Douglas Partners
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Report on
Preliminary Site Investigation (Contamination)

Proposed Rezoning - Belmore Road Precinct
South Creek West, Bringelly, NSW

Prepared for
CKDI Pty Ltd

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

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Executive Summary

Douglas Partners Pty Ltd (DP) has been engaged by CKDI Pty Ltd to complete this preliminary site investigation for contamination (PSI) undertaken for the Belmore Road Precinct, part of South Creek West in Bringelly, NSW (the site).

The objective of the PSI is to assess the potential for contamination at the site based on past and present land uses and to comment on the need for further investigation and/or management with regard to any future proposed development. It is understood that the report will be used to support a rezoning application for the precinct.

The PSI involved a desktop investigation (consisting of a review of historical aerial photography, review of historical land titles, search of EPA public registers and search of NSW Office of Water groundwater bore database), a Site walkover of lot 6/DP1216926, a review of geotechnical test pit logs, the development of a preliminary conceptual site model (CSM) and provision of this report.

The site history information suggests that the site has a history of largely being used for a combination of rural residential and agricultural uses, with the historical titles suggesting the portion of the site has changed registered proprietor eight times since the original owner in 1935. Small portions of the site have been used for industrial and commercial reasons including the Bringelly substation, Bringelly shopping village and the temporary asphalt/concrete processing plant and associated carpark and site compound for the upgrade of The Northern Road.

Based off the site history search and site walkover, the site was found to be formerly and currently used as rural residential land with agricultural activities, with a small portion of the site been used for industrial and commercial reasons including the Bringelly substation, Bringelly shopping village and the temporary asphalt/concrete processing plant and associated carpark and site compound for the upgrade of the adjacent The Northern Road.

Based on the findings of the PSI, a total of 10 potential areas of environmental concern (PAECs) were identified across the site requiring further investigation. The identified PAEC were as follows:

- PAEC 1 - Agricultural land use;
- PAEC 2 - Ground disturbance and general fill;
- PAEC 3 - Buildings and structures;
- PAEC 4 - Asbestos impacted fill;
- PAEC 5 - Timber Power Poles;
- PAEC 6 - Animal burial;
- PAEC 7 - Electrical Substation;
- PAEC 8 - Site compound and carpark;
- PAEC 9 - Concrete and asphalt batch plants; and
- PAEC 10 - Septic Tanks.

The majority of the PAECs encountered were typical for a rural residential site with agricultural activity, with the exception of PAEC 4, 7, 8 and 9. The PAECs encountered are considered by DP to unlikely pose a contamination constraint to the proposed rezoning at this time.

Based on the information presented above, the site has the potential for contamination due to the historical site uses. The presence or extent of potential contamination has not been fully confirmed. Further assessment of soil at the site would be required to assess the presence, degree and extent of contamination and any remediation requirements associated with the potential contamination sources identified. Targeted investigations of all PAECs should be undertaken, in the form of a Detailed Site Investigation (DSI) to inform any future DA.

A hazardous building survey is also recommended to identify any hazardous building materials prior to any maintenance or site redevelopment.

Table of Contents

Page

1. Introduction 1
2. Scope of Works 1
3. Site Information 2
4. Environmental Setting 4
   4.1 Topography 4
   4.2 Soil Landscape 5
   Figure 2: Penrith 1:100,000 Soils Landscape Sheet. 5
   4.3 Site Geology 6
   4.4 Acid Sulphate Soils 6
   4.5 Surface Water and Groundwater 6
5. Site History 7
   5.1 Title Deeds 7
   5.2 Historical Aerial Photography 8
   5.3 Search of NSW EPA Public Registers 11
   5.4 Site History Integrity Assessment 14
   5.5 Summary of Site History 14
6. Site Walkover 15
   6.1 Observations 15
7. Review of Geotechnical Test Pit Logs 15
8. Potential Areas of Environmental Concern 16
9. Preliminary Conceptual Site Model 17
10. Conclusions and Recommendations 19
11. References 20
12. Limitations 21

Appendix A: Drawings 1 to 4
Appendix B: About this Report
Appendix C: Site History Documentation
Appendix D: Historical Aerials
Appendix E: Site Photographs
Appendix F: DP (2021) Test Pit Logs

Report on Preliminary Site Investigation (Contamination)
Proposed Rezoning - Belmore Road Precinct
South Creek West, Bringelly, NSW

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by CKDI Pty Ltd to complete this preliminary site investigation for contamination (PSI) undertaken for the Belmore Road Precinct, part of South Creek West in Bringelly, NSW (the site). The site is shown on Drawing 1, Appendix A.

The objective of the PSI is to assess the potential for contamination at the site based on past and present land uses and to comment on the need for further investigation and/or management with regard to any future proposed development. It is understood that the report will be used to support a rezoning application for the precinct.

This report must be read in conjunction with all appendices including the notes provided in Appendix B.

The following key guidelines were consulted in the preparation of this report:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013);
- NSW DUAP/EPA. (1998). *Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land* . NSW Department of Urban Affairs and Planning/Environment Protection Authority; and
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).

A preliminary geotechnical assessment was also undertaken in conjunction with this PSI, with results presented in a separate report titled *Preliminary Geotechnical Assessment, reference 92336.04.R.002.Rev0.* The geotechnical assessment included the excavation of 12 test pits spread broadly across the site to depths of between 3.1 and 3.5 m below ground level (bgl).

2. Scope of Works

The works undertaken was as follows:

- A desktop investigation to determine potential areas of environmental concern (PAEC) for the site including:
  - Review of aerial photographs to identify land uses and changes in the land that may indicate potential for contamination;
  - Review of historical land titles;
  - Search on the Contaminated Land Register for Notices issued under the *Contaminated Land Management Act* 1997; and
  - NSW Office of Water groundwater bore search.

- Site walkover assessment by an environmental engineer to identify any Potential Areas of Environmental Concern (PAEC). The site walkover was limited to Lot 6 of Deposited Plan 1216926 (72.7 of the 187 ha of the site) as the only part of the site accessible at time of field investigations;
- Review of geotechnical test pit logs;
- Development of a preliminary conceptual site model (CSM); and
- Provision of this report.

3. Site Information

The site consists of 57 allotments comprising a total combined area of approximately 187 hectares, as listed in Table 2 below. The site layout is shown on Drawing 1, Appendix A. The site is identified below in Table 1

Table 1: Site Identification

Site Address	Belmore Road Precinct, South Creek West, Bringelly, NSW
Legal Description	See Table 2 below and Drawing 2, Appendix A
Area	Approximately 187 ha
Zoning	Zone RU1 Primary Production, Zone RU4 Primary Production Small Lots and B1 Neighbourhood Centre under Camden Local Environmental Plan 2010
Local Council Area	Camden Council
Current Use	Rural residential with some livestock, with a portion used as a substation and another portion used as a shopping centre.
Surrounding Uses	North – Greendale Road, beyond which is Bringelly Public School, parkland, rural residential and agricultural land, and The Northern Road. East – The Northern Road beyond which is the rural residential and agricultural land. South – Rural residential and agricultural land. West – Largely uncleared land with some building structures and Bringelly Brick Works

Table 2: Site Legal Description - Lots, Section and Plans

Lot (section)	Deposited Plan
3 (7 and 8), 4 (7), 5 (7), 5 (8), 6 (7, 8 and 9), 7 (7 and 8), 8 (7 and 8), 9 (7), 10 (8), 11 (8) and 12 (8)	2650
B	414758
21 and 22	531414
1	612995
10	614494
11	700210
1	733115
51 and 52	746911
41 and 42	805926
21 and 22	810113
100	826948
90 to 99	864637
1	936272
1	1111775
10	1125892
1 to 7, 15 to 19	1216926
500 and 501	1219184

Figure 1: Site Location

4. Environmental Setting

4.1 Topography

The regional geography of the site is typically gently undulating rises with broad rounded crests and ridges with gently inclined slopes, except to the south-west corner of the site which encompasses undulating rolling low hills with narrow ridges, hillcrests and valleys.

The site generally slopes towards the east with some undulation across the majority of the site. The site slopes steeply in the western portion with a peak of 134 m AHD at the west to 74 m AHD to the east. The topography generally slopes from west to east in the central section of the site and from north to south in the northern section.

4.2 Soil Landscape

Reference to the Penrith 1:100,000 Soils Landscape Sheet indicates that the site is located on or adjacent to the residual Blacktown (mapping unit bt), the erosional Luddenham (mapping unit lu) and alluvial South Creek soil landscape groups (mapping unit sc - see Figure 2 below).

The Blacktown group is associated with the majority of the site with the Luddenham Group is associated with the steeper areas along the south western boundary of the site.

The Blacktown soil landscape is characterised by gently undulating rises on Wianamatta Group shales with slopes usually <5% and local relief to 30 m. Soils are shallow to moderately deep (<1.0 m) red and brown podzolic soils on crests, upper slopes and well drained areas, deep (1.5 - 3.0 m) yellow podzolic soils and soloths on lower slopes and in areas of poor drainage. Soils are moderately reactive with low fertility, poor soil drainage and highly plastic subsoil.

The Luddenham soil landscape is characterised by undulating to rolling low hills on Wianamatta Group shales with slopes usually 5% to 20% and local relief of 50 m to 80 m. Soils are shallow to moderately deep (<1.0 m) dark or red podzolic soils on crests and upper slopes and moderately deep (<1.5 m) yellow podzolic soils on lower slopes and drainage lines. Soils are moderately reactive with a high erosion hazard.

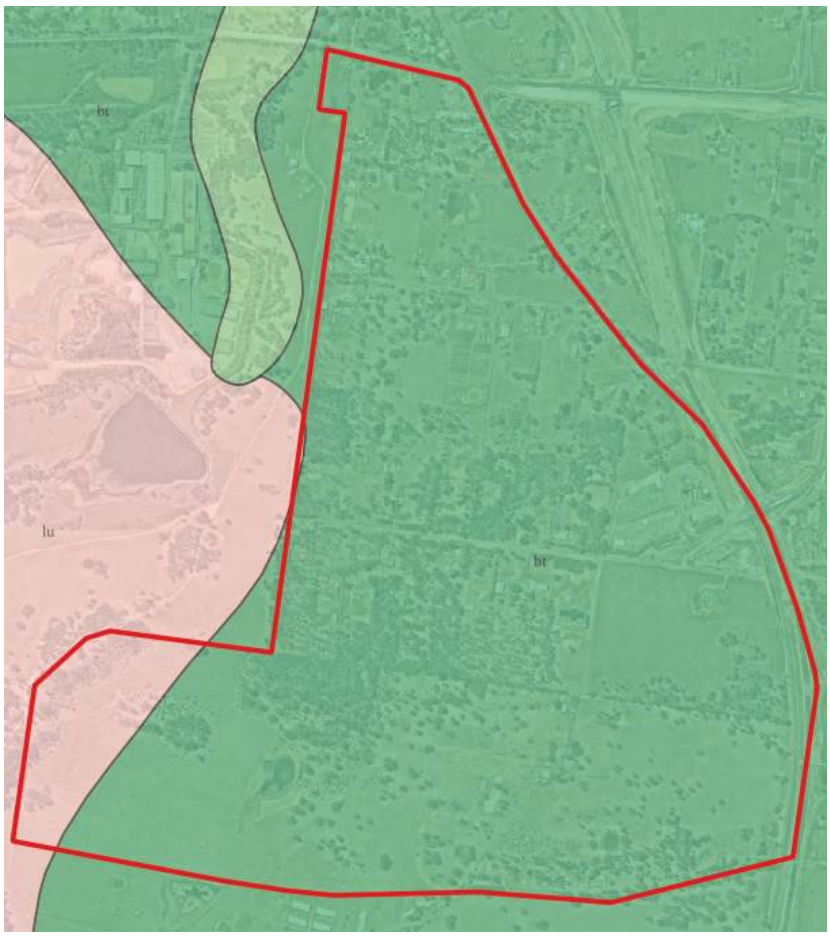


Figure 2: Penrith 1:100,000 Soils Landscape Sheet.

4.3 Site Geology

Reference to the Penrith 1:100,000 Geological Sheet indicates that the site is underlain by Bringelly Shale (mapping unit Rwb) of the Wianamatta Group of Triassic age. The Bringelly Shale formation typically comprises shale, carbonaceous claystone, claystone, laminite, fine to medium-grained lithic sandstone, rare coal and tuff.

4.4 Acid Sulphate Soils

The site is mapped in a region of extremely low probability of occurrence and is topographically well above the estuarine environments in which Acid Sulphate soils form.

4.5 Surface Water and Groundwater

The site contains numerous on-site dams that store surface water. Beyond the on-site dams and based on the site topography, most of the site's surface water is likely to flow towards the centre of the site towards a non-perennial water course (i.e. a river that only flows when there is rainriver) which eventually flows approximately 1.7 km the north east into South Creek. Surface water on the eastern portion of the site will flow to the south east into a non-perennial watercourse which eventually flows approximately 1.3 km to the east into South Creek. Surface water on the far northern portion of the site will flow to the north into a non-perennial watercourse which eventually flows approximately 350 m to the north-east into Thompsons Creek.

Given the local geology (ie: Bringelly Shale), the groundwater in the fractured rock beneath the site is anticipated to be brackish to saline and low groundwater flow is likely to be dominated by fracture flow with resultant low yields (typically < 1 L/s) in bores. Accordingly, there would be no significant potential beneficial uses of the shallow groundwater system.

A search of the groundwater bore database (maintained by NSW Department of Primary Industries Water) on 22 February 2021 indicated that there were seven groundwater bores located within a distance of 1 km from the site. The seven groundwater bores are summarised in Table 3, below. Summary information of wells, including well construction and water bearing zone details, have been provided in Appendix C.

Table 3: Summary of Available Information from Nearby and on-site Registered Groundwater Bores

Bore ID Authorised Purpose Completion Year Status	Location Relative to Site	Final Depth (m)	Standing Water Level (m bgl)
GW100732 Stock/Domestic	On site	138	20
GW111629 Monitoring bore	750 m south east	10	Not listed
GW072961 Stock/Domestic	720 m south	100	18

Bore ID Authorised Purpose Completion Year Status	Location Relative to Site	Final Depth (m)	Standing Water Level (m bgl)
GW063062 Stock/Industrial/Domestic	1,000 m north	151	Not listed
GW073533330 Domestic	980 m north	330	Not listed
GW10106222 Stock/Domestic	700 m north	220	45
GW111604 Monitoring Well	550 m north	20	Not listed

Based on the regional topography of the site and the inferred flow direction of nearby water courses, the anticipated flow direction of groundwater beneath the site is to the east, towards South Creek, the likely receiving surface water body for groundwater flow path.

5. Site History

5.1 Title Deeds

A historical title deeds search was used to obtain ownership and occupancy information including company names and the occupations of individuals. The title information can assist in the identification of previous land uses by the company names or the site owners and can, therefore, assist in establishing whether there were potentially contaminating activities occurring at the site. The historical title search was conducted on the largest lot, Lot 6 of Deposited Plan 1216926 consisting of 72.7 ha of the total site area. A summary of the title deeds and possible land uses (with reference to the aerial photographs and other historical searches) is presented in Table 4.

Table 4: Historical Title Deeds

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations	Inferred Land Use
25.11.1935 (1935 to 1945)	Horace Howard Young (Gentleman)	Unknown
03.12.1945 (1945 to 1949)	Lee Cameron Lathrop Murray (Manager)	Unknown
20.09.1949 (1949 to 1950)	George Lacey Evans (Grazier)	Pastoral
08.08.1950 (1950 to 1959)	Reginald William Farrell (Company Director) Una Grace Farrell (Married Woman)	Unknown
02.06.1959 (1959 to 1968)	J.M. Hargreaves (Pastoral) Pty Limited	Pastoral and rural residential

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations	Inferred Land Use
02.03.1968 (1960 to 1981)	John Henry Fitzgerald (Motor Car Dealer) Gladys May Fitzgerald (Married Woman) Raymond John Fitzgerald (Motor Car Dealer)	Rural residential
17.03.1981 (1981 to 1989)	Raymond John Fitzgerald (Bookmaker)	Rural residential
17.01.1989 (1989 to 2002)	Roy Anthony Medich (Company Director) Ronald Edward Medich (Company Director)	Rural residential with some agriculture use
01.03.2002 (2002 to date)	# Ron Medich Properties Pty Limited Now # CSPA Properties Pty Limited	Transferred to company of previous owner but remains Rural residential with some agriculture use

The following easements were also noted in Lot 6 of Deposited Plan 1216926:

- 28.11.1983 (D.P. 700210) Easement for Services 9 wide; and
- 29.09.2016 (AK 737176) Easement for Drainage of Water.

The fragmented ownership land was not examined due to the large number of lots and the low likelihood of identifying contaminating activities considering the likely previous land use.

5.2 Historical Aerial Photography

Historical aerial photographs were reviewed to assist in identifying the history of the site and the surrounding area. Images from 1947, 1955, 1965, 1975, 1986, 1998, 2002 and 2006 were sourced from NSW Land and Property Information. Images from 2009 to 2020 were sourced from Metromap. Extracts of the aerial photographs are included in Drawings D1 to D11, Appendix D. A summary of key features observed for the site and surrounding land is presented in Table 5 (following page).

Table 5: Summary of Historical Aerial Photographs

Year	Site	Surrounding Land Use
1947	A large majority of the site appeared to be largely cleared of vegetation with a strip of uncleared land on the western boundary on the site and partially vegetated area on southern portion of the site. Several farm dams appear to be present throughout the site (map reference point (MRP) 1). A number of rural residential properties are already established with a number of structures including houses and sheds noted (MRP 2). Agricultural gardens appear to be present near the properties in the northern portion of the site (MRP 3).	Surrounding land appeared to be largely cleared land with scattered vegetation. Surrounding properties were most likely used for rural residential and agricultural purposes. The Northern Road is present to the east, Greendale Road to the north and an access road is present to the west with an associated residential property and sheds adjacent to the western boundary of the site.
1955	The site appears relatively unchanged except for several additional dams (MRP 1).	The surrounding land appears relatively unchanged
1965	The south-eastern portion of the site has been largely cleared with only scattered vegetation remaining. Several structures have appeared in the south portion of the site (MRP 2). Some dams have been expanded and some additional dams have been constructed (MRP 1). Some additional unsurfaced access tracks are apparent across the site. Ground disturbance is evident in the central portion of the site (MRP 4). Additional agricultural activity is evident on the site with potential crop rows (MRP 3) and a potential cattle yard on the southern boundary (MRP 5).	The surrounding land appears relatively unchanged.
1975	Additional structures have appeared on the southern and northern portion of the site (MRP 2), with some prior structures no longer evident (MRP 6).	Bringelly Brick Works is evident to the west of the site. The remainder of the surrounding land appears relatively unchanged with the exception of the increase of rural residential properties.
1986	Several changes were apparent across the site including new dams established (MRP 1), additional structures (MRP 2), areas of potential ground disturbance was noted (MRP 4), Belmore Road has been established (MRP 7), Bringelly Village shops evident in the north-east corner (MRP 8), presence of stockpiles (MRP 9) and the previously identified cattle yard in the 1965 aerial is no longer present.	The surrounding land remains relatively unchanged with the exception of some additional structures and residential properties.

Year	Site	Surrounding Land Use
1998	Additional structures are evident across the site (MRP 2) and some structures no longer present (MRP 6). A couple areas of ground disturbance (MRP 4), presence of stockpiles (MRP 9) and potential dirt race tracks (MRP 10) are evident. New dams have been established across the site (MRP 1). Bringelly substation is evident in the north-west corner of the site (MRP 11).	Beyond the addition of some additional properties and the increase of size of Bringelly Brick works, the surrounding land appears relatively unchanged.
2002	Additional structures (MRP 2) are evident across the site. A dam has been noted to have been filled in the northern portion of the property (MRP 13). Two areas of disturbed ground with stockpiling are apparent in the southern portion of the site (MRP 12)	The surrounding land appears relatively unchanged.
2006	An area of ground disturbance is evident in the previous area of the unsurfaced race track (MRP 4). The areas of disturbed ground noted in the southern portion of the site in the 2002 aerial are no longer evident. Several new structures are present (MRP 2), a new dam is present in the north (MRP 1).	The surrounding land appears relatively unchanged.
2009	The site appears relatively unchanged with the exception of the construction of an equestrian or horse training area in the southern portion of the site (MRP 14) and a couple additional structures (MRP 2).	The surrounding land appears relatively unchanged.
2018	The Northern Road Upgrade to the east appears to have started, with partial land acquisition and a new fence line appears to have been established on the eastern boundary of the site. A large site compound (MRP 15) and an asphalt/concrete processing plant (MRP 16) associated with the road upgrade is being constructed just off Belmore Road. New structures (MRP 2) and some ground disturbance (MRP 4) has been noted for the remainder of the site. A market garden is also now evident (MRP 17). The Bringelly substation is evident that it has expanded (MRP 11).	The surrounding land appears relatively The Northern Road to the east of the site appears to be in the process of being upgraded.

Year	Site	Surrounding Land Use
2020	The site appears relatively unchanged, with the exception that the asphalt/concrete processing plant has been decommissioned and removed (MRP 16). A portion of the eastern boundary of the site is now a part of the upgraded Northern Road.	Beyond the upgrade of the adjacent The Northern Road, which has been re-aligned and no longer runs the entire length of the site, the surrounding land appears relatively unchanged.

5.3 Search of NSW EPA Public Registers

A search of the NSW EPA public registers for the site and 1 km surrounds on 22 February 2021 indicated that:

- The site and adjacent properties have not been included in the list of NSW contaminated sites notified to EPA;
- No notices or orders made under the Contaminated Land Management (CLM) Act 1997 have been issued for the site or adjacent properties;
- Licence for the concrete and asphalt batch plant at Lot B/414758 on the site, under licence number 20864, has been issued under Schedule 1 of the Protection of the Environment Operations (POEO) Act 1997. The licence is a part of The Northern Road and Bringelly Road Upgrade Stage 2, occuring mainly to the east of the site, which allows land-base extractive activity, crushing, grinding or seperating and road consturction.
- A former POEO licence for 1037 The Northern Road, Bringelly to regulate composting and Related Reprocessing or Treatment was surrendered on 17 June 2004. Several clean up notices were issued to the licensee of the premises by the EPA under the Protection of the Environment Operations (POEO) Act between 18 January 2001 and 17 November 2003. The notices generally related to unlawful receipt and stockpiling of materials, resulting in plastic contamination and formation of leachate. The EPA conducted a final inspection of the premises and agreed to the approval of the surrender of a licence via notice number 1037168 dated 27 May 2004, which confirmed:
    - All composting waste had been removed from the premises;
    - All vegetable, fruit and horse stable manure waste had been removed from the premises;
    - Plastic waste packaging originating from the composting material and plastic sheeting waste from the worm windrows had been removed from the premises;
    - All worm windrows had been removed from the premises;
    - All leachate originating from the composting activities had been removed from the premises; and
    - All other plant, equipment, fuels and chemicals connected with the carrying on of the activities authorised by the licence had been removed from the premises.

- POEO Licenses have been issued for the following properties within a 1 km of the site:
  - Lot 2, Greendale Road, Bringelly (PGH Bricks and Pavers Pty Ltd), approximately 100 m west of the site, has been issued a licence to regulate ceramics production, crushing, grinding or separating, mining for minerals and land based extractive activity.
- The following sites have been issued clean up notices and/or penalty notices under the POEO Act within 1 km of the site:
  - 1110 The Northern Road, Bringelly, approximately 100 m east of the site, has been issued numerous clean up notices and penalty notices for the alleged transportation and deposition of confirmed asbestos waste to the premise.

The location of the above POEO licences are shown in Figure 3 (following page).

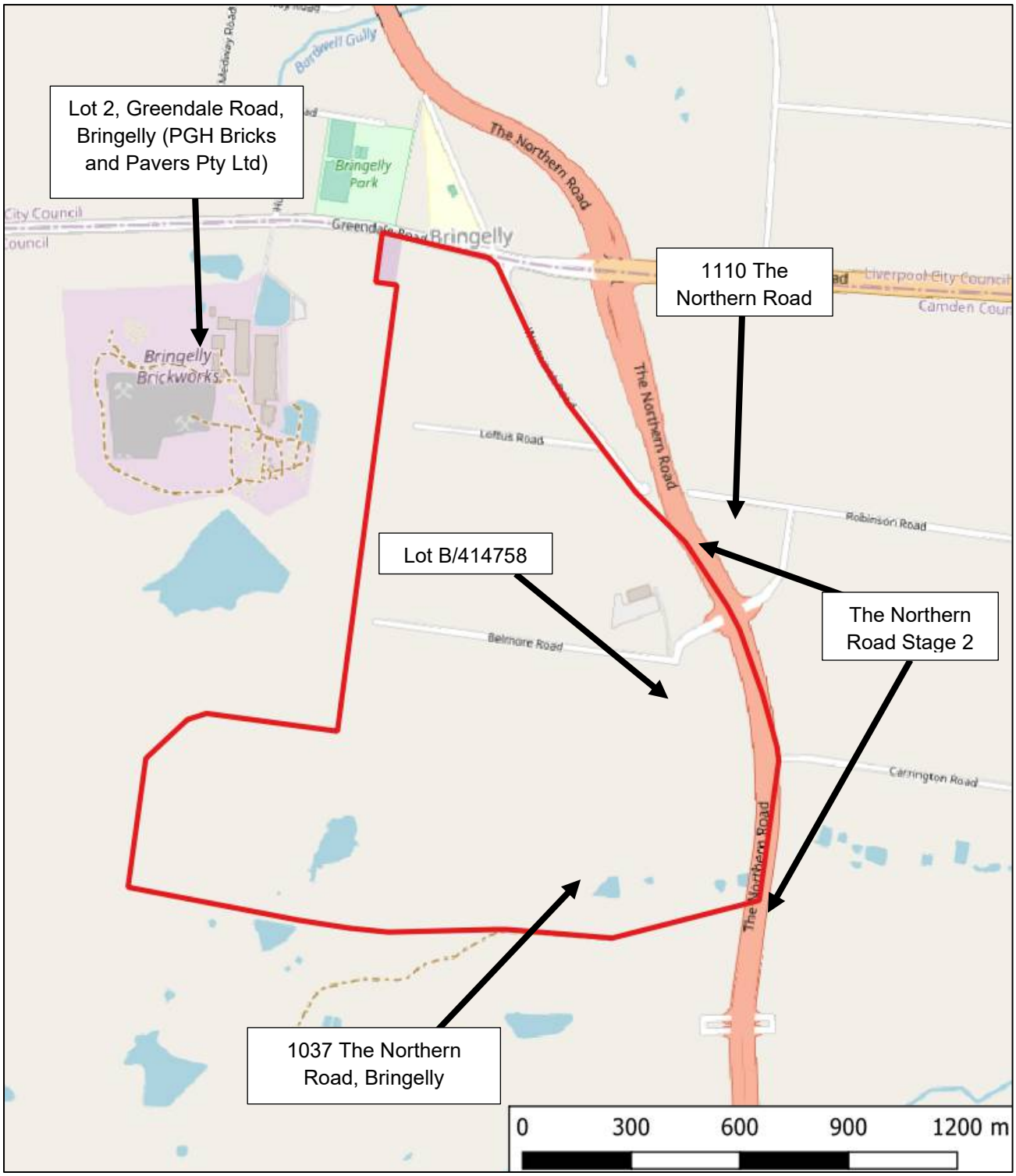


Figure 3: POEO Locations

5.4 Site History Integrity Assessment

The information used to establish the history of the site was sourced from reputable and reliable reference documents, many of which were official records held by Government departments/agencies. The databases maintained by various Government agencies potentially can contain high quality information, but some of these do not contain any data at all. A NSW SafeWork Dangerous Goods search was not undertaken due to the preliminary nature of the investigation. A Dangerous Goods search is completed to identify potentially hazardous substances that may be kept on site (such as chemical or fuel storage tanks) that may pose a potential contamination issue. Given that the site comprises rural residential land use it is unlikely that dangerous goods are held on site, notwithstanding, a Dangerous Goods Search should be conducted in future investigations for due diligence purposes. It is also noted that the titled deed search was limited to only Lot 6/DP1216926 due to the large number of lots and the low likelihood of identifying contaminating activities considering the likely previous land use.

In particular, aerial photographs provide high quality information that is generally independent of memory or documentation. They are only available at intervals of several years, so some gaps exist in the information from this source. The observed site features are open to different interpretations and can be affected by the time of day and/or year at which they were taken, as well as specific events, such as flooding. Care has been taken to consider different possible interpretations of aerial photographs and to consider them in conjunction with other lines of evidence.

5.5 Summary of Site History

The site history information suggests that the site was first occupied in 1935, with the site largely cleared of vegetation by the 1947 aerial photograph, which shows evidence of the site being used as rural residential and agricultural land. As evident from the aerial photographs, the site has been divided up into numerous properties with new structures evident in the majority of the aerial photographs between 1947 and 2018. The majority of the structures built appeared to be for rural residential land use with the exemptions of the Bringelly Village shops which first appeared in the 1986 aerial photograph, Bringelly electrical substation which first appeared in the 1998 aerial photograph and the concrete and asphalt batch plant as associated compound/carpark in the 2018 aerial. Loftus Road in the northern portion of the site first appeared in the 1955 aerial photograph and was extended by the 1975 aerial photograph and Belmore Road in the centre of the site first appeared in the 1986 aerial photograph. The Northern Road upgrade to the east of the site saw a portion of the site acquired for construction works and realignment of the road which appears to be completed by the 2020 aerial photograph.

The EPA records suggest that the southern portion of the site was also previously licensed for composting and related reprocessing or treatment, which was evident 2002 historical aerial, with the activity supposedly suspended in 2004 with the surrendor of the license.

Overall, the site history information suggests that the site has a history of largely being used for a combination of rural residential and agricultural uses. Small portions of the site have been used for industrial and commercial purposes including the Bringelly Substation, Bringelly Shopping Village and the temporary asphalt/concrete processing plant and associated carpark and site compound for the upgrade of The Northern Road.

6. Site Walkover

6.1 Observations

A site walkover was undertaken only at Lot 6 of Deposited Plan 1216926, as at the time of field work was the only accessible part of the site. The site walkover was conducted by an environmental engineer on 14, 28 and 30 January 2020. The general site topography was consistent with that described in Section 4. The site layout appears to have remained unchanged from the latest aerial photograph. The following key site features pertinent to the PSI were observed (refer to photographs in Appendix E and Drawing 3 in Appendix A).

- At the time of inspection, the property appeared to be mainly used as rural residential property with livestock in the form of horses and cattle (Photographs 1 to 3). Horse agistment appeared to be the primary site use;
- There were various structures on the site, mainly concentrated to the central portion of the site including residential buildings, sheds, garages and stables. Some structures appeared to clad or constructed of fibrous cement sheeting (Photograph 4);
- A garage appears to be used for motor vehicle repair with a hydraulic vehicle inspection lift and some chemical storage (Photograph 4 and 5);
- Timber power poles were used in the supply of electricity to the buildings (Photograph 6);
- General rubble including bricks, terracotta, wood and concrete was observed on the exposed earth surface to the south of the properties in the central portion of the site (Photograph 7) and surrounding the western dam (Photograph 8). See Drawing 3, Appendix A;
- A paddock was observed to contain loose sandy dark soil on the surface (Photograph 9 and Drawing 3);
- A pump house was observed adjacent to the western dam (Photograph 10 and Drawing 3);
- Numerous potential Asbestos Containing Material (ACM) Fragments were observed north of the large dam on the western portion of the site (photographs 11 and 12 and Drawing 3);
- The areas surrounding the potential ACM were observed to be potentially fill;
- A number of dead mature trees were observed on the southern boundary (photograph 13);
- A potential buried service was noted on the southern boundary (photograph 14); and
- Potential horse/cattle burial pits were observed on the northern boundary (Photograph 15 and Drawing 3).

7. Review of Geotechnical Test Pit Logs

DP (2021) conducted 12 test pit logs in Lot 6 of Deposited Plan 1216926. A review of the test pit logs was conducted to identifying any PAEC. No fill or signs of contamination were noted in any of the 12 test pits, with the soil profile typically noted to be topsoil overlying natural silty clays with shale or sandstone bedrock underlying. The test pit logs are included in Appendix F, together with notes defining classification methods and descriptive terms.

8. Potential Areas of Environmental Concern

From the site history review and the site inspection, it is considered that a potential for contamination exists at the site. A total of 10 PAEC were identified and these are summarised in Table 6.

Table 6: Summary of Identified Potential Areas of Environmental Concern

PAEC#	Identified from	Description	Comment
1	Historical aerials, historical title deeds and site walkover	Agricultural land use	Potential use of herbicides and pesticides on-site or immediately off-site (i.e. adjoining properties).
2	Historical aerials, EPA public record searches and site walkover	Ground disturbance and general fill	Areas of ground disturbances were observed in historical aerial photos, with the most notable observed in the 2002 photo for processing of compost on the southern portion of the site. Areas of ground disturbance were generally found to contain general rubble in the site walkovers with areas surrounding dams and properties impacted by fill in parts as indicated by embedded fragments of refuse (e.g. bricks, PVC pipes, concrete, etc). The filling of prior dams was also noted in historical aerials.
3	Historical aerials and site walkover	Buildings and structures	Potential hazardous building materials were observed in several structures and buildings on site including potentially asbestos containing fibre cement sheeting. Some structures had identifications of chemicals and fuel storage presently and/or historically, including a garage with a hydraulic vehicle lift and a dam pump house.
4	Site Walkover	Asbestos impacted fill	In Lot 6 of Deposited Plan 1216926, an area north of the western dam was observed to contain numerous fragments of potential ACM on the surface, with the surrounding soil suspected to be fill.
5	Site Walkover	Timber Power Poles	Timber power poles were observed providing electricity to several properties on the site.
6	Site Walkover	Animal burial	Potential horse or cattle burial was noted in Lot 6 of Deposited Plan 1216926 on the southern boundary during a site walkover, as indicated by a series of clustered mounds.
7	Aerial imagery	Substation site	The Endeavour Energy Bringelly Substation (Lot 10/1125892 and 1/733115) site appeared between 1986 and 1998. It has expanded progressively and now appears to sit entirely on hardstand.
8	Aerial imagery	Site Compound and carpark	The site compound and carpark first appeared in the aerial imagery in April 2018 and is still present at time of reporting (Lot B/414758).
9	Aerial imagery	Concrete and asphalt batch plants	The establishment of the batch plant was first evident in the April 2018 aerial imagery and appears to have been decommissioned and removed between August 2020 and December 2020 (Lot B/414758).
10	Aerial imagery	Septic Tanks	Septic tanks have been observed at the site which are typically removed as part of bulk earthworks and subject to targeted sampling and analysis, if required.

9. Preliminary Conceptual Site Model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e.: it enables an assessment of the potential source–pathway–receptor linkages (complete pathways).

Potential Sources

Based on the current investigation, the following potential sources of contamination and associated contaminants of potential concern (CoPC) have been identified.

- S1: Ground Disturbance and Fill: Associated with ground disturbances (ie: composting, levelling, demolition of former and current buildings on the site) and general filling observed in dams and in parts of the site.
  - CoPC include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), phenols and asbestos.
- S2: Agricultural land use
  - CoPC include OCP, OPP and metals.
- S3: Buildings and structures (including potentially stored chemicals):
  - CoPC include metals, TRH, BTEX, PAH, OCP, phenols, PCB and asbestos.
- S4: Timber Power Poles
  - CoPC include metals, TRH, BTEX and PAH.
- S5: Animal burials
  - CoPC include nutrients and microbiology (total coliforms)
- S6: Asbestos Impacted Fill.
  - CoPC include asbestos (bonded, friable and fines).
- S7: Electrical Substation
  - COPC include PCB, heavy metals and solvents.
- S8: Site compound and carpark
  - COPC include TRH, BTEX, heavy metals and phenols.
- S9: Concrete and asphalt batch plants
  - COPC include PAH, TRH, BTEX and heavy metals.
- S10: Septic Tanks
  - COPC include PAHs, Phenols, nutrients and pathogens.

Potential Receptors

The following potential human receptors have been identified:

- R1: Current and future site users;
- R2: Future construction and maintenance workers; and
- R3: Adjacent site users (rural residential).

The following potential environmental receptors have been identified:

- R4: Surface water (On site dams and South Creek];
- R5: Groundwater; and
- R6: Terrestrial ecology.

Potential Pathways

The following potential pathways have been identified:

- P1: Ingestion and dermal contact;
- P2: Inhalation of dust and/or vapours;
- P3: Surface water run-off;
- P4: Lateral migration of groundwater providing base flow to water bodies;
- P5: Leaching of contaminants and vertical migration into groundwater; and
- P6: Contact with terrestrial ecology.

Summary of Potentially Complete Exposure Pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S6) and receptors (R1 to R6) are provided in Table 5.

Table 5: Summary of Potentially Complete Exposure Pathways

Source	Transport Pathway	Receptor	Risk Management Action
S1: Ground Disturbance and Fill S2: Agricultural land use S3: Buildings and structures S4: Timber Power Poles S5: Animal Burials	P1: Ingestion and dermal contact P2: Inhalation of dust and/or vapours	R1: Current and future site users R2: Future construction and maintenance workers;	An intrusive investigation is recommended to assess possible contamination including testing of the soils.
	P2: Inhalation of dust and/or vapours	R3: Adjacent site users [Rural residential].	
	P3: Surface water run-off	R4: Surface water bodies [On site dams and South Creek];	

Source	Transport Pathway	Receptor	Risk Management Action
S6: Asbestos Impacted Fill S7: Electrical Substation S8: Site compound and carpark S9: Concrete and asphalt batch plants S10: Septic Tanks	P4: Lateral migration of groundwater providing base flow to water bodies		
	P5: Leaching of contaminants and vertical migration into groundwater	R5: Groundwater; and	
	P6: Contact with terrestrial ecology	R6: Terrestrial ecology.	
S3: Buildings and structures	P1: Ingestion and dermal contact. P2: Inhalation of dust and/or vapours. P3: Surface water run-off. P6: Contact with terrestrial ecology.	R1: Current and future site users. R2: Construction and maintenance workers (during any site. redevelopment). R6: Terrestrial ecology.	Hazardous building survey to identify any hazardous building materials prior to any site redevelopment.

10. Conclusions and Recommendations

The scope of the current investigation included a desktop study and a site walkover. The site was found to be formerly and currently used as rural residential land with agricultural activities, with a small portion of the site been used for industrial and commercial reasons including the Bringelly substation, Bringelly shopping village and the temporary asphalt/concrete processing plant and associated carpark and site compound for the upgrade of the adjacent The Northern Road.

Based on the findings of the PSI, a total of 10 PAECs were identified across the site requiring further investigation. The identified PAEC were as follows:

- PAEC 1 - Agricultural land use;
- PAEC 2 - Ground disturbance and general fill;
- PAEC 3 - Buildings and structures;
- PAEC 4 - Asbestos impacted fill;
- PAEC 5 - Timber Power Poles;
- PAEC 6 - Animal burial;
- PAEC 7 - Electrical Substation;
- PAEC 8 - Site compound and carpark;
- PAEC 9 - Concrete and asphalt batch plants; and
- PAEC 10 - Septic Tanks.

The location of the above PAECs are shown on Drawing 4, Appendix A.

The majority of the PAECs encountered were typical for a rural residential site with agricultural activity, with the exception of PAEC 4, 7, 8 and 9. The PAECs encountered are considered by DP unlikely to pose a contamination constraint to the proposed rezoning and the land is considered suitable for rezoning (from a contaminated land perspective).

Based on the information presented above, the site has the potential for contamination due to the historical site uses. The presence or extent of potential contamination has not been fully confirmed. Further assessment of soil at the site would be required to assess the presence, degree and extent of contamination and any remediation requirements associated with the potential contamination sources identified. Targeted investigations of all PAECs should be undertaken, in the form of a Detailed Site Investigation (DSI) to inform any future DA. Remaining areas of the site (i.e. areas outside of the identified PAEC) should also be investigated albeit at a low density of testing. This testing should include the area on the southern boundary where several mature trees were noted to have died.

With respect to site contamination, the recommended further assessment should build on the information provided in this report with reference to National Environment Protection Council (NEPC, 1999) National Environment Protection Council (Assessment of Site Contamination) Measure 1999 (amended 2013) (NEPC, 2013).

A hazardous building survey is also recommended to identify any hazardous building materials prior to any maintenance, demolition, or site redevelopment. Demolition of structures containing hazardous materials should be carried out by a licenced asbestos removal contractor.

11. References

Clark N.R. and Jones D.C., 1991, Penrith 1:100 000 Geological Sheet 9030, 1st edition. Geological Survey of New South Wales, Sydney.

Hazelton, P.A., Bannerman, S.M. and Tille, P.J. (1989), *Soil Landscapes Series - Penrith 1:100,000 Sheet, Soil Conservation Service of NSW.*

NEPC. (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]. Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW DUAP/EPA. (1998). Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land . NSW Department of Urban Affairs and Planning / Environment Protection Authority.

NSW EPA. (2020). Guidelines for Consultants Reporting on Contaminated Land. Contaminated Land Guidelines: NSW Environment Protection Authority

12. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for this project at Belmore Road Precinct, Bringelly, NSW in accordance with DP's proposal P92336.04.R.001 dated 9 February 2021. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of CKDI Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Although the scope of works adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for inspection/sampling, or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

Douglas Partners Pty Ltd

Appendix A

Drawings 1 to 4

Site Locality

Greendale Road

The Northern Road

GW100732

1 2 3 4 5 6 7 8 9 10 11 12

Legend

- NSW 2 m Contours
- NSW Sydney Watercourses
- DP (2021) Geotechnical Test Pit Locations
- Site Boundary
- NSW Registered Groundwater Wells

0 100 200 300 400 m

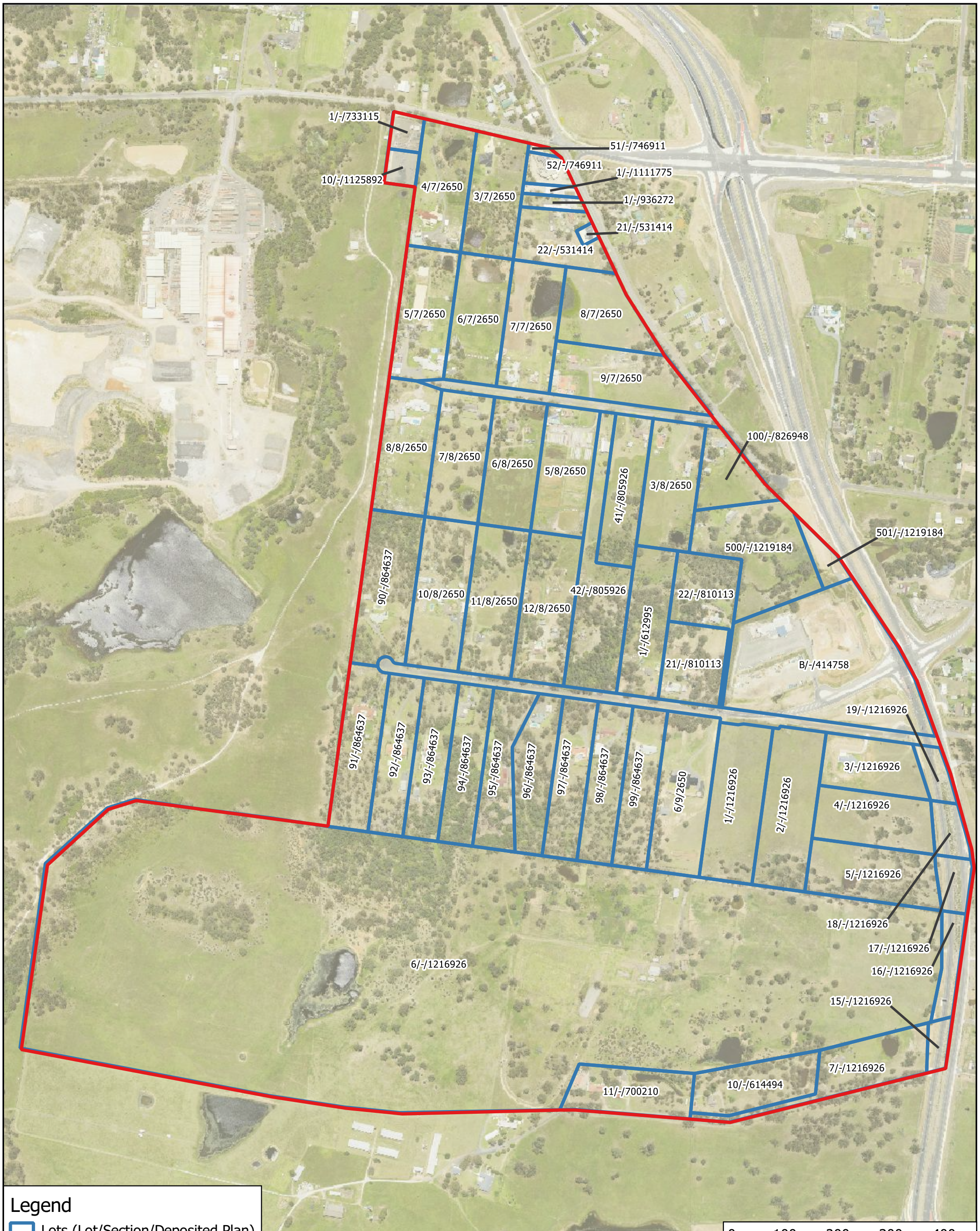
Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Site Layout, Site Locality and DP (2021) Test Pit Locations**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

N
MGA

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: 1
REVISION: 0
SCALE: As Shown



Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Site Layout - Lots**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: 2
REVISION: 0
SCALE: As Shown

Legend

- Accessible Area for Site Walkover

Site Walkover Features

- Potential Asbestos Containing Material Fragments
- Loose Sandy Fill on the Surface
- Pump House
- Potential Aminal Burials
- Potential Fill
- Refuse observed on surface

100 0 100 200 300 400 m

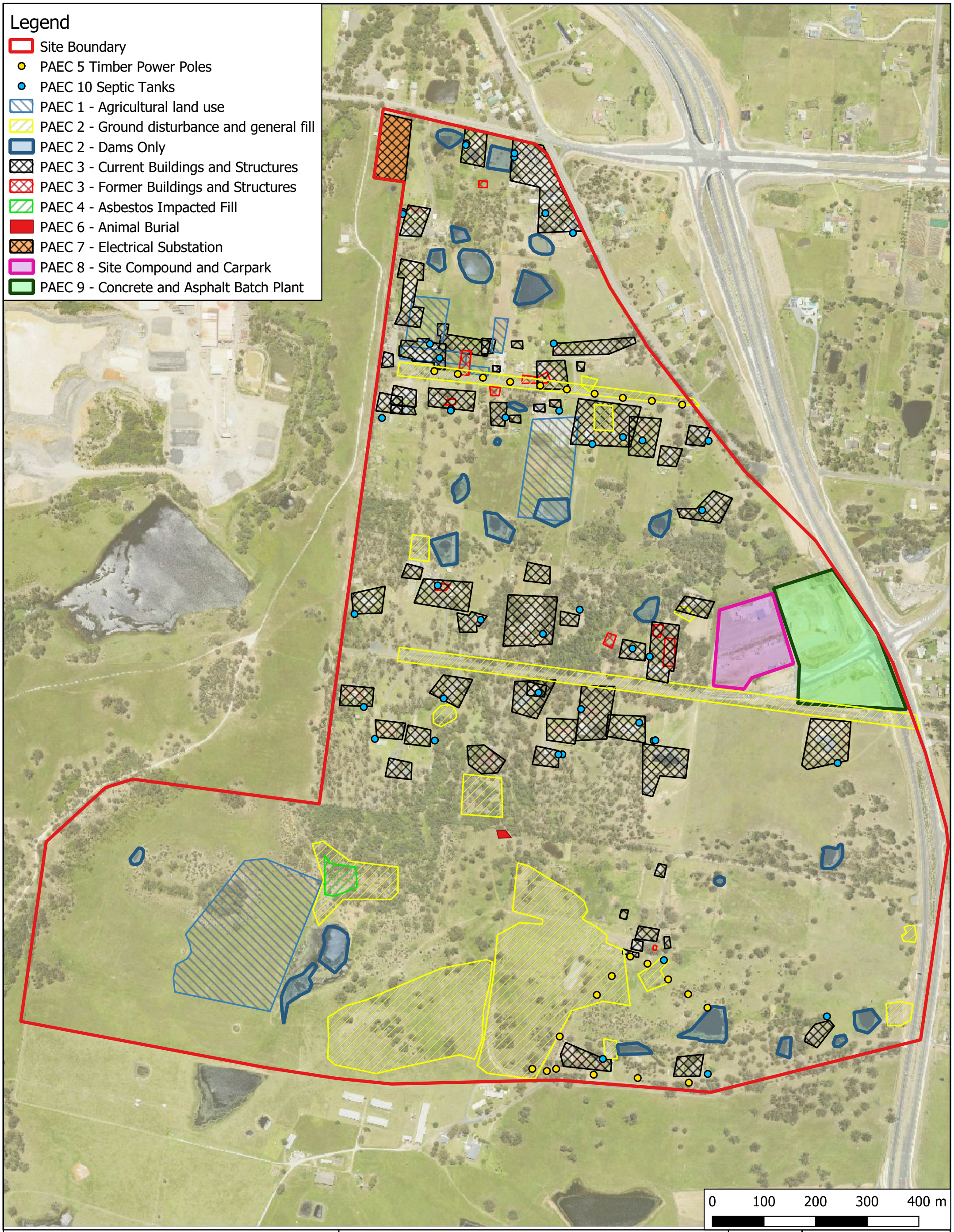
Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	CKDI Pty Ltd		
OFFICE:	Macarthur	DRAWN BY:	LOC
SCALE:	As shown	DATE:	26.02.2021

TITLE: Site Walkover Features
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

N
MGA

PROJ. #:	92336.04.R.001
DRAWING No:	3
REVISION:	0



Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Potential Areas of Environmental Concern**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

N
MGA

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: 4
REVISION: 0
SCALE: As Shown

Appendix B

About this Report

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

Appendix C

Site History Documentation

Search results

Your search for: Suburb: BRINGELLY

Search Again | Refine Search

did not find any records in our database.

Search TIP

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

... more search tips

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

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

More information about particular sites may be available from:

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

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

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

Background

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

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

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

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

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

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

• the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
• the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

• regulation under the CLM Act, POEO Act, or both
• notifying the relevant planning authority for management under the planning and development process
• managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

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

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

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

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

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

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997* .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the *Contaminated Land Management Act 1997* , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* . A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).

Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the *Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BRANXTON	Former Service Station Branxton	Part of 70 Maitland STREET	Service Station	Contamination currently regulated under CLM Act	-32.65631582	151.3516243
BRANXTON	Branxton Wastewater Treatment Works	2151 New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.66069944	151.3625572
BREWARRINA	Dowell's Fuel	39 Doyle STREET	Service Station	Regulation under CLM Act not required	-29.96152786	146.8612561
BRIGHTON-LE-SANDS	Shell Service Station Brighton Le Sands & adjacent land	2 General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9579214	151.1578665
BRIGHTON-LE-SANDS	Cook Park	General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9581072	151.1579572
BROADMEADOW	Former Industrial Site	16 Broadmeadow ROAD	Service Station	Regulation under CLM Act not required	-32.91444096	151.7300112
BROADMEADOW	Nineways Broadmeadow Coles Express SS	Corner Brunker Road and Lambton ROAD	Service Station	Regulation under CLM Act not required	-32.92511185	151.7364247
BROADMEADOW	2 Georgetown Road, Broadmeadow NSW 2292	2 Georgetown ROAD	Other Industry	Under assessment	-32.912319	151.732186
BROKEN HEAD	South Byron Sewage Treatment Works	Broken Head ROAD	Other Industry	Regulation under CLM Act not required	-28.67233626	153.6148974
BROKEN HILL	Former Caltex Depot	3 Kanandah ROAD	Service Station	Regulation under CLM Act not required	-31.98341823	141.4332211
BROKEN HILL	Former Caltex Service Station	167-173 Argent STREET	Service Station	Regulation under CLM Act not required	-31.96066663	141.4624175
BROKEN HILL	Caltex Service Station	535 Argent STREET	Service Station	Regulation under CLM Act not required	-31.95311924	141.4745274
BROKEN HILL	Tasco Petroleum (Former Mobil) Depot	5 Kanandah ROAD	Other Petroleum	Regulation under CLM Act not required	-31.9843986	141.4329127
BROKEN HILL	Former Mobil Aviation Refuelling Facility, Broken Hill Airport	Airport ROAD	Other Petroleum	Regulation under CLM Act not required	-31.99928312	141.4685759
BROKEN HILL	Caltex Service Station	73-87 Oxide STREET	Service Station	Contamination formerly regulated under the CLM Act	-31.95519591	141.4658647
BROKEN HILL	Former Mobil Depot	Corner Of Talc Street and Gossan STREET	Other Petroleum	Regulation under CLM Act not required	-31.96018102	141.4514752
BROKEN HILL	Former Gasworks	Cornish STREET	Gasworks	Contamination formerly regulated under the CLM Act	-31.96330562	141.4470611
BROOKLYN	Former Oyster Farm	139 Brooklyn (Off Government) ROAD	Unclassified	Regulation under CLM Act not required	-33.54716867	151.2229744
BROOKVALE	Coles Express Service Station Brookvale	198 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.76332299	151.2794028
BROOKVALE	Woolworths Petrol Brookvale	756 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76170587	151.2762411
BROOKVALE	Caltex Service Station Brookvale	740-742 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76146721	151.2745358
BROOKVALE	Harrison Manufacturing	75 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76497282	151.2637961
BROOKVALE	Brookvale Bus Depot	630-636 Pittwater ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76641698	151.2705659
BROOKVALE	Warringah Mall	Cnr Condamine Street, Old Pittwater Rd & Cross STREET	Other Industry	Regulation under CLM Act not required	-33.76729923	151.2657272
BROOKVALE	Littles Dry Cleaning	123 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76759121	151.2625932
BROOMS HEAD	Former Brooms Head General Store and Service Station	92 Ocean ROAD	Service Station	Regulation under CLM Act not required	-29.60711599	153.3346312
BROWNSVILLE	Caltex Service Station	342 Kanahooka ROAD	Service Station	Regulation under CLM Act not required	-34.48591734	150.8064373
BRUNSWICK HEADS	Caltex Service Station	5 Tweed STREET	Service Station	Regulation under CLM Act not required	-28.5381619	153.5487135

Number	Name	Location	Type	Status	Issued date
1597020		LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	11-Aug-20
1606411		Northern Road and Bringelly Road Upgrade Stage 2, BRINGELLY, NSW 2556	s.80 Surrender of a Licence	Pending	23-Feb-21
11354	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	POEO licence	Surrendered	28-Aug-01
1026098	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	27-Mar-03
1026346	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	04-Apr-03
1026512	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	17-Apr-03
1027416	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	19-May-03
1032269	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	17-Nov-03
1037168	A.C.N. 090 135 836 PTY LTD	1037 THE NORTHERN ROAD, BRINGELLY, NSW 2171	s.80 Surrender of a Licence	Issued	25-May-04
20864	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	Northern Road and Bringelly Road Upgrade Stage 2, BRINGELLY, NSW 2556	POEO licence	Issued	09-Dec-16
1553513	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	Northern Road and Bringelly Road Upgrade Stage 2, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	04-Jul-17
1572213	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	Northern Road and Bringelly Road Upgrade Stage 2, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	04-Dec-18
1550607	BO STEVENS	1110 The Northern Road , BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	31-Mar-17
3085782738	BO STEVENS	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	19-Jun-17
3173523367	BO STEVENS	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
1016336	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	27-Jun-02
1040220	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	22-Sep-04
1043879	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	20-Jan-05
1051526	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	05-Sep-05
1062983	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	28-Aug-06
1076143	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	19-Sep-07
1079902	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	15-Nov-07
1503297	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	23-Jan-12
1510257	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	06-Feb-13
1520429	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	20-May-14
1524516	BORAL BRICKS PTY LTD	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	28-Aug-14
1551668	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	24-May-17
3085782866	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	12-Jul-17
1553910	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	12-Jul-17
3085782839	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	13-Jul-17
3173523311	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
3173523320	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
3173523330	Centric Operations Pty Ltd	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
1594775	CITYWIDE CIVIL PTY LTD	41 GREENDALE ROAD, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	18-May-20
1599289	CITYWIDE CIVIL PTY LTD	41 GREENDALE ROAD, BRINGELLY, NSW 2556	s.110 Revocation of Clean Up Notice	Issued	28-Sep-20
11539	CLEAN & GREEN ORGANICS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	POEO licence	Issued	18-Oct-01
1504687	HAINES BROS EARTHMOVING PTY LIMITED	877 The Northern Road, BRINGELLY, NSW 2171	s.91 Clean Up Notice	Issued	27-Apr-12
3085765587	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Withdrawn	
3085765596	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Withdrawn	
11233	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	POEO licence	Issued	18-Oct-00
1035465	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	19-Mar-04
1095376	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	17-Feb-09
1099072	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	31-Mar-09
1111306	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	10-Feb-10
1111684	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	09-Mar-10
1112249	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	10-Mar-10
1112260	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	21-Jun-10
1118231	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	20-Aug-10
1121730	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	11-Feb-11
1503776	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.96 Prevention Notice	Issued	09-Mar-12
1507951	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Prevention Notice	Issued	17-Aug-12
3085767576	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	18-Dec-12
1504950	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.79 Suspension of a Licence	Issued	10-Jan-13
1532259	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	13-Aug-15
1546630	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	16-Nov-16
3085782563	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	08-Jun-17
3085782581	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	08-Jun-17
3085782572	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	08-Jun-17
1554407	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	31-Aug-17
1556796	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	18-Sep-17
1557957	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	25-Oct-17
1563262	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	29-Mar-18
1563297	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	03-Apr-18
1563465	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	05-Apr-18
1563830	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	20-Apr-18
1565460	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	05-Jun-18
1572231	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	27-Nov-18
1576537	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	01-Mar-19
1578978	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	13-May-19
1581395	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	10-Jul-19
1585698	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	07-Jan-20
1593192	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	31-Mar-20
1594779	HI-QUALITY WASTE MANAGEMENT PTY LTD	761 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	20-May-20
3173523688	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Withdrawn	
3173523349	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
3173523358	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	15-Sep-17
1556017	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	15-Sep-17
3173523706	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	03-Nov-17
1558424	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	s.110 Revocation of Clean Up Notice	Issued	06-Nov-17
1558359	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	06-Nov-17
3173524090	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	08-Dec-17
3173524320	HUSSEIN MRAD	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	11-Jan-18
1523373	KHALED MAHMOUD MOERBANY	27 Greendale Rd, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	04-Aug-14
11557	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	POEO licence	Issued	03-Apr-02
1052293	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	05-Oct-05
1500817	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	04-Nov-11
1530968	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	21-Sep-15
1547470	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	16-Mar-17
1555769	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	17-Jan-18

1567086	LEPPINGTON PASTORAL CO PTY LTD	1675 THE NORTHERN ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	21-Jun-19
3173524164	MARWAN FAKIH	1110 The Northern Road , BRINGELLY, NSW 2556	Penalty Notice	Issued	13-Dec-17
1529870	MICHAEL BORG	145 Mersey Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	05-Jun-15
1808	PGH BRICKS & PAVERS PTY LIMITED	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	POEO licence	Issued	10-Aug-00
1536325	PGH BRICKS & PAVERS PTY LIMITED	LOT 2 GREENDALE ROAD, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	04-Mar-16
1597021	THE GARDEN CEMETERY LIMITED	41 GREENDALE ROAD, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	28-Sep-20
3173529738	THE GARDEN CEMETERY LIMITED	41 GREENDALE ROAD, BRINGELLY, NSW 2556	Penalty Notice	Issued	24-Nov-20
1604025	THE GARDEN CEMETERY LIMITED	41 GREENDALE ROAD, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	15-Dec-20
3085775844	TONY ESTEPHAN	196 Greendale Road, BRINGELLY, NSW 2556	Penalty Notice	Withdrawn	
1519876	TONY ESTEPHAN	196 Greendale Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	25-Feb-14
1028105	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	23-Jun-03
1033769	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	09-Jan-04
1096898	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	19-Jan-09
1101429	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	01-Jul-09
1103296	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	25-Aug-09
1107272	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	22-Oct-09
1128831	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.91 Clean Up Notice	Issued	10-Jun-11
1500694	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.110 Variation of Clean Up Notice	Issued	28-Oct-11
3085770811	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	21-May-13
1519975	VOLK HOLDINGS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	18-Feb-14
1538776	W2R ORGANICS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	13-Apr-16
3173527794	W2R ORGANICS PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	24-May-19
1527358	W2R PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	18-Mar-15
1535116	W2R PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	s.58 Licence Variation	Issued	19-Feb-16
3085779080	W2R PTY LTD	769 The Northern Road, BRINGELLY, NSW 2556	Penalty Notice	Issued	30-May-16

WaterNSW
Work Summary

GW063062

Licence: 10WA109401
Licence Status: CURRENT

Authorised Purpose(s): STOCK,INDUSTRIAL,DOMESTIC
Intended Purpose(s): STOCK, INDUSTRIAL, DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Rotary
Owner Type: Private

Commenced Date:
Completion Date: 01/01/1989
Final Depth: 151.00 m
Drilled Depth:

Contractor Name: (None)
Driller:
Assistant Driller:

Property: M & B MOSES HOLDINGS NO 2 PTY 35 DART RD BRINGELLY 2556 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	BRINGELLY	1 128613
Licensed:	CUMBERLAND	BRINGELLY	Whole Lot 6/B/2650

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map: 9030-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)
Northing: 6243201.000
Easting: 289671.000
Latitude: 33°55'50.3"S
Longitude: 150°43'28.2"E

GS Map: -
MGA Zone: 56
Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Steel	0.00	0.00	159			

***** End of GW063062 *****

WaterNSW
Work Summary

GW072961

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): STOCK, DOMESTIC

Work Type: Bore
Work Status:
Construct.Method: Rotary Air
Owner Type: Private

Commenced Date:
Completion Date: 03/03/1995
Final Depth: 100.00 m
Drilled Depth: 100.00 m

Contractor Name: (None)
Driller: Phillip Arthur Windley
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description: Salty
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	COOK	LPT1 DP82885
Licensed:			

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6239727.000
Easting: 289538.000
Latitude: 33°57'43.0"S
Longitude: 150°43'20.0"E

GS Map: -
MGA Zone: 56
Coordinate Source: PR.,ACC.GIS

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
18.00	18.50	0.50	Fractured						
48.00	48.50	0.50	Fractured						
92.00	92.50	0.50	Fractured	18.00		1.00			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.50	0.50		Soil	
0.50	4.00	3.50		Clay	
4.00	100.00	96.00		Shale	

Remarks

03/03/1995: FILLED IN

***** End of GW072961 *****

WaterNSW
Work Summary

GW073533

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): DOMESTIC

Work Type: Bore
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/1990
Final Depth: 330.00 m
Drilled Depth:

Contractor Name: (None)
Driller:
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	BRINGELLY	L7 DP2650
Licensed:			

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6243139.000
Easting: 289618.000
Latitude: 33°55'52.3"S
Longitude: 150°43'26.1"E

GS Map: -
MGA Zone: 56
Coordinate Source: GD.,ACC.GIS

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	P.V.C.	0.00	0.00	50			

***** End of GW073533 *****

WaterNSW
Work Summary

GW100732

Licence: 10WA108391 **Licence Status:** CURRENT

Authorised Purpose(s): STOCK,DOMESTIC
Intended Purpose(s): STOCK, DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Rotary
Owner Type: Private

Commenced Date:
Completion Date: 17/01/1997
Final Depth: 138.00 m
Drilled Depth: 138.00 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Richard Auld
Assistant Driller:

Property: NAVH PTY LTD 78 BELMORE RD BRINGELLY 2556 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 20.000
Salinity Description:
Yield (L/s): 1.300

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	COOK	12/8/2650
Licensed:	CUMBERLAND	BRINGELLY	Whole Lot 12/8/2650

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6241317.000
Easting: 290333.000
Latitude: 33°56'52.0"S
Longitude: 150°43'52.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	4.50	210			Rotary
1		Hole	Hole	4.50	138.00	158			Rotary
1	1	Casing	Steel	-0.70	5.30	168	158		Driven into Hole, Cemented

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
58.70	58.80	0.10	Unknown			0.50	60.00		17700.00
108.60	110.30	1.70	Unknown			0.50	114.00		14900.00
133.50	133.70	0.20	Unknown	20.00		0.30	138.00		13300.00

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	4.50	4.50	CLAY	Clay	
4.50	28.40	23.90	SHALE DARK GREY	Shale	
28.40	30.70	2.30	SANDSTONE DARK GREY F.G.	Sandstone	

			CEMENTED		
30.70	36.30	5.60	SHALE DARK GREY	Shale	
36.30	37.30	1.00	SANDSTONE DARK GREY F.G. CEMENTED	Sandstone	
37.30	56.00	18.70	SHALE DARK GREY	Shale	
56.00	57.30	1.30	SANDSTONE DARK GREY F.G. CEMENTED	Sandstone	
57.30	61.80	4.50	SILSTONE	Siltstone	
61.80	104.50	42.70	SHALE DARK GREY	Shale	
104.50	105.40	0.90	SANDSTONE GREY F.G. CEMENTED	Sandstone	
105.40	108.60	3.20	SANDSTONE GREY F.G. CEMENTED	Sandstone	
108.60	110.30	1.70	SANDSTONE GREY C.G. SLIGHT QUARTZ MATRIX	Sandstone	
110.30	112.50	2.20	SANDSTONE LIGHT GREY OPEN	Sandstone	
112.50	119.70	7.20	SANDSTONE GREY F.G. CEMENTED	Sandstone	
119.70	125.30	5.60	SANDSTONE LIGHT GREY C.G. OPEN	Sandstone	
125.30	131.90	6.60	SANDSTONE LIGHT GREY C.G.	Sandstone	
131.90	133.70	1.80	SANDSTONE LIGHT GREY QUARTZ MATRIX	Sandstone	
133.70	137.80	4.10	SANDSTONE LIGHT GREY C.G. OPEN	Sandstone	
137.80	138.00	0.20	SHALE	Shale	

Remarks

25/01/2013: Nat Carling, 25-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

***** End of GW100732 *****

WaterNSW
Work Summary

GW101062

Licence: 10WA108412 **Licence Status:** CURRENT

Authorised Purpose(s): STOCK,DOMESTIC
Intended Purpose(s): STOCK, DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Rotary Air
Owner Type: Private

Commenced Date:
Completion Date: 09/09/1997
Final Depth: 220.00 m
Drilled Depth: 220.00 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Mark Anthony Eade
Assistant Driller:

Property: PELLICANO 1305 The Northern Rd BRINGELLY 2556 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 45.000
Salinity Description:
Yield (L/s): 1.800

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	BRINGELLY	2/C/2650
Licensed:	CUMBERLAND	BRINGELLY	Whole Lot 5//1220083

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6242958.000
Easting: 289934.000
Latitude: 33°55'58.4"S
Longitude: 150°43'38.2"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.40	210			Rot. Rev. Circ. Air
1		Hole	Hole	5.40	220.00	158			Rot. Rev. Circ. Air
1	1	Casing	Pvc Class 9	-0.50	128.80	127			Suspended in Clamps, Glued
1	1	Casing	Steel	-0.50	5.40	168	167		Driven into Hole

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
23.00	24.00	1.00	Unknown	45.00		1.00	24.00		8768.00
179.00	180.00	1.00	Unknown			0.20	180.00		
180.00	220.00	40.00	Unknown			0.60	220.00	01:00:00	

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.00	2.00	CLAY	Clay	
2.00	4.00	2.00	BROWN SHALE	Shale	

4.00	51.00	47.00	BLACK SHALE. WATER BEARING 24m TDS-8768/1.0L/s	Shale	
51.00	53.00	2.00	DARK GREY SANDSTONE. VERY FINE GRAIN	Sandstone	
53.00	55.00	2.00	BLACK SHALE	Shale	
55.00	67.00	12.00	DARK GREY SANDSTONE. VERY FINE GRAIN	Sandstone	
67.00	110.00	43.00	BLACK SHALE	Shale	
110.00	170.00	60.00	WHITE QUARTZ. SANDSTONE M TO C GRAIN BIT OF QUARTZ	Quartz	
170.00	190.00	20.00	WHITE QUARTZ. SANDSTONE M TO C GRAIN. LOT OF QUARTZ. AT 180 1.2 TDS 7507/AT 186-1.4 TDS -6720	Quartz	
190.00	199.00	9.00	SILTSTONE	Siltstone	
199.00	220.00	21.00	WHITE QUARTZ. SANDSTONE.MED.GRAIN. BIT OF QUARTZ	Quartz	
220.00	220.00	0.00	AT 204-1.6 TDS-5888 AT 220 -1.8 L/s TDS = 5568	Quartz	

Remarks

14/01/2013: Nat Carling, 14-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

***** End of GW101062 *****

WaterNSW
Work Summary

GW111604

Licence: 10BL604962
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger - Solid
Owner Type: Other Govt

Commenced Date:
Completion Date: 25/08/2011
Final Depth: 20.00 m
Drilled Depth: 20.00 m

Contractor Name: Terratest Pty Ltd
Driller: Trevor Higgs
Assistant Driller:

Property: THE NORTHERN ROAD CORRIDOR 4 Solway Rd BRINGELLY 2556 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	BRINGELLY	4/D/2650
Licensed:	CUMBERLAND	BRINGELLY	Whole Lot 3//1220083

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6242820.000
Easting: 290071.000
Latitude: 33°56'03.0"S
Longitude: 150°43'43.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.80	125			Auger - Solid Flight
1		Hole	Hole	5.80	20.00	76			Rotary - Coring
1		Annulus	Bentonite/Grout	12.00	12.50				
1		Annulus	Crushed Aggregate	12.50	20.00				Graded
1	1	Casing	Pvc Class 18	13.00	19.00	60	50		Seated on Bottom, Screwed, S: 19.00-20.00m
1	1	Opening	Slots - Horizontal	13.00	19.00	60		0	Casing - Machine Slotted, PVC Class 18, Screwed, SL: 45.0mm

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.60	0.60	TOPSOIL	Topsoil	
0.60	3.05	2.45	SILTY CLAY	Silty Clay	
3.05	4.00	0.95	SILTY CLAY,PALE GREY	Silty Clay	
4.00	5.80	1.80	SILTY CLAY,BROWN MOTTLED	Silty Clay	
5.80	8.00	2.20	SHALE GREY,THIN SILTSTONE	Shale	
8.00	9.50	1.50	SHALE DARK GREY	Shale	

9.50	12.90	3.40	SHALE DARK GREY,FINE GRAINED SANDSTONE	Shale	
12.90	17.10	4.20	SHALE GREY,DARK GREY	Shale	
17.10	20.00	2.90	SANDSTONE.GREY,SHALE FINE GRAINED	Sandstone	

***** End of GW111604 *****

WaterNSW
Work Summary

GW111629

Licence: 10BL605096
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger - Solid
Owner Type: Other Govt

Commenced Date:
Completion Date: 22/08/2011
Final Depth: 10.00 m
Drilled Depth: 10.00 m

Contractor Name: Terratest Pty Ltd
Driller: Trevor Higgs
Assistant Driller:

Property: NORTHERN ROAD CORRIDOR - B 925 The Northern Rd BRINGELLY 2556 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	COOK	21//836540
Licensed:	CUMBERLAND	COOK	Whole Lot 9//1216926

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6239779.000
Easting: 291060.000
Latitude: 33°57'42.4"S
Longitude: 150°44'19.3"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.37	110			Auger - Solid Flight
1		Hole	Hole	5.37	10.00	76			Rotary - Coring
1		Annulus	Crushed Aggregate	5.50	10.00				Graded
1	1	Casing	Pvc Class 18	0.00	6.00	60	50		Seated on Bottom, Screwed, S: 9.00-10.00m
1	1	Opening	Slots - Horizontal	6.00	9.00	60		0	Casing - Machine Slotted, PVC Class 18, Screwed, SL: 45.0mm

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	TOPSOIL,SILTY CLAY	Topsoil	
0.20	2.03	1.83	SILTY CLAY GREY,L/PLASTICITY	Silty Clay	
2.03	3.05	1.02	SANDY CLAY	Sandy Clay	
3.05	5.37	2.32	SANDY CLAY,PALE GREY,MOTTLED BROWN	Sandy Clay	
5.37	7.00	1.63	SHALE BROWN PALE,SOME IRONSTONE	Shale	
7.00	10.00	3.00	SHALE GREY,DARK GREY,SANDSTONE	Shale	

***** End of GW111629 *****

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

LRS NSW **Sydney**

Address: - 1037 The Northern Road, Bringelly

Description: - Lot 6 D.P. 1216926

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
25.11.1935 (1935 to 1945)	Horace Howard Young (Gentleman)	Book 1735 No. 832 Now Vol 4866 Fol 22
03.12.1945 (1945 to 1949)	Lee Cameron Lathrop Murray (Manager)	Vol 4866 Fol 22
20.09.1949 (1949 to 1950)	George Lacey Evans (Grazier)	Vol 4866 Fol 22
08.08.1950 (1950 to 1959)	Reginald William Farrell (Company Director) Una Grace Farrell (Married Woman)	Vol 4866 Fol 22
02.06.1959 (1959 to 1968)	J.M. Hargreaves (Pastoral) Pty Limited	Vol 4866 Fol 22 Now Vol 7817 Fol 168
02.03.1968 (1960 to 1981)	John Henry Fitzgerald (Motor Car Dealer) Gladys May Fitzgerald (Married Woman) Raymond John Fitzgerald (Motor Car Dealer)	Vol 7817 Fol 168
17.03.1981 (1981 to 1989)	Raymond John Fitzgerald (Bookmaker) (Transmission Applications not investigated)	Vol 7817 Fol 168 Now 13/785465
17.01.1989 (1989 to 2002)	Roy Anthony Medich (Company Director) Ronald Edward Medich (Company Director)	13/785465
01.03.2002 (2002 to date)	# Ron Medich Properties Pty Limited Now # CSPA Properties Pty Limited # Roy Medich Properties Pty Limited	13/785465 Now 6/1216926

Denotes current registered proprietor

Leases: -

- Various leases were found from 6th November 1991 that have since expired or have been surrendered, not investigated

Easements: -

- 28.11.1983 (D.P. 700210) Easement for Services 9 wide
- 28.11.1983 (D.P. 700210) Easement for Services 9 wide (? Duplicate entry)
- 29.09.2016 (AK 737176) Easement for Drainage of Water

Yours Sincerely,
Mark Groll
10 January 2019

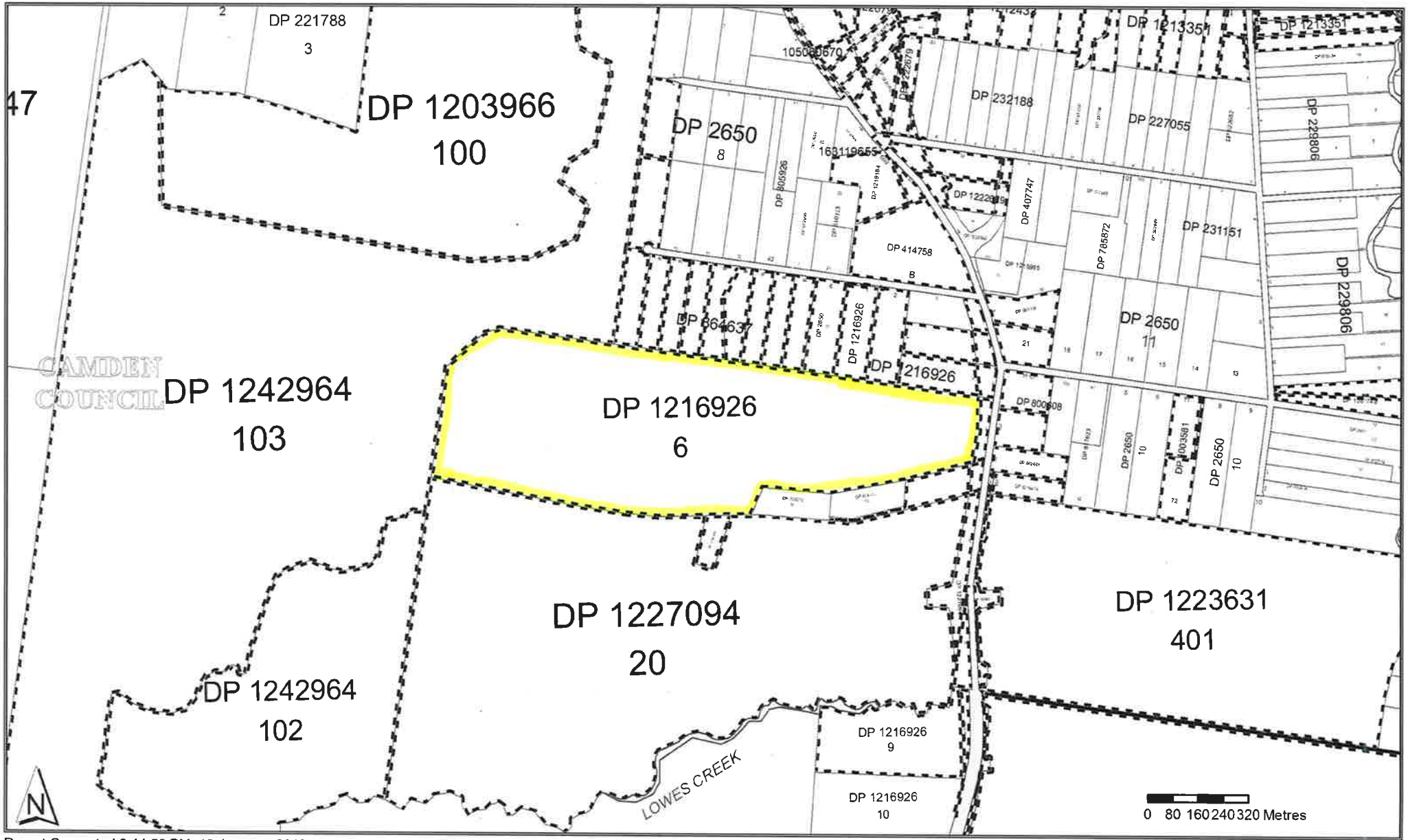
Email: mark.groll@infotrack.com.au

LAND REGISTRY SERVICES

Cadastral Records Enquiry Report : Lot 6 DP 1216926

Ref : CMapIT

Locality : BRINGELLY
LGA : CAMDEN
Parish : COOK
County : CUMBERLAND



Report Generated 8:44:56 PM, 10 January, 2019

PLAN FORM 2 (A2) DP1216926

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

ePlan Sheet 1 of 4 sheets

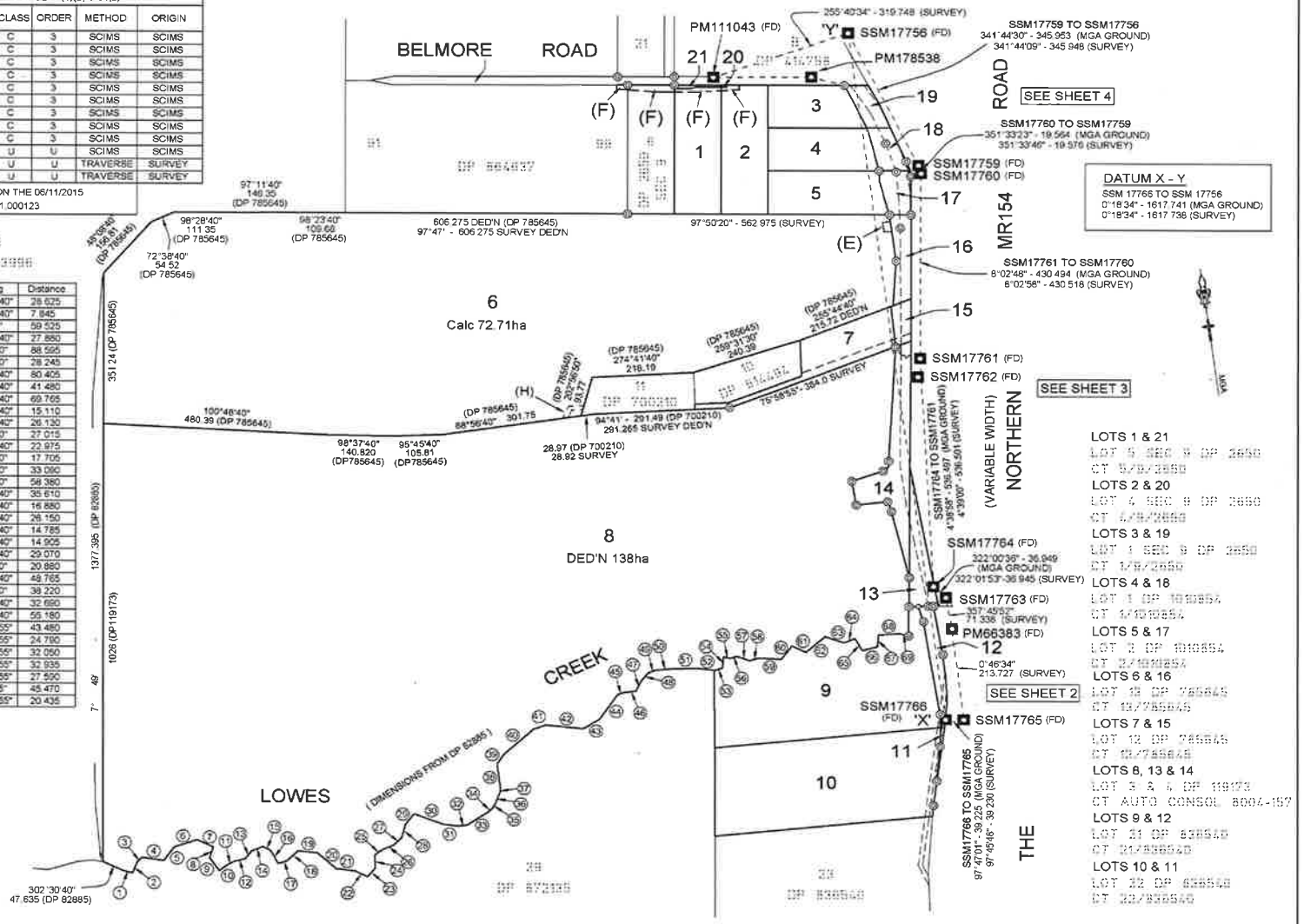
SURVEYING AND SPATIAL INFORMATION REGULATION 2012: CLAUSE 35(1)(B) & 61(2)

MARKS	MGA - CO-ORDINATES EASTING	NORTHING	ZONE	CLASS	ORDER	METHOD	ORIGIN
SSM 17756	291 047.043	6 241 183.479	56	C	3	SCIMS	SCIMS
SSM 17759	291 155.444	6 240 854.903	56	C	3	SCIMS	SCIMS
SSM 17760	291 158.317	6 240 835.549	56	C	3	SCIMS	SCIMS
SSM 17761	291 098.040	6 240 409.241	56	C	3	SCIMS	SCIMS
SSM 17762	291 078.333	6 240 403.458	56	C	3	SCIMS	SCIMS
SSM 17763	291 077.301	6 239 845.320	56	C	3	SCIMS	SCIMS
SSM 17764	291 054.555	6 239 874.444	56	C	3	SCIMS	SCIMS
SSM 17765	291 077.172	6 239 560.250	56	C	3	SCIMS	SCIMS
SSM 17766	291 038.304	6 239 569.563	56	C	3	SCIMS	SCIMS
PM 66383	291 007	6 239 753	56	U	U	SCIMS	SCIMS
PM 111043	290 737.23	6 241 104.37	56	U	U	TRAVERSE	SURVEY
PM 178538	291 006.24	6 241 067.72	56	U	U	TRAVERSE	SURVEY

SOURCE: MGA CO-ORDINATES ADOPTED FROM SCIMS ON THE 06/11/2015
COMBINED SEA LEVEL & SCALE FACTOR = 1.000123

Number	Bearing	Distance
1	113°14'40"	21.000
2	29°24'40"	27.180
3	52°32'40"	14.745
4	105°56'40"	47.135
5	44°08'40"	39.120
6	78°46'40"	51.177
7	123°21'40"	38.705
8	205°16'40"	26.595
9	152°50'40"	35.585
10	60°24'40"	21.465
11	67°58'40"	17.000
12	85°05'40"	24.340
13	45°02'40"	23.115
14	73°30'40"	26.395
15	126°44'40"	19.455
16	159°38'40"	33.955
17	80°14'40"	20.880
18	51°38'40"	32.590
19	104°07'40"	41.500
20	159°48'40"	54.215
21	104°57'40"	42.346
22	123°36'40"	29.130
23	47°24'40"	25.470
24	5°04'40"	39.795
25	59°57'40"	20.820
26	74°09'40"	27.902
27	52°00'40"	22.995
28	22°48'40"	32.085
29	43°44'40"	31.260
30	118°44'40"	66.185
31	105°39'40"	33.635
32	89°01'40"	20.195
33	53°36'40"	51.175
34	55°02'40"	15.830
35	216°09'40"	10.520

Number	Bearing	Distance
36	209°13'40"	28.625
37	196°32'40"	7.845
38	0°45'40"	59.525
39	218°09'40"	27.860
40	54°26'40"	88.595
41	77°45'40"	28.245
42	103°50'40"	80.405
43	245°39'40"	41.480
44	221°30'40"	69.765
45	257°29'40"	15.110
46	271°22'40"	26.130
47	32°32'40"	27.015
48	225°59'40"	22.975
49	75°20'40"	17.705
50	92°43'40"	33.090
51	95°56'40"	56.380
52	285°32'40"	35.610
53	259°34'40"	16.880
54	194°32'40"	26.150
55	109°12'40"	14.785
56	260°42'40"	14.905
57	297°17'40"	29.070
58	60°26'40"	20.880
59	281°03'40"	48.765
60	44°38'40"	39.220
61	304°51'40"	32.690
62	236°43'40"	55.180
63	296°01'55"	43.480
64	254°25'55"	24.790
65	157°45'55"	32.050
66	262°36'55"	32.935
67	194°02'55"	27.590
68	93°58'55"	45.470
69	112°59'55"	20.435



(E) - PROPOSED EASEMENT TO DRAIN WATER VARIABLE WIDTH
(F) - PROPOSED EASEMENT FOR TRANSMISSION LINE VARIABLE WIDTH
(H) - DP 700210 EASEMENT FOR SERVICES 9 WIDE

Surveyor: GLENN ARTHUR McFALL Date of Survey: 11/12/2015 Surveyor's Ref: 117399500-01 CHECKLIST, LASRA, REPORT, E.No.16/01-CL41(2) (RMS SP 3760 - Cl 1146)	PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSES OF THE ROADS ACT 1993	LGA: CAMDEN Locality: BRINGELLY Subdivision No: N/A Lengths are in metres. Reduction Ratio 1:6000	Registered: 3.3.2016	DP1216926

FILE 259 - 1921 FIELD BOOK 0154 075 FP 0114 PLAN : 0154 075 SS 4021

PLAN FORM 2 (A2) DP1216926 WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan Sheet 2 of 4 sheets

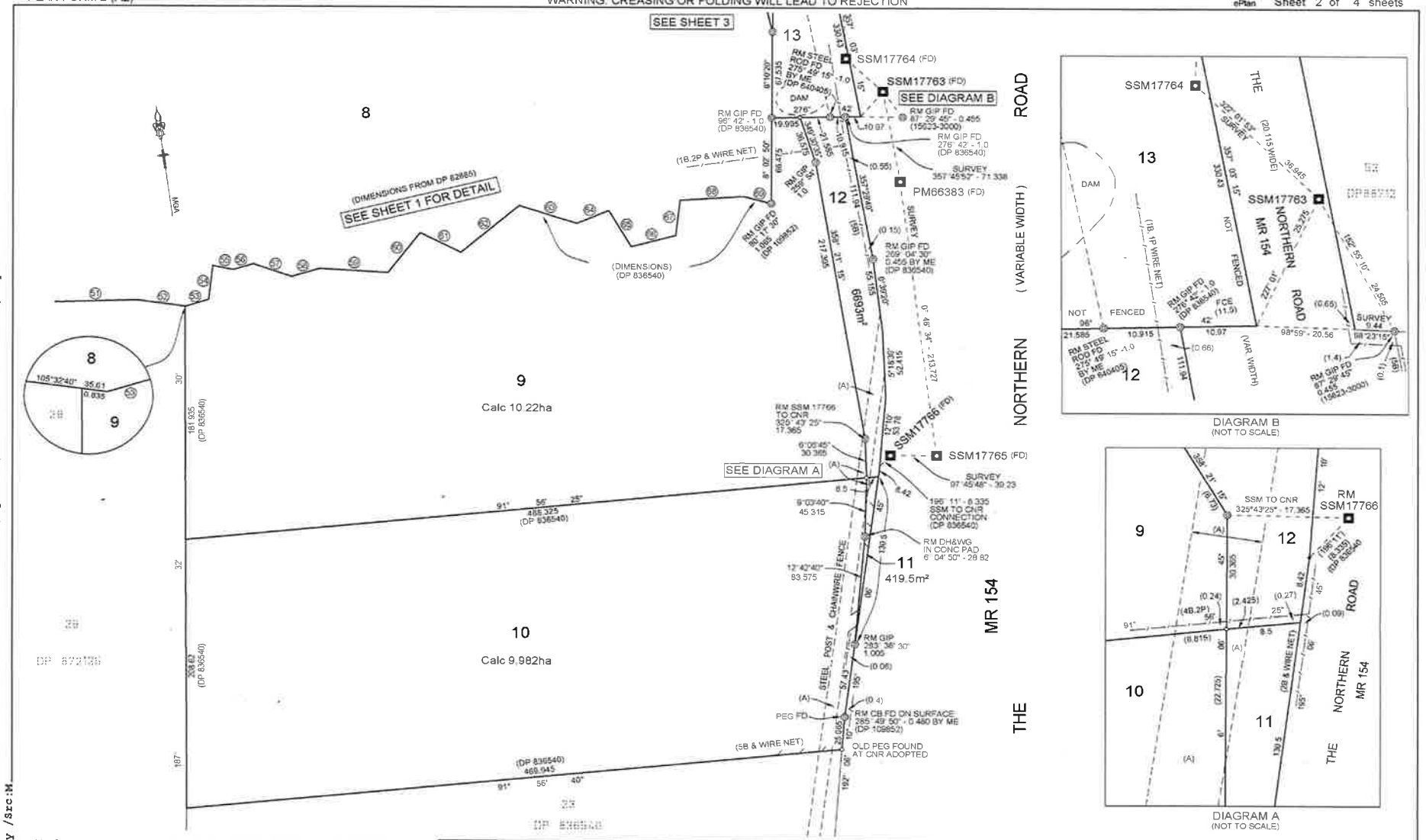


DIAGRAM B
(NOT TO SCALE)

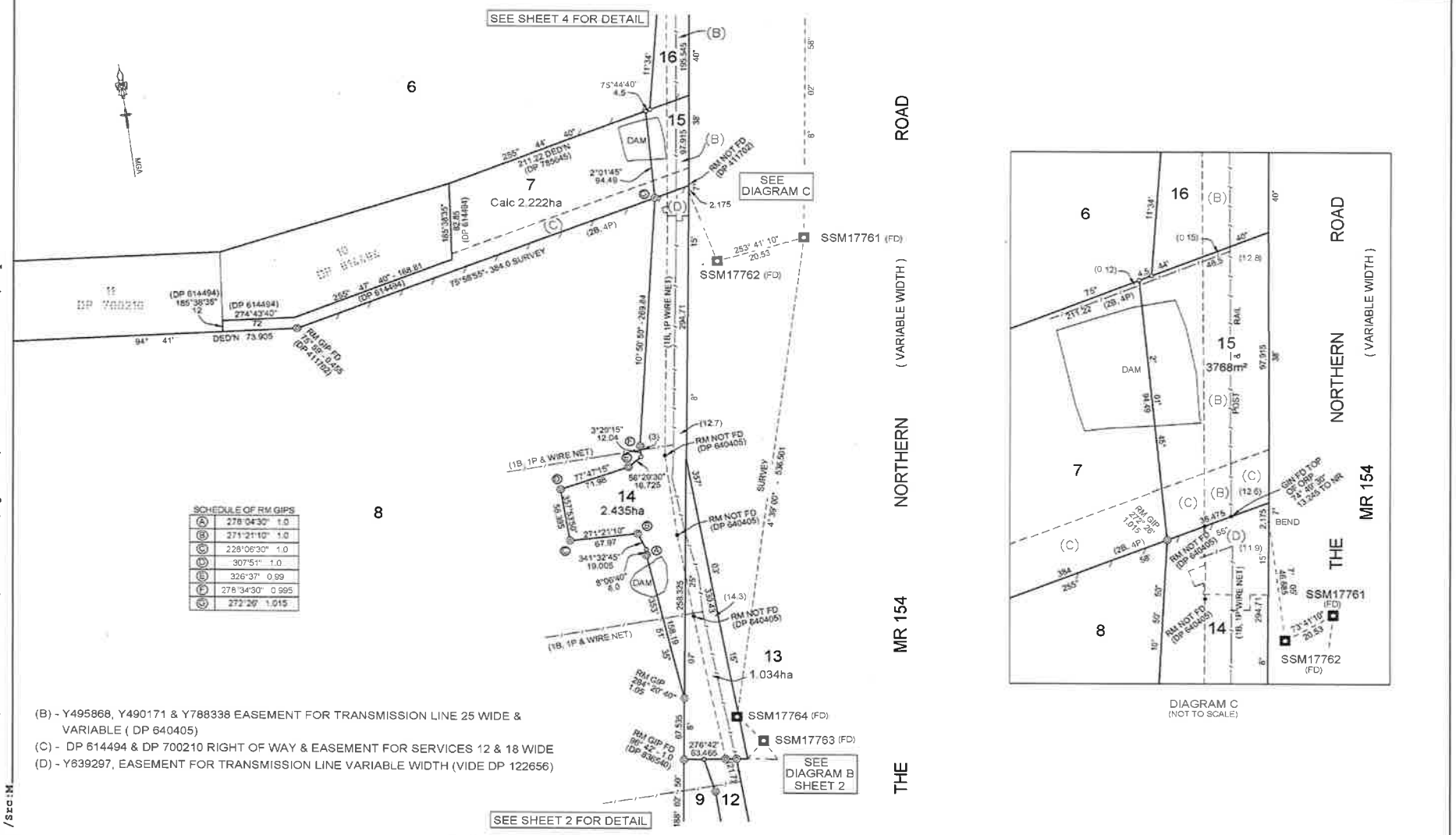
DIAGRAM A
(NOT TO SCALE)

(A) - EASEMENT FOR TRANSMISSION LINE 9 WIDE (DP 836540)

(B) - Y495868, Y490171 & Y788338 EASEMENT FOR TRANSMISSION LINE 25 WIDE & VARIABLE (DP 640405)

Surveyor: GLENN ARTHUR McFALL Date of Survey: 11/12/2015 Surveyor's Ref: 117799500-01 CHECKLIST, LASRA, REPORT, E.No.16/01-CL41(2) (RMS SP 3750 - CI 1145)	PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSES OF THE ROADS ACT 1993	LGA: CAMDEN Locality: BRINGELLY Subdivision No: N/A Lengths are in metres. Reduction Ratio 1:1750	Registered: 3.3.2016	DP1216926

FILE 259 - 1921 FIELD BOOK 0154 075 FP 0114 PLAN : 0154 075 SS 4021



(B) - Y495868, Y490171 & Y788338 EASEMENT FOR TRANSMISSION LINE 25 WIDE & VARIABLE (DP 640405)

(C) - DP 614494 & DP 700210 RIGHT OF WAY & EASEMENT FOR SERVICES 12 & 18 WIDE

(D) - Y639297, EASEMENT FOR TRANSMISSION LINE VARIABLE WIDTH (VIDE DP 122656)

DIAGRAM C
(NOT TO SCALE)

Surveyor: GLENN ARTHUR McFALL Date of Survey: 11/12/2015 Surveyor's Ref: 117799500-01 CHECKLIST, LASRA, REPORT, E.No.16/01-CL41(2) (RMS_SP 3760 - Cl 1146)	PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSES OF THE ROADS ACT 1993	LGA: CAMDEN Locality: BRINGELLY Subdivision No: N/A Lengths are in metres. Reduction Ratio 1:2500	Registered: 3.3.2016	DP1216926

FILE 259 - 1921 FIELD BOOK 0154 075 FP 0114 PLAN : 0154 075 SS 4021

PLAN FORM 2 (A2) DP1216926 WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION ePlan Sheet 4 of 4 sheets

(B) - Y495868, Y490171 & Y788338 EASEMENT FOR TRANSMISSION LINE 25 WIDE & VARIABLE (DP 640405)
(E) - PROPOSED EASEMENT TO DRAIN WATER VARIABLE WIDTH
(F) - PROPOSED EASEMENT FOR TRANSMISSION LINE VARIABLE WIDTH
(G) - AJ105994, EASEMENT FOR OVERHEAD POWER LINES 9 WIDE

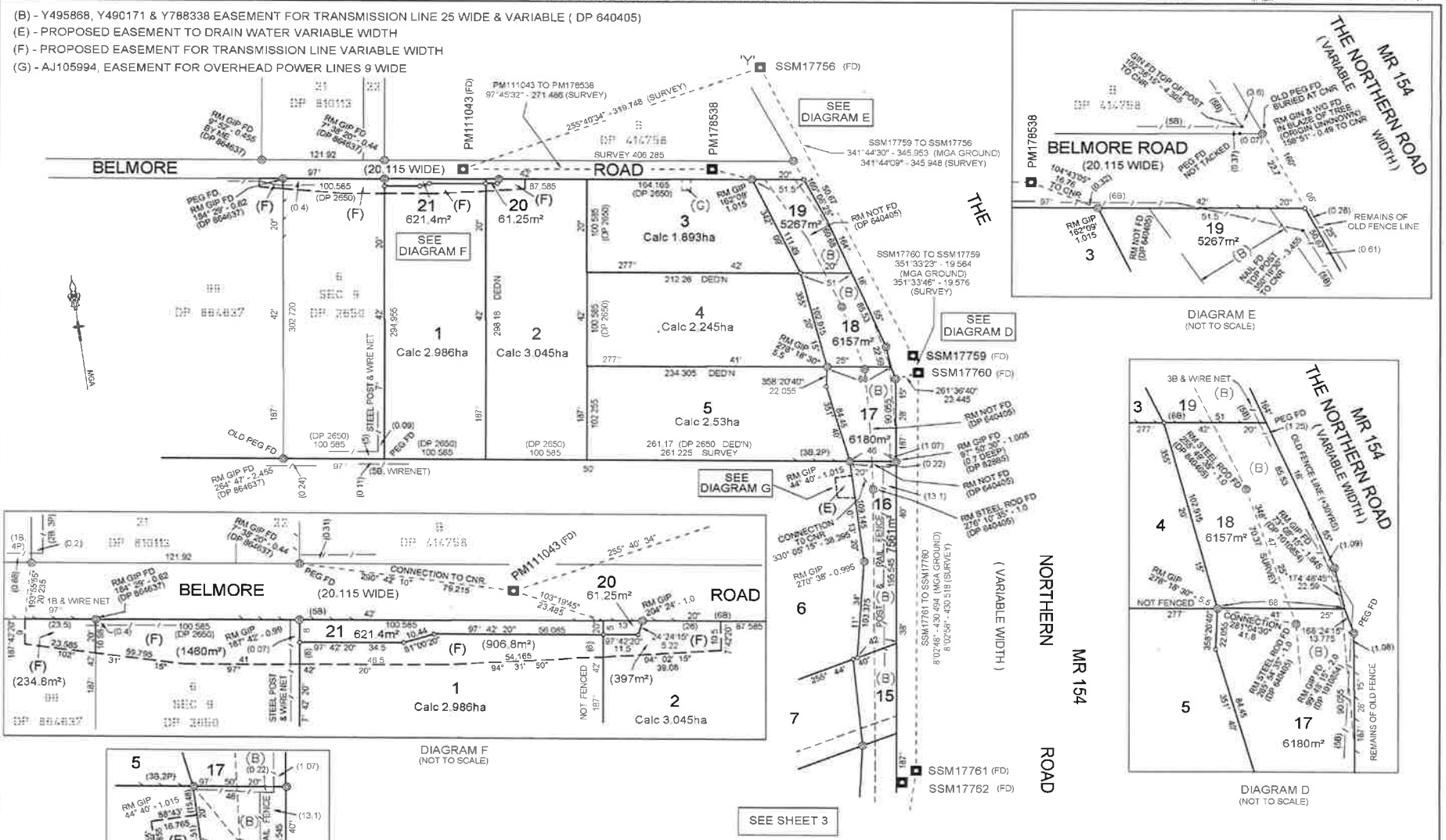


DIAGRAM E
(NOT TO SCALE)

DIAGRAM D
(NOT TO SCALE)

DIAGRAM F
(NOT TO SCALE)

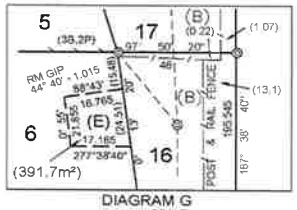


DIAGRAM G
(NOT TO SCALE)

Surveyor: GLENN ARTHUR McFALL Date of Survey: 11/12/2015 Surveyor's Ref: 117799500-01 CHECKLIST, LASRA, REPORT, E.No.16/01-CL41(2) (RMS - SP 3760 - CI 1146)	PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSES OF THE ROADS ACT 1993	LGA: CAMDEN Locality: BRINGELLY Subdivision No: N/A Lengths are in metres. Reduction Ratio 1:2500	Registered: 3.3.2016	DP1216926

FILE 259 - 1921 FIELD BOOK 0154 075 FP 0114 PLAN : 0154 075 SS 4021

PLAN FORM 6 (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheet(s)

Office Use Only	Office Use Only
Registered: 3.3.2016 Title System: TORRENS Purpose: ROADS ACT, 1993	DP1216926
PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSE OF THE ROADS ACT, 1993.	LGA: CAMDEN Locality: BRINGELLY Parish: COOK County: CUMBERLAND

Crown Lands NSW/Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, ...

*Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: .....

Accreditation number: .....

Consent Authority: .....

Date of endorsement: .....

Subdivision Certificate number: .....

File number: .....

*Strike through if inapplicable.

Survey Certificate

I, Glenn Arthur Mcfall .....

of Cardno Hard & Forester Pty Ltd .....

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a) ~~The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on .....~~

*(b) The part of the land shown in the plan (*being Lots 11 to 21 inclusive and connections excluding marking of existing Road Boundaries as per LASRA exemption) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on,... 11/12/2015... the part not surveyed was compiled in accordance with that Regulation.

*(c) ~~The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2012*.~~

Signature: ..... Dated: 11/12/2015....

Surveyor ID: 1537.....

Datum Line: "X – Y".....

Type: *Urban/*~~Rural~~

The terrain is *Level-Undulating / *~~Steep-Mountainous~~.

*Strike through if inapplicable.

^Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Statements of intention to dedicate public roads, public reserves and drainage reserves.

LOTS 11 TO 21 INCLUSIVE ARE REQUIRED FOR ROAD AND AFTER CONSTRUCTION WILL BE DEDICATED AS PUBLIC ROAD UNDER S.10 OF THE ROADS ACT, 1993

Plans used in the preparation of survey/compilation.

DP 836540, DP 119173, DP 872135, DP 1203966, DP 82885, DP 614494, DP 700210, DP 785645. DP 122656, DP 1010854, DP 640405, DP 864637, DP 2650, DP 810113, DP 826948, DP 414758, DP 88712, DP1159518

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Surveyor's Reference: 117799500-01, CHECKLIST, LASRA, REPORT, E. No. 16/01 – Cl.41 (2), (RMS: SP3760 – CI1146)

FILE: 259.1921 FIELD BOOK: 0154 075 FP 0114 PLAN: 0154 075 SS 4021

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET Sheet 2 of 2 sheet(s)

Office Use Only

Registered: 3.3.2016

Office Use Only

DP1216926

PLAN OF LAND, PROPOSED EASEMENT TO DRAIN WATER AND PROPOSED EASEMENT FOR TRANSMISSION LINE TO BE ACQUIRED FOR THE PURPOSE OF THE ROADS ACT, 1993.

Subdivision Certificate number: .....

Date of Endorsement: .....

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

STREET ADDRESS

LOTS 1 & 21 – No 37 BELMORE ROAD, BRINGELLY
LOTS 2 & 20 – No 27 BELMORE ROAD, BRINGELLY
LOTS 3 & 19 – No 1065 THE NORTHERN ROAD, BRINGELLY
LOTS 4 & 18 – No 1041 THE NORTHERN ROAD, BRINGELLY
LOTS 5 & 17 – No 1041 THE NORTHERN ROAD, BRINGELLY
LOTS 6 & 16 – No 1037 THE NORTHERN ROAD, BRINGELLY
LOTS 7 & 15 – No 1011 THE NORTHERN ROAD, BRINGELLY
LOTS 8,13 & 14 – No 975 THE NORTHERN ROAD, BRINGELLY
LOTS 9 & 12 – No 925 THE NORTHERN ROAD, BRINGELLY
LOTS 10 & 11 – No 905 THE NORTHERN ROAD, BRINGELLY

APPROVED by

.....

A/Principal Surveyor
ROADS AND MARITIME SERVICES

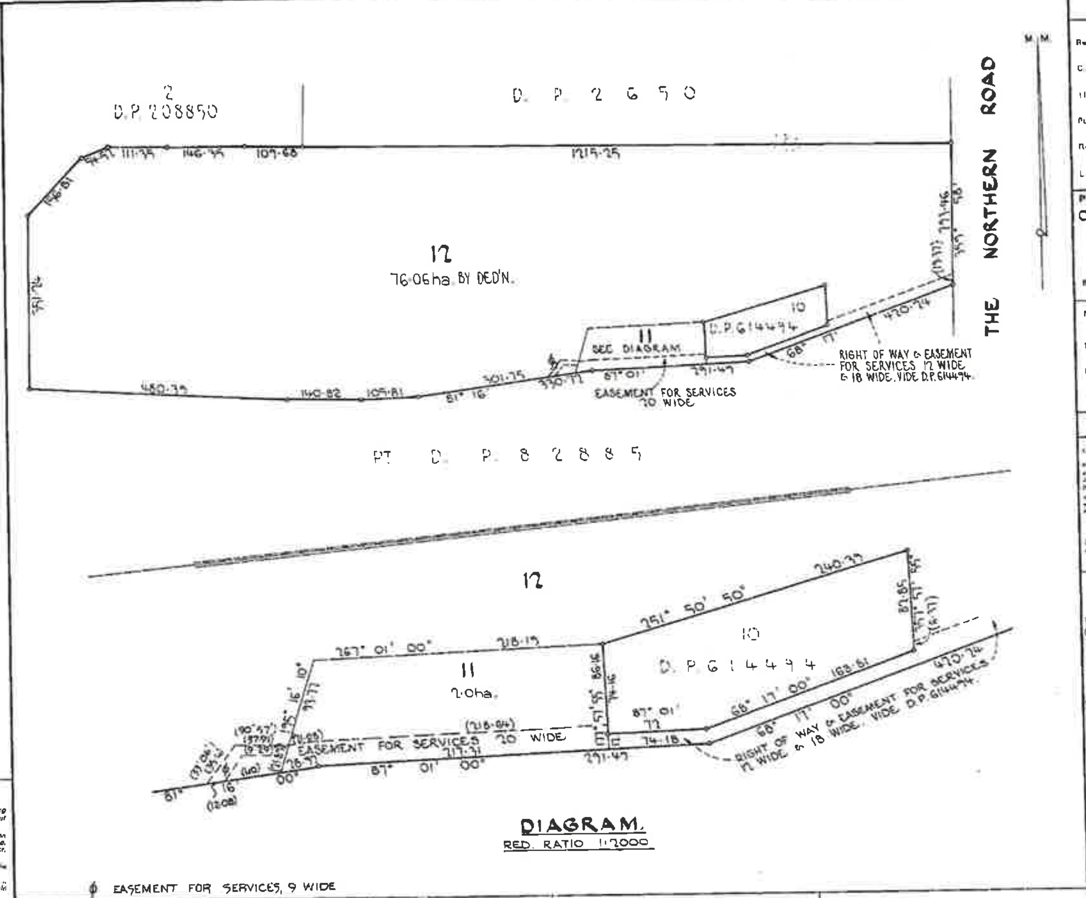
Surveyor's Reference: 117799500-01, CHECKLIST, LASRA, REPORT, E. No. 16/01 – Cl.41 (2), (RMS: SP3760 – Cl1146)

FILE: 259.1921 FIELD BOOK: 0154 075 FP 0114 PLAN: 0154 075 SS 4021

Req:R795376 /Doc:DP 0700210 P /Rev:22-Jun-1992 /Sts:OK.OK /Pgs:ALL /Prt:10-Jan-2019 20:43 /Seq:1 of 1
Ref:bringelly /Src:M

PLAN FORM 2

Plan Drawing only to appear in this space



*OFFICE USE ONLY

D.P. 700210

Registered: 28-11-83

C.A. No. 17/83 OF 15-7-1983

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: U7337-4 *

Last Plan: D.P. 614494

PLAN OF SUBDIVISION OF LOT 11 IN D.P. 614494.

Reduction Ratio 1: 5000

Municipality: CAMDEN

Locality: BRINGELLY

Parish: COOK

County: CUMBERLAND

OF JOHN M. DALY & ASSOCIATES

195-161 QUEEN STREET, CAMPBELLTOWN

PURSUANT TO SEC. 88B OF THE CONVEYANCING ACT, IT IS INTENDED TO CREATE:-

1. AN EASEMENT FOR SERVICES 20 WIDE.
2. A RESTRICTION AS TO USER.
3. AN EASEMENT FOR SERVICES, 9 WIDE
4. RIGHT OF WAY, 12 AND 18 WIDE
5. EASEMENT FOR SERVICES, 12 AND 18 WIDE
6. EASEMENT FOR SERVICES, 9 WIDE

Surveyor's Reference: 82-244

Y002A1B

Council Clerk's Certificate

Subdivision No. 17/83

Date: 13/7/84

M.P.D

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

I, Br. J. Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

29th November, 1983

[redacted]

IFICATE OF TITLE

NEW SOUTH WALES

REAL PROPERTY ACT, 1900

14409100

Vol. 14409 Fol. 100

Appln. No. 32885

Prior Title Vol.7817 Fol.168

EDITION ISSUED

30 4 1981

(Page 1) Vol. 14409 Fol. 100

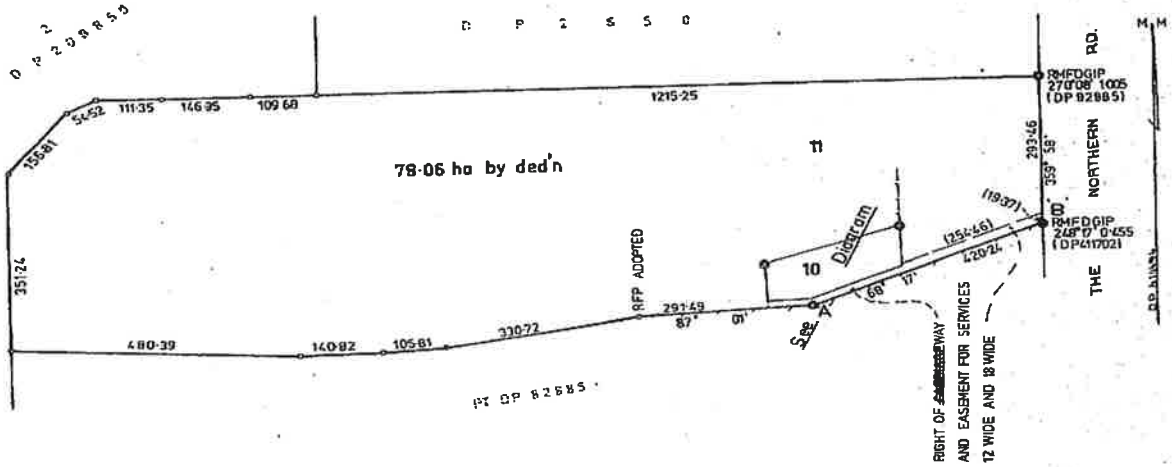
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

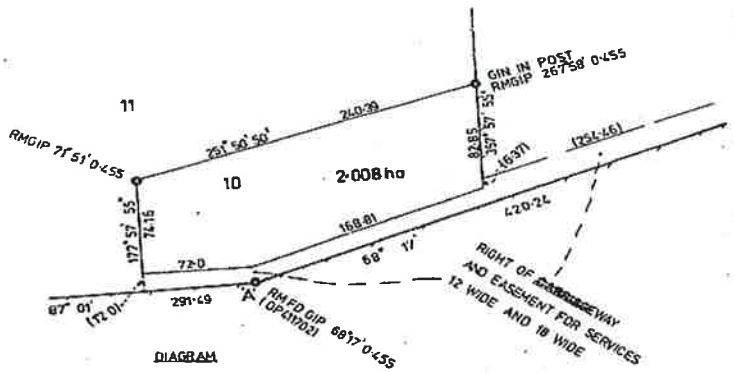
CANCELLED

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES





ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 11 in Deposited Plan 614494 at Bringelly in the Municipality of Camden Parish of Cook and County of Cumberland being part of Portion 50 granted to Robert Lowe on 25-8-1812.

FIRST SCHEDULE

RAYMOND JOHN FITZGERALD.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~L515191 Mortgage to Bank of New South Wales Savings Bank Limited.~~ Discharged S518949
3. DP614494 Right of way affecting the part of the land above described shown so burdened in Deposited Plan 614494.
4. ~~DP614494 Easement for services affecting the part of the land above described shown so burdened in~~ Deposited Plan 614494.
5. DP614494 Restriction as to user.

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

2/64

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

DP/~~SP~~ 700210 Registered 28-11-1983
This folio is cancelled as to whole/~~part~~ upon creation of computer folios for lots 11 & 12 in the abovementioned plan.

Registrar General.

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
Interests created pursuant to Section 88B Conveyancing Act, 1919, by the registration of Deposited Plan. 700210 Registered 28-11-1983		

NOTATIONS AND UNREGISTERED DEALINGS

S 518949 Dis.

DP 700210 Registered 28/11/83

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
10/1/2019 8:20PM

FOLIO: 12/700210

First Title(s): OLD SYSTEM
Prior Title(s): VOL 14409 FOL 100

Recorded	Number	Type of Instrument	C.T. Issue
28/11/1983	DP700210	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/12/1988	DP785645	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

bringelly PRINTED ON 10/1/2019

Received: 10/01/2019 20:20:39

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
10/1/2019 8:20PM

FOLIO: 13/785645

First Title(s): OLD SYSTEM
Prior Title(s): 12/700210

Recorded	Number	Type of Instrument	C.T. Issue
8/12/1988	DP785645	DEPOSITED PLAN	FOLIO CREATED EDITION 1
17/1/1989	Y102114	TRANSFER	EDITION 2
4/8/1989	Y490171	TRANSFER GRANTING EASEMENT	EDITION 3
6/11/1991	E42530	LEASE	EDITION 4
20/12/1995	O782563	LEASE	EDITION 5
8/6/1999	5885284	REQUEST	
8/6/1999	5885285	LEASE	EDITION 6
1/3/2002	8189077	APPLICATION	EDITION 7
13/1/2003	9284809	VARIATION OF LEASE	
2/5/2005	AB448029	LEASE	EDITION 8
10/6/2015	AJ547419	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 9
3/3/2016	DP1216926	DEPOSITED PLAN	
29/4/2016	AK321026	REQUEST	
2/9/2016	AK720350	DEPARTMENTAL DEALING	
29/9/2016	AK796014	DEPARTMENTAL DEALING	
29/9/2016	AK737176	RESUMPTION APPLICATION	FOLIO CANCELLED
29/9/2016	AK796735	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

bringelly PRINTED ON 10/1/2019

Received: 10/01/2019 20:20:15

RP 13 STAMP DUTY (1) [redacted]

Y102114

$1 –

TRANSFER

REAL PROPERTY ACT, 1900

T

CB	1 of 1	X
$	42	

R1/1

DESCRIPTION OF LAND Note (a)

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier 12/700210 now being Identifier 13/785645	~~WHOLE~~ Part, now being Lot 13 in DP 785645	Parish of Cook County of Cumberland

OFFICE OF STATE REVENUE (N.S.W. TREASURY) ALTERATION NOTED

TRANSFEROR Note (b)

RAYMOND JOHN FITZGERALD

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 900,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ROY ANTHONY MEDICH AND RONALD EDWARD MEDICH both of 3/104 Homepride Avenue, Warwick Farm, NSW, 2170, Company Directors.

OFFICE USE ONLY: TC2

TENANCY Note (e)

as ~~joint tenants~~/tenants in common in equal one-half shares

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. .... 2. .... 3. ....

DATE 29th December 1988

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

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

Cordelia Fitzgerald
Signature of Witness

CORDELIA FAY FITZGERALD
Name of Witness (BLOCK LETTERS)

32 MACQUARIE AVE CAMDEN
DOMESTIC
Address and occupation of Witness

R Fitzgerald
Signature of Transferor

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

Note (g)

....
Signature of Witness

209

....
Name of Witness (BLOCK LETTERS)

....
Address and occupation of Witness

L J GRAVES Signature of Transferee 's solicitor

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY

PARISH PATIENCE
Solicitors
LEVEL 57, M.L.C. CENTRE
MARTIN PLACE, SYDNEY 2000
TELEPHONE: (02) 233 1100
FACSIMILE: (02) 221 4195
DX 160 SYDNEY

Delivery Box Number LAND TITLES OFFICE BOX 667N

LOCATION OF DOCUMENTS

CT	OTHER	
✓		Herewith. ✓
		In L.T.O. with
		Produced by

OFFICE USE ONLY

584 S

Checked	Passed	REGISTERED -19
[initials]		17 JAN 1989
Signed	Extra Fee	

Secondary Directions	
Delivery Directions	CT 667N.

5885284Q

RP65

REQUEST

Real Property Act 1900

ly

(A) **LAND**
Show no more than 20 References to Title.

Folio Identifier 13/785645

(B) **REGISTERED DEALING**
If applicable.

(C) **LODGED BY**

ACCEPTABLE AS SURRENDER BY OPERATION OF LAW

L.T.O. Box	Name, Address or DX and Telephone	
570E	Messrs Marsdens Solicitors DX 5107 CAMPBELLTOWN REFERENCE (max 15 characters): 10 13 5711	R

(D) **APPLICANT** Roy Anthony Medich & Ronald Edward Medich

(E) I, the Applicant, in regard to the above **Land/Registered Dealing**, request the Registrar General to

Application to Record

SURRENDER OF LEASE BY OPTION OF LAW

Section 54 Real Property Act 1900

Registered number of surrendered Lease: 0782563

The Applicant requests the Registrar General to cancel the recording of the above Lease. The Lessor has resumed possession and the Lessee has indicated an intention to surrender the Lease.

(F) Certified correct for the purposes of the Real Property Act 1900. **DATE** 14.5.99.

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

Signature of Witness

LACHLAN GELDER
Name of Witness (BLOCK LETTERS)

MARSDENS – CAMPBELLTOWN
Address of Witness

Signature of Applicant's Solicitor
"BRIAN DEAN ALCORN
CAMPBELLTOWN - SOLICITOR"

CHECKED BY (office use only) 91

E42530

STATUTORY DECLARATION

I, **BRIAN DEAN ALCORN** of 49 Dumaresq Street, Campbelltown in the State of New South Wales, Solicitor do solemnly and sincerely declare as follows:

1. I am the Solicitor for Roy Anthony Medich and Ronald Edward Medich.

2. I say that Robert Denzil Swift was the Lessee of the premises at 1037 The Northern Road, Bringelly.

3. I say that the Lessee indicated, in the intention, to give up the premises by vacating the premises some time during 1997.

4. I say that the Lessor indicated an intention to accept the giving up of the premises by the Lessee on the basis of surrender by changing the locks and resuming possession of the premises.

5. I say that Roy Anthony Medich and Ronald Edward Medich have resumed possession of the premises.

6. I say that the Lessee was not, by reason of any charge or encumbrance on the Lease, incompetent to surrender the Lease on the date during 1997.

7. I say that it is impracticable, owing to our inability to locate the Lessee or otherwise, to obtain a Surrender of Lease in writing.

AND I MAKE this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act, 1900 (as amended).

Subscribed and declared at Campbelltown)
this 14)
day of May 1999)
before me:)

.....

LMKirk JP
~~Solicitor~~/Justice of the Peace

LYNETTE MARIE KIRK
JUSTICE OF THE PEACE
REG. NO. 8904735

Form: 04RP
Licence: 98M111
Edition: 0107

APPLICATION TO REC
NEW REGISTERED PROPI

New South Wales
Section 46C Real Property Ac
Section 12(4) Trustee Act 1

8189077C

PRIVACY NOTE: this information is legally required and will become part of the public record

STAMP DUTY — Office of State Revenue use only

(A) **LAND** — Torrens Title: Folio Identifier 13/785645

(B) **REGISTERED DEALING** — Number: | Torrens Title:

(C) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
570E	Marsdens Law Group DX 5107 CAMPBELLTOWN Reference (optional): bo 31 7437	AP

(D) **APPLICANT** — Roy Medich Properties Pty Limited (ACN 077 445 928)
Ron Medich Properties Pty Limited (ACN 084 840 095)

(E) **PRESENT REG'D PROPRIETOR** — Roy Anthony Medich and Ronald Edward Medich

(F) **NEW REG'D PROPRIETOR** — Roy Medich Properties Pty Limited (ACN 077 445 928)
Ron Medich Properties Pty Limited (ACN 084 840 095) as joint tenants

~~(G) APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900~~

~~In regard to the land/registered dealing specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register, the land / registered dealing having vested in the new registered proprietor pursuant to—~~

~~(H)~~ .....

.....

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925**

In regard to the the land / ~~registered dealing~~ specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register consequent on—

(I) The removal of Roy Anthony Medich and Ronald Edward Medich as Trustees and the appointment of Roy Medich Properties Pty Limited (ACN 077 445 928) and Ron Medich Properties Pty Limited (ACN 084 840 095)

DATE 05 / 12 / 2001
dd / mm / yyyy

(J) I certify that the applicant, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this application in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of witness:

Signature of applicant: S. L. Jib.

Name of witness: "BRIAN DEAN ALCORN
CAMPBELLTOWN - SOLICITOR"

Address of witness:

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

A set of notes on this form (04RP-2) is available from Land and Property Information NSW.

FILM WITH
8189077

CONSENT

22 November 2001

On the date of this instrument **Ronald Edward Medich** ("**Medich**") makes the following representations:

1. By Deed dated 10 October 1988 ("**Trust Deed**") between John Matthew Medich and Medich the "Anthony Peter Medich Trust" was created ("**Trust**").

2. Pursuant to clause 11 of the Trust Deed Medich removed himself as trustee of the Trust.

3. Pursuant to clause 11 of the Trust Deed Medich appointed Roy Medich Properties Pty. Limited (ACN 077 445 928) ("**New Trustee**") to be the new trustee of the Trust.

4. The New Trustee has informed Medich that it will lodge with the Registrar General an "Application to Record New Registered Proprietor" in respect of Folio Identifier 13/785645.

5. On the date of this instrument Medich consents to the Application being lodged for registration with the Registrar General.

R. Medich

Ronald Edward Medich

CONSENT

FILM WITH
8189077

22 November 2001

On the date of this instrument **Roy Anthony Medich** ("**Medich**") makes the following representations:

1. By Deed dated 10 October 1998 ("**Trust Deed**") between John Matthew Medich and Medich the "Peter Andrew Medich Trust" was created ("**Trust**").

2. Pursuant to clause 11 of the Trust Deed Medich removed himself as trustee of the Trust.

3. Pursuant to clause 11 of the Trust Deed Medich appointed Ron Medich Properties Pty. Limited (ACN 084 840 095) ("**New Trustee**") to be the new trustee of the Trust.

4. The New Trustee has informed Medich that it will lodge with the Registrar General an "Application to Record New Registered Proprietor" in respect of Folio Identifier 13/785645.

5. On the date of this instrument Medich consents to the Application being lodged for registration with the Registrar General.

R. A. Medich

Roy Anthony Medich

Dated the 10TH day of SEPTEMBER 1997

THE ANTHONY PETER MEDICH TRUST

DEED OF APPOINTMENT OF NEW TRUSTEE

True copy
MARK SCOTT WHITMORE
Solicitor - Campbelltown

Parish Patience
Solicitors
Level 18 City Centre
55 Market Street
SYDNEY NSW 2000
DX 166 Sydney
Tel: (02) 9283.1333
Fax: (02) 9267.8808
Ref: T J O'Connor

FILM WITH
8189077

This deed is made the 10TH day of SEPTEMBER 1997 by **Ronald Edward Medich.**

BACKGROUND

A. By deed dated 10 October 1988 between John Matthew Medich (therein called "the Settlor") and Ronald Edward Medich (therein called "the Trustee"). There was brought into being the Anthony Peter Medich Trust.

B. Clause 11 of the said trust deed provides that the Trustee or Trustees for the time being shall have the following powers vested in him or them:

(a) to remove any trustee at any time and from time to time, and

(b) to appoint a new Trustee or new Trustees or additional Trustee or additional Trustees.

OPERATIVE PART

1. In pursuance of the power contained in the said clause 11, Ronald Edward Medich hereby removes himself as Trustee of the said trust deed and appoints Roy Medich Properties Pty Limited (ACN 077 445 928) to be the new Trustee of the trust.

2. It is hereby declared that the said Roy Medich Properties Pty Limited shall not be and shall not be eligible to be a beneficiary of the said trust.

N - STAMP DUTY $10.00
220198 5004 00213 /01

EXECUTED as a deed.

Signed sealed and delivered by the said **Ronald Edward Medich** in the presence of: ODETA MEDICH)

R. Medich.

O Medich
Signature of Witness

ODETA MEDICH
Name of Witness

28 CUBITT DRIVE. DENHAM COURT
Address of Witness

Dated the 21st day of DECEMBER 1998

THE PETER ANDREW MEDICH TRUST

DEED OF APPOINTMENT OF NEW TRUSTEE

True copy.

MARK SCOTT WHITMORE
Solicitor - Campbelltown

Parish Patience
Solicitors
Level 18 City Centre
SYDNEY NSW 2000
DX 166 Sydney
Tel: (02) 9283 1333
Fax: (02) 9267 8808

This deed is made the 21st day of DECEMBER 1998 by **Roy Anthony Medich**.

BACKGROUND

A. By deed dated 10 October 1998 between John Matthew Medich (therein called "the Settlor") and Roy Anthony Medich (therein called "the Trustee") there was brought into being the Peter Andrew Medich Trust.

B. Clause 11 of the said trust deed provides that the Trustee or Trustees for the time being shall have the following powers vested in him or them:

(a) to remove any trustee at any time and from time to time, and

(b) to appoint a new Trustee or new Trustees or additional Trustee or additional Trustees.

OPERATIVE PART

1. In pursuance of the power contained in the said clause 11, Roy Anthony Medich hereby removes himself as Trustee of the said trust deed and appoints Ron Medich Properties Pty Limited (ACN 084 840 095) to be the new Trustee of the trust.

2. It is hereby declared that the said Ron Medich Properties Pty Limited shall not be and shall not be eligible to be a beneficiary of the said trust.

EXECUTED as a deed.

Signed sealed and delivered by **Roy Anthony Medich** in the presence of:

.....
Signature of witness

YVONNE HIAM
Name of witness (block letters)

27 JACARANDA AVE
Address of witness

BRINDABELLA

R. A. Medich
Roy Anthony Medich

I HEREBY CONSENT TO THIS DEED

R. Medich

Req:R795371 /Doc:DL AK321026 /Rev:03-May-2016 /Sts:SC.OK /Pgs:ALL /Prt:10-Jan-2019 20:38 /Seq:1 of 5
Ref:bringelly /Src:M

Form: 11R
Licence: 98M111
Edition: 1003

REQUEST

New South Wales
Real Property Act 1900

AK321026N

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the R... by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) STAMP DUTY

If applicable. Office of State Revenue use only

Extra fee $109.50 Paid

(B) TORRENS TITLE

SEE ANNEXURES "A", "B" and "C"

(C) REGISTERED DEALING

Number	Torrens Title

(D) LODGED BY

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
556X	LLPN:123406 G Roads and Maritime Services DX 10516 NORTH SYDNEY T. (02) 8588 5294 (Ms Miranda) Reference (optional): SF2015/171546 CM	R

(E) APPLICANT

ROADS AND MARITIME SERVICES

(F) NATURE OF REQUEST

Application to Record
GIVING OF A PROPOSED ACQUISITION NOTICE
Land Acquisition (Just Terms Compensation) Act, 1991

(G) TEXT OF REQUEST

THE APPLICANT, requests the Registrar General to note on the Register for the land listed in Annexures "A", "B" and "C" pursuant to Section 11 of the Land Acquisition (Just Terms Compensation) Act 1991, that a proposed acquisition notice has been given affecting the land.

DATE 14 / 03 / 2016
dd mm yyyy

(H) I certify that the applicant, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this application in my presence.

Signature of witness:
Name of witness: Charisse MIRANDA
Address of witness: ROADS AND MARITIME SERVICES
101 MILLER STREET
NORTH SYDNEY

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of applicant:
Karen DURIE
MANAGER
COMPULSORY ACQUISITION & ROAD DEDICATION
EXECUTED PURSUANT TO DELEGATION
BOOK 4623 NO 148

(I) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded to LPMA through eNOS.*

The applicant / applicant's solicitor / applicant's agent certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. [ ] Full name: ..... Signature: .....

ANNEXURE "A"

THIS IS THE ANNEXURE "A" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Lot 103 Deposited Plan 1217062, being part of the land in Certificate of Title 2010/1209178;

Lot 104 Deposited Plan 1217062, being part of the land in Certificate of Title 2011/1209178;

Lot 105 Deposited Plan 1217062, being part of the land in Certificate of Title 4/594238;

Lot 6 Deposited Plan 1216380, being part of the land in Certificate of Title 45/1104369;

Lot 8 Deposited Plan 1216380, being part of the land in Certificate of Title 200/1049231;

Lot 15 Deposited Plan 1218155, being part of the land in Certificate of Title 201/1049231;

Lot 16 Deposited Plan 1218155, being part of the land in Certificate of Title 102/746955;

Lot 17 Deposited Plan 1218155, being part of the land in Certificate of Title 280/1043744;

Lots 18 and 20 Deposited Plan 1218155, being parts of the land in Certificate of Title 29/872135;

Lot 11 Deposited Plan 1216926, being part of the land in Certificate of Title 22/836540;

Lot 12 Deposited Plan 1216926, being part of the land in Certificate of Title 21/836540;

Lots 13 and 14 Deposited Plan 1216926, being parts of the land in Certificate of Title Auto Consol 8004-157 (being also the land in Lots 3 and 4 Deposited Plan 119173);

Lot 15 Deposited Plan 1216926, being part of the land in Certificate of Title 12/785645;

Lot 16 Deposited Plan 1216926, being part of the land in Certificate of Title 13/785645;

Lot 17 Deposited Plan 1216926, being part of the land in Certificate of Title 2/1010854;

Lot 18 Deposited Plan 1216926, being part of the land in Certificate of Title 1/1010854;

Lot 20 Deposited Plan 1216926, being part of the land in Certificate of Title 4/9/2650;

Lot 19 Deposited Plan 1216926, being part of the land in Certificate of Title 1/9/2650;

Lot 21 Deposited Plan 1216926, being part of the land in Certificate of Title 5/9/2650;

Lot 16 Deposited Plan 1215995, being part of the land in Certificate of Title 2/593118;

ANNEXURE "A" continued

THIS IS THE ANNEXURE "A" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Lot 17 Deposited Plan 1215995, being part of the land in Certificate of Title 3/593118;

Lot 18 Deposited Plan 1215995, being part of the land in Certificate of Title 21/11/2650;

Lots 212 and 213 Deposited Plan 1216419, being parts of the land in Certificate of Title 101/800608;

Lot 211 Deposited Plan 1216419, being part of the land in Certificate of Title 102/800608;

Lot 210 Deposited Plan 1216419, being part of the land in Certificate of Title 31/882601; and

Lot 209 Deposited Plan 1216419, being part of the land in Certificate of Title 32/882601.

ANNEXURE "B"

THIS IS THE ANNEXURE "B" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Easement in gross for drainage of water as provided in Schedule 4A of the Conveyancing Act 1919, over land situated in the Camden Council area, Parish of Cook and County of Cumberland as described below:

Land Burdened

The site designated [E] on Deposited Plan 1217062 and described thereon as "proposed easement for drainage reserve variable width", being part of the land in Certificate of Title 4/594238; and

The site designated (E) on Deposited Plan 1216926 and described thereon as "proposed easement to drain water variable width", being part of the land in Certificate of Title 13/785645.

ANNEXURE "C"

THIS IS THE ANNEXURE "C" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Easement in gross for electricity purposes as provided in Schedule 4A of the Conveyancing Act 1919, over land situated in the Camden Council area, Parish of Cook and County of Cumberland as described below:

Land Burdened

The site designated [A] on Deposited Plan 1218155 and described thereon as "proposed easement for electricity purposes 3 wide", being part of the land in Certificate of Title 29/872135;

The site designated (F) on Deposited Plan 1216926 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 4/9/2650;

The site designated (F) on Deposited Plan 1216926 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 5/9/2650;

The site designated (F) on Deposited Plan 1216926 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 6/9/2650;

The site designated (F) on Deposited Plan 1216926 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 99/864637;

The site designated (B) on Deposited Plan 1215995 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 3/593118;

The site designated (B) on Deposited Plan 1215995 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 21/11/2650;

The site designated (T) on Deposited Plan 1216419 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 101/800608;

The site designated (T) on Deposited Plan 1216419 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 102/800608;

The site designated (T) on Deposited Plan 1216419 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 31/882601; and

The site designated (T) on Deposited Plan 1216419 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 32/882601.

LAND REGISTRY SERVICES

Historical Title

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
10/1/2019 8:20PM

FOLIO: 6/1216926

First Title(s): OLD SYSTEM
Prior Title(s): 13/785645

Recorded	Number	Type of Instrument	C.T. Issue
3/3/2016	DP1216926	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
29/9/2016	AK737176	RESUMPTION APPLICATION	FOLIO CREATED CT NOT ISSUED
1/8/2017	AM607242	CAVEAT	
20/9/2018	AN717535	CHANGE OF NAME	EDITION 1

*** END OF SEARCH ***

bringelly PRINTED ON 10/1/2019

Received: 10/01/2019 20:20:02

Req:R795351 /Doc:DL AK737176 /Rev:06-Oct-2016 /Sts:SC.OK /Pgs:ALL /Prt:10-Jan-2019 20:19 /Seq:1 of 3
Ref:bringelly /Src:M

Form: 11R
Licence: 98M111
Edition: 1003

REQUEST

New South Wales
Real Property Act 1900

AK737176X

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the collection of the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

(A) STAMP DUTY

If applicable. Office of State Revenue use only

(B) TORRENSTITLE

SEE ANNEXURE "B"

(C) REGISTERED DEALING

Number	Torrens Title

(D) LODGED BY

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
556X	***LLPN:123406 G*** Roads and Maritime Services DX 28555 PARRAMATTA T. (02) 8843 3125 (Ms Miranda) Reference (optional): SF2015/171546 CM	R

(E) APPLICANT

ROADS AND MARITIME SERVICES

(F) NATURE OF REQUEST

Application to Record
COMPULSORY ACQUISITION NOTICE
Real Property Act 1990 – Section 31A(3)

(G) TEXT OF REQUEST

THE APPLICANT, as a consequence of the notice of compulsory acquisition published in Government Gazette No. 68 of 26 August 2016, page 2361, a true copy of which is Annexure "A" hereto; requests the Registrar General to make such recordings in the register as may be necessary to give effect to the compulsory acquisition as far as it relates to the land and interests in land referred to in Annexure "B" hereto.

TITLES NOT TO ISSUE – LAND IS REQUIRED FOR ROAD

DATE 29 / 08 / 2016
dd mm yyyy

(H) I certify that the applicant, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this application in my presence.

Signature of witness:

Name of witness: Charisse MIRANDA

Address of witness: ROADS AND MARITIME SERVICES
27-31 ARGYLE STREET
PARRAMATTA

Certified correct for the purposes of the Real Property Act 1900 by the applicant.

Signature of applicant:

Karen DURIE
MANAGER
COMPULSORY ACQUISITION & ROAD DEDICATION
EXECUTED PURSUANT TO DELEGATION
BOOK 4623 NO 148

(I) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded to LPMA through eNOS.*

The applicant / applicant's solicitor / applicant's agent certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. [ ] Full name: ..... Signature: .....

SM 99

ANNEXURE "A"

THIS IS THE ANNEXURE "A" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Extract from NSW Government Gazette No. 68 of 26 August 2016, page 2361.

ROADS ACT 1993

LAND ACQUISITION (JUST TERMS COMPENSATION) ACT 1991

Notice of Compulsory Acquisition of Land at Bringelly in the Camden Council Area

Roads and Maritime Services by its delegate declares, with the approval of His Excellency the Lieutenant-Governor, that the land described in Schedule 1 and the interests in land described in Schedules 2 and 3 below are acquired by compulsory process under the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991* for the purposes of the *Roads Act 1993*.

K DURIE
Manager, Compulsory Acquisition & Road Dedication
Roads and Maritime Services

Schedule 1

All those pieces or parcels of land situated in the Camden Council area, Parish of Cook and County of Cumberland, shown as:

Lot 12 Deposited Plan 1216926, being part of the land in Certificate of Title 21/836540 and said to be in the possession of Gerard Anthony Flaherty (registered proprietor) and National Australia Bank Limited (mortgagee);

Lot 15 Deposited Plan 1216926, being part of the land in Certificate of Title 12/785645 and said to be in the possession of Raymond John Fitzgerald and Cordelia Fay Fitzgerald (registered proprietors) and Perpetual Trustee Company Limited (mortgagee);

Lot 16 Deposited Plan 1216926, being part of the land in Certificate of Title 13/785645 and said to be in the possession of Roy Medich Properties Pty Limited and Ron Medich Properties Pty Limited;

Lot 21 Deposited Plan 1216926, being part of the land in Certificate of Title 5/9/2650 and said to be in the possession of John Arentz;

excluding any existing easements from the compulsory acquisition of the land described above.

Schedule 2

An easement in gross for drainage of water over the land situated in the Camden Council area, Parish of Cook and County of Cumberland, described below:

Land Burdened

The site designated (E) on Deposited Plan 1216926 and described thereon as "proposed easement to drain water variable width", being part of the land in Certificate of Title 13/785645 and said to be in the possession of Roy Medich Properties Pty Limited and Ron Medich Properties Pty Limited.

Schedule 3

An easement in gross for electricity purposes over the land situated in the Camden Council area, Parish of Cook and County of Cumberland, described below:

Land Burdened

The site designated (F) on Deposited Plan 1216926 and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 5/9/2650 and said to be in the possession of John Arentz.

(RMS Papers: SF2015/171546)

ANNEXURE "B"

THIS IS THE ANNEXURE "B" REFERRED TO IN THE REQUEST MADE UNDER THE REAL PROPERTY ACT, 1900
BY ROADS AND MARITIME SERVICES

Land

Lot 12 Deposited Plan 1216926, being part of the land in Certificate of Title 21/836540;

Lot 15 Deposited Plan 1216926, being part of the land in Certificate of Title 12/785645;

Lot 16 Deposited Plan 1216926, being part of the land in Certificate of Title 13/785645; and

Lot 21 Deposited Plan 1216926, being part of the land in Certificate of Title 5/9/2650.

Interest in Land

An easement in gross for drainage of water over the site designated (E) on Deposited Plan 1216926, and described thereon as "proposed easement to drain water variable width", being part of the land in Certificate of Title 13/785645; and

An easement in gross for electricity purposes over the site designated (F) on Deposited Plan 1216926, and described thereon as "proposed easement for transmission line variable width", being part of the land in Certificate of Title 5/9/2650.

LAND REGISTRY SERVICES **Title Search**

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 6/1216926

SEARCH DATE	TIME	EDITION NO	DATE
10/1/2019	8:19 PM	1	20/9/2018

LAND

LOT 6 IN DEPOSITED PLAN 1216926
AT BRINGELLY
LOCAL GOVERNMENT AREA CAMDEN
PARISH OF COOK COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1216926

FIRST SCHEDULE

CSPA PROPERTIES PTY LIMITED
ROY MEDICH PROPERTIES PTY LIMITED
AS JOINT TENANTS (CN AN717535)

SECOND SCHEDULE (8 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP700210 EASEMENT FOR SERVICES 9 WIDE AFFECTING THE SITE DESIGNATED (H) IN THE TITLE DIAGRAM
3 DP700210 EASEMENT FOR SERVICES 9 WIDE AFFECTING THE SITE DESIGNATED (H) IN THE TITLE DIAGRAM
4 DP614494 RESTRICTION(S) ON THE USE OF LAND
5 DP700210 RESTRICTION(S) ON THE USE OF LAND
6 AJ547419 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900
7 AK737176 EASEMENT FOR DRAINAGE OF WATER AFFECTING THE SITE DESIGNATED (E) IN THE TITLE DIAGRAM
* 8 AM607242 CAVEAT BY CYAN STONE BRINGELLY HOLDINGS PTY LTD
* AN717535 CAVEATOR CONSENTED

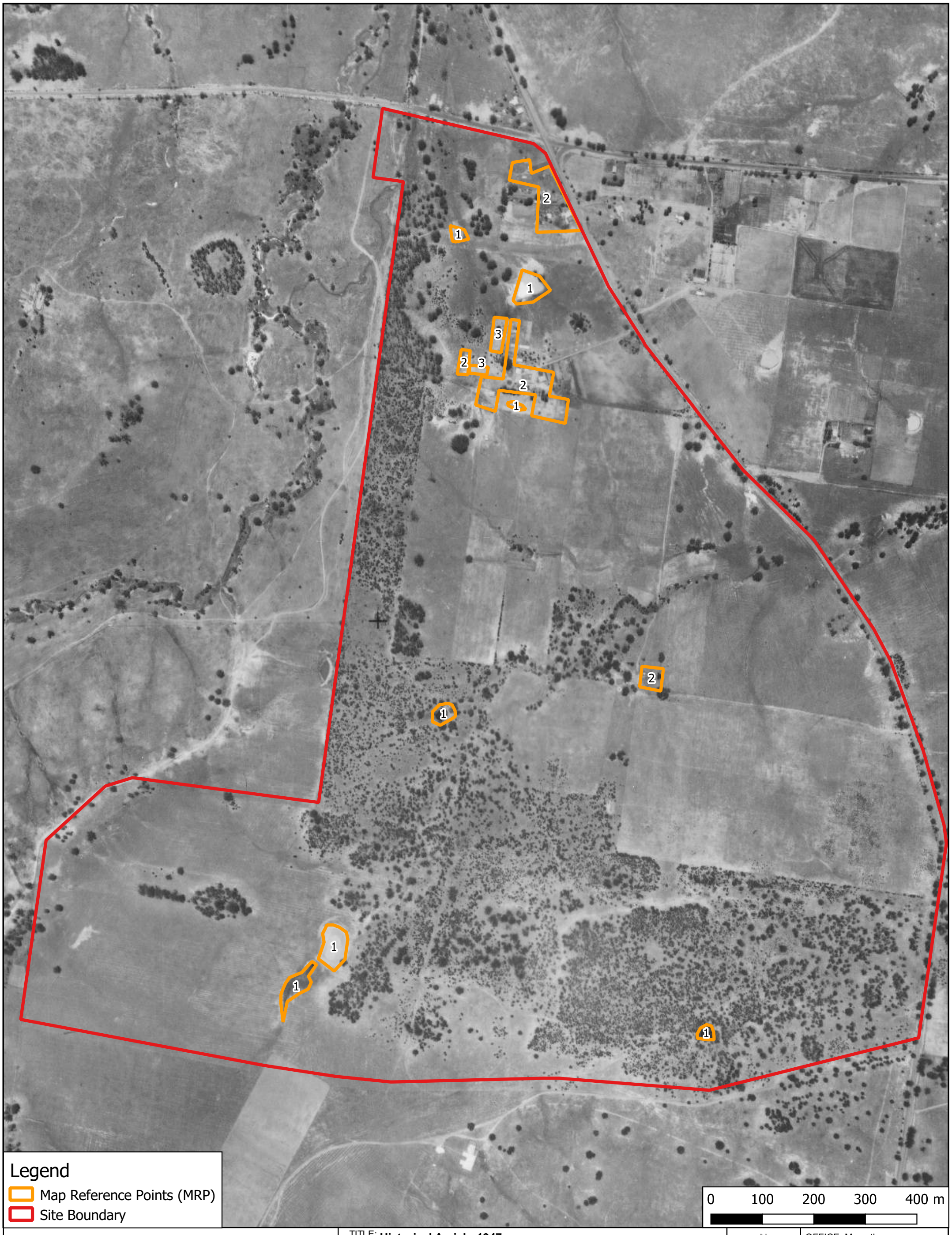
NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Appendix D

Historical Aerials



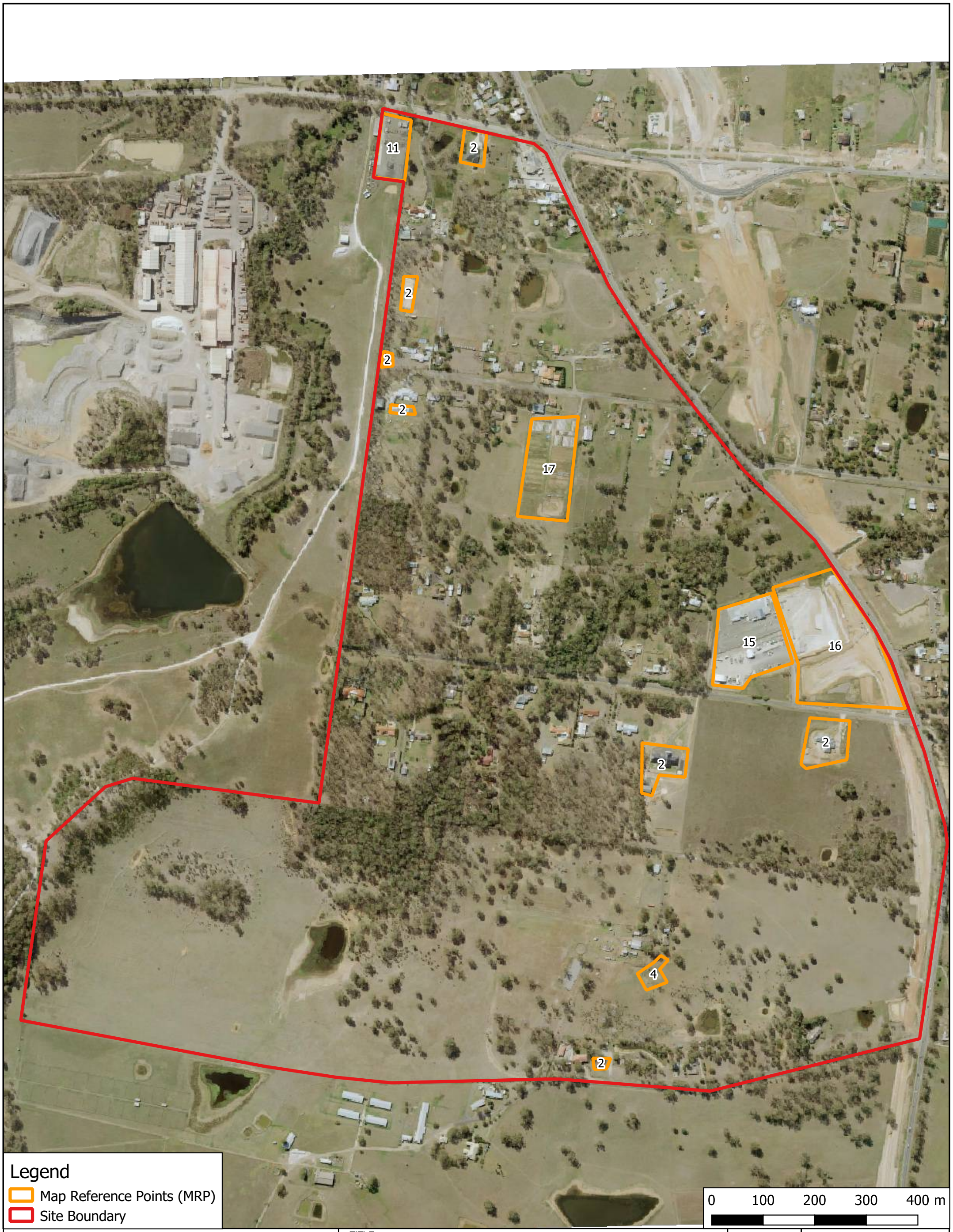
Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 1947**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

N
MGA

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D1
REVISION: 0
SCALE: As Shown



Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 2018**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D10
REVISION: 0
SCALE: As Shown

Douglas Partners
Geotechnics | Environment | Groundwater

TITLE: **Historical Aerial - 2020**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D11
REVISION: 0
SCALE: As Shown

Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 1955**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D2
REVISION: 0
SCALE: As Shown

Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 1965**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D3
REVISION: 0
SCALE: As Shown

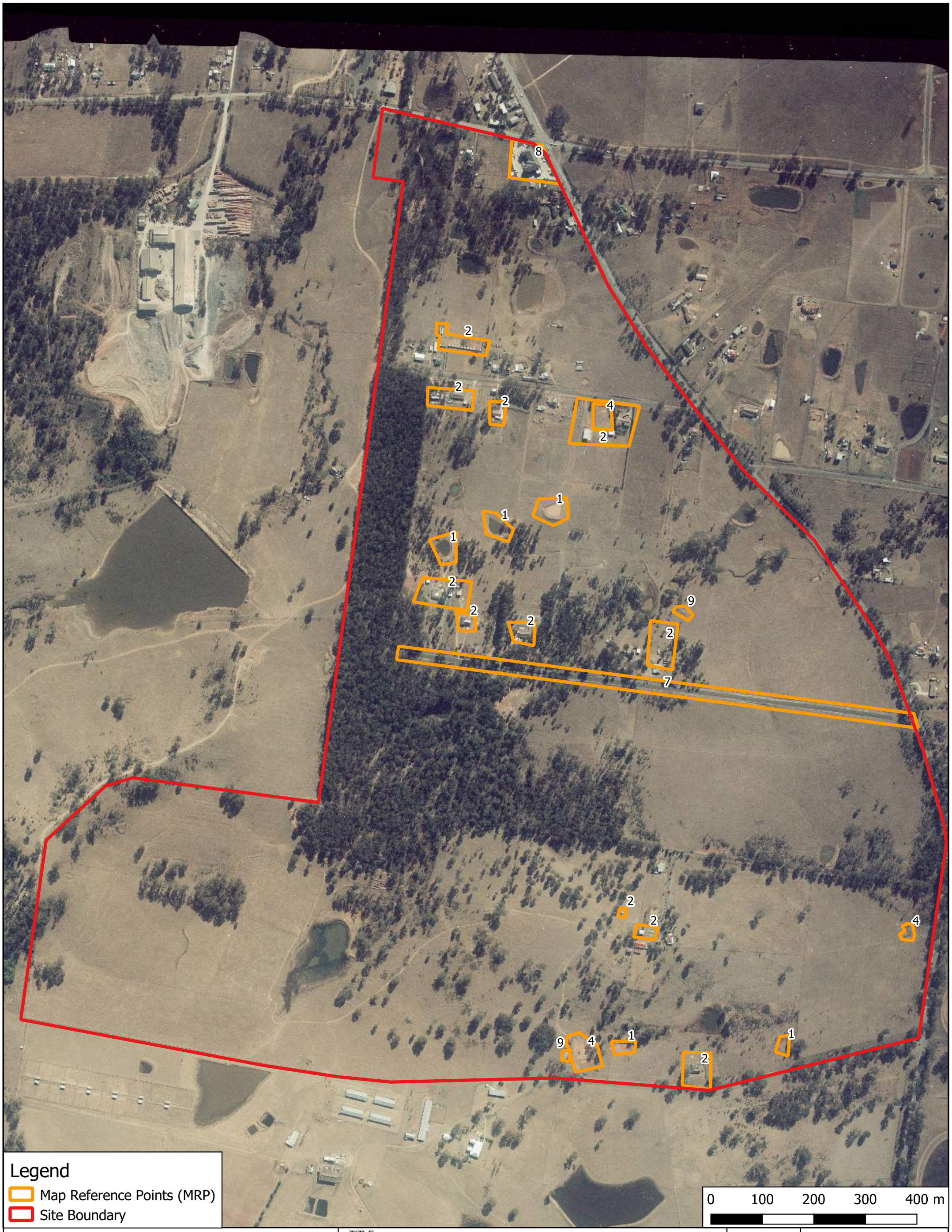
Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 1975**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

N
MGA

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D4
REVISION: 0
SCALE: As Shown



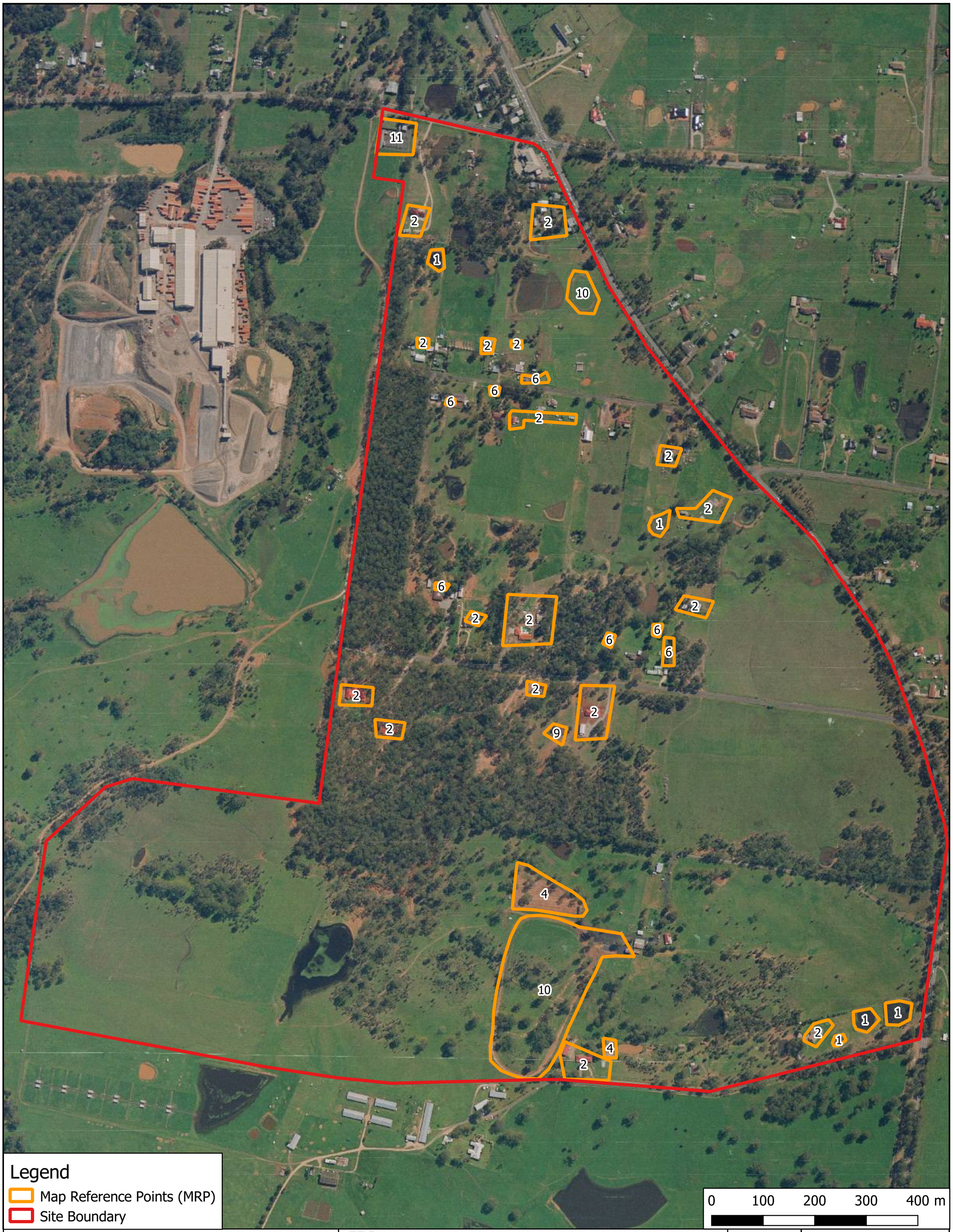
Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 1986**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

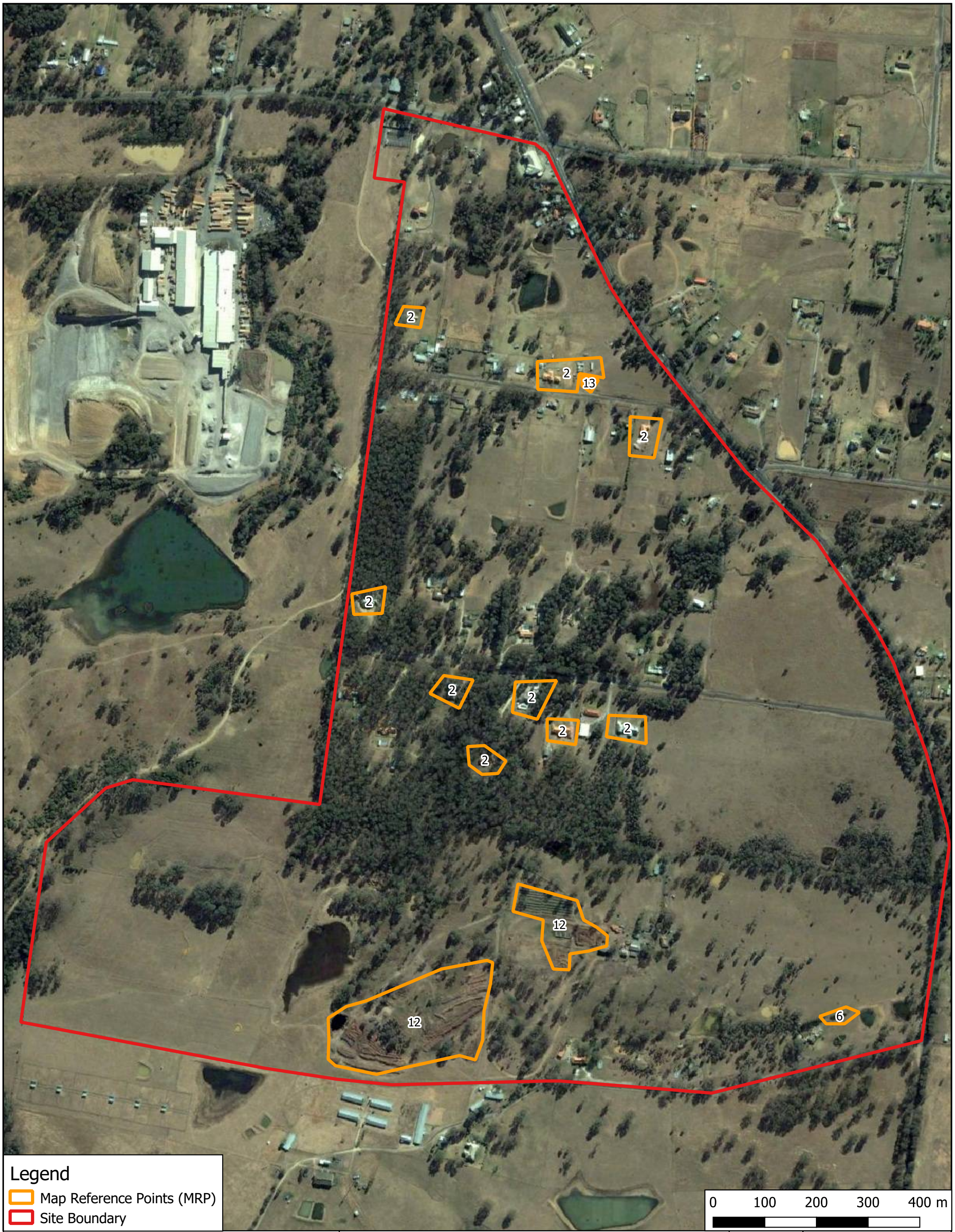
N
MGA

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D5
REVISION: 0
SCALE: As Shown



Douglas Partners Geotechnics / Environment / Groundwater	TITLE: **Historical Aerial - 1998** **Preliminary Site Investigation (Contamination)** **North West Precinct, Bringelly, NSW**		OFFICE: Macarthur DRAWN BY: L Clement DATE: 26.02.2021
CLIENT: CKDI Pty Ltd	PROJ. #: 92336.04.R.001	DRAWING No: D6 REVISION: 0	SCALE: As Shown

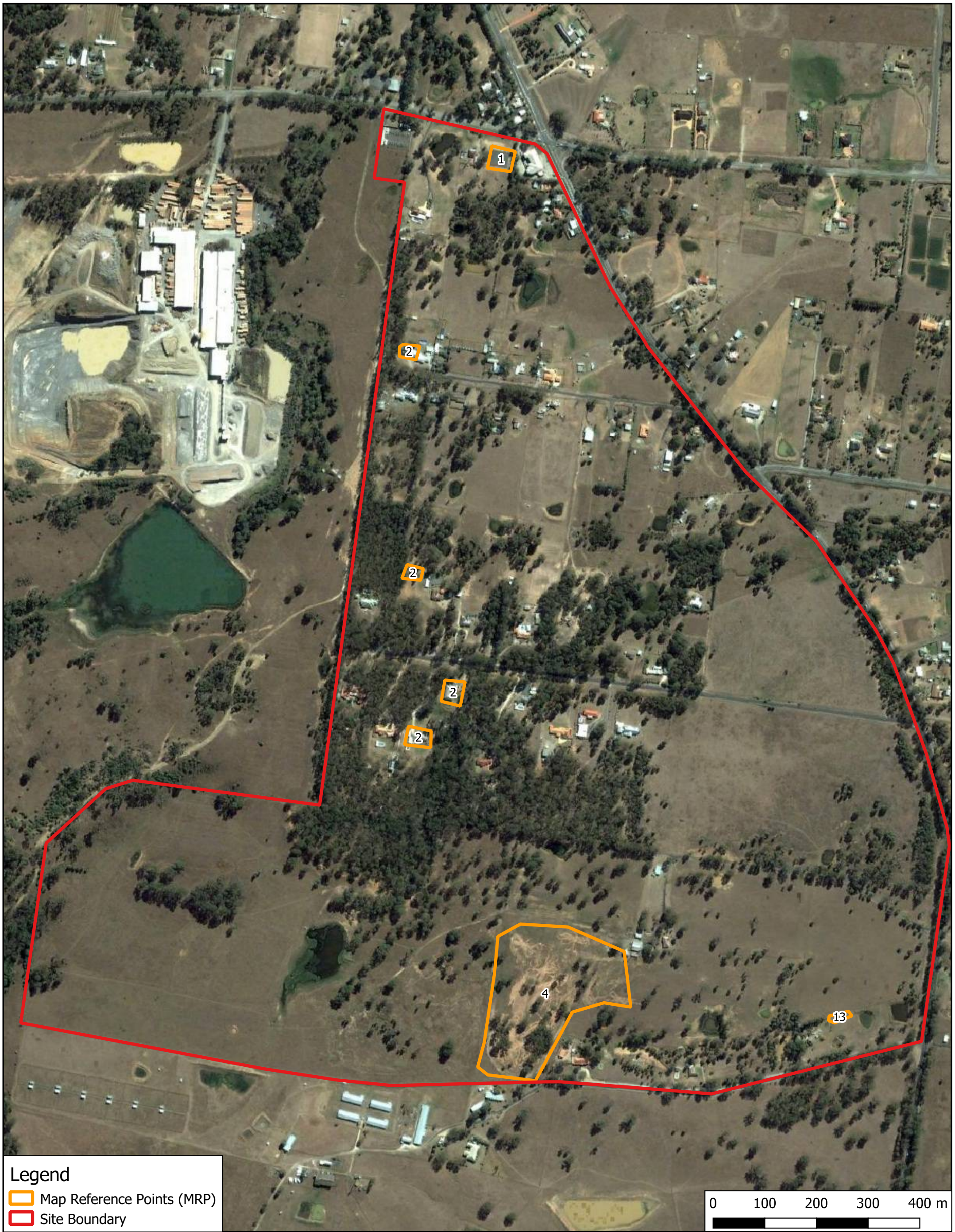


Douglas Partners
Geotechnics | Environment | Groundwater

TITLE: **Historical Aerial - 2002**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D7
REVISION: 0
SCALE: As Shown



Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 2006**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D8
REVISION: 0
SCALE: As Shown

Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Historical Aerial - 2009**
Preliminary Site Investigation (Contamination)
North West Precinct, Bringelly, NSW

OFFICE: Macarthur
DRAWN BY: L Clement
DATE: 26.02.2021

CLIENT: CKDI Pty Ltd
PROJ. #: 92336.04.R.001
DRAWING No: D9
REVISION: 0
SCALE: As Shown

Appendix E

Site Photographs

Photo 1: Paddocks and vegetation observed on the site

Photo 2 : Cattle present on the site

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 1
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 3 : Site Dam

Photo 4 : Hydraulic car jack in front of building cladded with fibro cement sheeting

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 2
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 5 : Chemicals stored near hydraulic car jack

Photo 6 : Timber power poles

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 3
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 7 : Rubble observed on the surface

Photo 8 : Rubble observed on surface near the western dam

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 4
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 9 : Loose sandy dark soil

Photo 10 : Diesel pump house

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 5
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 11 : Potential ACM

Photo 12 : Potential PACM

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 6
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 13 : Dead mature tree

Photo 14 : Potential buried service

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 7
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Photo 15 : Potential animal burials

Douglas Partners Geotechnics | Environment | Groundwater	**Site Photographs** **North West Precinct, Bringelly, NSW**	Project No. : 92336.04 PLATE No: 8
	CLIENT: CKDI Pty Ltd	DATE: March 2021

Appendix F

DP (2021) Test Pit Logs

TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 103.1 mAHD
EASTING: 289455
NORTHING: 6240625

PIT No: 1
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
103		TOPSOIL/Silty CLAY CI: pale brown, trace rootlets and fine grained sandstone gravel, w<PL		D	0.0				
	0.25	Silty CLAY CI: medium plasticity, red mottled grey, w<PL, very stiff, residual			0.2				
		- becoming hard below 0.5m		D	0.5				
		- becoming red and yellow mottled grey below 0.7m							
102	1			D	1.0				1
					1.2				
		- becoming pale grey, extremely weathered shale, with very low strength, highly weathered, iron-indurated shale bands below 1.4m		U_{50}					
				D	1.5		pp >400		
					1.6				
101	2			D	2.0		pp >400		2
100	3								3
	3.0	SHALE: brown, iron stained, very low strength, highly weathered, Bringelly Shale							
	3.3	Pit discontinued at 3.3m - limit of investigation							

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 108.8 mAHD
EASTING: 289493
NORTHING: 6240810

PIT No: 2
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
	0.0								
	0.1	TOPSOIL/Silty CLAY CI: medium pasticity, brown, with rootlets, sandstone gravel and cobbles, w<PL		D	0.0				
		Silty CLAY CH: high plasticity, brown, trace sand and gravel, w<PL, stiff, residual			0.2				
		- becoming hard below 0.3m							
		- becoming grey and brown, without sand and gravel below 0.5m		D/B	0.5				
108	1	- becoming pale grey, extremely weathered shale below 1.0m		D	1.0		pp >400		1
		- with very low strength, highly weathered, iron-indurated shale bands below 1.2m							
				D	1.5		pp >400		
107	1.9	SHALE: pale grey, iron stained, very low strength, highly weathered, with extremely weathered bands, Bringelly Shale		D	2.0				2
	2								
				D	2.5				
106	3								3
	3.0	Pit discontinued at 3.0m - refusal on low strength shale							
105									

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 102.8 mAHD
EASTING: 289638
NORTHING: 6240899

PIT No: 3
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
102.8	0.0	TOPSOIL/Silty CLAY CI: medium plasticity, with rootlets, trace sandstone gravel and cobbles, w<PL		D	0.0				
	0.25	Silty CLAY CH: high plasticity, brown and dark grey, w<PL, hard, residual			0.2				
					0.5				
102		- becoming grey and red mottled, trace gravel below 0.8m							
	1			D	1.0		pp >400		1
				D	1.5		pp >400		
101	1.8	SHALE: brown, iron stained, low strength, highly weathered, Bringelly Shale							
	1.9	Pit discontinued at 1.9m - refusal on low strength shale		D	1.9				2
	2								
100	3								3
99									

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 86.2 mAHD
EASTING: 289906
NORTHING: 6240507

PIT No: 4
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
86	0.0	TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace rootlets, w<PL		D	0.0				
	0.3	Silty CLAY CL: low plasticity, red and brown, trace ironstone gravel,, w<PL, hard, residual		D	0.2				
					0.5				
				U_{50}					
					0.9				
85	1			D	1.0		pp >400		1
		- becoming grey, extremely weathered shale, with very low strength, highly weathered, iron-indurated shale bands below 1.6m		D	1.5		pp >400		
84	2			D	2.0		pp >400		2
	2.4	SHALE: grey and brown, very low strength, highly weathered, with extremely weathered bands, Bringelly Shale		D	2.5				
83	3			D	3.0				3
	3.0	Pit discontinued at 3.0m - limit of investigation							

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 80.6 mAHD
EASTING: 290023
NORTHING: 6240693

PIT No: 5
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
80	0.1	TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace gravel and rootlets, w<PL							
		Silty CLAY CI: medium plasticity, brown, trace gravel, w<PL very stiff, residual		D	0.5				
	0.7	SHALE: brown and grey, low strength, highly weathered, Bringelly Shale							
	0.9	Pit discontinued at 0.9m - refusal on low strength sandstone							
	1								
79	2								
78	3								
77									

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 91.3 mAHD
EASTING: 290075
NORTHING: 6240405

PIT No: 6
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
91	0.15	TOPSOIL/Silty CLAY CI: medium plasticity, grey and brown, trace rootlets, w<PL							
		Silty CLAY CH: high plasticity, red mottled grey, trace ironstone gravel, w<PL, hard, residual		D	0.5		pp >400		
	1	- becoming grey below 0.9m		D	1.0		pp >400		1
90		- becoming extremely weathered shale, with very low strength, highly weathered, iron-indurated shale bands below 1.4m		D	1.5		pp >400		
	2			D	2.0		pp >400		2
89				D	2.5		pp >400		
	3	3.0		D	3.0		pp >400		3
88		Pit discontinued at 3.0m - limit of investigation							

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 87.5 mAHD
EASTING: 290206
NORTHING: 6240619

PIT No: 7
PROJECT No: 92336.04
DATE: 28/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
		TOPSOIL/Silty CLAY CI: medium plasticity, grey and brown, trace rootlets, w<PL		D	0.0				
	0.2	Silty CLAY CI: medium plasticity, red and brown, trace ironstone gravel, w<PL, hard, residual			0.2				
87				D	0.5		pp >400		
		- becoming pale brown and dark grey below 0.8m							
	1			D/B	1.0		pp >400		1
	1.1	SHALE: pale grey and brown, very low strength, highly weathered, Bringelly Shale							
86				D	1.5				
	1.8	Pit discontinued at 1.8m - refusal on low strength shale							
	2								2
85									
	3								3
84									

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 87.9 mAHD
EASTING: 290263
NORTHING: 6240784

PIT No: 8
PROJECT No: 92336.04
DATE: 29/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
									5 10 15 20
		TOPSOIL/Silty CLAY CI: medium plasticity, dark brown, trace gravel, sand and rootlets, w<PL		D	0.0				
	0.2	Silty CLAY CL: low plasticity, red and brown, trace sand, w<PL, very stiff, residual			0.2				
		- becoming grey and brown, hard below 0.5m		D	0.5				
				U_{50}					
87	1				0.9				1
				D	1.0		pp >400		
	1.4	SHALE: brown and grey, iron stained, very low strength, highly weathered, Bringelly Shale		D	1.5				
	1.8	Pit discontinued at 1.8m - refusal on low strength shale							
86	2								2
85	3								3
84									

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 85.8 mAHD
EASTING: 290625
NORTHING: 6240497

PIT No: 9
PROJECT No: 92336.04
DATE: 29/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace rootlets, w<PL		D	0.0				
		Silty CLAY CH: high plasticity, red and brown, trace gravel, w<PL, hard, residual			0.2				
				D	0.5				
85		- becoming grey and red below 0.8m							
	1	- becoming extremely weathered shale below 1.0m		D	1.0				1
				U_{50}					
					1.4				
				D	1.5		pp >400		
	1.6	SHALE: pale grey and brown, iron stained, very low srength, highly weathered, with extremely weathered bands, Bringelly Shale							
84									
	2			D	2.0				2
				D	2.5				
83									
	3			D	3.0				3
	3.0	Pit discontinued at 3.0m - limit of investigation							
82									

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 88.4 mAHD
EASTING: 290723
NORTHING: 6240714

PIT No: 10
PROJECT No: 92336.04
DATE: 29/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
		TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace gravel, with rootlets, w<PL		D	0.0				
	0.2	Silty CLAY CH: high plasticity, red and brown mottled grey, w<PL, very stiff		D	0.2				
88					0.5				
				U_{50}					
					0.9				
	1	- becoming grey mottled red, trace gravel, extremely weathered shale below 0.9m		D	1.0				1
87				D	1.5		pp >400		
	2								2
	2.2	SHALE: brown and pale grey, iron stained, very low strenth, highly weathered, Bringelly Shale		D	2.2				
86				D	2.5				
	2.8	Pit discontinued at 2.8m - refusal on low strength shale							
	3								3
85									

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 75.5 mAHD
EASTING: 290975
NORTHING: 6240529

PIT No: 11
PROJECT No: 92336.04
DATE: 29/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace gravel and rootlets, w<PL		D	0.0				
		Silty CLAY CH: high plasticity, brown, trace gravel, w<PL, hard, residual			0.2				
75				D/B	0.5				
	1			D	1.0				1
		- becoming grey and red, extremely weathered shale below 1.3m							
74				D	1.5		pp >400		
	2			D	2.0		pp >400		2
73				D	2.5		pp >400		
		- with very low strength, highly weathered, iron-indurated shale bands below 2.5m							
	3 3.0	Pit discontinued at 3.0m		D	3.0		pp >400		3
		- limit of investigation							
72									

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: John Deere 315SE backhoe - 450mm toothed bucket

LOGGED: ERL

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: 75.8 mAHD
EASTING: 291045
NORTHING: 6240724

PIT No: 12
PROJECT No: 92336.04
DATE: 29/1/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
		TOPSOIL/Silty CLAY CI: medium plasticity, brown, trace rootlets, w<PL		D	0.0				
	0.2	Silty CLAY CH: pale brown, trace gravel, w<PL, hard, residual			0.2				
75		- becoming red, brown and grey, with very low strength, highly weathered, iron-indurated shale bands below 0.5m		D	0.5		pp >400		
	1			D	1.0		pp >400		1
				U_{50}					
	1.4	SHALE: brown, low strength, highly weathered, Bringelly Shale		D	1.4				
				D	1.5				
74	1.8	Pit discontinued at 1.8m - refusal on low strength shale		D	1.8				
	2								2
73	3								3
72									

RIG: John Deere 315SE backhoe - 450mm toothed bucket
LOGGED: ERL
SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: w = moisture content; PL = plastic limit

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: --
EASTING: 289473
NORTHING: 6240642
DIP/AZIMUTH: 90°/--

BORE No: 201
PROJECT No: 92336.04
DATE: 20/2/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, brown, with rootlets, w<PL							stick-up
		Silty CLAY CI: medium plasticity, red mottled grey, w<PL, appears to be very stiff to hard, residual							grout
	3.5	SHALE: grey and brown, low strength, highly weathered, Bringelly Shale							bentonite
									sand
									screen
	7.3	Bore discontinued at 7.3m - limit of investigation							

RIG: Hanjin D&B 8 **DRILLER:** Terratest **LOGGED:** ERL **CASING:** N/A

TYPE OF BORING: Solid flight auger

WATER OBSERVATIONS: No free groundwater observed whilst augering. Moisture observed 21/02/2020 whilst bailing

REMARKS: Location coordinates are in MGA94 Zone 56. w = moisture content; PL = plastic limit. Well installed: 0.8m stickup, 0.0 - 4.3m non-slotted, 4.3 - 7.3m slotted, 0.0 - 2.8m spoil, 2.8 - 3.8m bentonite, 3.8 - 7.3m sand.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: --
EASTING: 289903
NORTHING: 6240711
DIP/AZIMUTH: 90°/--

BORE No: 202
PROJECT No: 92336.04
DATE: 20/2/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, brown, with rootlets, w<PL							stick-up
		Silty CLAY CI: medium plasticity, red, brown and grey, w<PL, appears to be very stiff to hard, residual							grout; bentonite
	3.5	SHALE: pale brown, low strength, highly weathered, Bringelly Shale							sand; screen
	7.0	Bore discontinued at 7.0m - limit of investigation							

RIG: Hanjin D&B 8 **DRILLER:** Terratest **LOGGED:** ERL **CASING:** N/A

TYPE OF BORING: Solid flight auger

WATER OBSERVATIONS: No free groundwater observed whilst augering. Moisture observed 21/02/2020 whilst bailing

REMARKS: Location coordinates are in MGA94 Zone 56. w = moisture content; PL = plastic limit. Well installed: 0.9m stickup, 0.0 - 4.0m non-slotted, 4.0 - 7.0m slotted, 0.0 - 2.5m spoil, 2.5 - 3.0m bentonite, 3.0 - 7.0m sand.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: --
EASTING: 290518
NORTHING: 6240467
DIP/AZIMUTH: 90°/--

BORE No: 203
PROJECT No: 92336.04
DATE: 20/2/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, brown, with rootlets, w<PL							stick-up
		Silty CLAY CH: high plasticity, red and brown, trace gravel, w<PL, appears to be very stiff to hard, residual - becoming grey and orange below 0.5m							grout
	2.3	SHALE: pale brown and grey, low strength, highly weathered, Bringelly Shale							bentonite
									sand
									screen
	7.1	Bore discontinued at 7.1m - limit of investigation							

RIG: Hanjin D&B 8 **DRILLER:** Terratest **LOGGED:** ERL **CASING:** N/A

TYPE OF BORING: Solid flight auger

WATER OBSERVATIONS: No free groundwater observed whilst augering. Moisture observed 20/02/2020 whilst bailing

REMARKS: Location coordinates are in MGA94 Zone 56. w = moisture content; PL = plastic limit. Well installed: 1.0m stickup, 0.0 - 4.1m non-slotted, 4.1 - 7.1m slotted, 0.0 - 3.0m spoil, 3.0 - 3.6m bentonite, 3.6 - 7.1m sand.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: CKDI Pty Ltd
PROJECT: South Creek West - North West Precinct
LOCATION: The Northern Road, Bringelly, NSW

SURFACE LEVEL: --
EASTING: 290983
NORTHING: 6240527
DIP/AZIMUTH: 90°/--

BORE No: 204
PROJECT No: 92336.04
DATE: 20/2/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.05	TOPSOIL/Silty CLAY: brown, with rootlets							stick-up
		Silty CLAY CH: high plasticity, brown, trace gravel, w<PL, appears to be very stiff to hard, residual							
	1								
		- becoming pale grey and brown, extremely weathered shale below 1.3m							grout
	2								
	3								
	3.0	SHALE: pale grey and brown, low strengh, highly weathered, Bringelly Shale							bentonite
	4								
									sand
	5								
									screen
	6								
	6.9	Bore discontinued at 6.9m - limit of investigation							
	7								
	8								
	9								

RIG: Hanjin D&B 8 **DRILLER:** Terratest **LOGGED:** ERL **CASING:** N/A

TYPE OF BORING: Solid flight auger

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. w = moisture content; PL = plastic limit. Well installed: 1.0m stickup, 0.0 - 3.9m non-slotted, 3.9m - 6.9m slotted, 0.0 - 2.9m spoil, 2.9 - 3.9m bentonite, 3.9 - 6.9m sand.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are generally based on Australian Standard AS1726:2017, Geotechnical Site Investigations. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Type	Particle size (mm)
Boulder	>200
Cobble	63 - 200
Gravel	2.36 - 63
Sand	0.075 - 2.36
Silt	0.002 - 0.075
Clay	<0.002

The sand and gravel sizes can be further subdivided as follows:

Type	Particle size (mm)
Coarse gravel	19 - 63
Medium gravel	6.7 - 19
Fine gravel	2.36 – 6.7
Coarse sand	0.6 - 2.36
Medium sand	0.21 - 0.6
Fine sand	0.075 - 0.21

Definitions of grading terms used are:

- Well graded - a good representation of all particle sizes
- Poorly graded - an excess or deficiency of particular sizes within the specified range
- Uniformly graded - an excess of a particular particle size
- Gap graded - a deficiency of a particular particle size with the range

The proportions of secondary constituents of soils are described as follows:

In fine grained soils (>35% fines)

Term	Proportion of sand or gravel	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	>30%	Sandy Clay
With	15 – 30%	Clay with sand
Trace	0 - 15%	Clay with trace sand

In coarse grained soils (>65% coarse)
- with clays or silts

Term	Proportion of fines	Example
And	Specify	Sand (70%) and Clay (30%)
Adjective	>12%	Clayey Sand
With	5 - 12%	Sand with clay
Trace	0 - 5%	Sand with trace clay

In coarse grained soils (>65% coarse)
- with coarser fraction

Term	Proportion of coarser fraction	Example
And	Specify	Sand (60%) and Gravel (40%)
Adjective	>30%	Gravelly Sand
With	15 - 30%	Sand with gravel
Trace	0 - 15%	Sand with trace gravel

The presence of cobbles and boulders shall be specifically noted by beginning the description with ‘Mix of Soil and Cobbles/Boulders’ with the word order indicating the dominant first and the proportion of cobbles and boulders described together.

Soil Descriptions

Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	VS	<12
Soft	S	12 - 25
Firm	F	25 - 50
Stiff	St	50 - 100
Very stiff	VSt	100 - 200
Hard	H	>200
Friable	Fr	-

Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	Density Index (%)
Very loose	VL	<15
Loose	L	15-35
Medium dense	MD	35-65
Dense	D	65-85
Very dense	VD	>85

Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil - derived from in-situ weathering of the underlying rock;
- Extremely weathered material – formed from in-situ weathering of geological formations. Has soil strength but retains the structure or fabric of the parent rock;
- Alluvial soil – deposited by streams and rivers;
- Estuarine soil – deposited in coastal estuaries;
- Marine soil – deposited in a marine environment;
- Lacustrine soil – deposited in freshwater lakes;
- Aeolian soil – carried and deposited by wind;
- Colluvial soil – soil and rock debris transported down slopes by gravity;
- Topsoil – mantle of surface soil, often with high levels of organic material.
- Fill – any material which has been moved by man.

Moisture Condition – Coarse Grained Soils

For coarse grained soils the moisture condition should be described by appearance and feel using the following terms:

- Dry (D) Non-cohesive and free-running.
- Moist (M) Soil feels cool, darkened in colour.
  Soil tends to stick together.
  Sand forms weak ball but breaks easily.
- Wet (W) Soil feels cool, darkened in colour.
  Soil tends to stick together, free water forms when handling.

Moisture Condition – Fine Grained Soils

For fine grained soils the assessment of moisture content is relative to their plastic limit or liquid limit, as follows:

- 'Moist, dry of plastic limit' or 'w <PL' (i.e. hard and friable or powdery).
- 'Moist, near plastic limit' or 'w ≈ PL (i.e. soil can be moulded at moisture content approximately equal to the plastic limit).
- 'Moist, wet of plastic limit' or 'w >PL' (i.e. soils usually weakened and free water forms on the hands when handling).
- 'Wet' or 'w ≈LL' (i.e. near the liquid limit).
- 'Wet' or 'w >LL' (i.e. wet of the liquid limit).

Symbols & Abbreviations

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Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

C	Core drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U_{50}	Undisturbed tube sample (50mm)
W	Water sample
pp	Pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	Lamination
Pt	Parting
Sz	Sheared Zone
V	Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
v	vertical
sh	sub-horizontal
sv	sub-vertical

Coating or Infilling Term

cln	clean
co	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

Coating Descriptor

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

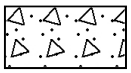
Symbols & Abbreviations

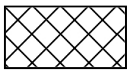
Graphic Symbols for Soil and Rock

General


Asphalt


Road base

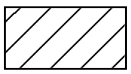

Concrete

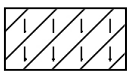

Filling

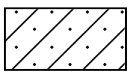
Soils


Topsoil

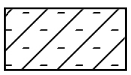

Peat

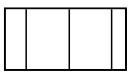

Clay

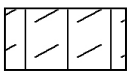

Silty clay

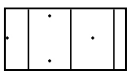

Sandy clay

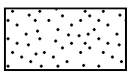

Gravelly clay

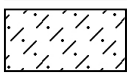

Shaly clay

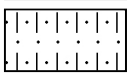

Silt


Clayey silt


Sandy silt

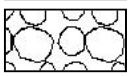

Sand

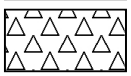

Clayey sand


Silty sand


Gravel

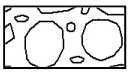

Sandy gravel


Cobbles, boulders

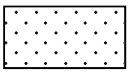

Talus

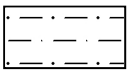
Sedimentary Rocks

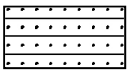

Boulder conglomerate

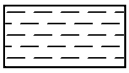

Conglomerate


Conglomeratic sandstone

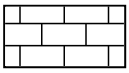

Sandstone


Siltstone

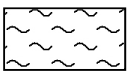

Laminite

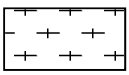

Mudstone, claystone, shale


Coal


Limestone

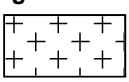
Metamorphic Rocks

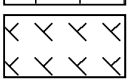

Slate, phyllite, schist

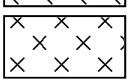

Gneiss

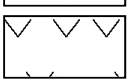

Quartzite

Igneous Rocks


Granite


Dolerite, basalt, andesite


Dacite, epidote


Tuff, breccia


Porphyry

Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

  4,6,7
  N=13

- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

  15, 30/40 mm

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.