ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

GROUP GSA

ON

PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT

FOR

PROPOSED NEW SCHOOL DEVELOPMENT

AT

14-28 CULLEN AVENUE, JORDAN SPRINGS, NSW

23 JANUARY 2019 **REF: E30718KPrpt-rev1**

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EXECUTIVE SUMMARY

Richard Crookes Constructions, acting on behalf of Group GSA ('the client'), commissioned Environmental Investigation Services (EIS)[1] to re-assign the Preliminary Environmental Site Assessment (ESA) report prepared for the proposed new school development at 14-28 Cullen Avenue, Jordan Springs, NSW. The site location and features are shown on Figure 1 and Figure 2 respectively. The proposed development area is referred to as 'the site' in this report. The ESA was initially commissioned by Hayball.

The re-assignment is made on the basis that the conditions under which the original work was undertaken are unequivocally transferred with the re-assigned report. The original proposal, scope of work and standard terms and conditions are attached in the appendices

Based on the details provided, EIS understand that the proposed development includes the construction of a new school over the south eastern portion of the site. This will include a hall, library, classrooms, administration building, sports courts and a staff car park. It is anticipated that the northern areas will largely be open space.

The primary aims of the assessment were to identify past or present potentially contaminating activities at the site, identify the potential for site contamination, assess the need for further investigation, and make a preliminary assessment of the suitability of the site for the proposed development. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Prepare a conceptual site model (CSM); and
- Assess whether an intrusive investigation is required.

The scope of work included: review of site information, including background and site history information from a Lotsearch Pty Ltd *Environmental Risk and Planning Report*; a walkover site inspection; and preparation of an ESA report presenting the results of the assessment, including a CSM.

Based on the scope of work undertaken for this assessment, EIS identified the following potential contamination sources/AEC:

- Fill (either imported, or locally sourced);
- Fuel storage;
- Use/storage of pesticides; and
- Hazardous building materials.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, EIS are of the opinion that there is a low to moderate potential for site contamination.

The site appeared to have been used for defence purposes which is listed in Table 1 of the SEPP55 Planning Guidelines as an activity that may cause contamination. On this basis, and considering the sensitivity of the proposed land use (i.e. a primary school), a Stage 2 investigation would typically be required. However, given the recent subdivision works and the information provided by Lendlease, the site may have already been investigated and remediated.

EIS are of the opinion that the historical land uses and potential sources of contamination identified would not preclude the proposed development. The following is recommended to better assess the risks:

- All historical reports relevant to site contamination assessment and remediation should be obtained and reviewed. Following the review, an assessment should be made as to whether further investigation is warranted (or required in order to obtain development consent); and
- A preliminary site investigation should be designed and implemented (if required) based on the outcome of the review.

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

Considering the findings of the assessment, EIS are of the opinion that the site can be made suitable for the proposed development subject to the appropriate implementation of the recommendations.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of the report.

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ABBREVIATIONS

Asbestos Containing Material	**ACM**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Contaminant(s) of Potential Concern	**CoPC**
Contaminated Land Management	**CLM**
Conceptual Site Model	**CSM**
Environmental Investigation Services	**EIS**
Environmental Protection Authority	**EPA**
Environmental Site Assessment	**ESA**
Local Government Authority	**LGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**
Remediation Action Plan	**RAP**
Total Recoverable Hydrocarbons	**TRH**
Volatile Organic Compounds	**VOC**
Work Health and Safety	**WHS**

1 INTRODUCTION

Richard Crookes Constructions, acting on behalf of Group GSA, commissioned Environmental Investigation Services (EIS) to re-assign the Preliminary Environmental Site Assessment (ESA) report prepared for the proposed new school development at 14-28 Cullen Avenue, Jordan Springs, NSW. The site location and features are shown on Figure 1 and Figure 2 respectively. The proposed development area is referred to as 'the site' in this report. The ESA was initially commissioned by Hayball.

The re-assignment is made on the basis that the conditions under which the original work was undertaken are unequivocally transferred with the re-assigned report. The original proposal, scope of work and standard terms and conditions are attached in the appendices.

A geotechnical investigation was undertaken in conjunction with this assessment by JK Geotechnics[2]. The results of the investigation are presented in a separate report (Ref: 30718Zrpt)[3].

1.1 Proposed Development Details

Based on the details provided, EIS understand that the proposed development includes the construction of a new primary school over the south eastern portion of the site. This will include a hall, library, classrooms, administration building, sports courts and a staff car park. It is anticipated that the northern areas will largely be open space/playing field.

1.2 Aim and Objectives

The primary aims of the assessment were to identify past or present potentially contaminating activities at the site, identify the potential for site contamination, assess the need for further investigation, and make a preliminary assessment of the suitability of the site for the proposed development. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Prepare a conceptual site model (CSM); and
- Assess whether an intrusive investigation is required.

1.3 Scope of Work

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP43202KP2) of 31 August 2016 and written acceptance from Hayball of 14 June 2017. The re-assignment was undertaken in accordance with EIS proposal EP48789P and the acceptance by Richard Crookes Constructions dated 22 January 2019.

[2] Geotechnical consulting division of J&K

[3] Referred to as JK 2017 Report

The scope of work included the following:

- Review of site information, including background and site history information from a Lotsearch Pty Ltd *Environmental Risk and Planning Report*;
- A walkover site inspection; and
- Preparation of an ESA report presenting the results of the assessment, including a CSM.

The report was prepared with reference to regulations/guidelines outlined in the table below. Individual guidelines are also referenced within the text of the report.

Table 1-1: Guidelines

Guidelines/Regulations/Documents
Contaminated Land Management Act (1997)[4]
State Environmental Planning Policy No.55 – Remediation of Land (1998)[5]
Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)[6]
Guidelines for Consultants Reporting on Contaminated Sites (2011)[7]
Guidelines for the NSW Site Auditor Scheme, 2nd Edition (2006)[8]
National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)[9]

[4] NSW Government Legislation, (1997). *Contaminated Land Management Act 1997.* (referred to as CLM Act 1997)

[5] NSW Government, (1998). *State Environmental Planning Policy No. 55 – Remediation of Land.* (referred to as SEPP55)

[6] Department of Urban Affairs and Planning, and Environment Protection Authority, (1998). *Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land*. (SEPP55 Planning Guidelines)

[7] NSW Office of Environment and Heritage (OEH), (2011). *Guidelines for Consultants Reporting on Contaminated Sites.* (referred to as Reporting Guidelines 2011)

[8] NSW DEC, (2006). *Guidelines for the NSW Site Auditor Scheme, 2nd ed.* (referred to as Site Auditor Guidelines 2006)

[9] National Environment Protection Council, (2013). *National Environmental Protection (Assessment of Site Contamination) Amendment Measure 1999* (as amended 2013). (referred to as NEPM 2013)

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Site Address:	14-28 Cullen Avenue, Jordan Springs, NSW
Lot & Deposited Plan:	Part of Lot 22 DP1194338
Current Land Use:	Vacant Land
Proposed Land Use:	School
Local Government Authority (LGA):	Penrith City Council
Current Zoning:	Unknown*
Site Area (m^2):	29,950m^2
RL (AHD in m) (approx.):	40-42m
Geographical Location (decimal degrees) (approx.):	Latitude: -33.725027 Longitude: 150.727053

***Note** – Current zoning not identified with the Penrith City Council LEP or the SEPP (Sydney Region Growth Centres) 2006.

2.2 Site Location and Regional Setting

The site is located to the north of Cullen Avenue and is in a predominantly new residential area of Jordan Springs.

2.3 Topography

The regional topographic setting is gently undulating with the site sloping slightly away to the north east and south west from its centre at a gradient of approximately 1-2°.

2.4 Site Inspection

A walkover inspection of the site was undertaken by EIS on 27 July 2017. The inspection was limited to accessible areas of the site and immediate surrounds. At the time of the inspection, the majority of site was vacant land. A site compound consisting of two demountable site sheds occupied by 'Landscape Solutions' was located along the southern boundary. An internal inspection of the site sheds was not undertaken. A summary of the other inspection findings are outlined in the following subsections:

2.4.1 Boundary Conditions, Soil Stability and Erosion

The site was bound by metal fencing along the western and northern boundaries and metal wire fencing along the eastern and southern boundaries. Some minor erosion of exposed soil was visible along the eastern boundary.

2.4.2 Visible or Olfactory Indicators of Contamination

No visible or olfactory (i.e. odours) indicators of contamination were identified at the time of the inspection.

2.4.3 Presence of Drums/Chemicals, Waste and Fill Material

Bulk storage of chemicals was not observed during the site inspection. There was considered to be a potential for the storage of small quantities of petrol or other chemicals within the site sheds.

Several small stockpiles were identified to the north-east of the site compound (as shown on Figure 2). The stockpiles were of small volumes (i.e. less than 1 tonne) and made up of imported gravelly material.

A large elongated stockpile of excavated soil was identified along the western boundary shared with the 'Little Zacs' child care centre (as shown on Figure 2). The material appeared to have been excavated from along the boundary and stockpiled adjacent the excavation.

2.4.4 Drainage and Services

Considering the topography, surface water runoff was assumed to flow away from the centre of the site towards the north-east and south-west. Two (2) sewer pit covers were located along the southern boundary (as shown on Figure 2).

2.4.5 Sensitive Environments

Sensitive environments such as wetlands, ponds, creeks or extensive areas of natural vegetation were not identified on site. A small storm water channel with landscaped vegetation was observed running north to south approximately 30m east of the site.

2.4.6 Landscaped Areas and Visible Signs of Plant Stress

The majority of the site was grassed and had been cleared of any significant vegetation.

2.5 Surrounding Land Use

The site was generally surrounded by roads, new residential areas and light commercial land use. EIS did not observe any land uses in the immediate surrounds that were identified as potential contamination sources for the site.

2.6 Anecdotal Information

During the site induction conducted by Lendlease, the Lendlease representative noted that the site (and/or the broader subdivision area) had been remediated. Reference was made to a former brick kiln and unexploded ordnance. Further information was not provided.

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information presented in the Lotsearch report (attached in the appendices) indicated that the site is underlain by Bringelly Shale of the Wianamatta Group, which typically consists of shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff.

3.2 Acid Sulfate Soil Risk and Planning

The site is not located in an acid sulfate soil (ASS) risk area.

3.3 Hydrogeology

Hydrogeological information presented in the Lotsearch report (attached in the appendices) indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive highly productive aquifers. There was a total of one (1) registered bore within the report buffer of 2,000m. The bore is located approximately 1,808m north-west of the site and is registered for recreation purposes. The drillers log identified clay/gravel to a depth of 13.5m underlain by shale and sandstone bedrock. The standing water level in the bore was 45.0m below ground level.

The information reviewed for this assessment indicated that the subsurface conditions at the site are expected to consist of erosional soils overlying relatively deep bedrock. The site will be connected to the mains water supply and use of groundwater is not anticipated as part of the development.

3.4 Receiving Water Bodies

The site location and regional topography indicates that excess surface water flows have the potential to enter the stormwater channel located approximately 30m east of the site. This stormwater channel discharges into a large manmade dam/water body approximately 100-150m to the south of the site. This water body could be a potential receptor.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs

Historical aerial photographs were included in the Lotsearch report (attached in the appendices). EIS has reviewed the photographs and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1955	The site appeared to be mostly vacant and grassed. Tracks and man-made features were visible in western section of the site. A large dam was visible in the north-east corner of the site. Small buildings and tracks were visible in the immediate surrounds. Excavated areas and filled mounds were visible across the site and surrounds which indicated possible military land use.
1961	The site and immediate surrounds appeared generally similar to the 1955 photograph. The mounds around buildings and tracks appeared more pronounced.
1965	The photograph was of poor quality. The site appeared generally similar to the 1961 photograph. Several large elongated mounds were visible immediately to the west and south of the site. Additional mounds were also visible around the damn in the north east corner of the site and surrounding buildings. The presence of the elongated mounds indicated possible ongoing military use.
1970	The site and immediate surrounds appeared generally similar to the 1965 photograph.
1982	The site appeared generally similar the 1970 photograph. A large damn was visible immediately to the south east of the site with a large mound visible along the southern perimeter of the dam.
1991	The photograph was of poor quality. The site and immediate surrounds appeared generally similar to the 1982 photograph.
2002	The dam in the north east corner of the site was no longer visible. The remainder of the site appeared generally similar to the 1991 photograph. The small buildings were no longer visible surrounding the site. The mounds and tracks were still visible.
2009	The site and immediate surrounds appeared generally similar to the 2002 photograph. Increase tree and vegetation coverage was now visible indicating the site had been vacated.
2014	The site appeared similar to the present day.

Year	Details
	The 'Little Zacs' child care centre was not visible adjacent the site, however the remaining surrounds appeared generally similar to the present day.

4.2 NSW EPA Records

The Lotsearch report (attached in the appendices) included information from the NSW EPA databases for the following:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of notified sites under Section 60 of the CLM Act 1997 (Duty to Report Contamination); and
- Licensed activities under the Protection of the Environment Operations Act (1997)[10].

The search included the site area and surrounding areas in the report buffer of 1,000m. The search indicated the following:

- There were no records for the site or any properties in the report buffer under Section 58 of the CLM Act 1997;
- The site has not been notified with regards to the Duty to Report Contamination under Section 60 of the CLM Act 1997; and
- There were no records for current licenced activities at the site under the POEO Act 1997. Historical licenses were identified for waterways onsite for the application of herbicides.

4.3 Historical Business Directory and Additional Lotsearch Information

Historical business records for the site and surrounding areas in the report buffer were included in the Lotsearch report (attached in the appendices). The records indicated there were no motor garages, service stations or dry cleaners historically registered at the site.

In addition to the above, EIS have reviewed additional information contained within the Lotsearch report and note the following:

- There were no local or state heritage items at the site or in the immediate surrounds;
- There were no significant ecological constraints at the site or in the immediate surrounds; and
- The online National Assessment dataset indicates that the site is located within a high risk area of Dryland Salinity.

[10] NSW Government Legislation, (1997). *Protection of the Environment Operations Act 1997.* (referred to as POEO Act 1997)

4.4 Summary of Site History Information

The historical information indicated that:

- The site appeared vacant and grassed and possibly used for military/defence land use from at least 1956 to 1991. The presence of man-made features including buildings, dams, mounds and tracks indicated ongoing activity across the site and immediate surrounds during this time;
- The buildings were demolished sometime prior to 2002 and the site left vacant until the development of the surrounding areas sometime prior to 2014; and
- The site remained largely unchanged from 2014 to the present day.

4.5 Integrity of Site History Information

The majority of the site history information was obtained from government organisations as outlined in the relevant sections of this report. The veracity of the information from these sources is considered to be relatively high. A certain degree of information loss can be expected given the lack of specific land use details over time. EIS has relied upon the Lotsearch report and has not independently verified any information contained within. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

5 CONCEPTUAL SITE MODEL

5.1 Potential Contamination Sources/AEC and CoPC

The potential contamination sources/AEC and CoPC are presented in the following table:

Table 5-1: Potential Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material – Portions of the site appear to have been historically filled for site features such as mounds and to fill disused dams. This fill was most likely used during the site levelling (the JK Geotechnics borehole logs identify fill to depths of over 2m). There is a potential for the fill to be contamination.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Fuel storage – The possible military/defence land use on site and immediate surrounds may have involved the storage of fuel or other petroleum products. Incorrect storage or leaking containers may have contaminated the underlying soil.	Lead, TRH, BTEX and PAHs
Use of pesticides – Pesticides may have been used beneath the former buildings and/or around the site. There is a low potential for pesticide/herbicide storage/spills etc (small quantities) associated with the 'Landscape Solutions' compound.	Heavy metals, OCPs, OPPs, herbicides
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. These materials have the potential to be mixed in with fill during earthworks.	Asbestos, lead and PCBs
Storage of explosives – The historical site photographs indicate the buildings in the surround areas may have been used for storage of explosive materials.	Explosive residues (e.g. TNT, RDX), VOCs

Unexploded ordnance is another risk factor that could potentially pose a risk to site users. The assessment and management and unexploded ordnance is a specialised field and this has been considered further in drawing conclusions for the site.

5.2 Mechanism for Contamination, Affected Media, Receptors and Exposure Pathways

The mechanisms for contamination, affected media, receptors and exposure pathways relevant to the potential contamination sources/AEC are outlined in the following CSM table:

Table 5-2: CSM

Potential mechanism for contamination	The mechanisms for contamination are most likely to include 'top-down' impacts and spills. There is a potential for sub-surface releases to have occurred if deep fill (or other buried material) is present, although this is considered to be the least likely mechanism for contamination.
Affected media	Soil/soil vapour and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site occupants/users (adults and children), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users (including children within the adjacent childcare centre). Ecological receptors include terrestrial organisms and plants within unpaved areas (including the proposed landscaped areas, sports fields, gardens etc), and freshwater ecology within the water body to the south of the site.
Potential Exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and use of unpaved areas (i.e. the gardens) and future buildings (i.e. vapour inhalation). Potential exposure pathways for ecological receptors include primary contact and ingestion. This could occur via off-site migration of contaminated sediment via overland flow and stormwater run-off, or via migration of groundwater.
Presence of preferential pathways for contaminant movement	Preferential pathways for contaminant migration were not identified.

5.3 Assessment of Data Gaps

EIS has undertaken a preliminary data gap analysis based on the findings of the assessment. The data gaps and our comments are outlined in the following table:

Table 5-3: Data Gap Assessment

Data Gap	EIS Comments
Limited site history sources	Council records, historical land titles records and SafeWork NSW records (for the storage of dangerous goods) were not reviewed for the assessment. These records may provide additional information, however the information is unlikely to alter the CSM. EIS are of the opinion that a detailed review of historical site assessment reports, including any previous contamination investigations, remediation and validation works, would be more beneficial.
Soil and Groundwater Sampling	Soil and groundwater sampling and analysis was outside the scope of this assessment.

The comments above have been considered in drawing the conclusions provided in Section 6 of this report.

6 CONCLUSIONS

6.1 Contamination Sources/AEC and Potential for Site Contamination

Based on the scope of work undertaken for this assessment, EIS identified the following potential contamination sources/AEC:

- Fill (either imported, or locally sourced);
- Fuel storage;
- Use/storage of pesticides;
- Hazardous building materials; and
- Unexploded ordnance.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, EIS are of the opinion that there is a low to moderate potential for site contamination.

6.2 Conclusions and Recommendations

The site appeared to have been used for defence purposes which is listed in Table 1 of the SEPP55 Planning Guidelines as an activity that may cause contamination. On this basis, and considering the sensitivity of the proposed land use (i.e. a primary school), a Stage 2 investigation would typically be required. However, given the recent subdivision works and the information provided by Lendlease, the site may have already been investigated and remediated.

EIS are of the opinion that the historical land uses and potential sources of contamination identified would not preclude the proposed development. The following is recommended to better assess the risks:

- All historical reports relevant to site contamination assessment and remediation should be obtained and reviewed. Following the review, an assessment should be made as to whether further investigation is warranted (or required in order to obtain development consent); and
- A preliminary site investigation should be designed and implemented (if required) based on the outcome of the review.

Considering the findings of the assessment, EIS are of the opinion that the site can be made suitable for the proposed development subject to the appropriate implementation of the recommendations.

EIS consider that the assessment objectives outlined in Section 1.2 have been addressed.

7 LIMITATIONS

The following limitation apply to this assessment:

- EIS accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the assessment; scope of work and limitation outlined in the EIS proposal; and terms of contract between EIS and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- The preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- EIS accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- EIS have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. EIS should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- 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.

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IMPORTANT INFORMATION ABOUT THIS REPORT

These notes have been prepared by EIS to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors:
This report has been prepared in response to specific project requirements as stated in the EIS proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

EIS/J&K will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by EIS to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions:
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an assessment report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data:
Site assessments identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Assessment Limitations:
Although information provided by a site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled.

Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Assessments by Design Professionals:
Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Assessment Report:
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the assessment. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete assessment should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely:
Because an environmental site assessment is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

REPORT FIGURES



AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

This plan should be read in conjunction with the EIS report.

Title: **SITE LOCATION PLAN**

Location: 14-28 CULLEN AVENUE
JORDAN SPRINGS, NSW

Report No: E30718KP

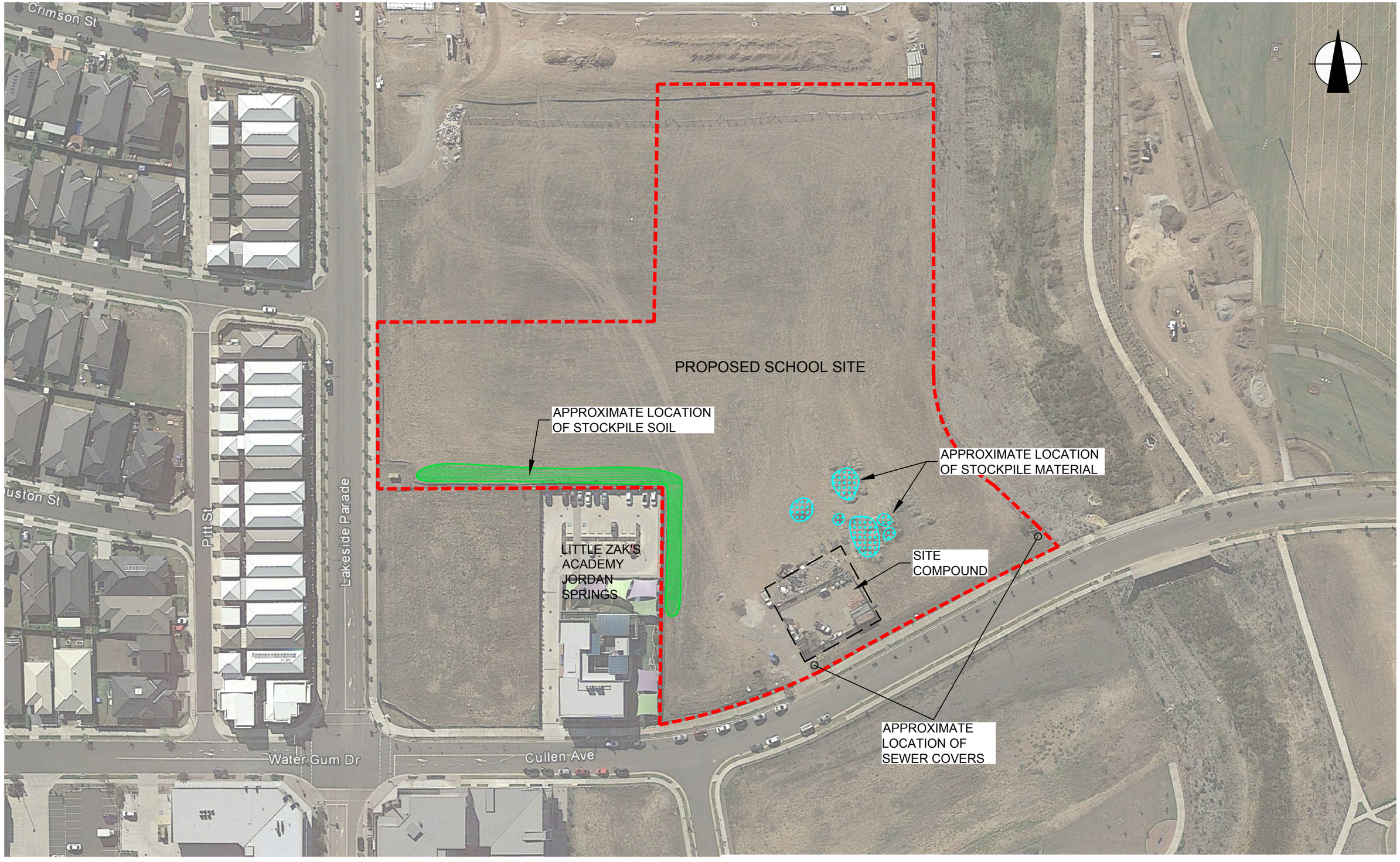
Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 28/07/2017 3:25:33 PM DWG FILE: S:\5 EIS\5G EIS JOBS\30000'S\E30718KP JORDAN SPRINGS\CAD\E30718KP.DWG

© EIS



LEGEND

APPROXIMATE SITE BOUNDARY

0 12 24 36 48 60

SCALE 1:1200 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SITE FEATURES PLAN**

Location: 14-28 CULLEN AVENUE JORDAN SPRINGS, NSW

Report No: E30718KP

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 28/07/2017 3:28:12 PM DWG FILE: S:\5 EIS\5C EIS JOBS\3000'S\E30718KP JORDAN SPRINGS\CAD\E30718KP.DWG

© EIS

REPORT APPENDICES

Appendix A: Lotsearch Report

Environmental Risk and Planning Report

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Report Date: **22 Jul 2017 19:37:12**

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

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Location Confidences

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

LC Code	Location Confidence
1	Georeferenced to the site location / premise or part of site
2	Georeferenced with the confidence of the general/approximate area
3	Georeferenced to the road or rail
4	Georeferenced to the road intersection
5	Feature is a buffered point
6	Land adjacent to Georeferenced Site
7	Georeferenced to a network of features

Dataset Listing

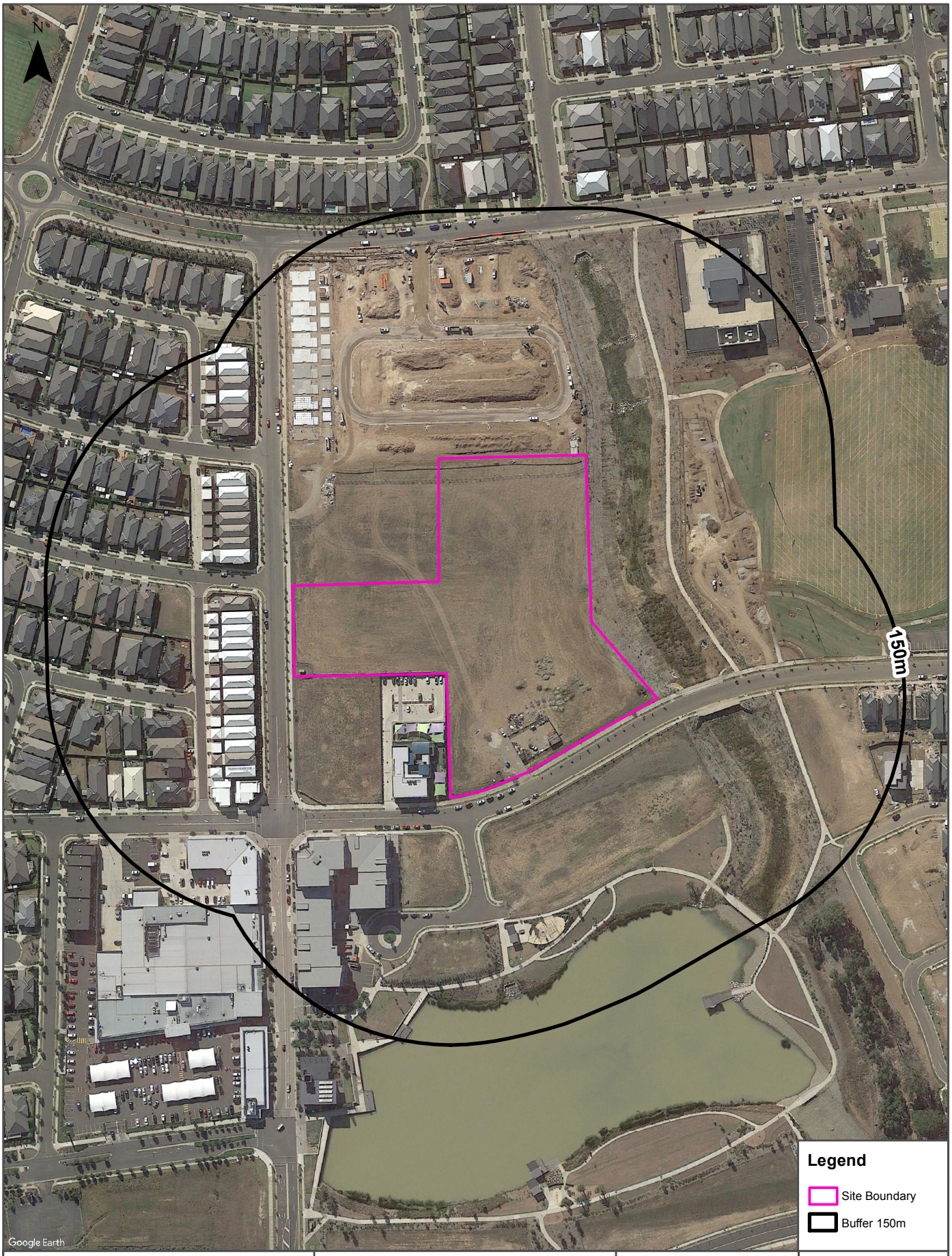
Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Land and Property Information	22/07/2017	22/07/2017	Daily	-	-	-	-
Topographic Data	Land and Property Information	10/04/2015	01/04/2015	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	17/07/2017	06/07/2017	Monthly	1000	0	0	0
Contaminated Land: Records of Notice	Environment Protection Authority	22/06/2017	22/06/2017	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	17/07/2017	16/01/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	07/03/2017	15/11/2012	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	22/06/2017	22/06/2017	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	22/06/2017	22/06/2017	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	14/07/2017	14/07/2017	Monthly	1000	0	0	0
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	14/07/2017	14/07/2017	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	14/07/2017	14/07/2017	Monthly	1000	3	3	4
UPSS Environmentally Sensitive Zones	Department of Environment, Climate Change and Water (NSW)	14/04/2015	12/01/2010	As required	1000	0	0	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	1000	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	1000	-	0	0
Points of Interest	Land and Property Information	01/02/2017	01/02/2017	Annually	1000	0	0	2
Tanks (Areas)	Land and Property Information	01/02/2017	01/02/2017	Annually	1000	0	0	1
Tanks (Points)	Land and Property Information	01/02/2017	01/02/2017	Annually	1000	0	0	1
Major Easements	Land and Property Information	01/02/2017	01/02/2017	As required	1000	0	1	4
State Forest	Land and Property Information	01/02/2017	29/06/2016	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment and Heritage	01/02/2017	31/12/2016	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	2
Groundwater Boreholes	NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology) 2015	21/03/2016	01/12/2015	Annually	2000	0	0	1
Geological Units 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	2
Geological Structures 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Naturally Occurring Asbestos Potential	NSW Department of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment and Heritage	12/08/2014		None planned	1000	1	-	2
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	0	-	-
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	1	1	2
Dryland Salinity Potential of Western Sydney	NSW Office of Environment and Heritage	12/05/2017	01/01/2002	None planned	1000	1	2	2
Mining Subsidence Districts	Land and Property Information	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	06/07/2016	28/01/2014	Annually	1000	0	0	0
Local Environmental Plan - Land Zoning	NSW Planning and Environment	30/06/2017	23/06/2017	Quarterly	1000	0	0	18
Local Environmental Plan - Minimum Subdivision Lot Size	NSW Planning and Environment	30/06/2017	23/06/2017	Quarterly	0	0	-	-
Local Environmental Plan - Height of Building	NSW Planning and Environment	30/06/2017	23/06/2017	Quarterly	0	0	-	-
Local Environmental Plan - Floor Space Ratio	NSW Planning and Environment	30/06/2017	23/06/2017	Quarterly	0	0	-	-
Local Environmental Plan - Land Application	NSW Planning and Environment	30/06/2017	13/04/2017	Quarterly	0	0	-	-
Local Environmental Plan - Land Reservation Acquisition	NSW Planning and Environment	30/06/2017	23/06/2017	Quarterly	0	0	-	-
State Heritage Items	NSW Office of Environment and Heritage	20/04/2017	30/09/2016	Quarterly	1000	0	0	0
Local Heritage Items	NSW Planning and Environment	30/06/2017	16/06/2017	Monthly	1000	0	0	0
Bush Fire Prone Land	NSW Rural Fire Service	28/03/2017	17/02/2017	Quarterly	1000	0	0	2
Remnant Vegetation of the Cumberland Plain	NSW Office of Environment and Heritage	07/10/2014	04/08/2011	Unknown	1000	1	1	4
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
ATLAS of NSW Wildlife	NSW Office of Environment and Heritage	22/07/2017	22/07/2017	Daily	10000	-	-	-

Aerial Imagery 2016

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Scale:	Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 21 July, 2017

Contaminated Land & Waste Management Facilities

14-28 Cullen Avenue, Jordan Springs, NSW 2747

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
N/A	No records in buffer								

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land & Waste Management Facilities

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

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

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

Former Gasworks

Former Gasworks within the dataset buffer:

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

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

National Waste Management Site Database

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

Site Id	Owner	Name	Address	Suburb	Landfill	Reprocess	Transfer	Location Confidence	Distance	Direction
N/A	No records in buffer									

Wate Management Facilities Data Source: Australian Governement Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

EPA PFAS Investigation Program

14-28 Cullen Avenue, Jordan Springs, NSW 2747

EPA PFAS Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

14-28 Cullen Avenue, Jordan Springs, NSW 2747

EPA Other SIte s with Contamination Issues

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

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

Sites within the dataset buffer:

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

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

EPA Activities

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Licensed Activities under the POEO Act 1997

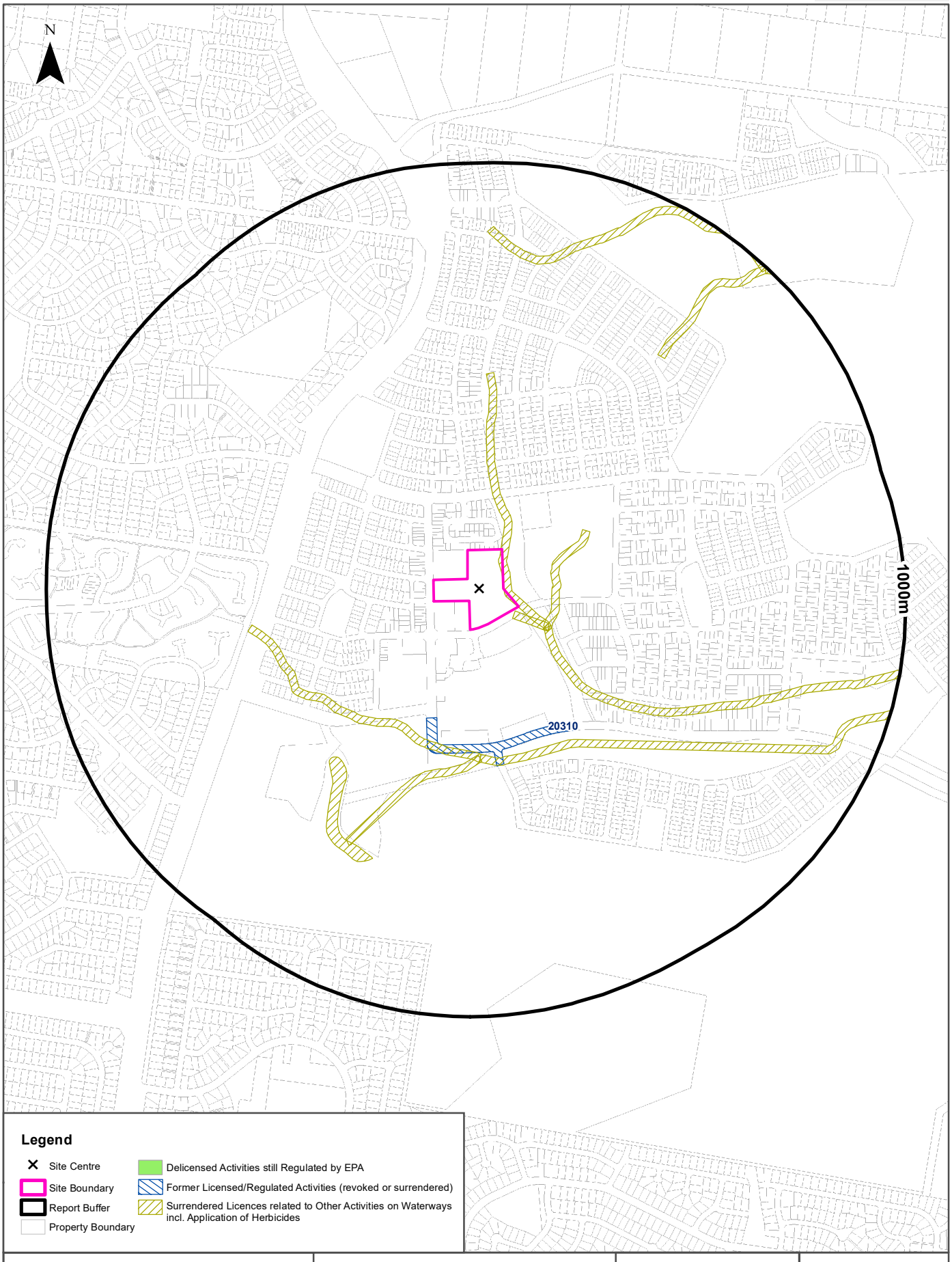
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

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

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

EPA Activities

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Delicensed Activities still regulated by the EPA

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

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

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

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

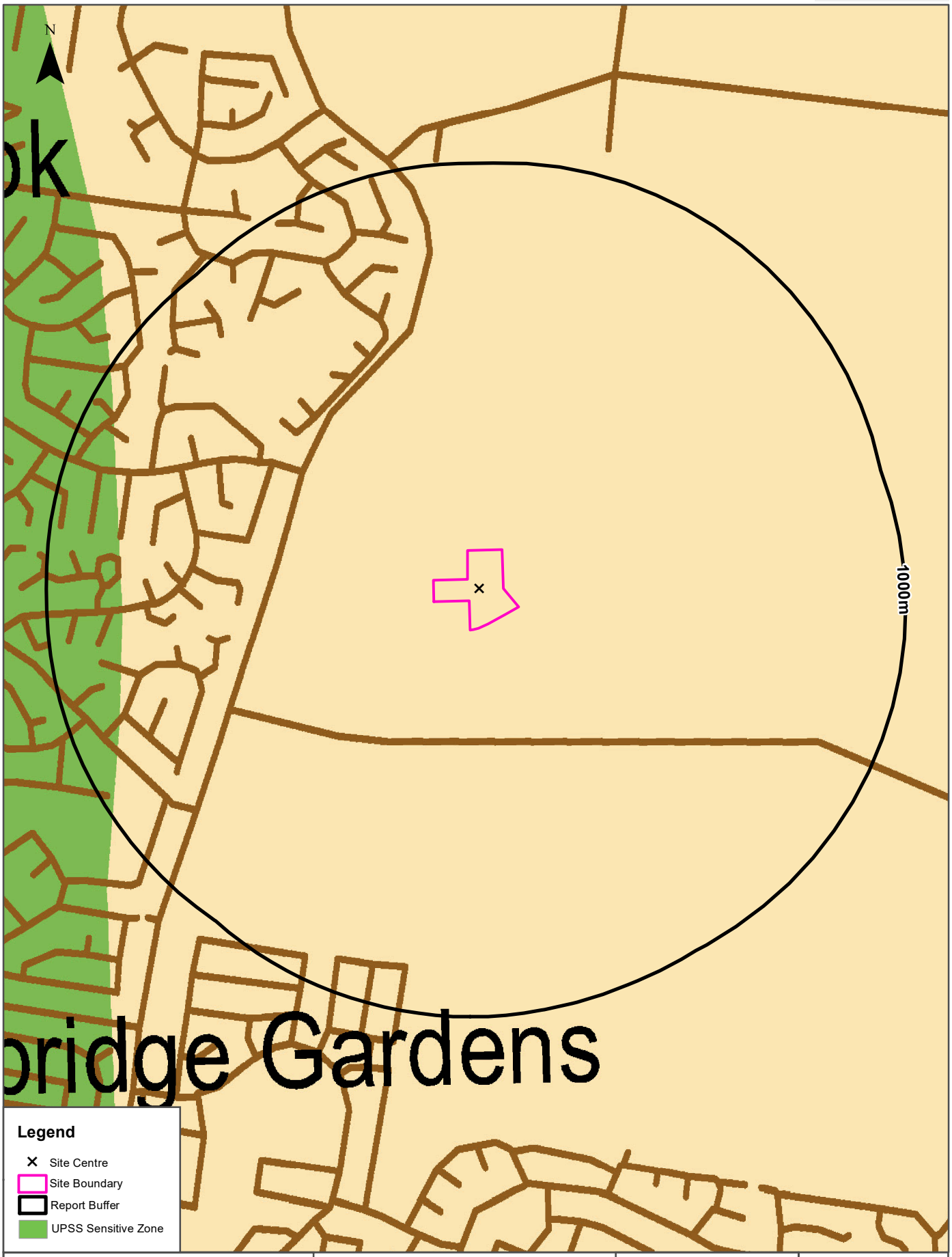
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
20310	Maryland Development Company Pty Ltd	Corner of Lakeside Parade and Jubilee Drive, JORDAN SPRINGS, NSW 2747	Surrendered	05/09/2013	Sewage treatment processing by small plants	3	243m	South

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

UPSS Sensitive Zones

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Historical Business Directories

14-28 Cullen Avenue, Jordan Springs, NSW 2747

1991 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1991 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1991 Business to Business Directory Records Road or Area Matches

Records from the 1991 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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

Historical Business Directories

14-28 Cullen Avenue, Jordan Springs, NSW 2747

1986 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1986 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1986 Business to Business Directory Records Road or Area Matches

Records from the 1986 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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

Historical Business Directories

14-28 Cullen Avenue, Jordan Springs, NSW 2747

1982 Business Directory Records
Premise or Road Intersection Matches

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

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

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

1982 Business Directory Records
Road or Area Matches

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

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

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

Historical Business Directories

14-28 Cullen Avenue, Jordan Springs, NSW 2747

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

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

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

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

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

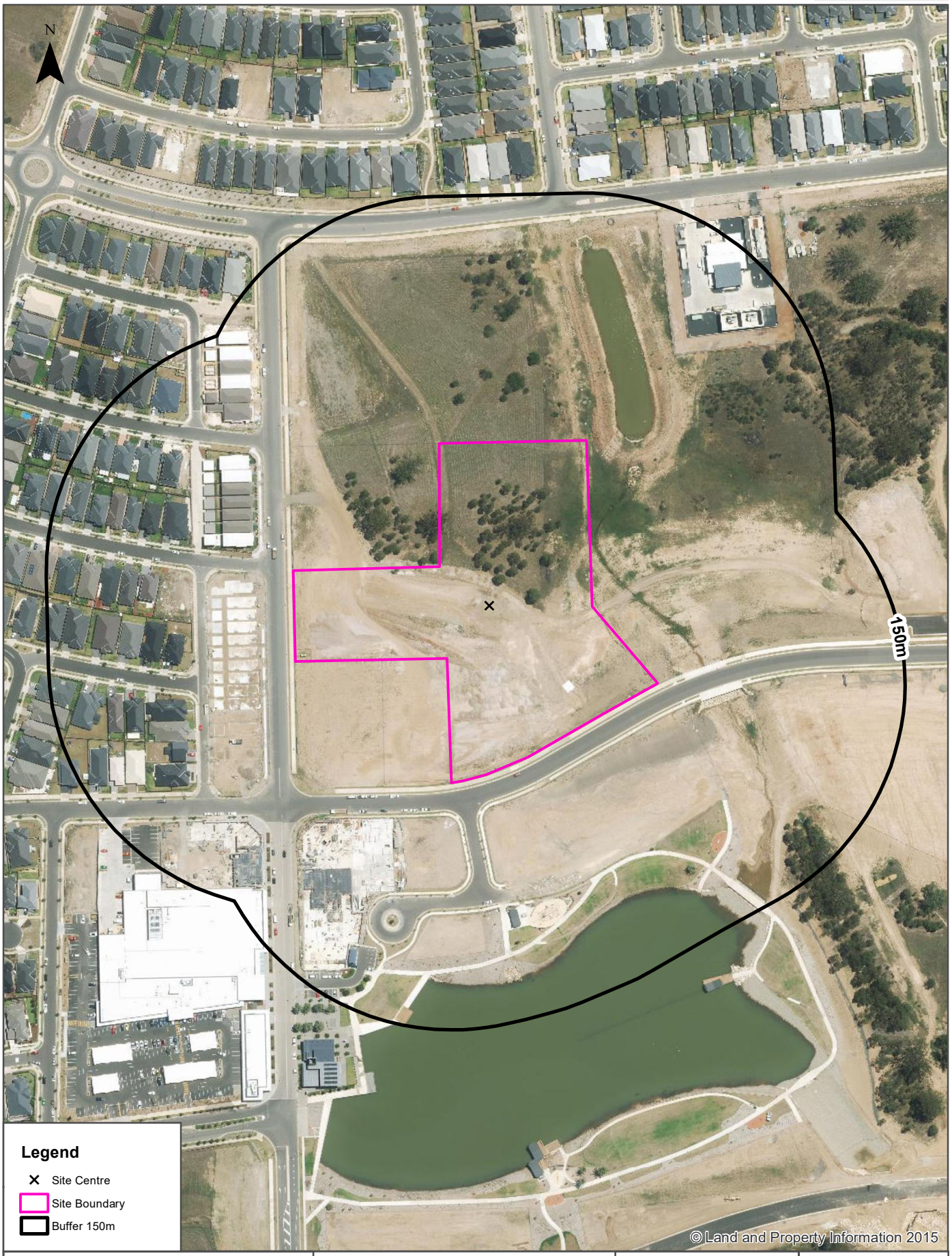
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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

Aerial Imagery 2014

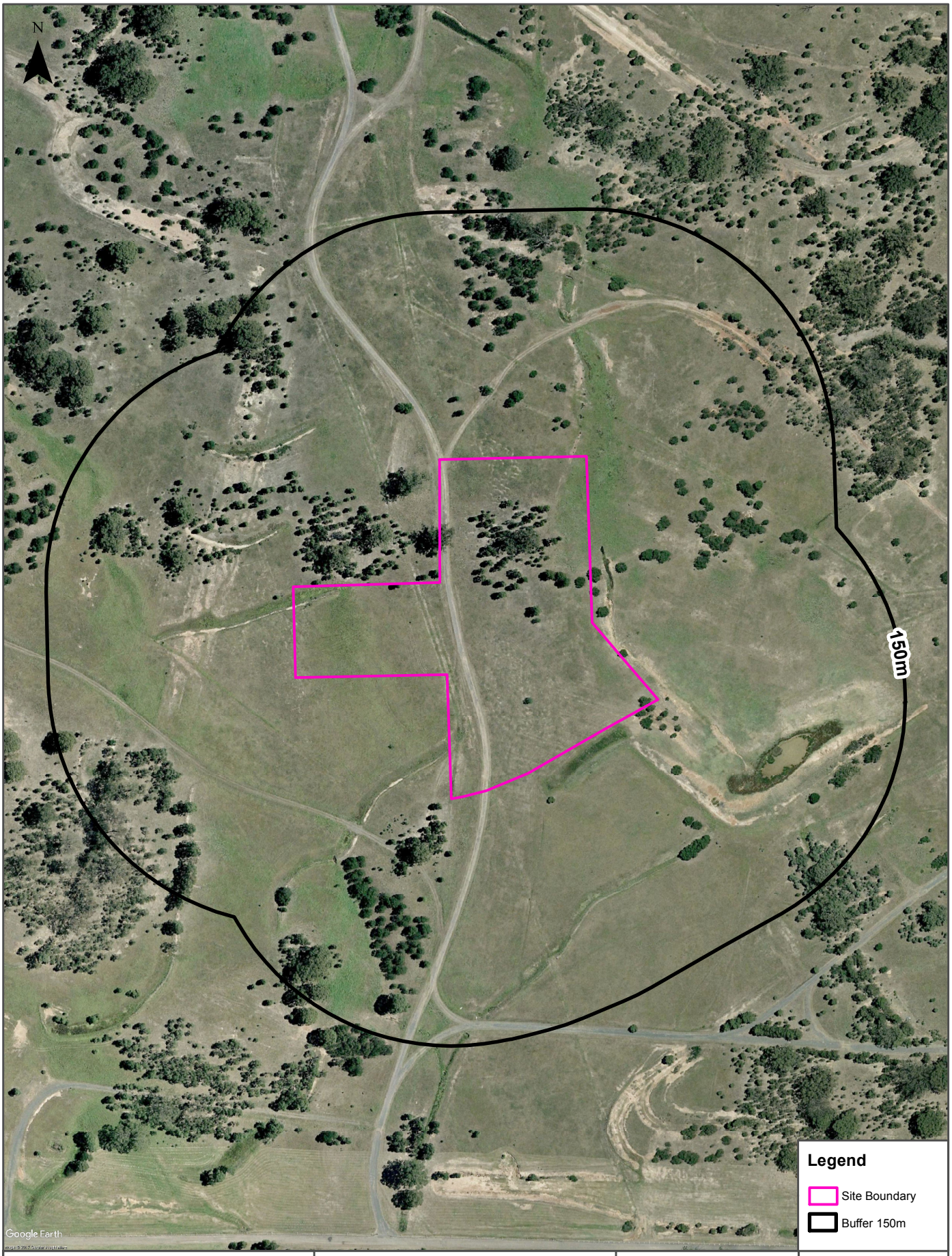
14-28 Cullen Avenue, Jordan Springs, NSW 2747



Scale: 0 25 50 100 Meters	Data Sources:Aerial Imagery © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 22July 2017

Aerial Imagery 2009

14-28 Cullen Avenue, Jordan Springs, NSW 2747



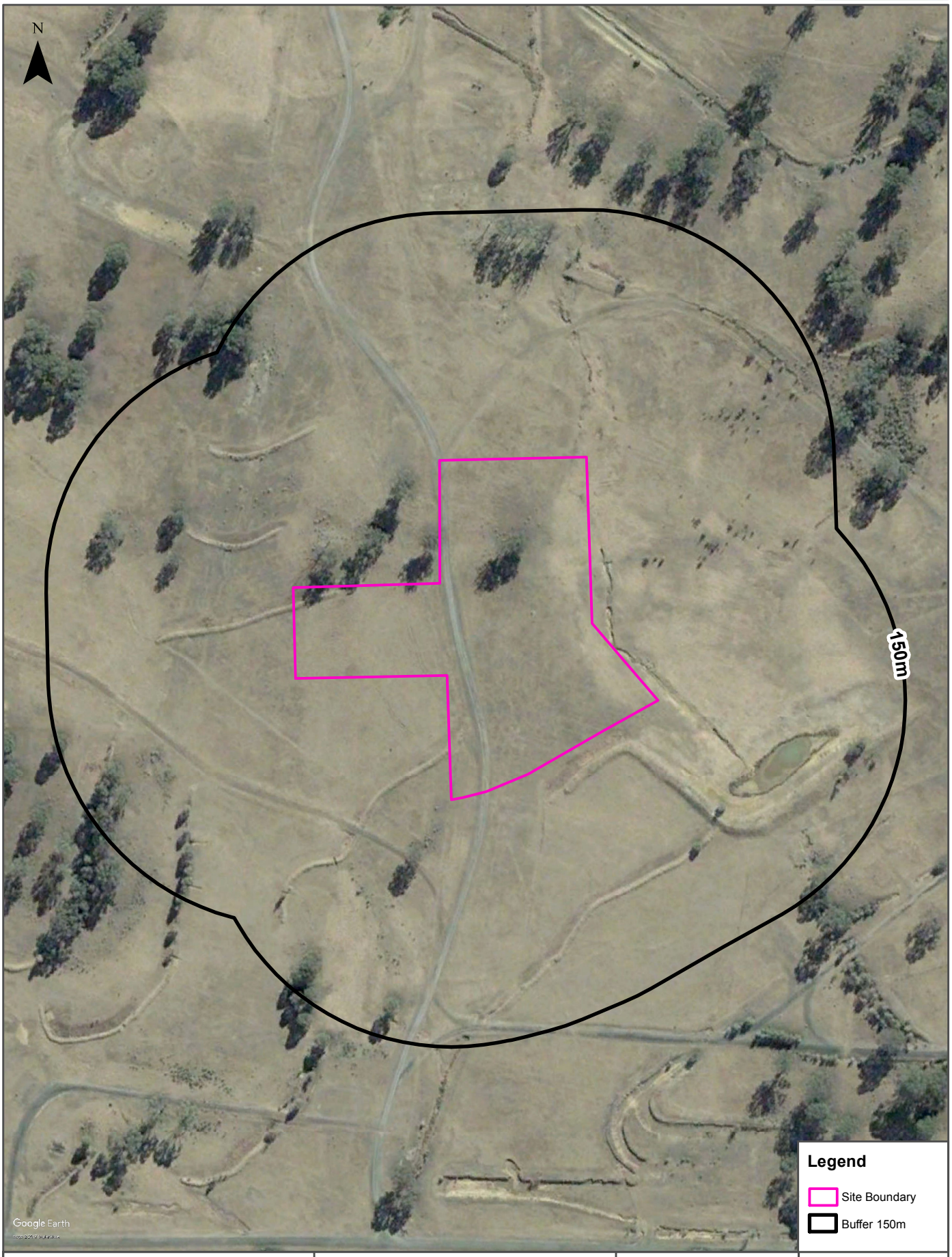
Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 21 July, 2017

Aerial Imagery 2002

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Scale:
0 25 50 100
Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 21 July, 2017

Aerial Imagery 1991

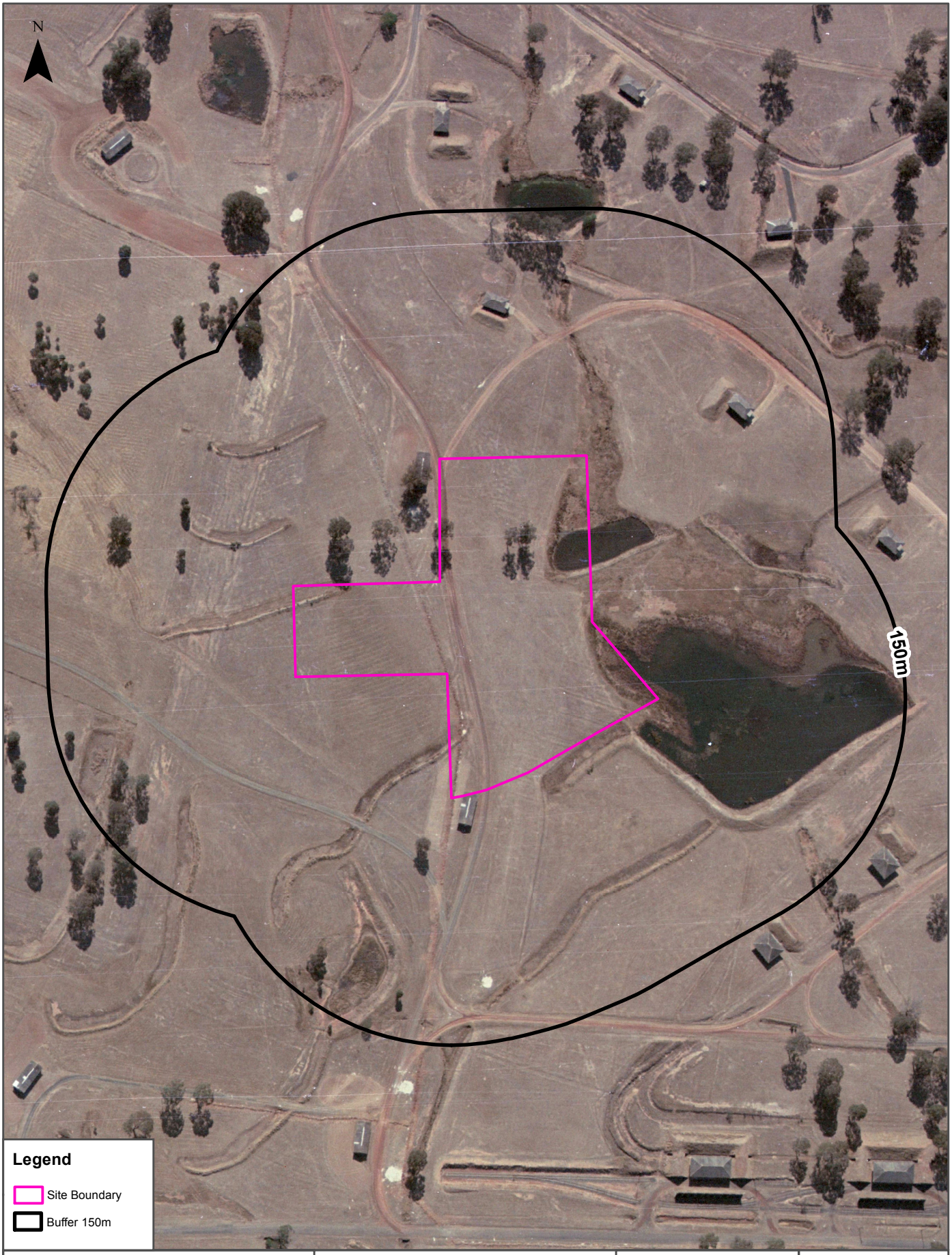
14-28 Cullen Avenue, Jordan Springs, NSW 2747



Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 21 July 2017

Aerial Imagery 1982

14-28 Cullen Avenue, Jordan Springs, NSW 2747



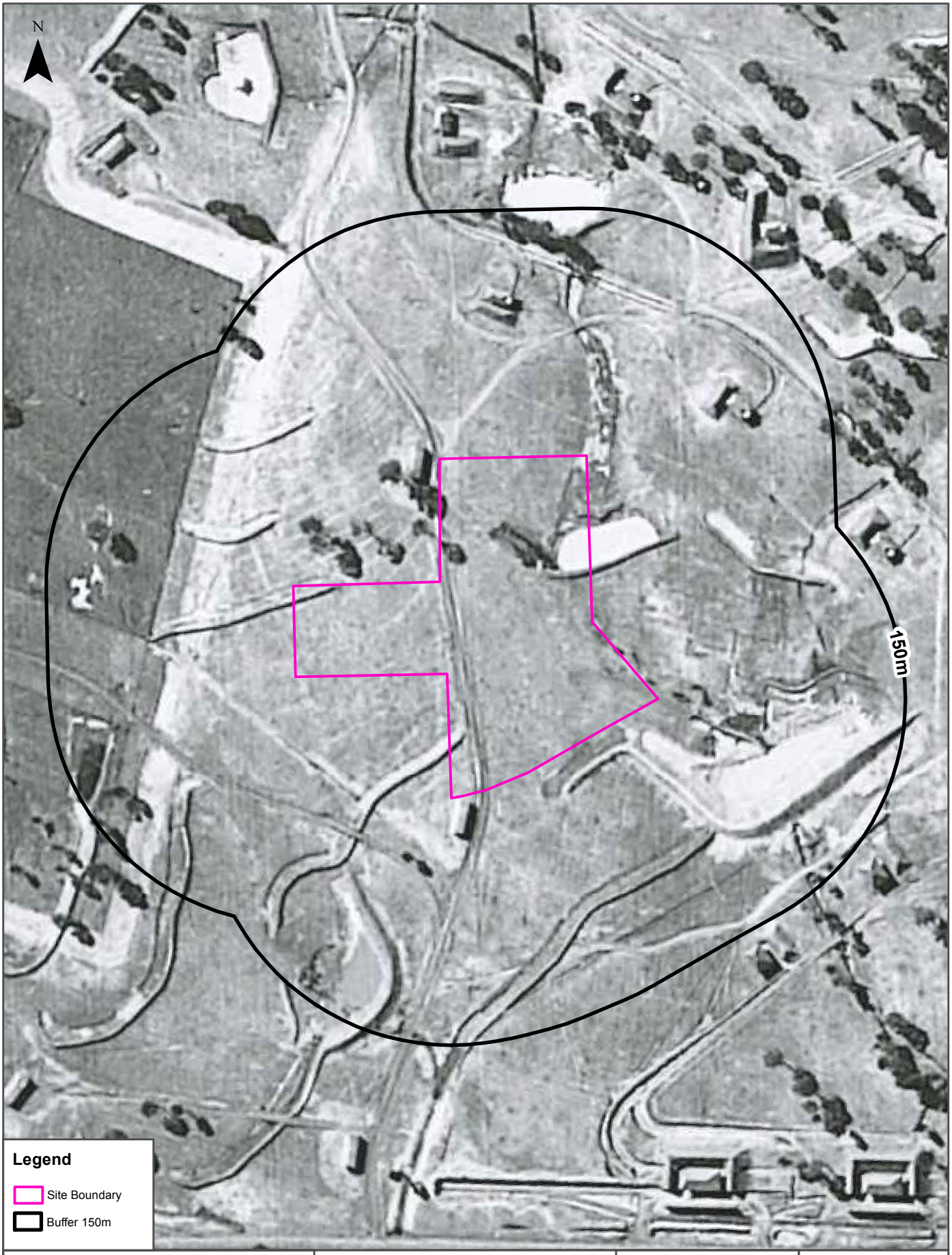
Aerial Imagery 1970

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Aerial Imagery 1965

14-28 Cullen Avenue, Jordan Springs, NSW 2747



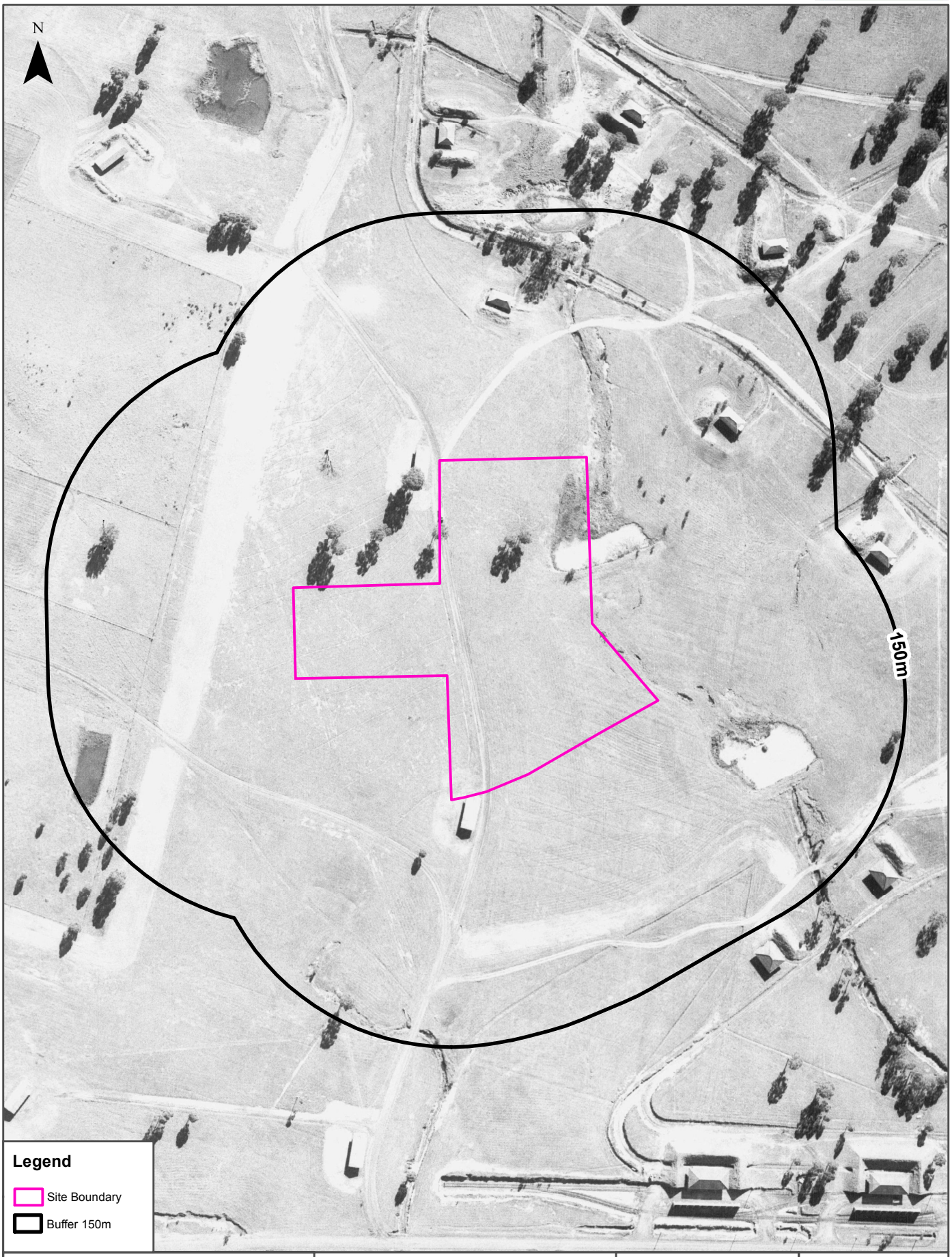
Data Sources: Historical Aerials: © Department Finance, Services & Innovation

Coordinate System: GDA 1994 MGA Zone 56

Date: 21 July 2017

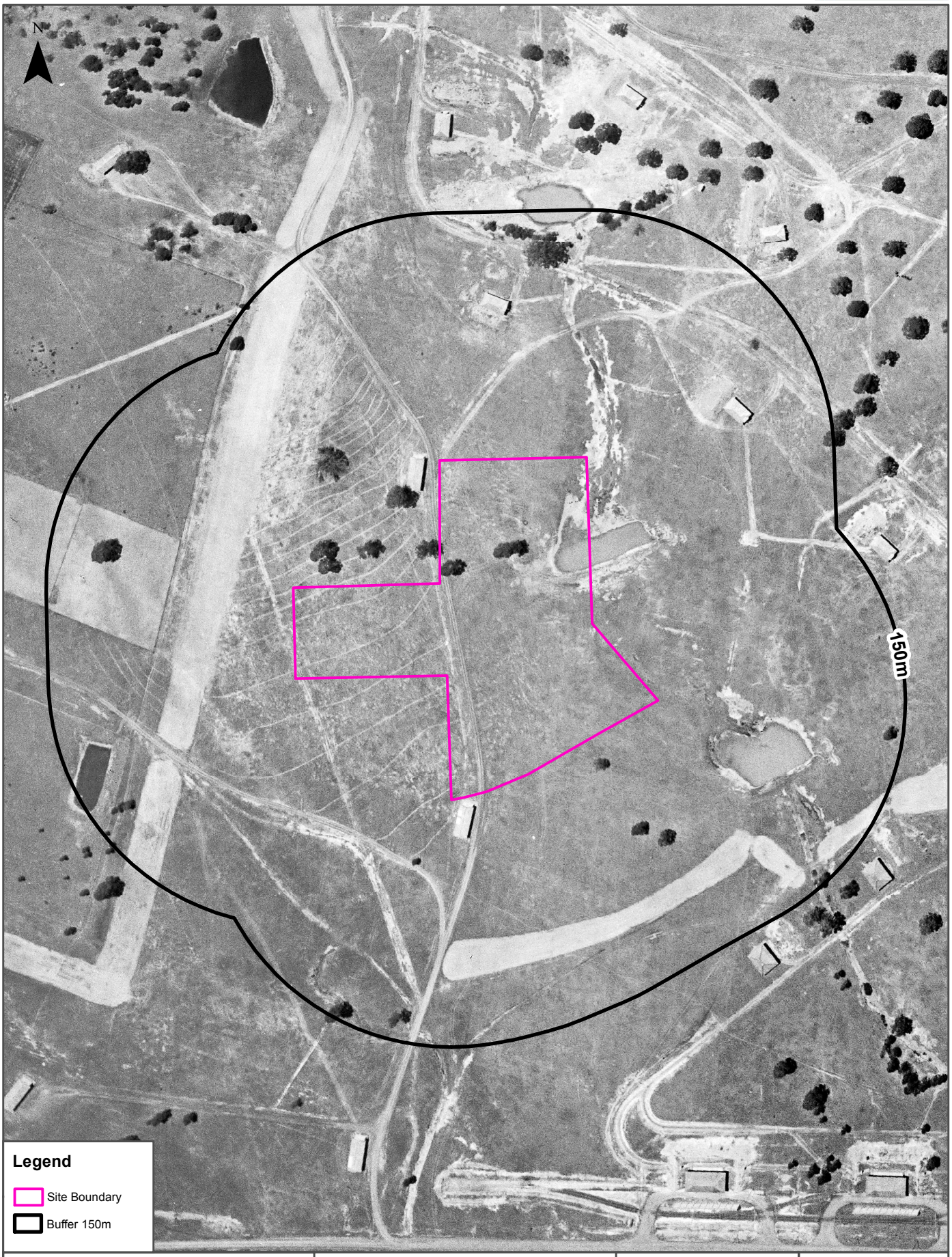
Aerial Imagery 1961

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Aerial Imagery 1955

14-28 Cullen Avenue, Jordan Springs, NSW 2747



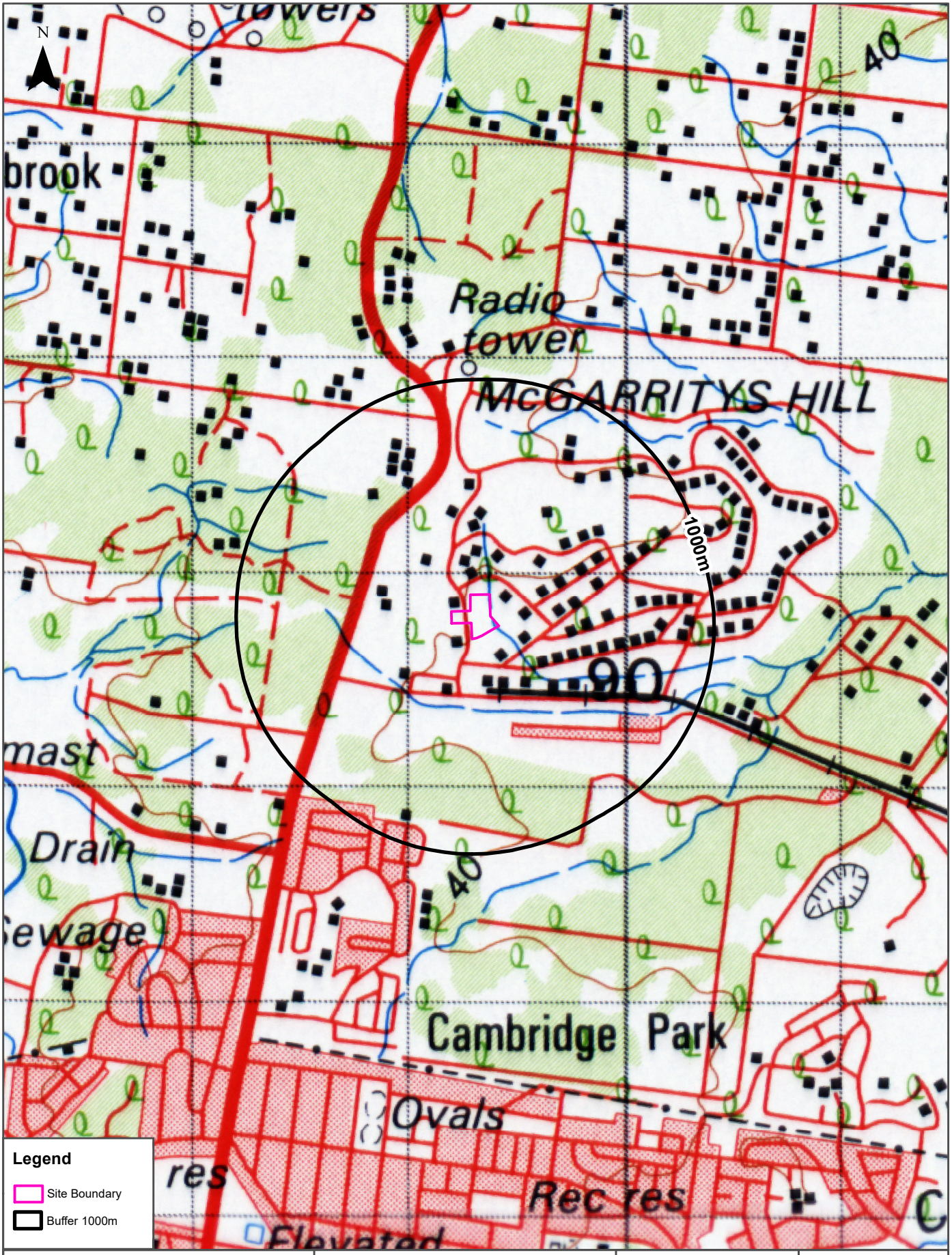
Historical Maps.1996

14-28 Cullen Avenue, Jordan Springs, NSW 2747



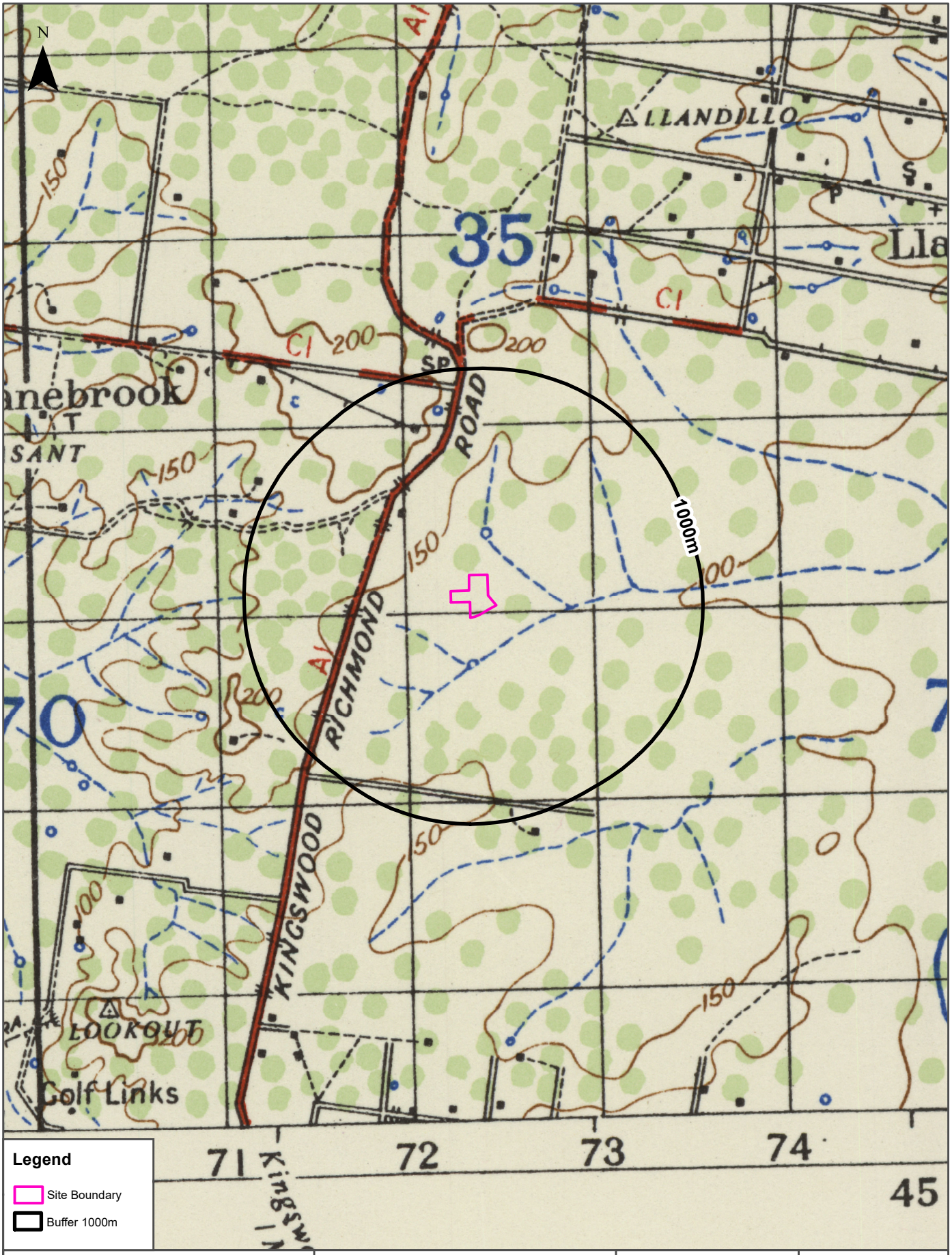
Historical Map 1975

14-28 Cullen Avenue, Jordan Springs, NSW 2747



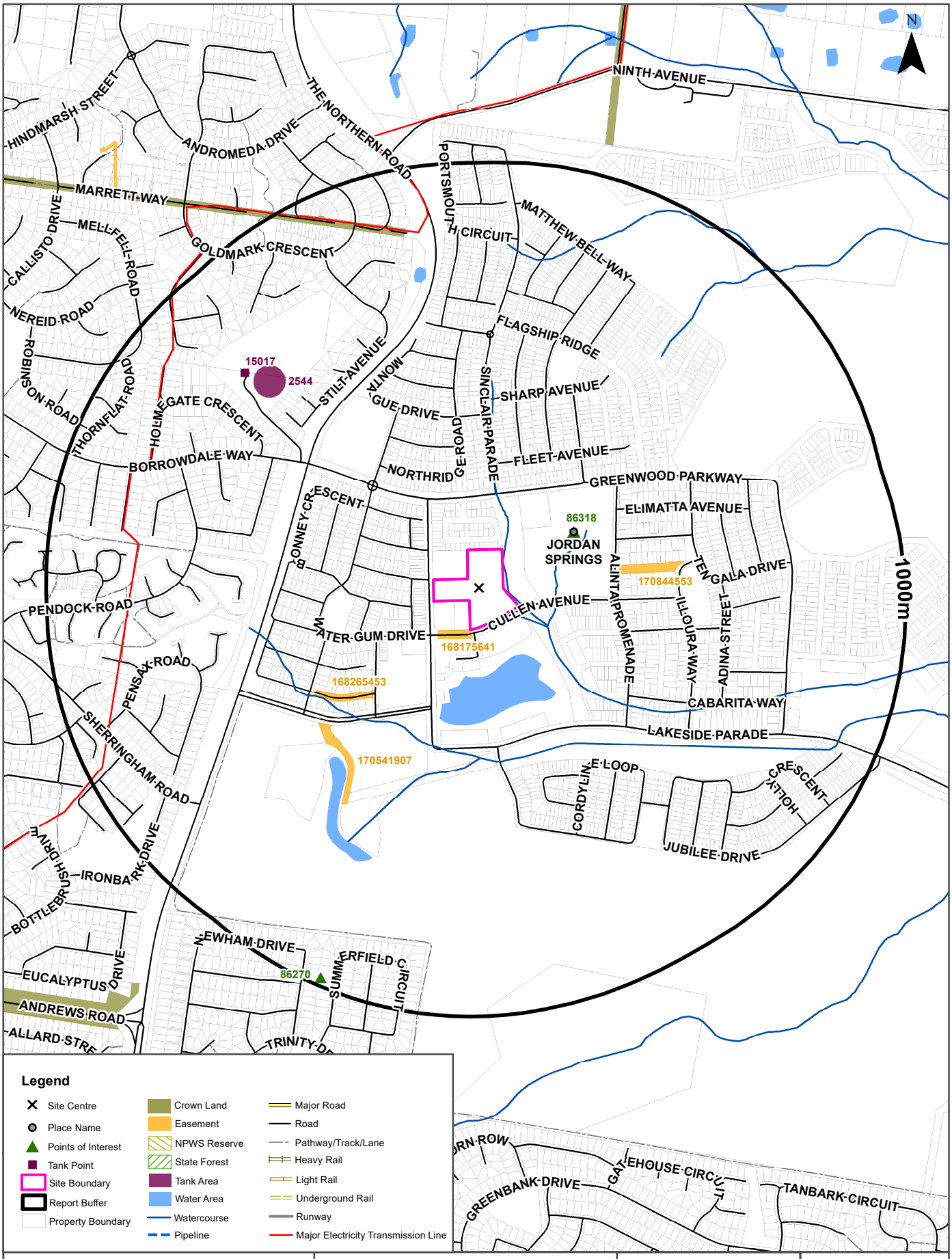
Historical Maps ca.1942

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Topographic Features

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Legend

- Site Centre
- Place Name
- Points of Interest
- Tank Point
- Site Boundary
- Report Buffer
- Property Boundary
- Crown Land
- Easement
- NPWS Reserve
- State Forest
- Tank Area
- Water Area
- Watercourse
- Pipeline
- Major Road
- Road
- Pathway/Track/Lane
- Heavy Rail
- Light Rail
- Underground Rail
- Runway
- Major Electricity Transmission Line

Scale: 0 100 200 400 Meters

Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

Topographic Features

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
86318	Suburb	JORDAN SPRINGS	191m	North East
86270	Park	Park	978m	South

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

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
2544	Water	Operational		01/01/2009	623m	North West

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
15017	Water	Operational		12/06/2000	723m	North West

Tanks Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Major Easements

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
168175641	Primary	Right of way	19.6m	1m	South West
170844553	Primary	Right of way	Var	274m	East
168265453	Primary	Right of way	15.6m Var.	277m	South West
170541907	Primary	Right of way	Var	416m	South West

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

14-28 Cullen Avenue, Jordan Springs, NSW 2747

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Parks and Wildlife Service Reserves

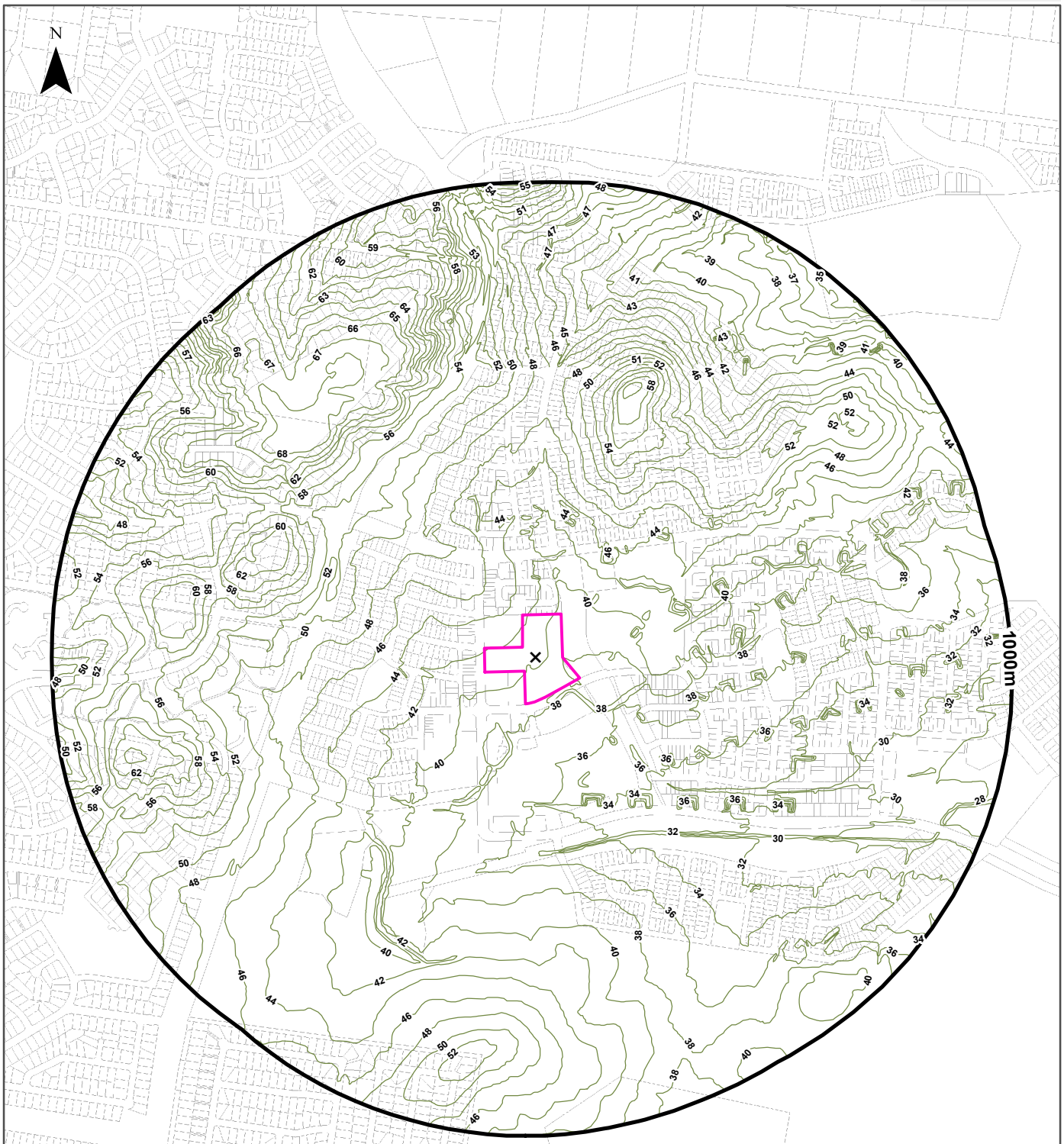
What NPWS Reserves exist within the dataset buffer?

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

NPWS Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Elevation Contours (m AHD)

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Legend

- Site Centre
- Elevation Contour (m AHD)
- Site Boundary
- Report Buffer
- Property Boundary

Accuracy & Currency: This contour data can be up to 0.4 of the contour interval out in height and must therefore not be used for any design or engineering works, but only as a general guide to topography. Gaps may occur along contour lines due to vertical topography, obscured topography in the source photography such as buildings, dense vegetation or dead ground, or the fact that original buildings have been replaced in the intervening thirty years since the original contour capture.

Scale: 0 100 200 400 Meters

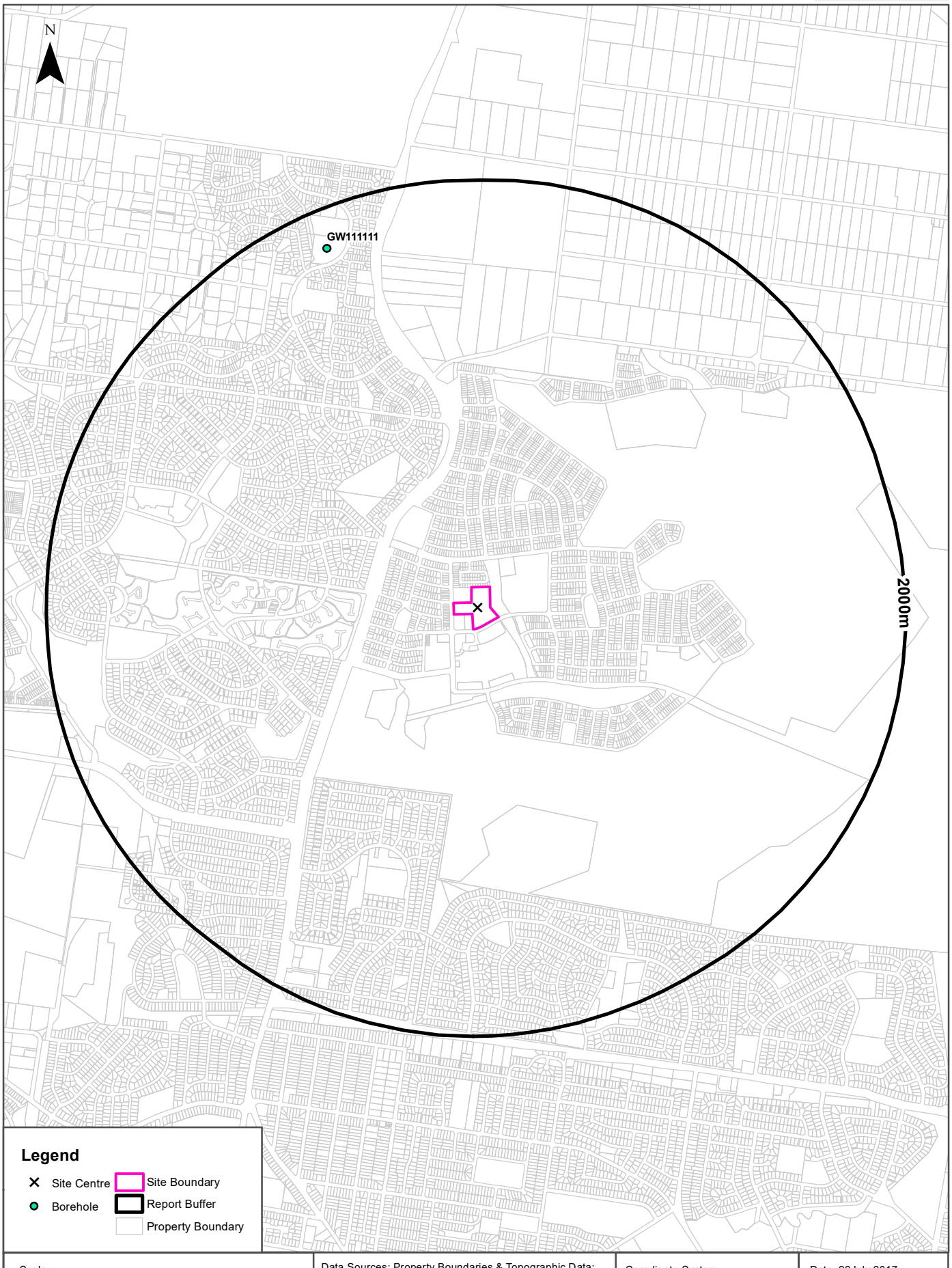
Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

Groundwater Boreholes

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Hydrogeology & Groundwater

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive highly productive aquifers

Description of aquifers within the dataset buffer:

Description
Porous, extensive aquifers of low to moderate productivity
Porous, extensive highly productive aquifers

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW111111	10BL604116, 10BL604297, 10CA109589	Bore	Local Govt	Recreation - hig	Ultra Drilling	30/07/2010	168.00	168.00	1190	45.00	2.200		1808m	North West

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

Hydrogeology & Groundwater

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Driller's Logs

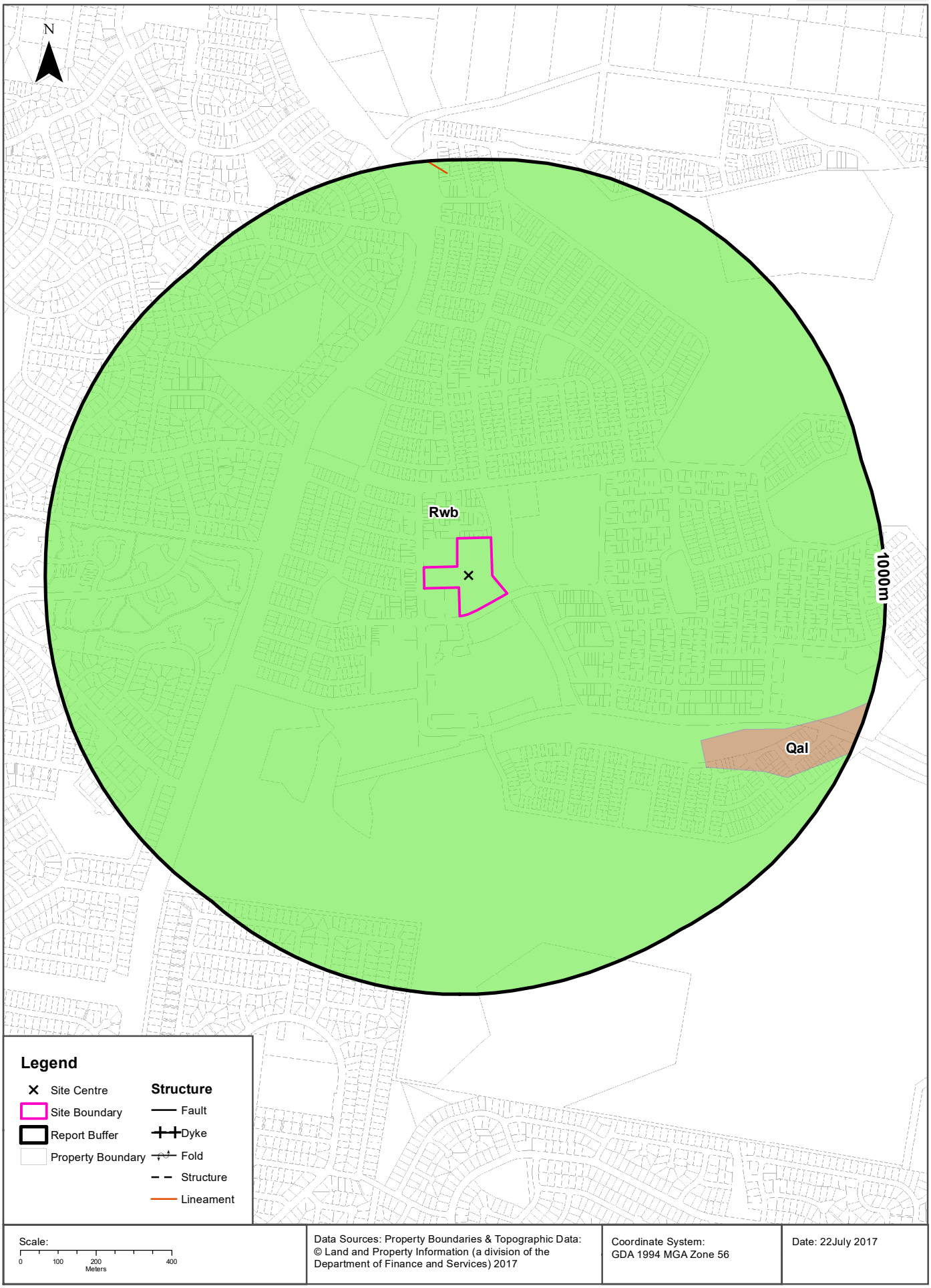
Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW111111	0.00m-13.50m CLAY / GRAVEL 13.50m-126.00m SHALE 126.00m-135.00m SHALE / SANDSTONE 135.00m-168.00m SANDSTONE	1808m	North West

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
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Geology 1:100,000

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

Geology

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rwb	Shale, carbonaceous claystone,claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group (undifferentiated)		Middle Triassic		Penrith	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qal	Fine-grained sand, silt and clay				Quaternary		Penrith	1:100,000
Rwb	Shale, carbonaceous claystone,claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group (undifferentiated)		Middle Triassic		Penrith	1:100,000

Geological Structures

What are the Geological Structures onsite?

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

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
Lineament			Penrith	1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy
© State of New South Wales through the NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Naturally Occurring Asbestos Potential

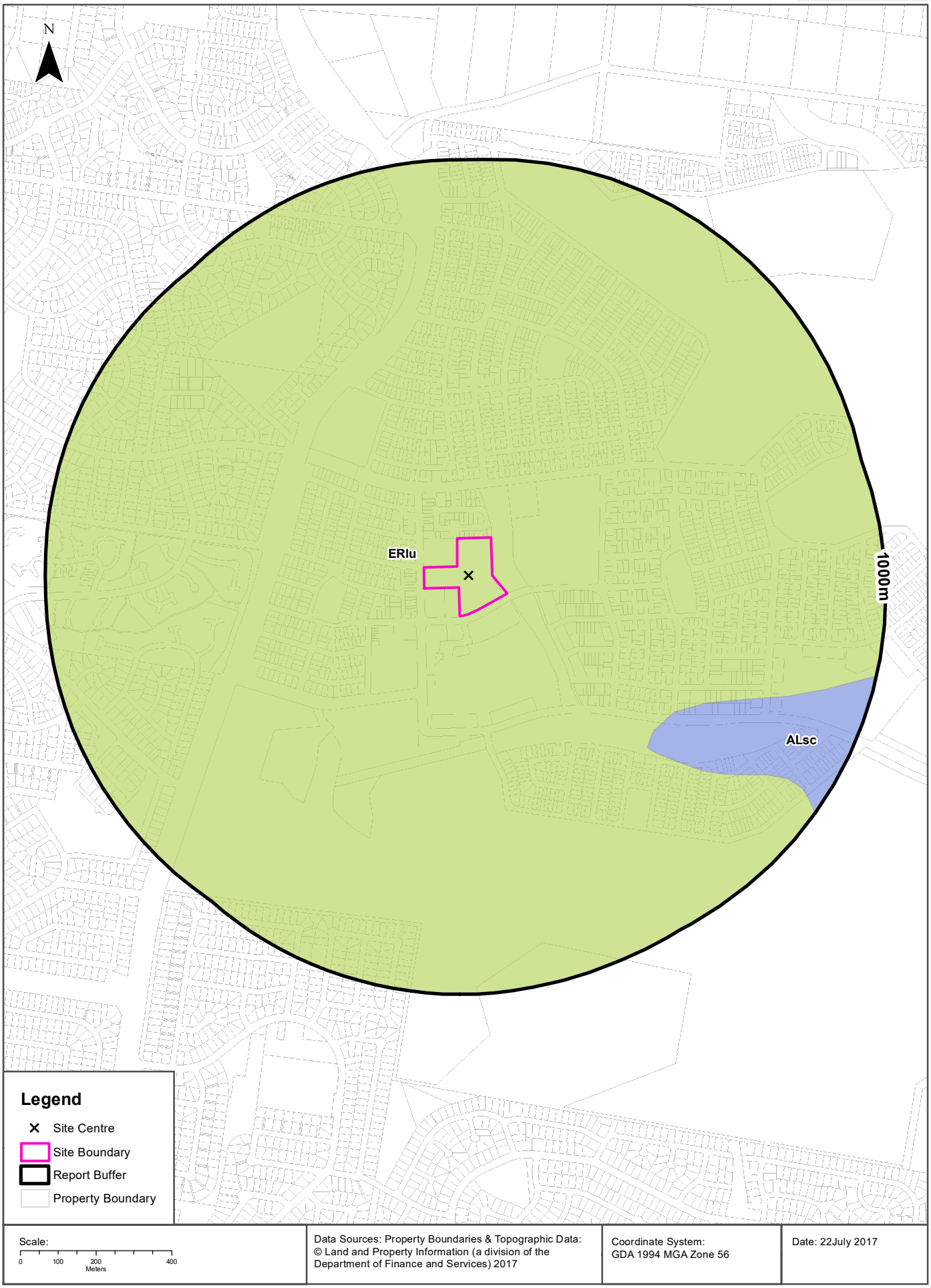
Naturally Occurring Asbestos Potential within the dataset buffer:

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

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

Soil Landscapes

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Soils

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
ERlu	LUDDENHAM		EROSIONAL	Penrith	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALsc	SOUTH CREEK		ALLUVIAL	Penrith	1:100,000
ERlu	LUDDENHAM		EROSIONAL	Penrith	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage
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Standard Local Environmental Plan Acid Sulfate Soils

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Standard Local Environmental Plan Acid Sulfate Soils

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

Soil Class	Description	LEP
N/A		

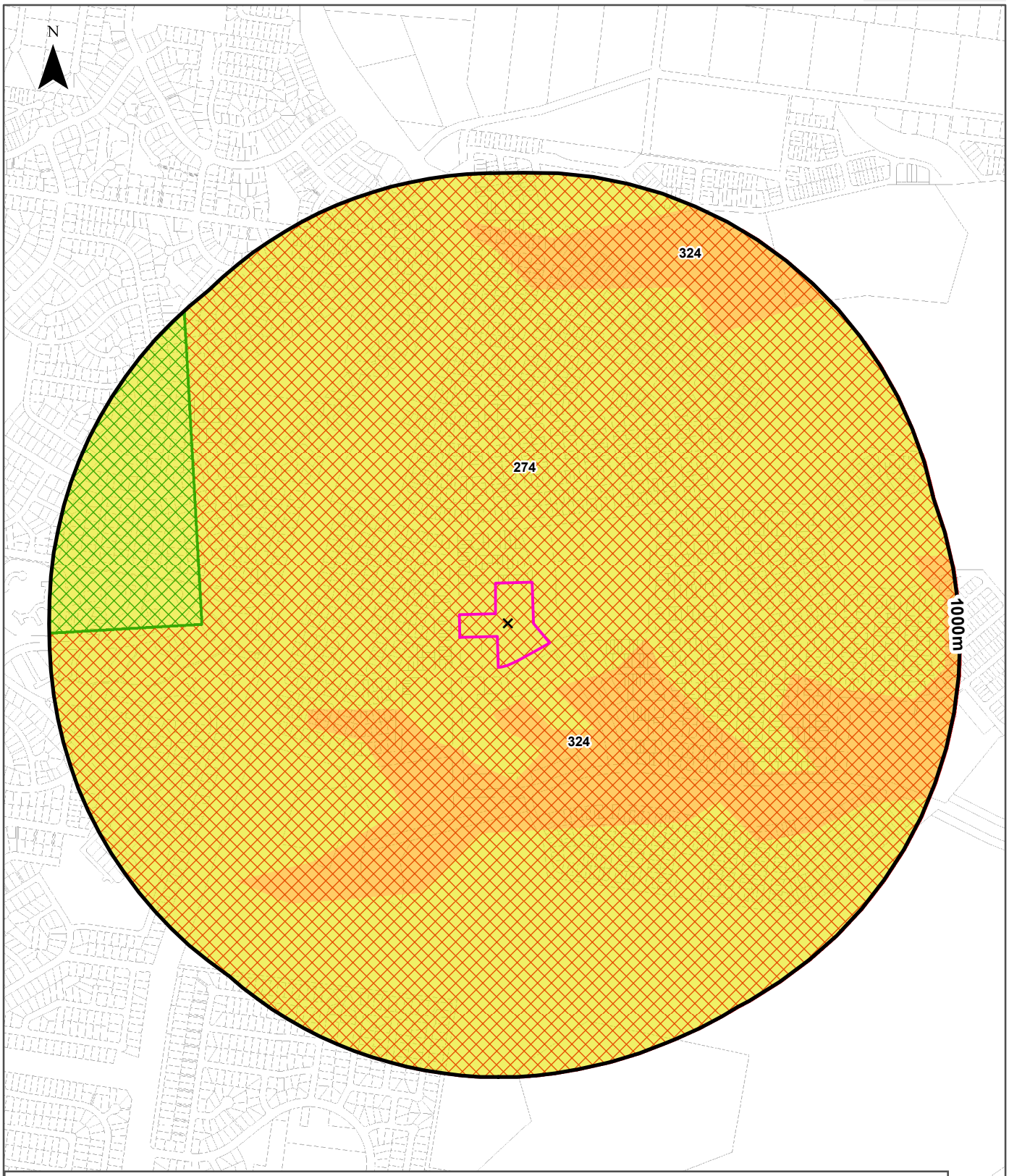
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment
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Dryland Salinity

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Legend

- Site Centre
- Site Boundary
- Report Buffer
- Property Boundary

Dryland Salinity - National Assessment

- Delineated risk area but no high hazard or risk rating for either 2000, 2020, 2050
- High hazard or risk in 2050 only
- High hazard or risk defined for 2050, but no assessment made for 2000 or 2020
- High hazard or risk in 2020 and 2050
- High hazard or risk in 2000 and 2050. 2020 not defined as high hazard
- High hazard or risk defined for all years: 2000, 2020, 2050

Salinity Potential of Western Sydney

- Area of Known Salinity
- Area of High Salinity Potential
- Area of Moderate Salinity Potential
- Area of Very Low Salinity Potential
- Area of Water

Scale: 0 100 200 400 Meters

Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

Dryland Salinity

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	0m	Onsite
Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	627m	West

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	Onsite
324	HIGH	Area of High Salinity Potential	91m	East

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

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Environmental Zoning

14-28 Cullen Avenue, Jordan Springs, NSW 2747

State Environmental Planning Policy Protected Areas

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

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

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

State Environmental Planning Policy Major Developments within the dataset buffer:

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

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

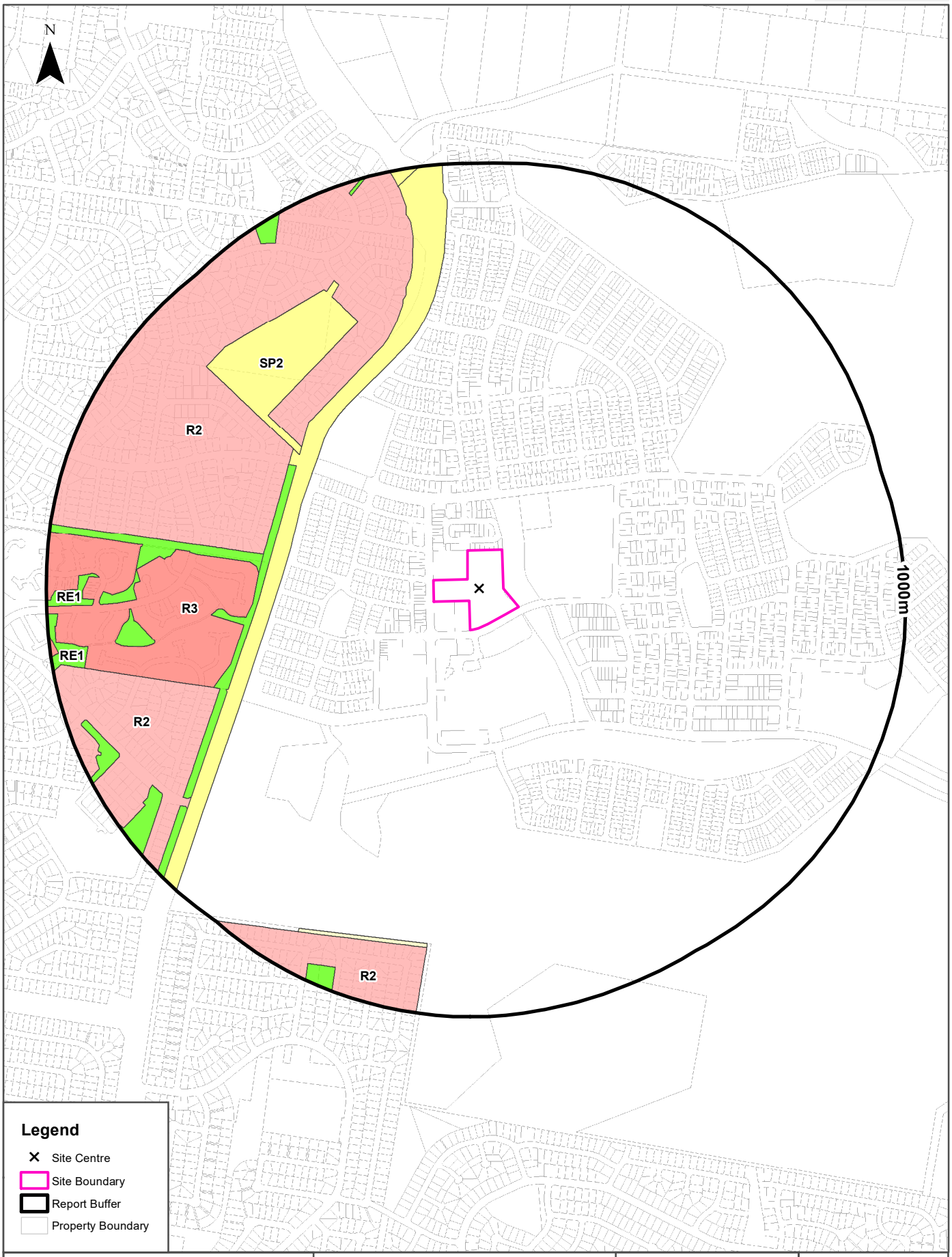
State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
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LEP Planning Zones

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017
Planning: NSW Crown Copyright - Planning & Environment

Coordinate System: GDA 1994 MGA Zone 56

Date: 22July 2017

Local Environmental Plan

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Land Zoning

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

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	378m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	421m	West
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	441m	North West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	444m	West
R3	Medium Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	452m	West
SP2	Infrastructure	Water Supply System	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	475m	North West
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	597m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	728m	West
SP1	Special Activities	Defence	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	818m	South
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	828m	South
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	831m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	860m	West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	864m	West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	901m	West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	937m	North West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	939m	South
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	14/10/2016		959m	North
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	14/10/2016	Amendment No 4	966m	North

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

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Minimum Subdivision Lot Size

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

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Maximum Height of Building

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

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

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

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data						

Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

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

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

14-28 Cullen Avenue, Jordan Springs, NSW 2747

State Heritage Items

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Planning & Environment
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Local Heritage Items

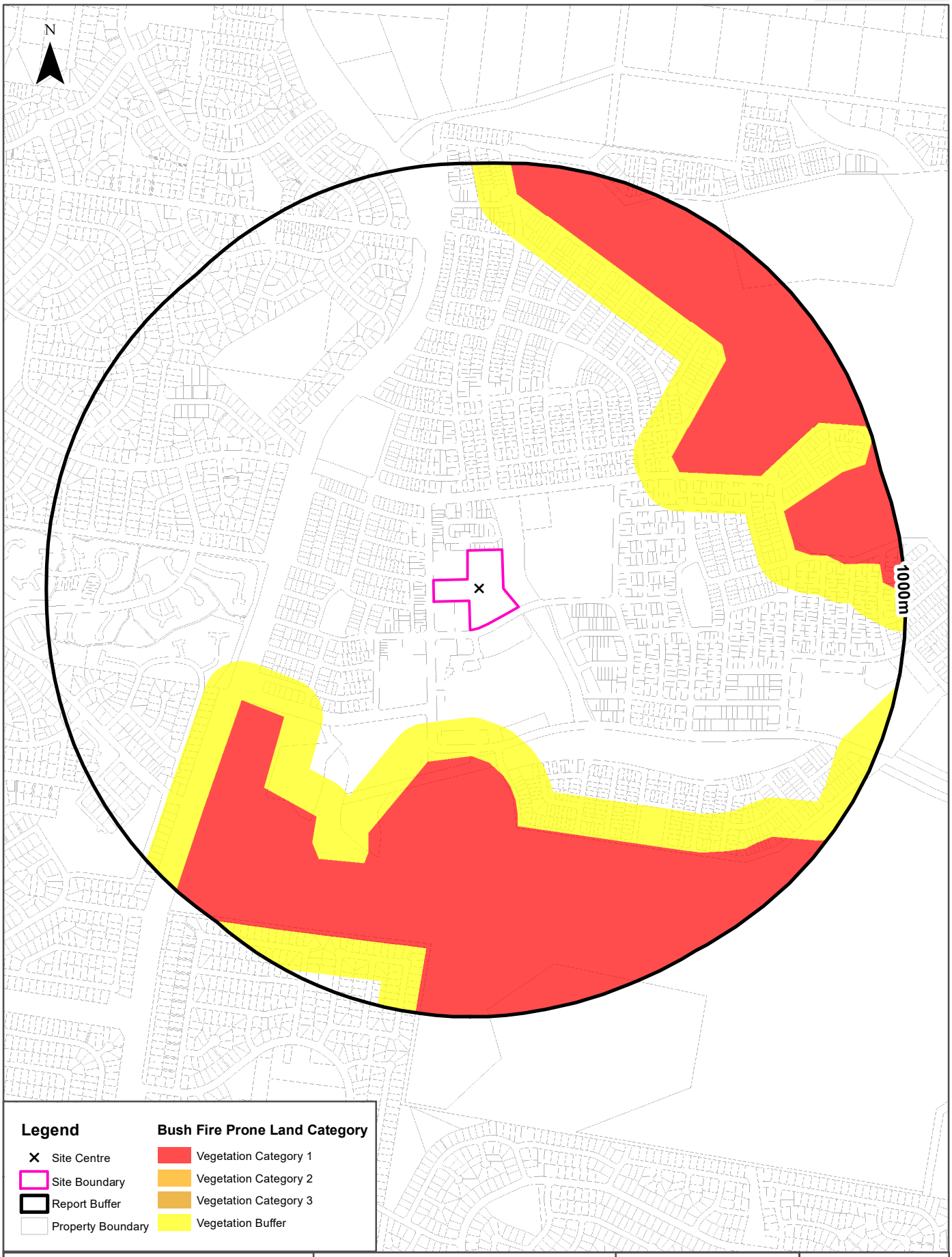
What are the Local Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
N/A	No records in buffer								

Heritage Data Source: NSW Crown Copyright - Planning & Environment
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Natural Hazards - Bush Fire Prone Land

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2017. Property Boundaries: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22 July 2017

Natural Hazards

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Bush Fire Prone Land

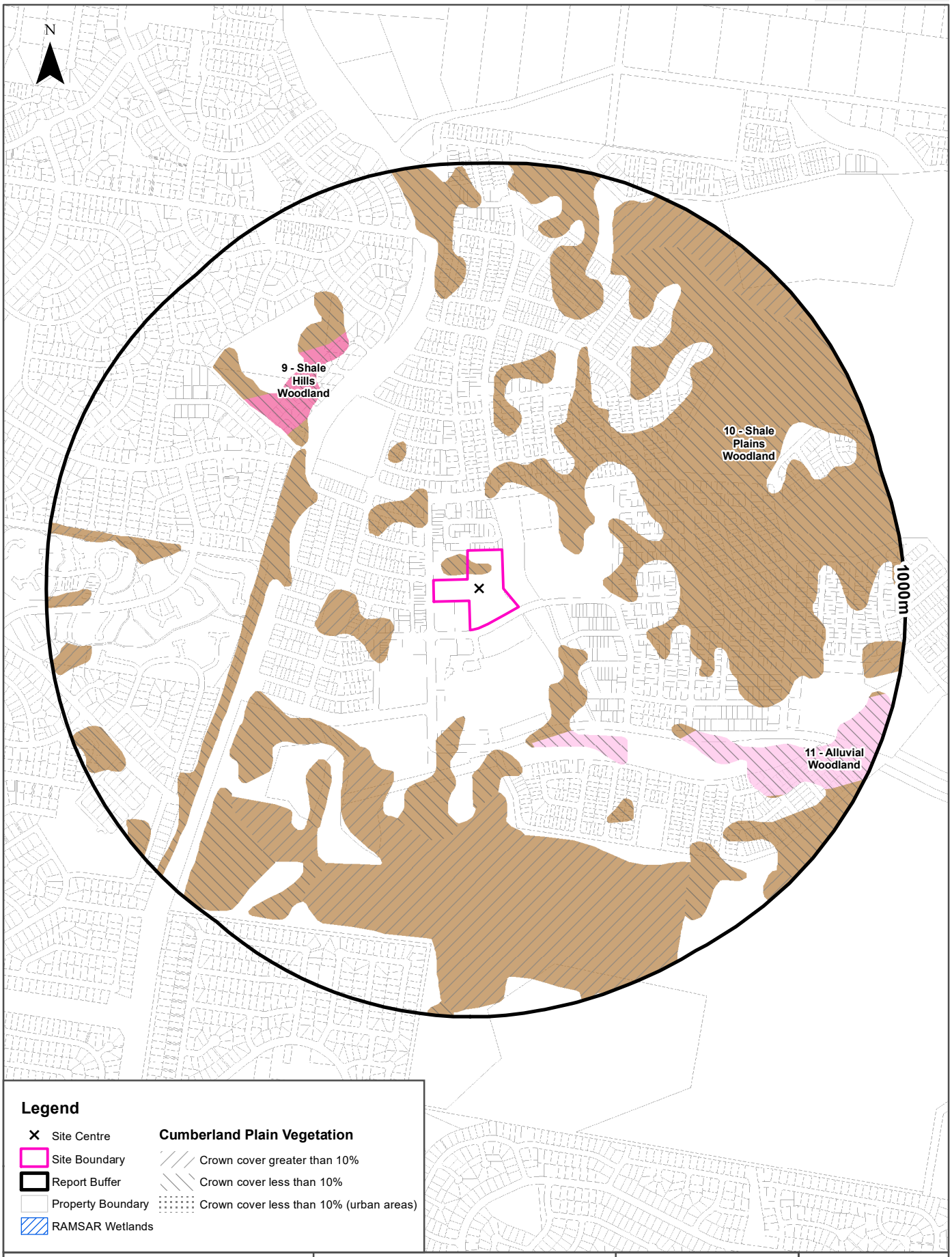
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	225m	South
Vegetation Category 1	325m	East

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

Ecological Constraints - Remnant Vegetation of the Cumberland Plain

14-28 Cullen Avenue, Jordan Springs, NSW 2747



Data Sources: Property Boundaries & Topographic Data: © Land and Property Information (a division of the Department of Finance and Services) 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 22 July 2017

Ecological Constraints

14-28 Cullen Avenue, Jordan Springs, NSW 2747

Remnant Vegetation of the Cumberland Plain

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

Description	Crown Cover	Distance	Direction
10 - Shale Plains Woodland	Crown cover less than 10%	0m	Onsite
10 - Shale Plains Woodland	Crown cover greater than 10%	119m	West
11 - Alluvial Woodland	Crown cover less than 10%	325m	South East
9 - Shale Hills Woodland	Crown cover less than 10%	531m	North West

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

What RAMSAR Wetland areas exist within the dataset buffer?

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

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

Ecological Constraints

14-28 Cullen Avenue, Jordan Springs, NSW 2747

ATLAS of NSW Wildlife

Endangered &Vulnerable Species on the ATLAS of NSW Wildlife database, within 10km of the site?

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Amphibia	Hylidae	Litoria aurea	Green and Golden Bell Frog	No	Endangered, Protected	Vulnerable
Amphibia	Myobatrachidae	Heleioporus australiacus	Giant Burrowing Frog	No	Vulnerable, Protected	Vulnerable
Amphibia	Myobatrachidae	Pseudophryne australis	Red-crowned Toadlet	No	Vulnerable, Protected	
Aves	Acanthizidae	Chthonicola sagittata	Speckled Warbler	No	Vulnerable, Protected	
Aves	Accipitridae	Circus assimilis	Spotted Harrier	No	Vulnerable, Protected	
Aves	Accipitridae	Haliaeetus leucogaster	White-bellied Sea-Eagle	No	Vulnerable, Protected	CAMBA
Aves	Accipitridae	Hieraaetus morphnoides	Little Eagle	No	Vulnerable, Protected	
Aves	Accipitridae	Lophoictinia isura	Square-tailed Kite	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Anatidae	Stictonetta naevosa	Freckled Duck	No	Vulnerable, Protected	
Aves	Ardeidae	Botaurus poiciloptilus	Australasian Bittern	No	Endangered, Protected	Endangered
Aves	Ardeidae	Ixobrychus flavicollis	Black Bittern	No	Vulnerable, Protected	
Aves	Artamidae	Artamus cyanopterus cyanopterus	Dusky Woodswallow	No	Vulnerable, Protected	
Aves	Burhinidae	Burhinus grallarius	Bush Stone-curlew	No	Endangered, Protected	
Aves	Cacatuidae	Callocephalon fimbriatum	Gang-gang Cockatoo	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Cacatuidae	Calyptorhynchus lathami	Glossy Black-Cockatoo	No	Vulnerable, Protected, Category 2 Sensitive Species	
Aves	Ciconiidae	Ephippiorhynchus asiaticus	Black-necked Stork	No	Endangered, Protected	
Aves	Estrildidae	Stagonopleura guttata	Diamond Firetail	No	Vulnerable, Protected	
Aves	Falconidae	Falco subniger	Black Falcon	No	Vulnerable, Protected	
Aves	Meliphagidae	Anthochaera phrygia	Regent Honeyeater	No	Critically Endangered Species, Protected	Critically Endangered
Aves	Meliphagidae	Grantiella picta	Painted Honeyeater	No	Vulnerable, Protected	Vulnerable
Aves	Meliphagidae	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	No	Vulnerable, Protected	
Aves	Neosittidae	Daphoenositta chrysoptera	Varied Sittella	No	Vulnerable, Protected	
Aves	Petroicidae	Petroica boodang	Scarlet Robin	No	Vulnerable, Protected	
Aves	Petroicidae	Petroica phoenicea	Flame Robin	No	Vulnerable, Protected	
Aves	Petroicidae	Petroica rodinogaster	Pink Robin	No	Vulnerable, Protected	
Aves	Psittacidae	Glossopsitta pusilla	Little Lorikeet	No	Vulnerable, Protected	
Aves	Psittacidae	Lathamus discolor	Swift Parrot	No	Endangered, Protected, Category 3 Sensitive Species	Critically Endangered
Aves	Psittacidae	Neophema pulchella	Turquoise Parrot	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Strigidae	Ninox strenua	Powerful Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Aves	Tytonidae	Tyto novaehollandiae	Masked Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Tytonidae	Tyto tenebricosa	Sooty Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Gastropoda	Camaenidae	Meridolum corneovirens	Cumberland Plain Land Snail	No	Endangered	
Gastropoda	Camaenidae	Pommerhelix duralensis	Dural Woodland Snail	No	Endangered	Endangered
Insecta	Petaluridae	Petalura gigantea	Giant Dragonfly	No	Endangered	
Mammalia	Burramyidae	Cercartetus nanus	Eastern Pygmy-possum	No	Vulnerable, Protected	
Mammalia	Dasyuridae	Dasyurus maculatus	Spotted-tailed Quoll	No	Vulnerable, Protected	Endangered
Mammalia	Emballonuridae	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	No	Vulnerable, Protected	
Mammalia	Molossidae	Mormopterus norfolkensis	Eastern Freetail-bat	No	Vulnerable, Protected	
Mammalia	Petauridae	Petaurus australis	Yellow-bellied Glider	No	Vulnerable, Protected	
Mammalia	Petauridae	Petaurus norfolcensis	Squirrel Glider	No	Vulnerable, Protected	
Mammalia	Phascolarctidae	Phascolarctos cinereus	Koala	No	Vulnerable, Protected	Vulnerable
Mammalia	Pteropodidae	Pteropus poliocephalus	Grey-headed Flying-fox	No	Vulnerable, Protected	Vulnerable
Mammalia	Vespertilionidae	Chalinolobus dwyeri	Large-eared Pied Bat	No	Vulnerable, Protected	Vulnerable
Mammalia	Vespertilionidae	Falsistrellus tasmaniensis	Eastern False Pipistrelle	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Miniopterus australis	Little Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Myotis macropus	Southern Myotis	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Scoteanax rueppellii	Greater Broad-nosed Bat	No	Vulnerable, Protected	
Flora	Apocynaceae	Marsdenia viridiflora subsp. viridiflora	Marsdenia viridiflora R. Br. subsp. viridiflora population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas	No	Endangered Population	
Flora	Casuarinaceae	Allocasuarina glareicola		No	Endangered, Protected	Endangered
Flora	Ericaceae	Leucopogon fletcheri subsp. fletcheri		No	Endangered, Protected	
Flora	Fabaceae (Faboideae)	Dillwynia tenuifolia		No	Vulnerable, Protected	
Flora	Fabaceae (Faboideae)	Pultenaea parviflora		No	Endangered, Protected	Vulnerable
Flora	Fabaceae (Faboideae)	Pultenaea villifera	Pultenaea villifera Sieber ex DC. population in the Blue Mountains local government area	No	Endangered Population	
Flora	Fabaceae (Mimosoideae)	Acacia bynoeana	Bynoe's Wattle	No	Endangered, Protected	Vulnerable
Flora	Fabaceae (Mimosoideae)	Acacia pubescens	Downy Wattle	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	Micromyrtus minutiflora		No	Endangered, Protected	Vulnerable
Flora	Orchidaceae	Pterostylis saxicola	Sydney Plains Greenhood	No	Endangered, Protected, Category 2 Sensitive Species	Endangered
Flora	Proteaceae	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	No	Vulnerable, Protected	
Flora	Proteaceae	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	No	Vulnerable, Protected	Vulnerable
Flora	Proteaceae	Persoonia hirsuta	Hairy Geebung	No	Endangered, Protected, Category 3 Sensitive Species	Endangered
Flora	Proteaceae	Persoonia nutans	Nodding Geebung	No	Endangered, Protected	Endangered
Flora	Thymelaeaceae	Pimelea curviflora var. curviflora		No	Vulnerable, Protected	Vulnerable

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Flora	Thymelaeaceae	Pimelea spicata	Spiked Rice-flower	No	Endangered, Protected	Endangered

Data does not include records not defined as either endangered or vulnerable, and category 1 sensitive species are also excluded. NSW Office of Environment and Heritage's Atlas of NSW Wildlife, which holds data from a number of custodians. Data obtained 22/07/2017

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10. These terms are subject to New South Wales law.

Appendix B: Original Fee Proposal and Terms

ENVIRONMENTAL INVESTIGATION SERVICES

PROPOSAL

31/08/2016
EIS Ref: EP43202KP2

Hayball

Attention: David Tordoff
Email: dtordoff@hayball.com.au

PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT
PROPOSED DEVELOPMENT
WESTERN SYDNEY AND WOLLONGONG SCHOOLS

1 Introduction

EIS are pleased to provide this revised proposal based on the information provided by Hayball. This proposal includes a two-stage scope comprising:

- **Stage 1a**: Preliminary contamination screening (desktop and site inspection); and
- **Stage 1b**: Preliminary soil contamination assessment and supplementary site history assessment. The requirement to proceed with Stage 1b will be assessed following completion of Stage 1a.

The primary aim of the screening/assessment is to assess the potential for site contamination via the identification of potential contamination sources and contaminants of concern. It should be noted that the costs associated with Stage 1b have been excluded at this stage and will be confirmed following Stage 1a in the event these works are required.

The cost of this proposal is additional to the JK Geotechnics[1] proposal (Ref: P3202Z) dated 24 August 2016 and we have assumed that, if required, the Stage 1b works will be undertaken concurrently with the geotechnical investigation

2 Proposed Development

Based on the details provided, EIS understand that development works are proposed for 12 schools, including:

- Mainsbridge SSP – school to be relocated;
- Jordan Springs PS – new build (site yet to be determined);

[1] JK Geotechnics is a division of Jeffery and Katauskas Group

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- Riverstone HS – expansion and upgrade;
- Alex Avenue PS – new build (site yet to be determined);
- Liverpool West PS – expansion and upgrade;
- Cecil Hills PS – expansion and upgrade;
- Prestons – expansion and upgrade;
- Quakers Hill East PS – expansion and upgrade;
- Wollongong PS – expansion and upgrade;
- Gwynneville PS – expansion and upgrade;
- Marsden Road PS – expansion and upgrade; and
- Canley Vale HS – expansion and upgrade.

3 Scope of Work

The general framework of the proposed screening/assessment has been designed with reference to the guidelines adopted by the NSW EPA for the assessment of contaminated sites (see http://www.epa.nsw.gov.au/clm/).

3.1 Stage 1a

The Stage 1a scope of work for each of the 12 school sites is outlined below:

- Purchase and review of a Lotsearch Pty Ltd Environmental Risk and Planning Report for the site. The following information from the Lotsearch report will be evaluated during the environmental assessment process:
    - Regional geology and soil landscape, including acid sulfate soil risk;
    - Registered groundwater bores;
    - Historical aerial photographs; and
    - Contaminated land records maintained by the NSW EPA.
- The Lotsearch report will also be used to obtain information in relation to historical business activities at the site and in the immediate surrounds, salinity, heritage items, ecological constraints and other planning-related issues that are relevant to the development of a conceptual site model;
- Walkover inspection of the site and visual inspection of the immediate surrounds; and
- Preparation of a report presenting the results of the screening, along with a discussion and recommendations (if required).

3.2 Stage 1b

The Stage 1b scope of work is outlined below. The requirement to implement these works will be evaluated as part of the Stage 1 a screening.

- Supplementary site history assessment. The scope of the supplementary assessment will be dependent on the outcome of Stage 1b, but may include: review of Safe Work records for storage of dangerous goods; review of historical land titles; review of council records;
- Soil sampling from 2-4 of the geotechnical boreholes. This sampling density will not meet the minimum density recommended in the NSW EPA Sampling Design Guidelines (1995). However,

the sampling is considered reasonable to confirm whether the site has been filled with imported material and to establish the potential for widespread soil contamination;

- Environmental samples will be obtained from the fill material (assumed to be no deeper than 0.5m) and from the upper 0.5-1m profile of natural material, based on field observations;
- The boreholes will be drilled using hand tools as outlined in the geotechnical proposal. The use of hand tools may limit the depth of the boreholes;
- All samples will be screened for volatile organic compounds (VOCs) using a hand held photoionisation detector (PID);
- Selected fill/natural soil samples will be analysed for combinations of the following contaminants: heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); polycyclic aromatic hydrocarbons (PAHs); total recoverable hydrocarbons (TRH); monocyclic aromatic hydrocarbons (BTEX); organochlorine (OC) and organophosphate (OP) pesticides; polychlorinated biphenyls (PCBs); and asbestos;
- Analysis of field Quality Assurance/Quality Control (QA/QC) samples; and
- Preparation of a report presenting the results of the assessment. The report will include an evaluation of the results against the Tier 1 criteria outlined in the NEPM (2013).

3.3 Reporting

The reports will be issued as final version in electronic format (pdf copy) by email. The reports will be prepared with reference to the NSW OEH *Guidelines for Consultants Reporting on Contaminated Sites* (2011) and will include a conceptual site model.

4 Costs

The total cost for the Stage 1a work is [redacted].
The costs associated with Stage 1b would be confirmed in the event these works are required. [redacted]

The scope of work and costs may be subject to variation based on site conditions or additional information made available during the assessment. In the event that additional costs are likely to be incurred, EIS will seek approval from the client prior to proceeding with the variation.

5 Reporting Timeframe

The Stage 1a screening reports can be completed within two weeks of receiving confirmation of the development site area applicable to each school project.

The Stage 2b assessment reports can be completed three weeks after soil sampling (i.e. after each geotechnical investigation).

Review of client generated consultancy agreements or terms of engagement may delay the commencement of the investigation.

6 Proposal Acceptance

This proposal is valid for three months from the date of issue. The conditions of engagement are attached below. By accepting this proposal, the client agrees to the scope of work provided and acknowledges that they assume responsibility for any services outside the nominated scope of work.

In the event that additional services are required, the additional scope of services should be confirmed in writing via the preparation (and client acceptance) of a separate fee proposal or variation.

7 Assumptions and Limitations

7.1 Design and Development Stages

Due to the limited development details available and the lack of specific deliverables for the contamination assessment, we have assumed that the contamination screening/assessment is required for the initial concept design/planning stage. Additional works (outside of the Stage 1a and Stage 1b scope) would be site specific and would need to be priced separately at a later stage. We would suggest that the Head Design Consultant include suitable limitations in their submission as the scope and costs associated with additional investigation work, remediation and/or validation are unknown.

7.2 Presence of Contamination

The site assessment/investigation process usually requires a staged approach. If actual or potential contamination is encountered, additional work (outside the scope of this proposal) may be necessary in order to characterise the nature and extent of the problem. Potential triggers for additional work may include but are not limited to the following:

- The presence of asbestos in or on soil;
- Deep fill material;
- Limited or no access for sampling beneath buildings;
- Point sources of contamination such as underground fuel tanks;
- Potential ground gas or soil vapour issues; and
- Groundwater contamination.

7.3 Changes to Proposed Development Details and/or Site Information

The scope of work is based on the site/development details provided to EIS at the time of the preparation of this proposal. If this information changes, we may need to amend the scope which may incur additional costs.

All relevant plans and information in your possession regarding storage of dangerous goods, details of underground services, previous investigation reports and anecdotal site history should be made available to us prior to commission. Review of any such documents issued to EIS upon commission will be charged at unit rates.

7.4 Field Work / Inspections

- We have assumed that the Stage 1a site inspections for the Wollongong and Gwynneville schools can be undertaken on the same day. Additional costs will apply (based on the rates provided) in the event that the schools need to be inspected on different days;
- All work would be completed during normal working hours (0700 to 1700 hours, Monday to Friday) unless stated in the scope of works;
- Soil sampling for Stage 1b works would be undertaken from the boreholes drilled for the JK geotechnical investigation. Reference should be made to the JK proposal for details regarding this work;
- Standing time waiting for site access or instructions would be charged at unit rates; and
- Cancellation of any work may incur charges. Charges would directly relate to costs incurred or time spent on the project to the point of the cancellation.

8 Additional Work

Any additional work undertaken outside the scope will be charged at our normal schedule of rates plus 10% GST. Please contact us if you require any of the following additional items and a revised proposal will be issued for your consideration:

- Detailed Environmental Site Assessment in accordance with SEPP55[2];
- Detailed screening of asbestos in soil in accordance with the Western Australia (WA) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites (2009);
- Waste Classification for the off-site disposal of soil;
- Groundwater sampling and analysis for contamination screening or dewatering advice;
- Review of Client Generated Consultancy Agreements or Terms of Engagement;
- Changes to reports issued as final versions;
- Additional sampling and analysis outside the scope;
- Meetings or additional site visits outside the scope;
- NSW EPA/Council/auditor liaison;
- Review of reports prepared by other consultants; and
- Preparation and issue of report hard copies.

9 About EIS

EIS is a division of Jeffery and Katauskas Group (JK). JK Group is a well-established environmental and geotechnical consulting engineering company. EIS has undertaken over 10,000 site assessments in the past 20 years. The firm has a skilled workforce of over sixty personnel in the Sydney office. The company owns and operates eight drill rigs and specialises in combined environmental, geotechnical and groundwater investigations. EIS is an active member of the Australian Contaminated Land Consultants Association (ACLCA[3]). We offer practical solutions to environmental problems at very competitive rates.

[2] State Environmental Planning Policy No. 55 – Remediation of Land 1998, (SEPP55)

[3] http://www.aclca.org.au/home/

Please visit our website for further information http://www.jkgroup.net.au/.

Kind Regards



Brendan Page
Associate Environmental Scientist



Adrian Kingswell
Principal

Attachments:

[redacted]

Summary of Proposal or Quotation Conditions and Conditions of Engagement
Acceptance of Proposal Form

SUMMARY OF PROPOSAL OR QUOTATION CONDITIONS & CONDITIONS OF ENGAGEMENT

EIS is a Division of Jeffery and Katauskas Pty Ltd (A.C.N. 003 550 801 A.B.N. 17 003 550 801)

1 This document forms the entire agreement between the Client and Environmental Investigation Services (EIS).

2 We require that you promptly forward a copy of these conditions to your Client if you are acting as an agent in this project.

3 We request we be formally commissioned by return of the form below or Company Purchase Order. If we proceed on the basis of verbal commission, we will confirm your instructions by email, in which case the instructor will be deemed to have formally accepted these conditions. We request we be formally advised who should be invoiced for the works (ie. the Client) including business name, ACN/ABN and address, the relevant contact name and telephone number. Our QA System does not permit results or reports to be issued without an order, letter or email of commission.

4 Subject to the *Privacy Act 1988*, the Client gives consent to collection of information in relation to the Client and/or Client representative or advisors regarding names, addresses, and contact details. Such information is used for project communications and may be stored in the EIS database for future retrieval of project information. Such information may be made available to third parties for the purposes of debt collection or credit referencing including notifying other credit providers by listing on national databases of a default by you.

5 Neither the Client nor EIS shall disclose to third parties or use for any purpose (other than providing or benefiting from the Services) any information provided by the other unless:

a) required by law;

b) the information is already generally known to the public; or

c) the other consents to the disclosure.

6 If there are limiting time criteria, then please advise this information to us.

7 In providing the services, EIS shall exercise the degree of skill, care and diligence normally exercised by consulting engineers in similar circumstances. The services will not comply with AS1726 unless additional fees are paid for the extended brief.

8 EIS (or its employees or agents) do not accept or undertake the role or responsibility of the Principal Contractor with respect to the *Work Health & Safety Act (NSW) 2011* or the *Work Health & Safety Regulation 2011*, whether explicitly or by default or implication. Unless advised otherwise, the Client will be the Principal Contractor.

9 Where a Head Contract is in place between the recipient of this fee proposal (Lead Consultant or Contractor) and their Client, EIS will be subcontracted to the Lead Consultant or Contractor for the works. EIS will endeavour to carry out the works in such a way as to enable the Lead Consultant or Contractor to meet their obligations under their Head Contract with their Client but EIS will not be bound to that Head Contract. Our engagement will be entirely between EIS and the Lead Consultant or Contractor on the basis of the scope of works and Summary Conditions of Engagement set out in this fee proposal.

10 Security of Payment:

a) For the purposes of this clause, the term 'Customer' shall mean the company or individual person who has requested EIS to carry out the work described in the attached proposal.

b) The Customer agrees to a charge of EIS so as to secure the repayment of all or any money which may be owing to EIS on the Customers interest in any freehold or leasehold land which the Customer may presently own or subsequently acquires.

11 The Client shall pay to EIS:

a) the Fee and the Reimbursable Expenses as set out in the accompanying proposal together with such other amounts in respect of other services agreed to be provided;

b) reasonable adjustments to the Fee and the Reimbursable Expenses to reflect the additional costs, expenses, liabilities, losses or other amounts incurred or suffered by EIS in the performance of the Services and arising out of or in connection with any event or matter beyond EIS's control; and

c) to the extent that amounts payable under this Agreement are not expressed to be GST inclusive, an additional amount for the GST incurred by EIS in relation to the supply of the Services ('GST').

12 EIS may claim payment in accordance with the times set out in the accompanying letter or, if no time is set out, monthly in arrears. The Client must pay to EIS, without set-off or deduction:

a) the amount payable under this Agreement for the Services provided during the relevant period, within 10 business days of EIS's invoice; and

b) the GST payable under this Agreement for the Services provided during the relevant period, within 10 business days of receiving a valid tax invoice.

13 EIS terms of payment are: Payment in full to be made within 10 business days of our invoice data. If in default of payment by the due date, the Client will be liable to pay Bank Overdraft and Accountancy Fees of 2.5% per month (calculated on a daily basis) on any outstanding amount and will indemnify EIS and pay all costs and expenses of a solicitor on an own client basis if legal action is necessary, and/or fees from a debt recovery agency, which EIS may incur in recovering from the Client any overdue amount. The Client gives consent to completion of a credit check on that individual, company or other entity.

14 EIS liability to the Client in respect of the commission shall be limited to either three times EIS invoiced amount or $25,000, whichever is the lesser. Liability shall be limited to loss arising out of or in connection with EIS services under this agreement to the extent that the same is due to EIS negligence. EIS liability shall be reduced proportionally to the extent that any acts or omissions of the Client or the Client's employees, subcontractors or agents contributed to such claim, employees, subcontractors or agents contributed to such claim, liability or loss. EIS liability may be extended by negotiation. As a guide, professional indemnity insurance may be extended to $1,000,000 and will be charged for at 2.5% of the invoiced amount or $300+GST, whichever is the greater. The requirement for additional cover must be indicated at the time of acceptance of our proposal, and the appropriate fee will be in addition to EIS estimate or quotation.

If, and to the extent that, any of this clause is void as a result of Section 68 of the *Trade Practices Act 1974* (Cth), then EIS's liability for a breach of a condition or warranty is limited to:

(i) the supplying of the relevant Services again; or

(ii) the payment of the cost of having the Services supplied again.

15 After the expiration of one (1) year from the date of invoice for any work or investigation, EIS shall be discharged from all liability in respect of the services provided

16 Copyright in all documents (such as drawings, reports and specifications) provided by EIS shall remain the property of EIS. Subject to payment of fees due, the Client alone shall have a licence to use the documents provided for the purpose of completing the project, but the Client shall not use, or make copies of, such documents in connection with any work not included in the project. If the Client is in breach of any obligation to make a payment to EIS, EIS may revoke the licence to use the documents and the Client shall then cause to be returned to EIS all documents provided by EIS and all copies thereof.

17 EIS is not responsible for the Client for the project design or the methods, techniques, sequences, procedures and use of equipment which are employed by the contractor or others in executing the project.

18 Any dispute or difference ('Dispute') between the Client and the EIS may be notified by a party to that other party and the parties shall:

a) firstly, meet to negotiate, in good faith, resolution of the Dispute; and

b) secondly, if negotiation fails to achieve a resolution of the Dispute within five working days of the notification of the Dispute, attend mediation, administered in accordance with procedures as set out by the *Institute of Arbitration and Mediations Australia*.

19 The Client may, without prejudice to any other rights or remedies it may have, by written notice served on EIS terminate its obligations under this Agreement:

a) if EIS is in breach of the terms of the Agreement and the breach has not been remedied within 28 days of a written notice served by the Client on EIS specifying the breach and requiring the breach to be remedied; or

b) upon the Client giving EIS 60 days written notice of the intention to do so; or

c) if EIS informs the Client that it is insolvent, becomes bankrupt, or becomes subject to any official management, receivership, liquidation, provisional liquidation, voluntary administration, winding up or external administration ('Insolvency Event').

20 EIS may, without prejudice to any other rights or remedies it may have, by notice in writing served on the Client suspend its obligations under this Agreement:

a) immediately by written notice if the Client has failed to pay in accordance with this Agreement; or

b) if the Client is in breach of any of the other terms of the Agreement and the breach has not been remedied within 10 working days (or longer as EIS may allow) of a written notice served by EIS on the Client specifying the breach and requiring the breach to be remedied.

Neither party may assign, transfer or subject any obligations under this Agreement without the written consent of the other. Unless stated in writing to the contrary, no assignment, transfer or subletting shall release the assignor from any obligation under this Agreement.

In the interpretation of this Agreement, no rule of construction applies to the disadvantage of one party on the basis that it put forward this Agreement or any part of it.

21 Drawings showing all buried services should be forwarded to EIS so that boreholes and test pits, etc avoid any such services. EIS will observe for surface indications of buried services and locate boreholes away from them, however, EIS accepts no responsibility for damaging buried services if their locations have not been accurately advised.

22 EIS provides Consulting Environmental Engineering activities as a division of Jeffery and Katauskas Pty Ltd. Commissioning EIS to undertake environmental consulting engineering activities does not imply that EIS will provide geotechnical engineering advice. Should you require geotechnical input in parallel with the EIS site activities, JK Geotechnics should be contracted separately for this service. EIS personnel are not geotechnical engineers and therefore cannot under any circumstances be held responsible for geotechnical performance of works undertaken on site by a contractor or subcontractor. EIS will not bear any liability whatsoever for damage caused by the contractor or subcontractor to existing structures either on, or adjacent to, the work site. EIS environmental logs are prepared by environmental scientists for environmental purposes and are not suitable for geotechnical engineering design.

23 No environmental site assessment can eliminate the risk that contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur, only the most likely contaminants are screened. EIS does not accept any liability whatsoever for any contaminants that are not detected during the work undertaken by EIS at any particular site or migration occurring from a nearby site.

24 EIS assumes that free and uninterrupted access to the site is available and trafficable for a heavy two wheel drive truck-mounted rig, unless noted otherwise in our proposal. All costs associated with recovery of bogged vehicles or damage to vehicle and/or equipment due to site conditions will be chargeable to the Client at schedule rates or cost plus 10% as appropriate. If a key to any gate is required, then it must be supplied to this office prior to the commencement of the investigation, otherwise standing time will be claimed for time lost in attempting to gain access. The Client shall be responsible for arranging legal access to a site prior to acceptance of this proposal. The work shall normally be within working hours (0700 hours to 1700 hours, Monday to Friday), unless noted otherwise in the proposal. Surcharges shall apply for work outside the above hours to cover penalty rates paid to staff. No allowance has been made for the following unless indicated otherwise; coring concrete or road pavements, reinstatement of disturbance to landscaped areas, site meetings, progress meetings, post-report consultations and paper copies of reports.

25 Samples will be stored for a period of one month from date of report and will then be discarded unless otherwise requested in writing. If samples are found to contain hazardous levels of contamination, then additional charges for safe disposal may apply.

26 All costs associated with damaged, lost or excessively worn equipment due to drilling or CPT testing in fill will be charged for at cost plus 10% unless agreed otherwise.

27 EIS is not liable to the Client in respect of any indirect, consequential or special losses (including loss of profit, loss of business opportunity and payment of liquidated sums or damages under any other agreement.

28 It is essential that detailed information regarding any known or possible contamination at a site be forwarded to EIS prior to undertaken site work in order that EIS can ensure appropriate Health & Safety precautions are followed. Additional costs will be involved if protective clothing, respirators, etc are required. If suspicious conditions are encountered on site, EIS will attempt to contact you to advise of the situation. If there is any doubt as to safety of EIS personnel, EIS will use their judgment as to appropriate precautions and the additional cost will be added to the quoted price.

29 Information of any relevance in determining the history of the site, whether land title documents, plans, drawings, photographs or personal contacts should be provided to EIS and may be quoted in their report where appropriate. EIS holds no liability whatsoever for any inaccuracy in their report which is due to information being withheld which may invalidate their conclusions.

30 If any other party is to be advised regarding EIS presence on site, the names, addresses and telephone numbers of such parties should be advised or, alternatively, confirmation given that the relevant parties have been notified and approve.

31 Where drilling time is lost due to the presence of significant asbestos containing material (ACM), additional costs will be charged to cover the lost time, special disposal of ACM to licensed landfill, and the costs associated with appointment of WHS Hygienist, if required. Work will be undertaken in accordance with NSW SafeWork requirements.

32 **The accompanying proposal only remains valid for 90 days from the date of issue. After 90 days, we reserve the right to revise our fee.**

ACCEPTANCE OF PROPOSAL

(Please return to EIS)

To:	**EIS**	**Fax:**	**02 9888 5004**
Attention:	**Brendan Page**	**Email:**	**bpage@jkgroup.net.au**
Re:	**PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT** **PROPOSED DEVELOPMENT** **WESTERN SYDNEY AND WOLLONGONG SCHOOLS**		

A. I/we request EIS to carry out the works described in their proposal EIS Ref: EP43202KP2 dated 31/08/2016.

Client Name: ..... ABN .....

For Organisations Authorised Officer:

Name: ..... Position: .....

Signature: ..... Date: .....

Contact Phone No: .....

Contact Email: .....

Company Name and Postal Address for Invoice:

.....

.....

If you are signing on behalf of another person, full contact details of the other person including a physical address must be provided. Acceptance on behalf of another company, as Client, must be followed up with a letter of commission on the Client's company letterhead.

Specify below any limitations or instructions regarding the proposed works, OR

B. EIS' proposal has been unsuccessful because (specify reasons below).

NOTES:

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❒ I/we require ..... hard copies of the report at $100 + GST per copy.