscaping of stormwater channel and Jubilee park has occurred and the surrounding areas have undergone significant commercial development. 2010 to date proprietor listed as Aust & NZ international Investment Group Pty Ltd.

4 Preliminary Conceptual Site Model

4.1 Preliminary Conceptual Site Model

Generally, a conceptual site model (CSM) provides an assessment of the fate and transport of contaminants of potential concern (COPCs) relative to site-specific subsurface conditions with regard to their potential risk to human health and the environment. The CSM takes into account site-specific factors including:

- > Source(s) of contamination
- > Identification of COPCs associated with past (and present) source(s)
- > Vertical, lateral and temporal distribution of COPCs
- > Site specific lithologic information including soil type(s), depth to groundwater, effective porosity, and groundwater flow velocity
- > Actual or potential receptors considering both current and future land use both at the site and adjacent properties, and any sensitive ecological receptors.

Based on the information sourced in this report, a preliminary CSM has been developed and is outlined in **Table 4-1** below. Additional details are included in the sections that follow as necessary.

Table 4-1 Preliminary Conceptual Site Model

Conceptual Site Model Element	Description
Site History/Contaminant Sources	Historical buildings that have been demolished and potential importation of uncontrolled fill materials. Previous use of the Site as a car sales yard including storage and/or servicing of vehicles and day-to-day operations of the business. Former licensed EPA activity identified licenses for the use of herbicides presumed to be used in maintenance works along the stormwater channel.
Site Current and Future Use	The zoning for the Site is business development and currently operates as a Holiday Inn. The Site is proposed to be redeveloped as medium/high density residential providing serviced apartments and luxury accommodation.
Site Geology and hydrogeology	Soils and groundwater were not investigated as part of this PSI. Based on our experience with sites in the vicinity, groundwater is expected to be encountered between 5-9m below ground level and soils are anticipated to be fill material overlying natural soil which is typically a mixture of silty and sandy clays in the Parramatta locale.
COPCs – Soil	The contaminants of potential concern (COPCs) associated with the sources listed above include Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethyl-benzene, Xylenes and Naphthalene (BTEXN), Polycyclic Aromatic Hydrocarbons (PAHs), metals, pesticides, herbicides and asbestos.
Potential Human Receptors	Current and future users of the site including residents, employees, construction and maintenance workers as well as customers.

Conceptual Site Model Element	Description
Potential Environmental Receptors	The stormwater channel has the potential to form a pollutant pathway to receiving water bodies and groundwater.
Potential Contaminant Pathways	<p>The potential contaminant pathways to human and ecological receptors include:</p> <ul style="list-style-type: none"> ○ Vertical and lateral migration of COPCs from Site and surrounds through surface water runoff and migration into groundwater; ○ Migration of COPCs from Site through sediment erosion with winds and surface runoff during construction works; ○ Dermal and respiratory exposure to workers during construction works.

4.2 Preliminary Risk Evaluation

Based on the information sourced during preparation of this PSI, Cardno considers the potential for subsurface impacts at the site be low. Cardno identified some potential sources of contamination that could result in localised impacts to the subsurface. However, there were no signs of significant or gross contamination such as odours or surface staining noted during the site inspection.

The redevelopment of the Site will include serviced apartments, commercial businesses, luxury accommodation and recreational areas. If there are any measurable COPCs in the subsurface at the Site they can be managed during the bulk earth works to facilitate the site redevelopment. Management would include the establishment of an unexpected finds protocol to identify any COPCs that may be present. Additionally, any soil proposed to be disposed off-site would require classification in accordance with the *NSW EPA Waste Classification Guidelines (2014)*.

Under the future site use as a mixed light commercial and medium density residential, the potential risks to human health and the environment are considered low. If measurable COPC concentrations are present at the Site, it is possible that future site workers could be exposed to the COPCs. However, any potential risks to the construction workers could be managed through standard Occupational Health and Safety (OHS) procedures.

4.3 Data Gaps and Uncertainties

There is uncertainty with regard to the use and presence of tanks at the site currently or historically that could potentially occur due to historical use of the Site as a car sales yard and any additional storage and use of chemicals that would lead to contamination. It is recommended that a dangerous goods certificate (Section 149) be obtained to address this uncertainty.

5 Conclusions

Cardno has completed a Preliminary Site Investigation of Lot 20 on DP 7992518 situated at 18-40 Anderson Street, Parramatta, NSW. The purpose of the PSI is to provide the Client with preliminary advice on the contamination status of the Site and any consequent implications for the suitability of the Site for its proposed development and land use.

5.1.1 Summary of Contamination Potential

The review of the Site history identified the following:

- > Prior to the establishment of the Holiday Inn in 1991 land use of the Site was as a car sales yard dating back to 1965 and prior to this residential.

Based on the information reviewed relating to the site history and the site inspection, the following activities have historically or currently occur at the Site that present potential sources of contamination:

- > Historical fill materials utilised in earth works;
- > Potential for asbestos and/or lead containing building material due to demolition of historical buildings on Site;
- > Spills and leaks from vehicles stored at the Site and day to day operations of previous car yard business on Site.

5.1.2 Summary of Conceptual Site Model

Based on the information sourced during preparation of this PSI, Cardno considers the potential for subsurface impacts at the site be low. Cardno identified some potential sources of contamination that could result in localised impacts to the subsurface. However, there were no signs of significant or gross contamination such as odours or surface staining noted during the site inspection.

The proposed development is intended to be for mixed use as residential and commercial including five star hotel, business centre, residential apartments, serviced apartments, cafes and recreational facilities. If there are any measurable COPCs in the subsurface at the Site they can be managed during the bulk earth works to facilitate the site redevelopment. Management would include the establishment of an unexpected finds protocol to identify any COPCs that may be present. Additionally, any soil proposed to be disposed off-site would require classification in accordance with the *NSW EPA Waste Classification Guidelines (2014)*.

Under the future site use as a mixed light commercial medium/high density residential, the potential risks to human health and the environment are considered to be low. If measurable COPC concentrations are present at the Site, it is possible that future site workers could be exposed to the COPCs. However, any potential risks to the construction workers could be managed through standard Occupational Health and Safety (OHS) procedures.

5.2 Recommendations

Given the results of this assessment, Cardno recommends the following:

- > Any future works involving soil disturbance should incorporate an unexpected finds protocol to facilitate the identification and management of potential sources not identified during this assessment.
- > Any soil proposed for excavation and off-site disposal should be classified in accordance with the *NSW EPA Waste Classification Guidelines (2014)*.
- > Obtain a dangerous goods certificate (Section 149) to confirm the presence or absence of tanks within the Site currently or historically.

6 References

Cardno (NSW/ACT) Pty Ltd (2017) *Flood Impact Assessment – 18-40 Anderson St, Parramatta*. Prepared for Landream Pty Ltd. June 2017.

DECC (2009) *Contaminated Sites: Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*. Department of Environment and Climate Change NSW, Sydney. June 2009.

Guideline on the Investigation Levels for Soil and Groundwater' of the *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM) 1999 (NEPC, 1999) as varied May 2013 (the 'NEPM 2013'); Standards Australia (2005) *Australian Standard 4482.1-2005: Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil*.

NSW EPA (1994) *Contaminated Sites: Guidelines for Assessing Service Station Sites*. NSW Environment Protection Authority, Sydney. December 1994.

NSW EPA (1997) *Contaminated Sites: Guidelines for Consultants reporting on Contaminated Sites*. NSW Environment Protection Authority, Sydney. Reprinted August 2011.

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7 Limitations

This assessment has been undertaken in general accordance with the current “industry standards” for a PSI for the purpose and objectives and scope identified in this report. These standards are set out in:

- > National Environment Protection [Assessment of Site Contamination] Measure (NEPM), December 1999, National Environment Protection Council (NEPC).
- > National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (NEPC, 1999) as varied May 2013 (the ‘NEPM 2013’).
- > AS4482.1- 2005: Guide to the sampling and investigation of potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds. Standards Australia (2005).

The agreed scope of this assessment has been limited for the current purposes of the Client. The assessment may not identify contamination occurring in all areas of the site, or occurring after sampling was conducted. Subsurface conditions may vary considerably away from the sample locations where information has been obtained.

This Document has been provided by Cardno subject to the following limitations:

- > This Document has been prepared for the particular purpose outlined in Cardno’s proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.
- > The scope and the period of Cardno’s services are as described in Cardno’s proposal, and are subject to restrictions and limitations. Cardno did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Cardno in regards to it.
- > Conditions may exist which were undetectable given the limited nature of the enquiry Cardno was retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.
- > In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. Cardno’s opinions are based upon information that existed at the time of the production of the Document. It is understood that the services provided allowed Cardno to form no more than an opinion of the actual conditions of the site at the time this Document was prepared and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.
- > Any assessments made in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.
- > Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Cardno for incomplete or inaccurate data supplied by others.
- > Cardno may have retained sub consultants affiliated with Cardno to provide services for the benefit of Cardno. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any direct legal recourse to, and waives any claim, demand, or cause of action against, Cardno’s affiliated companies, and their employees, officers and directors.

This assessment report is not any of the following:

- > A Site Audit Report or Site Audit Statement as defined under the *Contaminated Land Management Act, 1997*.

- > A Detailed ESA or Environmental Site Investigation sufficient for an Environmental Auditor to be able to conclude a Site Audit Report and Site Audit Statement.
- > A geotechnical report and the bore logs or test pit logs may not be sufficient as the basis for geotechnical advice.
- > A detailed hydrogeological assessment in conformance with NSW DEC (2007) Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination.
- > An assessment of groundwater contaminants potentially arising from other sites or sources nearby.
- > A total assessment of the site to determine suitability of the entire parcel of land at the site for one or more beneficial uses of land.

DRAFT



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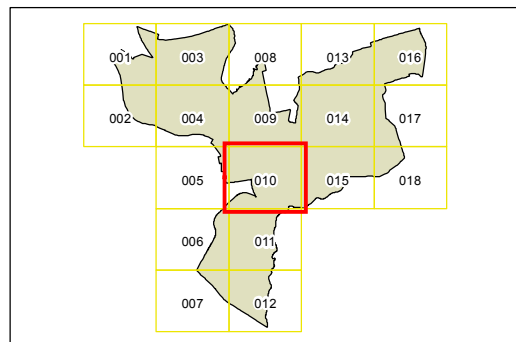
Floor Space Ratio Map - Sheet FSR_010

Maximum Floor Space ratio (n:1)

A	0.33	Z	5.0
B	0.4	AA1	6.0
D	0.5	AA2	6.4
F	0.6	AA3	6.5
H	0.7	AB	7.2
J	0.8	AC	8
K	0.89	AE1	10
N	1.0	AE2	10.2
O	1.1	AG	12
P	1.2	AI	19
R	1.4		
S1	1.5		
S2	1.52		
S3	1.7		
S4	1.75		
T1	2.0		
T2	2.1		
T3	2.4		
U1	2.5		
U2	2.6		
V1	3.0		
V2	3.3		
V3	3.4		
W	3.5		
X1	4.0		
X2	4.2		
Y1	4.5		
Y2	4.8		

Cadastre

Cadastre 01/02/2018 © Parramatta City Council

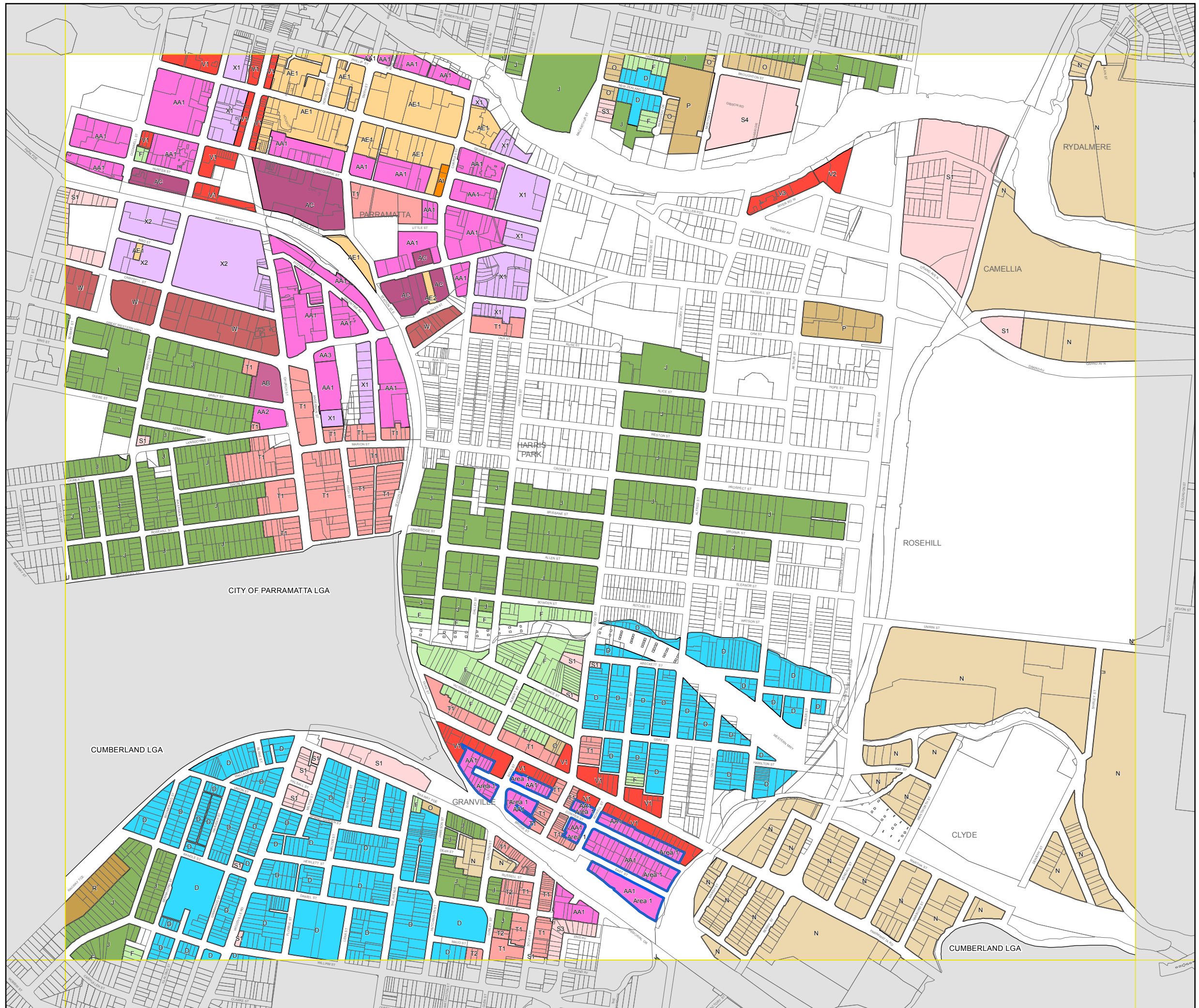


0 200 400 Metres

Scale: 1:10,000 @ A3

Projection: GDA 1994
MGA Zone 56

Map identification number:
6250_COM_FSR_010_010_20180207





Parramatta Local Environmental Plan 2011

Height of Buildings Map - Sheet HOB_010

Maximum Building Height (RL)
Heights shown on map in RL (m)

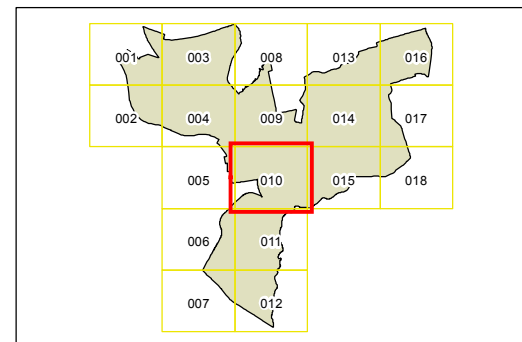
- RL 11
- RL 14

Maximum Building Height (m)

E	6	Y1	52
G	7	Y2	54
J1	9	AA1	60
J2	9.2	AA2	66
J3	9.5	AA3	72
K	10	AB1	80
L	11	AB2	90
M	12	AC1	102
N1	13	AC2	118
N2	14	AC3	120
O1	15	AD1	130
O2	16	AD2	136
P1	17	AE	150
P2	18	AF	190
Q1	19	AG	200
Q2	20	Area 1	Refer to table in Clause 4.3 (2A)
R	21	Area 2	Refer to Clause 7.4
S	24		
T1	25		
T2	28		
U1	31		
U2	34		
V1	36		
V2	37		
W	40		
X1	48		
X2	49		

Cadastre

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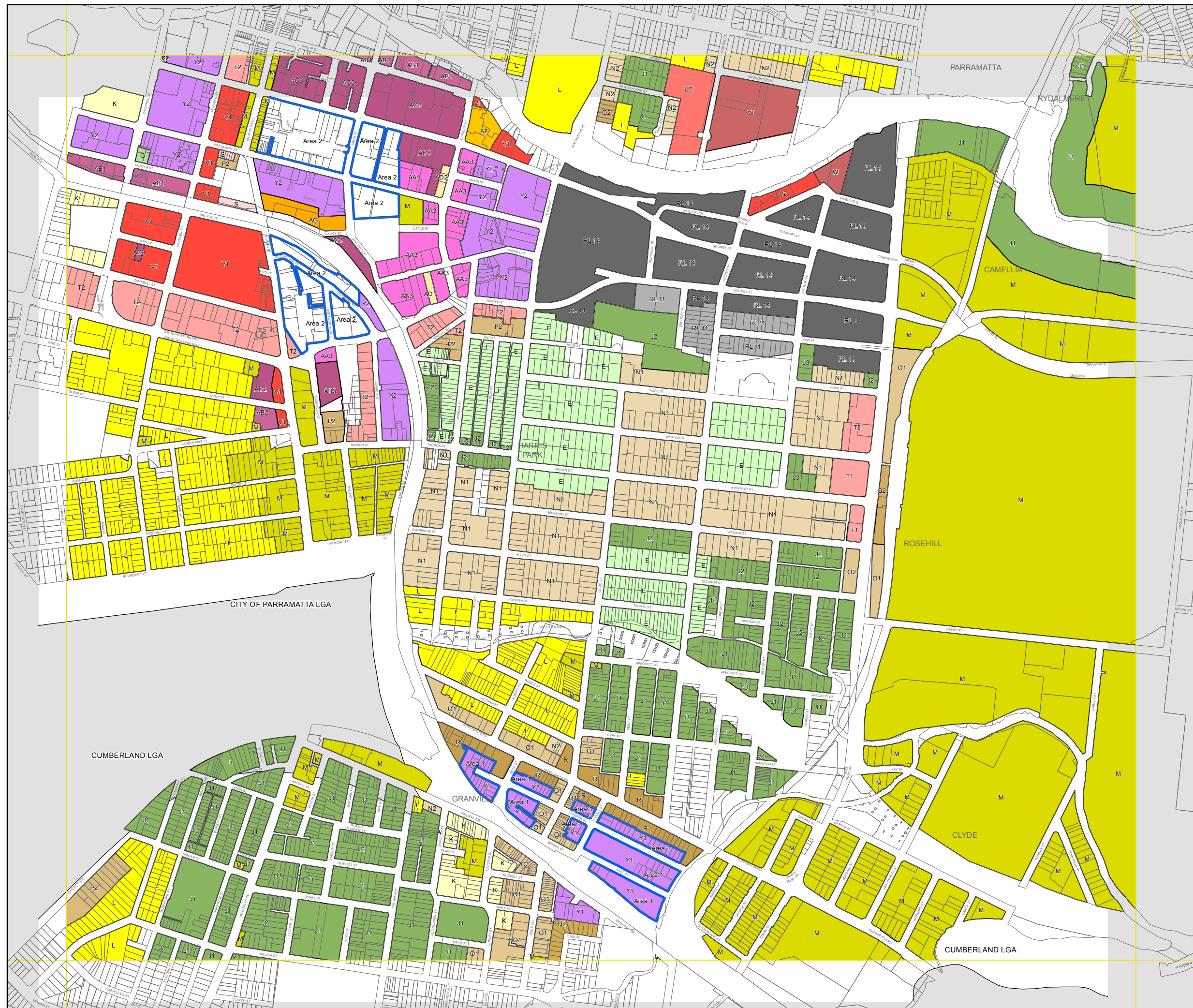


0 200 400 Metres

Scale: 1:10,000 @ A3

Projection: GDA 1994
MGA Zone 56

Map identification number:
6250_COM_HOB_010_010_20180226





Parramatta Local Environmental Plan 2011

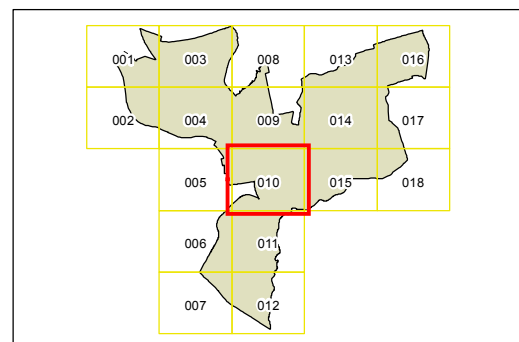
Land Zoning Map - Sheet LZN_010

Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B3 Commercial Core
- B4 Mixed Use
- B5 Business Development
- B6 Enterprise Corridor
- E2 Environmental Conservation
- E3 Environmental Management
- IN1 General Industrial
- IN2 Light Industrial
- IN3 Heavy Industrial
- 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
- W1 Natural Waterways
- W2 Recreational Waterways

Cadastre

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0 200 400 Metres

Projection: GDA 1994
MGA Zone 56

Scale: 1:10,000 @ A3

Map identification number:
6250_COM_LZN_010_010_20170505

