Douglas Partners
Geotechnics / Environment / Groundwater

Integrated Practical Solutions

Preliminary Site Investigation for Contamination

Planning Proposal Request
Glenlee House, Menangle Park, NSW

Prepared for
Premise NSW Pty Ltd

Project 92425.00
September 2020

Douglas Partners
Geotechnics / Environment / Groundwater

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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.

	Signature	Date
Author		2 September 2020
Reviewer		2 September 2020

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Executive Summary

Douglas Partners Pty Ltd (DP) has been engaged by Premise NSW Pty Ltd (Premise) to complete a Preliminary Site Investigation for Contamination (PSI) to support a Planning Proposal Request (PPR) for Glenlee House, Menangle Park (hereinafter referred to as 'the site'). The site is formally identified as Lots 1, 2 & 3 on Deposited Plan (D.P.) 713646, Glenlee Road, Menangle Park and has a combined area of approximately 18 hectares (ha).

DP understands that Premise proposes to partially rezone the site for low density (minimum 600 m^2 lots) and large lots (2,000 m^2) residential development in the north and south east of the site, with the remainder of the size rezoned as Glenlee (heritage site) and open space curtilage. 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 regards to the proposed development.

The site was formerly used as rural residential land with minor agricultural activities. A total of ten PAECs were identified, all typical for a site of this type and for the general region. Targeted investigations of PAECs should be undertaken, in the form of a Detailed Site Investigation (DSI) to inform any future DA for the proposed development.

Based on the findings of the PSI the potential for significant, widespread contamination to be present at the site with respect to the proposed development is generally low and, as such the site is deemed suitable (from a contamination perspective) for proposed rezoning for the proposed land use as outlined in Section 1 of this report.

This PSI has been prepared with reference to, and meets the reporting requirements for, a Preliminary Site Investigation (PSI) as set out in NSW EPA guidelines under the *Contaminated Land Management (CLM) Act* 1997, NSW *State Environmental Planning Policy No. 55 - Remediation of Land* (SEPP 55) and NSW EPA endorsed guidelines, in particular the National Environment Protection Council National *Environment Protection (Assessment of Site Contamination) Measure, 1999*, as amended 2013 (NEPC, 2013).

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Preliminary Site Investigation for Contamination
Planning Proposal Request
Glenlee House, Menangle Park, NSW

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by Premise NSW Pty Ltd (Premise) to complete a Preliminary Site Investigation for Contamination (PSI) to support a Planning Proposal Request (PPR) for Glenlee House, Menangle Park (hereinafter referred to as 'the site'). The site is formally identified as Lots 1, 2 & 3 on Deposited Plan (D.P.) 713646, Glenlee Road, Menangle Park and has a combined area of approximately 18 hectares (ha). The site location and boundary are shown on Drawing 1, Appendix A.

The investigation was undertaken in general accordance with DP's proposal reference MAC200187.P.001.Rev 0 dated 3 July 2020 and acceptance dated 13 August 2020.

DP understands that Premise proposes to partially rezone the site for low density (minimum 600 m^2 lots) and large lots (2,000 m^2) residential development in the north and south east of the site, with the remainder of the size rezoned as Glenlee (heritage site) and open space curtilage. 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 regards to the proposed development.

This PSI has been prepared with reference to, and meets the reporting requirements for, a Preliminary Site Investigation (PSI) as set out in NSW EPA guidelines under the *Contaminated Land Management (CLM) Act* 1997, NSW *State Environmental Planning Policy No. 55 - Remediation of Land* (SEPP 55) and NSW EPA endorsed guidelines, in particular the National Environment Protection Council National *Environment Protection (Assessment of Site Contamination) Measure, 1999*, as amended 2013 (NEPC, 2013).

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

2. Scope of Works

The following scope of works were undertaken with reference to NSW EPA endorsed guidelines and SEPP 55:

- Desktop review of the following:
  - Available historical aerial photographs to identify site environmental features and the potential for contamination to be present at the site;
  - Groundwater bore search records;
  - Review of EPA public registers under the CLM Act and the POEO Act; and
  - Review of published geological, soil landscape, salinity and acid sulphate soil maps.

- Completion of a site walkover to observe for possible indicators of contamination, potentially contaminative processes and constraints (including areas of filling, and storage and use of chemicals, fuels and oils);
- Development of a list of Potential Areas of Environmental Concern (PAEC) if further assessment (e.g. a targeted Detailed Site Investigation) or remediation / management is required; and
- Preparation of this PSI report providing advice on the suitability of the site for the proposed development (from a contamination perspective) as well as recommendations for future investigations eg: to inform a Development Application (DA).

3. Site Information

Site Address	Glenlee House, Menangle Park, NSW
Legal Description	Lots 1, 2 & 3 on DP 713646
Area	18 ha
Zoning	RU2 - Rural Landscape
Local Council Area	Campbelltown City Council
Current Use	Rural Residential
Surrounding Uses	North – Railway line, beyond which is rural agricultural land and botanical gardens East / north east – Large lot rural residential and Suez Camden Organic Resource Recovery, beyond which is the Hume Motorway South – Open space and pastoral land, beyond which is rural residential West / north west – Railway line, beyond which is rural agricultural land and Glenlee Coal Washery

Figure 1: Site Location (red boundary)

4. Environmental Setting

4.1 Topography

The site is situated on a hill and undulating terrain, at approximately 108 m relative to Australian Height Datum (AHD) in the south east of the site, sloping towards the western corners of the site at approximately to 82 m AHD.

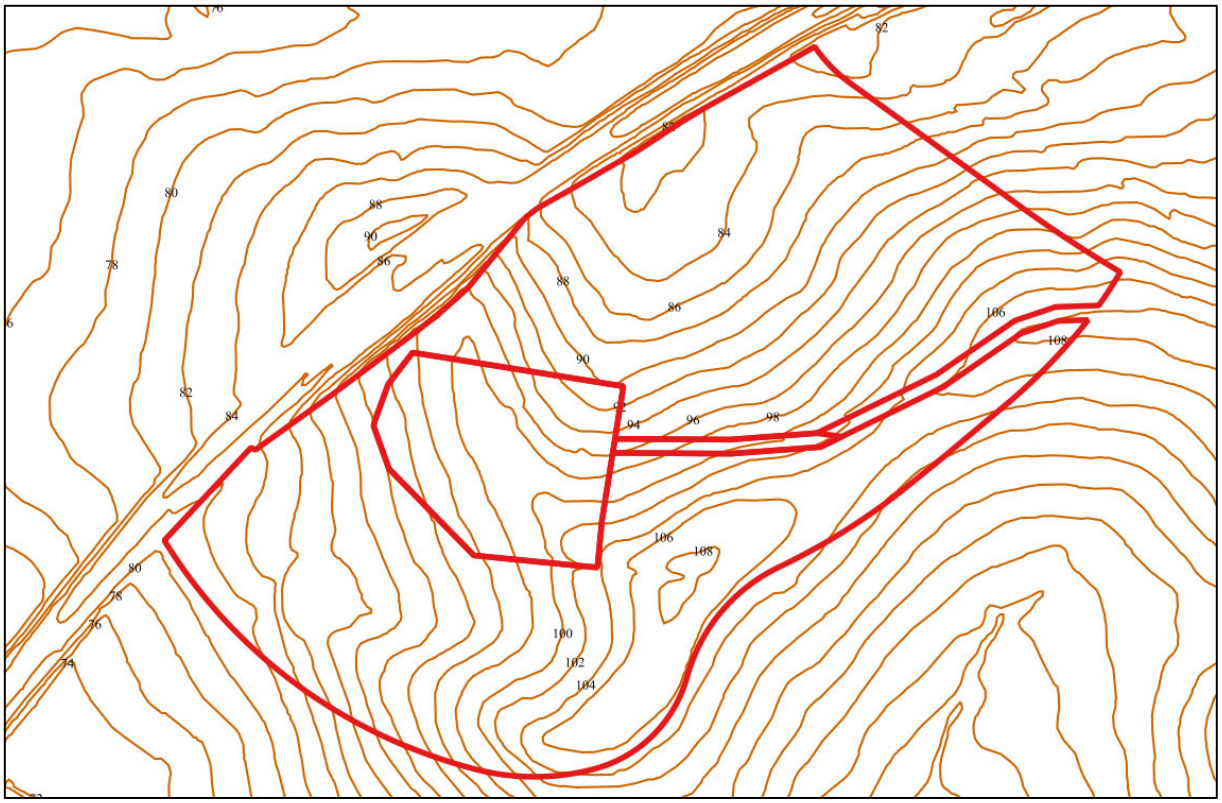


Figure 2: Site topography (red boundary)

4.2 Site Geology

With reference to the NSW Sydney Region Geology 1987 Survey *Wollongong-Port Hacking 1:100 000 Geology Sheet*, the site is underlain with Bringelly Shale of the Wianamatta Group, which is characterised by shale, claystone, laminate, lithic sandstone, rare coal and tuff.

With reference to the Soil Conservation Service of NSW (1990) *Soil Landscapes of the Wollongong-Port Hacking 1:100 000 Sheet,* the site is largely underlain by the Blacktown residual soil and a small portion of the western section of the site is mapped as underlain by Theresa Park alluvial soil. The two soil landscapes are further described below:

The Blacktown Soil Landscape (dark green) is a residual soil group associated with the gently undulating slopes and broad rounded crests and ridges on the Wianamatta Group in the eastern part of the site. The unit comprises up to four soil horizons that range from shallow red-brown hard-setting sandy clay soils on crests and upper slopes to deep brown to yellow sand and clay soils overlying grey plastic mottled clay on mid- to lower slopes. These soils are typically of low fertility, are moderately reactive and have a generally low wet bearing strength.

The Theresa Park Soil Landscape (light green) is an alluvial unit associated with Tertiary and Quaternary flood plains and terraces of the Nepean River. Soil types include brown sandy loam, reddish-brown sandy clay, and light clay. Fluvial bedding is sometimes evident, and their sand-rich nature is reflected in typically higher permeability and low available water holding capacity. Development limitations of these soils include: seasonal and localised permanent waterlogging, erosion hazards, localised flood hazards, hardsetting surfaces and are generally of low fertility. The approximate extents of the soil landscapes are shown in Figure 2.

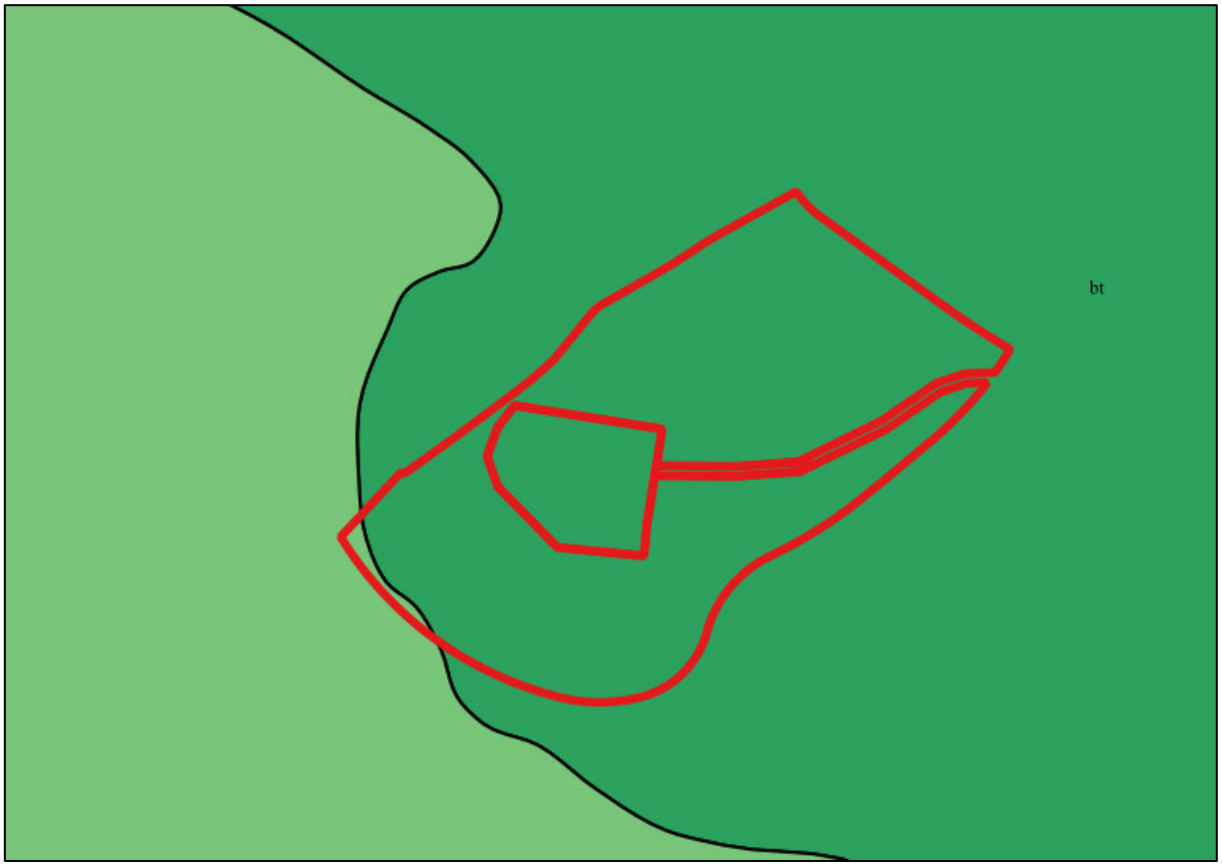


Figure 2: Soil landscape mapping for the site (red boundary)

4.3 Acid Sulphate Soils

Published acid sulphate soils risk mapping indicates that the site is classified as having an extremely low probability of being impacted by acid sulfate soils.

4.4 Surface Water and Groundwater

Apart from one manmade farm dam no surface water bodies are present on the site. The closest surface water body to the site is Howes Creek located approximately 300 m south of the site. Howes Creek flows east through the alluvial terrace towards the Nepean River which is located approximately 1.2 km west of the site.

A search of the publicly available registered groundwater bore database indicated that there are four registered groundwater bores within a 500 m radius of the site, including one located within the site and the remaining three located on a coal washery site located 400 m north east of the site. The four groundwater bores from within 500 m of the site are summarised in Table 1.

Table 1: Summary of Available Information from Nearby Registered Groundwater Bores

Bore ID Authorised Purpose	Location Relative to Site	Final Depth (m)	Standing Water Level (m bgl)
GW101106 Test bore	0 m	280	17
GW114885 Monitoring bore	164 m north	102	NA
GW114886 Monitoring bore	161 m north	190.3	NA
GW114887 Monitoring bore	159 m north	228.30	NA

Based on the regional topography and the inferred flow direction of nearby water courses, the anticipated flow direction of groundwater beneath the site is towards the west to north west.

5. Site History

5.1 Historical Aerial Photography

Several historical aerial photographs were obtained from public databases. Drawings featuring the aerial photographs are included in Appendix A, Drawing 2 to 7. A summary of key features observed for the site and surrounding land is presented in Table 2.

Table 2: Summary of Historical Aerial Photographs

Year	Site	Surrounding Land Use
1956	The site appears to be rural residential. Five structures and one dam can be clearly identified on the site. A track leads up to and loops around the four properties located within Lot 1. The structure in Lot 3 appears to be the smaller, currently dilapidated structure.	The surrounding areas are general rural residential and vacant land. There is minimal development. A railway line is located west of the site. Glenlee Coal Washery is located to the north-west (out of frame).
1975	The site remains largely unchanged from the previous photograph.	The surrounding areas remain largely unchanged from the previous photograph. A structure is visible north east of the site.

Year	Site	Surrounding Land Use
1984	The site remains largely unchanged from the previous photograph. A swimming pool and a tennis court have been added within Lot 1.	The surrounding areas remain largely unchanged from the previous photograph. Density of surrounding development is steadily increasing.
1994	The site remains largely unchanged from the previous photograph. There is some new vegetation (landscaping) within Lot 1.	The surrounding areas remain largely unchanged from the previous photograph. Density of surrounding development is steadily increasing.
2009 - 2020	The swimming pool was removed since the previous photograph (1994) and a possible fire had impacted the structure to the south of the tennis court. This structure was rebuilt around early 2012. Much of the site in 2009 appears to be used as an orchard (olive orchard). A new structure has appeared in Lot 3 since the previous photograph (1994). Possible removal and/or placement of fill appears to have occurred in the area between the farm dam and former olive orchard, south of the structures, since the previous photograph (1994). The ground appears hummocky in subsequent photographs. Large scale vegetation clearing within the former olive orchard occurred between April and June 2014. Stockpiled materials remain in place to the present day. Earthworks, likely associated with possible drainage works or the installation of water infrastructure for the surrounding development, first appear along the western boundary of the site around May 2015 and again in May 2020. The tennis courts appear to be no longer maintained or used from mid-2016.	The surrounding areas remain largely unchanged from the previous photograph. Density of surrounding development is slightly increased. A possible site compound or materials storage/processing facility appears to the south west of the site around January 2015 and increases in size to present day.

5.2 Public Registers

A search of the NSW EPA website on 12 August 2020 indicated that:

- The site has 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; and

- No licences under Schedule 1 of the *Protection of the Environment Operations* (POEO) Act, 1997 have been issued for the site. Suez Organics Recycling Facility, located approximately 500 m north east of the site, holds a current licence.

5.3 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.

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.

5.4 Summary of Site History

The site history information suggests that the site was a rural residential property from 1956. It is likely that minor agricultural or pastoral (animal grazing) activities have occurred on the site. Minor filling of the former pool has also likely occurred. Surrounding activities, including the Suez Organics Recycling Facility and the Glenlee Coal Washery, are unlikely to have impacted upon the site.

6. Site Walkover

A site walkover was undertaken by a senior environmental scientist and environmental engineer on 21 August 2020. The general site topography was consistent with that described in Section 4.1. The site layout appears to have remained unchanged from the 4 August 2020 aerial photograph. The following key site features pertinent to the PSI were observed (refer to the photographs presented in Appendix H).

- Cement fragments and occasional demolition rubble underneath the structure where a possible fire was noted in the historical aerial review;
- Hummocky ground to the south of the main house and structures, suggesting possible filling / soil mounds below vegetation. Thick vegetation cover prevented closer inspection, however, small piles of timber, possible coal wash or bitumen, and occasional plastic were occasionally visible on the surface;
- The farm dam wall appeared to likely have been constructed of reworked natural material. Thick vegetation cover prevented closer inspection. Boulders of bedrock (of unknown origin) were located east of the dam. A PVC pipe appears to drain surface water towards the dam;
- An access road was present along the north western side of the site next to the railway line comprising natural strata with occasional fragments of gravel including fragments of shale and trace fragments of demolition rubble;

- Piles of vegetation placed at generally regular intervals across the former olive orchard portion of the site, north of Glenlee House. The insides of these piles could not be closely inspected but based on field observations and aerial photographs it is presumed that these piles contain tree, vegetation and soil remnants removed from the former olive orchard;
- The structure north east of the main house appears to have undergone minor refurbishment (e.g. a new sheet metal roof). No obvious asbestos-containing materials (ACM) were evident, however, the interior could not be accessed for safety reasons to assess the possible presence of hazardous building materials. A large water tank and dilapidated brick and cement structure with a collapsed roof were also observed next to this structure;
- Power lines running from the east to service the site with a mounted transformer box;
- Telstra service ducts running approximately parallel with and slightly north of the access road to the site. Duct and duct cover materials could not be determined (depending on age ACM could be possibly present);
- Below ground drainage lines run perpendicular to the above access road. The drainage pits are constructed of brick, however, a closer inspection of the pipe to determine its construction material was not possible due to the depth and orientation of the pipe;
- Timber horse stables located south of the house. These are built up on a cobble/concrete floor and appear to have been used for minor fuel/oil and machinery storage (e.g. lawnmowers – sighted in the walkover) only; and
- Raised garden beds to the north of the house.

From discussions with the site owners at the time of the walkover, DP understands that the site has been occupied and maintained by the current landowners for the past 50 years. Discussions with the landowners confirmed that the site was formerly subject to basic pastoral use, however, no animals have been kept on site or farming undertaken for the past 20 years. No burial sites were established for deceased animals during this time; however, carcasses may have been left in place from time to time on the site surface. DP was not made aware of any known filling on site. According to the landowners, chemical use on site during their occupation has been limited to small amounts of ammonium nitrate only and that the olive orchard was an organic operation with minimal pesticide use. The structure fire noted in the historical aerial photograph review had burnt through the structure before the fire fighters' attended the site and limited spot fires only were extinguished.

7. Potential Areas of Environmental Concern

From the site history review and the site inspection, it is considered a potential for contamination exists at the Site. Ten areas were identified as PAEC and are summarised in Table 3. The PAEC locations are shown on Drawing 7.

Table 3: Summary of Identified Potential Areas of Environmental Concern

PAEC#	Identified from	Description	Comment
1	Aerials Site Wa kover	Structure	Located in an area previously impacted by fire at some time between 1994 and 2009. Fragments of demolition material were observed beneath the structure. Based on anecdotal information provided to DP, the application of any fire-fighting medium was likely very limited and for spot-fires only. Therefore, the potential for significant PFAS / PFOA substances impact (from fire-fighting foams) is neglig ble.
2	Aerials Site Wa kover	Possible disturbed ground / fill / surficial rubbish	Multiple small stockpiles of unknown materials observed in aerials, between the farm dam and former olive orchard and to the south of Glenlee House. Vegetated and hummocky ground present in these areas and surrounding areas during site wa kover.
PAEC#	**Identified from**	**Description**	**Comment**
3	Aerials Site Wa kover	Farm Dam (poss ble fill)	L kely constructed from reworked natural material, however, heavy vegetation along the dam wall hindered proper inspection of the material.
4	Aerials Site Wa kover	Fill (former pool)	Poss ble former below ground swimming pool which was later backfilled. The quality of fill is currently unknown.
5	Aerials Site Wa kover	Structures / hazardous building materials (HBMs)	The two structures in Lot 3 could not be closely inspected due to safety reasons and may contain HBMs, particularly considering the presence of one on site from at least the 1950s. Residual HBM may be present on the site surface surrounding these structures.
6	Site Wa kover	Buried Telstra pits	Running parallel to the main access road. Depending on their age they can contain ACM.
7	Site Wa kover	Drainage pipes (possible ACM)	Running perpendicular below the main access road. May contain ACM.
8	Aerials Site Wa kover	Former horse stables	Minor fuel / oil and machinery storage, predominately on hardstand area.
9	Aerials Site Wa kover	Garden beds	Raised garden beds within fence area north of the main house. Possible historic minor chemical use.

8. 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 ie: 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: Surface soils under structure, possibly impacted from fire damage.
  - CoPC may include metals (lead), and asbestos.
- S2: Fill / surficial rubbish.
  - CoPC may include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), PAH, polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), phenols and asbestos.
- S3: Fill (farm dam).
  - CoPC may include metals, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos.
- S4: Fill (former pool).
  - CoPC may include metals, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos.
- S5: Existing structures, possibly containing HBMs
  - CoPC may include lead, zinc, asbestos and synthetic mineral fibres (SMFs)
- S6: Buried Telstra pits
  - CoPC may inolude ACM
- S7: Buried drainage pipes
  - CoPC may include ACM
- S8: Former horse stables used for minor fuel / oil and machinery storage.
  - CoPC may include metals, TRH, BTEX, PAH, PCB, OCP and phenols.
- S9: Raised Garden Beds.
  - CoPC include metals, TRH, PAH, PCB, OCP and phenols.

Potential Receptors

The following potential human receptors have been identified:

- R1: Current users;
- R2: Construction and maintenance workers;
- R3: End users (low density residential); and
- R4: Adjacent site users (future residential).

The following potential environmental receptors have been identified:

- R5: Surface water (Nepean River and Howes Creek);
- R6: Groundwater; and
- R7: 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 in localised areas (e.g. paved areas near Glenlee House);
- 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 near the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S10) and receptors (R1 to R7) are provided in below in Table4.

Table4: Summary of Potentially Complete Exposure Pathways

Source and COPC	Transport Pathway	Receptor	Risk Management Action
S1: AsbestosS2: metals, TRH, BTEX, PAH, PCBs, OCPs, OPPs, phenols and asbestos S3: metals, TRH, BTEX, PAH, PCBs, OCPs, OPPs, phenols and asbestos S4: metals, TRH, BTEX, PAH, PCBs, OCPs, OPPs, phenols and asbestos S5: lead, zinc, asbestos and SMFs S6: asbestos S7: asbestos S8: metals, TRH, BTEX, PAH, PCBs, OCPs, OPPs, phenols and asbestos S9: metals, total, PAH, PCBs, OCPs and phenols	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 P6: Contact with terrestrial ecology	R1: Current users R2: Construction and maintenance workers R3: End users R4: Adjacent site users R5: Surface water (Nepean River, Howes Creek) R6: Groundwater	An intrusive investigation including soil sampling and analysis is recommended to assess for possible contamination

9. Conclusions and Recommendations

The objective of the PSI was to identify any past or present potentially contaminating activities and to provide a preliminary assessment of the potential of site contamination. The scope of this PSI included a desk top study and site walkover. The site was formerly used as rural residential land with minor agricultural activities. A total of ten PAECs were identified, as summarized in Table 3 and the CSM, which are all typical for a site of this type and for the general region. Targeted investigations of PAECs should be undertaken, in the form of a Detailed Site Investigation (DSI) to inform any future DA for the proposed development.

Based on the findings of the PSI the potential for significant, widespread contamination to be present at the site with respect to the proposed development is generally low and, as such the site is deemed suitable (from a contamination perspective) for proposed rezoning for the proposed land use as outlined in Section 1 of this report.

10. References

Australian Collaborative Land Evaluation Program, Acid Sulfate Soils Risk Map [http://www.asris.csiro.au/arcgis/rest/services/ASRIS/Acid_Sulfate_Soils/MapServer]

Geological Survey of NSW *Wollongong-Port Hacking 1:100,000* Geology Sheet

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)

NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd Edition)

NSW OEH (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites

Soil Conservation Service of NSW, *Wollongong-Port Hacking 1:100,000* Sheet

11. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report (or services) for this project at Glenlee House, Menangle Park in accordance with DP's proposal dated 3 July 2020 and acceptance received. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Premise NSW 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.

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.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the environmental components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

Drawings 1 to 7
About This Report

Douglas Partners
Geotechnics / Environment / Groundwater

TITLE: **Site Layout and Locality**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N
MGA

CLIENT: Prem se NSW Pty Ltd	PROJECT No.: 92425.00	SCALE: As shown	DRAWING No: 1
OFFICE: Macarthur	DRAWN BY: EMG	DATE: 2 September 2020	REVISION: 1

Legend

Lot Boundaries

60 0 60 120 180 240 m

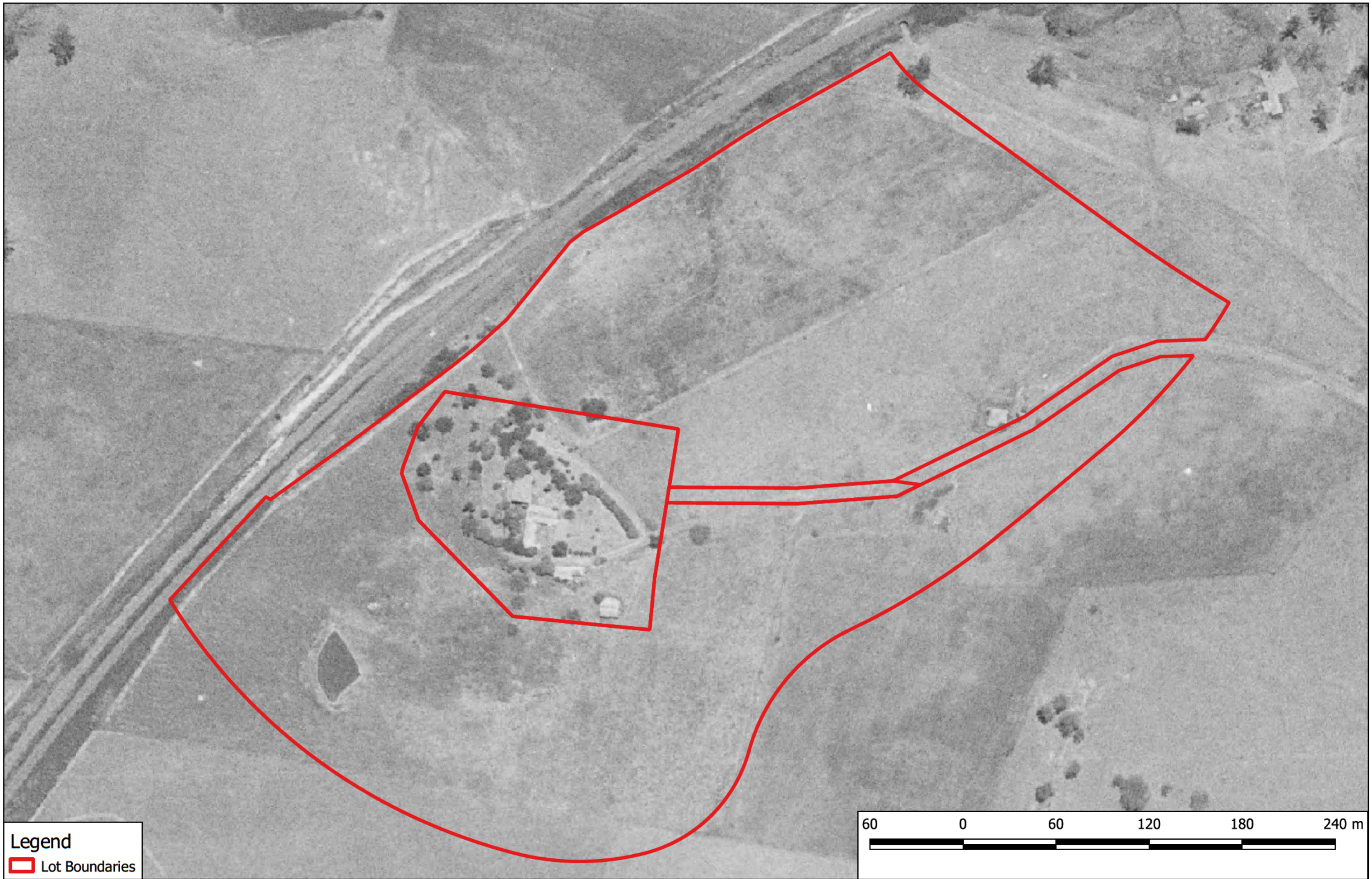
Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Prem se NSW Pty Ltd		
OFFICE: Macarthur	DRAWN BY: ERN	
SCALE: As shown	DATE: 13 August 2020	

TITLE: **1956 Aerial Imagery**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N
MGA

PROJ. #: 92425.00	
DRAWING No:	2
REVISION:	0



Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Prem se NSW Pty Ltd		
OFFICE: Macarthur	DRAWN BY: ERN	
SCALE: As shown	DATE: 13 August 2020	

TITLE: **1975 Aerial Imagery**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N
MGA

PROJ. #: 92425.00	
DRAWING No:	3
REVISION:	0

Legend

Lot Boundaries

60 0 60 120 180 240 m

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Prem se NSW Pty Ltd		TITLE: **1984 Aerial Imagery** **Planning Proposal Request** **Preliminary Site Investigation for Contamination** **Glenlee House, Menangle Park**
	OFFICE: Macarthur	DRAWN BY: ERN	
	SCALE: As shown	DATE: 13 August 2020	

N

MGA

PROJ. #:	92425.00
DRAWING No:	4
REVISION:	0

Legend

Lot Boundaries

60 0 60 120 180 240 m

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Prem se NSW Pty Ltd		
OFFICE: Macarthur	DRAWN BY: ERN	
SCALE: As shown	DATE: 13 August 2020	

TITLE: **1994 Aerial Imagery**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N

MGA

PROJ. #: 92425.00	
DRAWING No:	5
REVISION:	0

Legend
Lot

60 0 60 120 180 240 m

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Prem se NSW Pty Ltd		
OFFICE: Macarthur	DRAWN BY: ERN	
SCALE: As shown	DATE: 26 August 2020	

TITLE: **2009 Aerial Imagery**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N
MGA

PROJ. #: 92425.00	
DRAWING No:	6
REVISION:	0

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Prem se NSW Pty Ltd		
OFFICE: Macarthur	DRAWN BY: ERN	
SCALE: As shown	DATE: 26 August 2020	

TITLE: **PAECs**
Planning Proposal Request
Preliminary Site Investigation for Contamination
Glenlee House, Menangle Park

N
MGA

PROJ. #: 92425.00	
DRAWING No:	7
REVISION:	1

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 B

Site Photographs

Photo 1 - Structure in formerly fire effected area

Photo 2 - Rubbish in hummocky area

Photo 3 - '1950s' structure in Lot 3

Photo 4 - Drainage pits

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT:	Premise NSW Pty Ltd		Site Photographs	PROJECT No: 92425.00
	OFFICE: Macarthur	PREPARED BY:	ERN	Planning Proposal Request	PLATE No: 1
	SCALE: NTS	DATE:	3 Mar 2020	Glenlee House, Menangle Park, NSW	REVISION: 0

Photo 5 - Horse sheds, showing minor chemical and machinery storage

Photo 6 - Garden beds

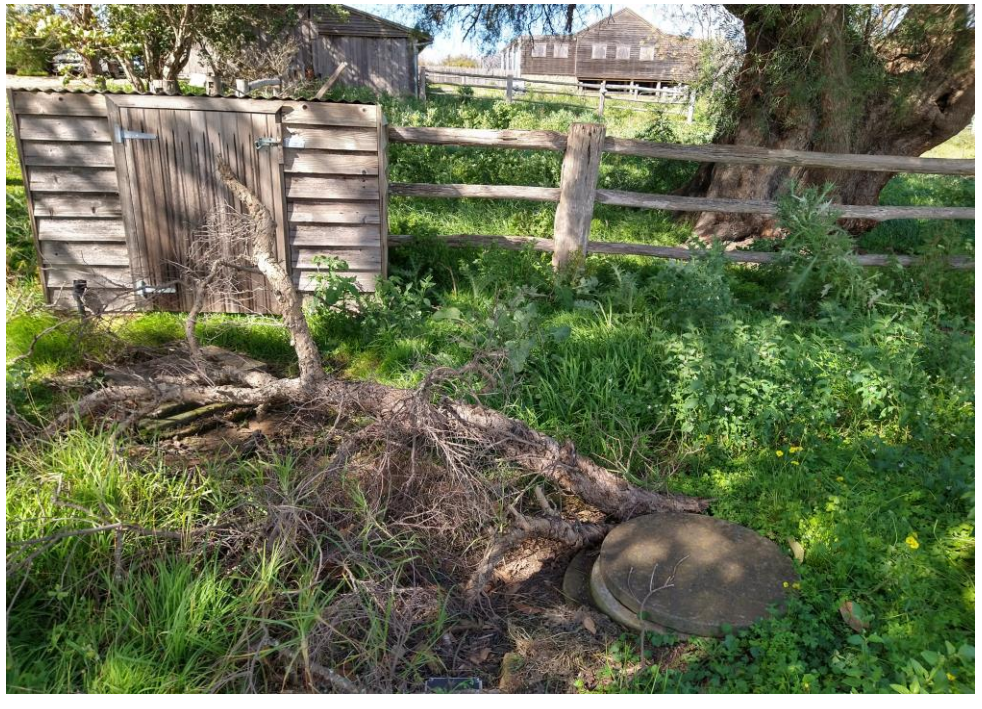


Photo 7 - View east towards horse stables

Photo 8 - New structure in Lot 3

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT:	Premise NSW Pty Ltd		Site Photographs	PROJECT No:	92425.00
	OFFICE:	Macarthur	PREPARED BY: ERN	Planning Proposal Request	PLATE No:	2
	SCALE:	NTS	DATE: 3 Mar 2020	Glenlee House, Menangle Park, NSW	REVISION:	0

Photo 9 - Early 2012 aerial imagery, showing rebuilt structure

Photo 10 - Mid 2014 aerial imagery, showing large scale vegetation clearing

Photo 11 - Mid 2016 imagery, showing former tennis court

Photo 12 - May 2020 imagery, showing earthworks near western site boundary

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT:	Premise NSW Pty Ltd		Site Photographs	PROJECT No: 92425.00
	OFFICE:	Macarthur	PREPARED BY: ERN	Planning Proposal Request	PLATE No: 3
	SCALE:	NTS	DATE: 3 Mar 2020	Glenlee House, Menangle Park, NSW	REVISION: 0

Appendix C

Groundwater Well Search Results

WaterNSW
Work Summary

GW101106

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 07/03/1997
Final Depth: 280.00 m
Drilled Depth: 280.00 m

Contractor Name: SOUTHERN TABLELANDS DRILLING
Driller: Roger Charles Ritchie
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 17.000
Salinity Description:
Yield (L/s): 1.310

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	MENANGLE	2//713646
Licensed:			

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: 6225747.000
Easting: 293207.000
Latitude: 34°05'19.1"S
Longitude: 150°45'31.0"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	96.00	200			Rotary Air
1		Hole	Hole	96.00	280.00	160			Rotary Air

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	19.00	1.00	Unknown	14.00		0.26	19.00		4000.00
80.00	84.00	4.00	Unknown	14.00		0.30	84.00		4000.00
160.00	163.00	3.00	Unknown	17.00		0.75	163.00		4000.00

Drillers Log

From	To	Thickness	Drillers Description	Geological Material	Comments

(m)	(m)	(m)			
0.00	1.00	1.00	Red Clay	Clay	
1.00	6.00	5.00	Brown clay	Clay	
6.00	80.00	74.00	Grey shale	Shale	
80.00	102.00	22.00	Grey sandstone	Sandstone	
102.00	145.00	43.00	White sandstone	Sandstone	
145.00	151.00	6.00	Sandstone/shale bands	Sandstone	
151.00	160.00	9.00	Sandstone	Sandstone	
160.00	180.00	20.00	Shale	Shale	
180.00	267.00	87.00	Sandstone	Sandstone	
267.00	280.00	13.00	Illawarra Shale	Shale	

Remarks

16/01/2013: Nat Carling, 16-Jan-2013; Added rock type codes to driller's log & added missing information (based on existing data).

***** End of GW101106 *****

WaterNSW
Work Summary

GW114885

Licence: 10BL605472 **Licence Status:** ACTIVE

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

Work Type: Bore
Work Status: Equipped
Construct.Method: Rotary - Percu
Owner Type: Other Govt

Commenced Date:
Completion Date: 01/02/2014
Final Depth: 102.00 m
Drilled Depth: 102.00 m

Contractor Name: HIGHLAND DRILLING PTY LTD
Driller: Ian Palk
Assistant Driller: Ashley Wills

Property: AUSTRALIAN RAIL TRACK CORPORAT Glenlee Rd MENANGLE PARK 2563 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s): 0.500

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	NARELLAN	1//790254
Licensed:	CUMBERLAND	NARELLAN	Whole Lot 1//790254

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: 6226183.000
Easting: 293341.000
Latitude: 34°05'05.1"S
Longitude: 150°45'36.5"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	10.00	200			Rotary - Percussion (Down Hole H
1		Hole	Hole	10.00	102.00	130			Rotary - Percussion (Down Hole H
1		Annulus	Bentonite/Grout	79.00	84.00				
1		Annulus	Waterworn/Rounded	84.00	100.50				Graded
1	1	Casing	Pvc Class 18	-0.50	87.00	60	50		Screwed, S: 99.00-102.00m
1	1	Casing	Steel - Erw	-0.50	10.00	168	159		Welded - Butt, S: 99.00-102.00m
1	1	Opening	Slots - Horizontal	87.00	99.00	60		0	Casing - Machine Slotted, PVC Class 18, Screwed, SL: 20.0mm, A: 10.00mm
1	1	Casing	Pvc Class 18	99.00	102.00	60	50		Screwed, S: 99.00-102.00m

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth	Duration (hr)	Salinity (mg/L)

							(m)		
36.00	37.00	1.00	Unknown			0.35		00:15:00	4.04
66.00	67.00	1.00	Unknown			0.15		00:15:00	3.46
96.00	97.00	1.00	Unknown			0.05		00:15:00	4.43

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.00	2.00	SOIL	Soil	
2.00	6.00	4.00	CLAY	Clay	
6.00	15.00	9.00	SHALE	Shale	
15.00	18.00	3.00	SILTSTONE	Siltstone	
18.00	20.00	2.00	SHALE	Shale	
20.00	24.00	4.00	SILTSTONE	Siltstone	
24.00	72.00	48.00	SHALE	Shale	
72.00	75.00	3.00	SILTSTONE	Siltstone	
75.00	89.00	14.00	SANDSTONE	Sandstone	
89.00	92.00	3.00	SILTSTONE	Siltstone	
92.00	102.00	10.00	SANDSTONE	Sandstone	

Remarks

03/06/2015: Coordinates provided by LAS.
10/08/2015: Nat Carling, 10-Aug-2015; Updated coordinate source.

***** End of GW114885 *****

WaterNSW
Work Summary

GW114886

Licence:
Licence Status:

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

Work Type: Bore
Work Status: Equipped
Construct.Method: Rotary - Percu
Owner Type: Other Govt

Commenced Date:
Completion Date: 01/02/2014
Final Depth: 190.30 m
Drilled Depth: 190.30 m

Contractor Name: HIGHLAND DRILLING PTY LTD
Driller: Ian Palk
Assistant Driller: Ashley Wills

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s): 0.310

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	NARELLAN	1//790254
Licensed:			

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: 6226177.000
Easting: 293340.000
Latitude: 34°05'05.3"S
Longitude: 150°45'36.5"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	5.50	200			Rotary - Percussion (Down Hole H
1		Hole	Hole	5.50	190.30	140			Rotary - Percussion (Down Hole H
1		Annulus	Crushed Aggregate	165.00	182.00				Ungraded
1		Annulus	Bentonite/Grout	182.00	185.00				
1		Annulus	Crushed Aggregate	185.00	190.30				Ungraded
1	1	Casing	Pvc Class 18	-0.50	168.00	60	50		Screwed
1	1	Casing	Steel - Erw	-0.50	5.50	168	159		Welded - Butt, S: 180.00-182.00m
1	1	Opening	Slots - Horizontal	168.00	180.00	60		0	Casing - Machine Slotted, PVC Class 18, Screwed, SL: 20.0mm, A: 10.00mm
1	1	Casing	Pvc Class 18	180.00	182.00	60	50		Screwed

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth	Duration (hr)	Salinity (mg/L)

							(m)		
114.00	115.00	1.00	Unknown			0.50		00:15:00	5.52
144.00	145.00	1.00	Unknown			0.50		00:15:00	4.64
180.00	181.00	1.00	Unknown			0.31		00:15:00	4.49

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.00	2.00	FILL	Fill	
2.00	6.00	4.00	CLAY	Clay	
6.00	7.00	1.00	SANDSTONE	Sandstone	
7.00	14.00	7.00	SHALE	Shale	
14.00	16.00	2.00	SILTSTONE	Siltstone	
16.00	24.00	8.00	SANDSTONE	Sandstone	
24.00	27.00	3.00	SHALE	Shale	
27.00	29.00	2.00	SANDSTONE	Sandstone	
29.00	73.00	44.00	SHALE	Shale	
73.00	89.00	16.00	SANDSTONE	Sandstone	
89.00	90.00	1.00	SHALE	Shale	
90.00	157.00	67.00	SANDSTONE	Sandstone	
157.00	158.00	1.00	SILTSTONE	Siltstone	
158.00	173.00	15.00	SANDSTONE	Sandstone	
173.00	174.00	1.00	SILTSTONE	Siltstone	
174.00	190.30	16.30	SANDSTONE	Sandstone	

Remarks

01/02/2014: Form A Remarks:
Coordinates provided on Form A.

***** End of GW114886 *****

WaterNSW
Work Summary

GW114887

Licence:
Licence Status:

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

Work Type: Bore
Work Status: Equipped
Construct.Method: Rotary - Percu
Owner Type: Other Govt

Commenced Date:
Completion Date: 01/02/2014
Final Depth: 228.30 m
Drilled Depth: 228.30 m

Contractor Name: HIGHLAND DRILLING PTY LTD
Driller: Ian Palk
Assistant Driller: Ashley Wills

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s): 0.200

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	NARELLAN	1//790254
Licensed:			

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: 6226169.000
Easting: 293338.000
Latitude: 34°05'05.5"S
Longitude: 150°45'36.4"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	9.00	200			Rotary - Percussion (Down Hole H
1		Hole	Hole	9.00	228.30	130			Rotary - Percussion (Down Hole H
1		Annulus	Crushed Aggregate	162.00	200.00				Ungraded
1		Annulus	Bentonite/Grout	200.00	209.00				
1		Annulus	Crushed Aggregate	209.00	228.30				Ungraded
1	1	Casing	Galvinised Steel	-0.50	212.00	60	52		Screwed
1	1	Casing	Steel Stainless 3	-0.50	9.30	130	121		Welded - Butt, S: 224.00-228.00m
1	1	Opening	Slots - Horizontal	212.00	224.00	60		0	Casing - Machine Slotted, Steel - Seamless, Screwed, SL: 20.0mm, A: 10.00mm
1	1	Casing	Galvinised Steel	224.00	228.00	60	52		Screwed

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth	Duration (hr)	Salinity (mg/L)

							(m)		
73.00	74.00	1.00	Unknown			1.57		00:15:00	4.30
108.00	109.00	1.00	Unknown			0.46		00:15:00	4.38
222.00	223.00	1.00	Unknown			0.20		00:15:00	3.78

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	FILL	Fill	
3.00	9.00	6.00	CLAY	Clay	
9.00	30.00	21.00	SILTSTONE	Siltstone	
30.00	73.00	43.00	SHALE	Shale	
73.00	87.00	14.00	SANDSTONE	Sandstone	
87.00	90.00	3.00	SILTSTONE	Siltstone	
90.00	228.30	138.30	SANDSTONE	Sandstone	

Remarks

01/02/2014: Form A Remarks:
Coordinates provided on form A.

***** End of GW114887 *****

Appendix D

Public Register Search Results

Number	Name	Location	Type	Status	Issued date
12003	AGL UPSTREAM INVESTMENTS PTY LIMITED	MEDHURST ROAD, GILEAD, NSW 2560	POEO licence	Issued	22-Dec-04
5061	AUSTRALIAN PET BRANDS PTY LTD	12 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	19-Apr-00
11690	AUSTRALIAN PETRO CHEMICAL STORAGE PTY LTD	14 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	25-Oct-02
20062	BOORTMALT ASIA PACIFIC PTY LTD	11 STONNY BATTER ROAD, MINTO, NSW 2566	POEO licence	Issued	8-May-12
121	BORAL RESOURCES (NSW) PTY LTD	7 - 11 ESSEX STREET, MINTO, NSW 2566	POEO licence	No longer in force	22-Aug-00
7128	BOSCO MANUFACTURING PTY LTD	17-23 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	28-Sep-00
20797	BULK RECOVERY SOLUTIONS PTY LTD	16 KERR ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	18-Oct-16
21040	BURTON CONTRACTORS PTY LTD	Campbelltown Road Upgrade between East Town Centre Road and New MacDonald Road, CAMPBELLTOWN, NSW 2560	POEO licence	Issued	21-Feb-18
6651	CAMPBELLTOWN CITY COUNCIL	CAMPBELLTOWN CITY COUNCIL, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	8-May-00
1667	CAMPBELLTOWN CITY COUNCIL	THE PARKWAY, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	21-Jun-00
4623	CAMPBELLTOWN CITY COUNCIL	CNR RANGERS AND LYNWOOD ROADS, WEDDERBURN, NSW 2560	POEO licence	Surrendered	15-Nov-00
3523	CAPRAL LIMITED	57-65 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	14-Aug-00
11734	CLEANAWAY ORGANICS PTY LTD	APPIN ROAD, APPIN, NSW 2560	POEO licence	Surrendered	26-Sep-02
12231	CLEANAWAY ORGANICS PTY LTD	515 Appin Road, APPIN, NSW 2560	POEO licence	Surrendered	12-Aug-05
12547	CLEANAWAY ORGANICS PTY LTD	415-417 Appin Road, APPIN, NSW 2560	POEO licence	Surrendered	20-Sep-06
20076	CLEANWAY ENVIRONMENTAL SERVICES PTY LTD	12 Shaw Road, INGLEBURN, NSW 2565	POEO licence	Issued	12-Jun-12
4025	CLEARY BROS (BOMBO) PTY LTD	MEDHURST ROAD, MENANGLE PARK, NSW 2563	POEO licence	Surrendered	20-Dec-99
3489	CONSOLIDATED EXTRUSIONS MANAGEMENT PTY LTD	10 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	25-Nov-99
13087	CSR BUILDING PRODUCTS LIMITED	55 Stennett Road, INGLEBURN, NSW 2565	POEO licence	Issued	2-Jul-09
2692	CSR VIRIDIAN LIMITED	8 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	22-Aug-00
3109	DULMISON PTY LTD	BADGALLY ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	1-May-00
5971	ECO-CHEM PTY. LTD.	2/19 AERO ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	31-Mar-00
20696	ENVIRONMENTAL TREATMENT SOLUTIONS PTY LTD	7 Pembury Road, MINTO, NSW 2566	POEO licence	Issued	7-Apr-16
5463	FLINT GROUP AUSTRALIA PTY LTD	14A WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	19-Jan-00
4244	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	POEO licence	Issued	9-May-00
3138	FULTON HOGAN CONSTRUCTION PTY LTD	117 AIRDS ROAD, MINTO, NSW 2566	POEO licence	No longer in force	26-Jun-00
5966	GE BETZ PTY LIMITED	69 - 77 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	23-Jun-00
21358	GLASS RECYCLING (NSW) PTY LTD	5/1 SWAFFHAM RD , MINTO, NSW 2566	POEO licence	Issued	1-Apr-20
1341	HANSON CONSTRUCTION MATERIALS PTY LTD	66 BLAXLAND ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	24-May-00
6721	HCOA OPERATIONS (AUSTRALIA) PTY LIMITED	92-96 DUMARESQ ST, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	1-May-00
12577	HI-QUALITY ENVIRONMENTAL SERVICES PTY LTD	Medhurst Road, MENANGLE PARK, NSW 2563	POEO licence	Issued	6-Oct-06
3317	HY-TEC INDUSTRIES PTY LTD	LOT 16 SHAW ROAD, INGLEBURN, NSW 2565	POEO licence	No longer in force	21-Dec-99
12593	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	POEO licence	Issued	21-Dec-06
11525	INGHAMS ENTERPRISES PTY. LIMITED	6 Benson Road, INGLEBURN, NSW 2565	POEO licence	Issued	20-Nov-01
20616	INGLEBURN RECYCLING PTY LTD	8 HEALD ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	8-Dec-15
13425	JOHN HOLLAND PTY LTD	From the existing rail network at Glenfield west to Rossmore., GLENFIELD, NSW 2167	POEO licence	Surrendered	4-Aug-11
11796	KIRK ENGINEERING SERVICES (AUST) PTY LTD	6 AIRDS ROAD, MINTO, NSW 2566	POEO licence	No longer in force	29-Jun-05
4614	L A KENNETT ENTERPRISES PTY LTD	CAMBRIDGE AVE, GLENFIELD, NSW 2167	POEO licence	Issued	12-Apr-01
1292	LE-RO DIECASTERS PTY LTD	24-26 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	15-Aug-00
12125	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	POEO licence	Issued	8-Jun-04

Number	Name	Location	Type	Status	Issued date
4615	M & C PTY LTD	LOT 52 MONTORE ROAD, MINTO, NSW 2566	POEO licence	Surrendered	18-May-00
20638	MINTO RECYCLING PTY LTD	13 Pembury road, MINTO, NSW 2566	POEO licence	Surrendered	25-Nov-15
21435	ORIGIN ENERGY LPG LIMITED	26 PEMBURY ROAD, MINTO, NSW 2566	POEO licence	Issued	16-Jul-20
6925	OTIS ELEVATOR COMPANY PTY LTD	50 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	15-Aug-00
3530	PAX AUSTRALIA PTY LIMITED	9 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	15-Aug-00
2945	PRECISION VALVE AUSTRALIA PTY LTD	85 WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	No longer in force	26-Jun-00
20637	REDIRECT RECYCLING PTY LTD	3B WILLIAMSON ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	18-Mar-16
12041	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	POEO licence	Issued	15-Jan-04
11518	RESOURCE RECYCLING TECHNOLOGIES PTY. LTD.	3B Williamson Road, INGLEBURN, NSW 2565	POEO licence	Surrendered	22-Oct-01
1596	SADA SERVICES PTY LIMITED	214 SPRINGS ROAD, MOUNT ANNAN, NSW 2567	POEO licence	Issued	7-Sep-00
11977	SANDFIRE PTY LTD	UNIT3, 13 YORK ROAD, INGLEBURN, NSW 2565	POEO licence	Surrendered	19-Nov-03
5647	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	Issued	6-Jan-00
20022	SUPAGAS PTY LIMITED	5 Benson Road, INGLEBURN, NSW 2565	POEO licence	Issued	9-Mar-12
7457	SYDNEY SOUTH WEST AREA HEALTH SERVICE	THERRY ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	31-Mar-00
13348	SYDNEY WATER CORPORATION	Streets identified within Scheme Envelope as per Fig 1-3 of Appin/245, APPIN, NSW 2560	POEO licence	Surrendered	19-Jan-11
20097	TOLL TRANSPORT PTY. LIMITED	4 INGLIS ROAD, INGLEBURN, NSW 2565	POEO licence	Issued	16-Mar-12
12824	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Issued	14-Feb-08
5851	UNILEVER AUSTRALIA TRADING LIMITED	2 Magnum Place, MINTO, NSW 2566	POEO licence	Issued	14-Feb-00
7049	VOLVO TRUCK AUSTRALIA PTY LTD	91-101 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	12-Oct-00