REPORT TO

FDC CONSTRUCTION (NSW) PTY LTD ON BEHALF OF CHARTER HALL HOLDINGS PTY LTD

ON

PRELIMINARY SITE INVESTIGATION/LIMITED DETAILED SITE INVESTIGATION

FOR

PROPOSED HUNTINGWOOD PROCESSING EXPANSION

AT

65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Date: 9 August 2021
Ref: E34067PrptRev2

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DOCUMENT REVISION RECORD

Report Reference	Report Status	Report Date
E34067Prpt	Draft Report	17 June 2021
E34067Prpt	Final Report	23 June 2021
E34067PrptRev1	Final Report – revised to account for minor changes to the proposed development summary	21 July 2021
E34067PrptRev2	Final Report – revised to account for minor changes to the proposed development summary	9 August 2021

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Executive Summary

FDC Construction (NSW) Pty Ltd ('the client') on behalf of Charter Hall Holdings Pty Ltd commissioned JK Environments (JKE) to undertake a Preliminary (Stage 1) Site Investigation (PSI)/Limited Detailed (Stage 2) Site Investigation (DSI) for the proposed development at 65 Huntingwood Drive, Huntingwood, NSW ('the site'). The purpose of the investigation is to make a preliminary assessment of site contamination.

The site location is shown on the attached Figure 1 and the intrusive investigation was confined to the proposed development area in the north-western section of the site as shown on Figure 2. The proposed development areas shown on Figure 2 were delineated by JKE to capture the extent of the proposed works, including tree/vegetation removal.

We understand that this report will be used to support the lodgement of a State Significant Development Application (SSDA), with regards to State Environmental Planning Policy No.55 – Remediation of Land (1998) (SEPP55). The proposed development comprises the expansion of the existing food processing operations at the site. A basement carpark is proposed in the north-western section of the site. Further details are provided in Section 1.1.

The primary aims of the investigation were to provide preliminary information in relation to contamination and soil waste in order to support the SSDA. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use(s) via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil and groundwater contamination conditions via implementation of a preliminary sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Provide a preliminary waste classification for off-site disposal of soil;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further intrusive investigation and/or remediation is required.

The scope of work included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- Preparation of a CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The investigation included a review of historical information and sampling from six boreholes concurrently with the geotechnical investigation. The historical information indicated that the site was used for agricultural purposes (including grazing, market gardens and possibly dairy and poultry farming) prior to being redeveloped from the late 1980s onwards. The redevelopment included a large industrial facility associated with the Arnott's Biscuits processing and distribution centre.

The boreholes drilled for this investigation identified relatively deep fill (up to 4m deep), overlying residual silty clay soil and shale bedrock. A groundwater monitoring well was installed at one location, however groundwater was not encountered in the well to a depth of 6mBGL.

Soil samples analysed during the investigation did not identify contaminant concentrations above the SAC. However, the potential contamination sources/AEC trigger a need for a Detailed Site Investigation (DSI) based on the SEPP55 Planning Guidelines.

Due to the number of previous residential and agricultural structures that were built and demolished at the site throughout the 1900s, JKE is of the opinion that the potential for asbestos occurrence in the fill is relatively high. The DSI must include bulk field screening for asbestos in accordance with the NEPM 2013 requirements.

The investigation has not identified any actual or potential contamination issues that would be expected to preclude the proposed development of the site for the purpose described in Section 1.1. On this basis JKE is of the opinion that the site can be made suitable for the proposed development. A DSI is required to establish whether the site is suitable in its current state without the need for remediation, or whether remediation is required. A Sampling, analysis and Quality Plan (SAQP) must be prepared for the DSI prior to commencement. It would be reasonable for the DSI to be limited to the proposed development areas considering the scope of the SSDA.

A preliminary waste classification of 'general solid waste (non-putrescible)' was assigned to the fill. Further waste classification will be required prior to off-site disposal of waste generated during the proposed development works. We note that the contaminant concentrations in the fill samples were generally low in the context of the waste guidelines. Therefore, the fill material may be suitable for recycling at a licensed facility, or alternatively, assessed and classified for beneficial re-use under a Resource Recovery Order/Exemption (e.g. Excavated Natural Material – ENM). These options should be explored further considering the quantity of waste that is expected to be generated during the basement construction.

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

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Abbreviations

Asbestos Fines/Fibrous Asbestos	**AF/FA**
Ambient Background Concentrations	**ABC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Below Ground Level	**BGL**
Benzo(a)pyrene Toxicity Equivalent Factor	**BaP TEQ**
Bureau of Meteorology	**BOM**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Cation Exchange Capacity	**CEC**
Contaminated Land Management	**CLM**
Contaminant(s) of Potential Concern	**CoPC**
Chain of Custody	**COC**
Conceptual Site Model	**CSM**
Development Application	**DA**
Dial Before You Dig	**DBYD**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Investigation Level	**EIL**
Environmental Impact Statement	**EIS**
Ecological Screening Level	**ESL**
Environmental Management Plan	**EMP**
Environment Protection Authority	**EPA**
Fibre Cement Fragment(s)	**FCF**
General Approval of Immobilisation	**GAI**
Health Investigation Level	**HILs**
Health Screening Level	**HSL**
International Organisation of Standardisation	**ISO**
JK Environments	**JKE**
Lab Control Spike	**LCS**
Light Non-Aqueous Phase Liquid	**LNAPL**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**
Polychlorinated Biphenyls	**PCBs**
Per-and Polyfluoroalkyl Substances	**PFAS**
Photo-ionisation Detector	**PID**
Protection of the Environment Operations	**POEO**
Practical Quantitation Limit	**PQL**
Quality Assurance	**QA**
Quality Control	**QC**
Remediation Action Plan	**RAP**
Relative Percentage Difference	**RPD**
Site Assessment Criteria	**SAC**
Sampling, Analysis and Quality Plan	**SAQP**

Site Audit Statement	**SAS**
Site Audit Report	**SAR**
Site Specific Assessment	**SSA**
Source, Pathway, Receptor	**SPR**
Specific Contamination Concentration	**SCC**
State Significant Development Application	**SSDA**
Standard Penetration Test	**SPT**
Standing Water Level	**SWL**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Total Recoverable Hydrocarbons	**TRH**
Trip Spike	**TS**
Upper Confidence Limit	**UCL**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**
Virgin Excavated Natural Material	**VENM**
Volatile Organic Compounds	**VOC**
World Health Organisation	**WHO**
Work Health and Safety	**WHS**

Units

Litres	**L**
Metres BGL	**mBGL**
Metres	**m**
Millivolts	**mV**
Millilitres	**ml or mL**
Milliequivalents	**meq**
micro Siemens per Centimetre	**µS/cm**
Micrograms per Litre	**µg/L**
Milligrams per Kilogram	**mg/kg**
Milligrams per Litre	**mg/L**
Parts Per Million	**ppm**
Percentage	**%**

1 INTRODUCTION

FDC Construction (NSW) Pty Ltd ('the client') on behalf of Charter hall Holdings Pty Ltd commissioned JK Environments (JKE) to undertake a Preliminary (Stage 1) Site Investigation (PSI)/Limited Detailed (Stage 2) Site Investigation (DSI) for the proposed development at 65 Huntingwood Drive, Huntingwood, NSW ('the site'). The purpose of the investigation is to make a preliminary assessment of site contamination.

The site location is shown on the attached Figure 1 and the intrusive investigation was confined to the proposed development area in the north-western section of the site as shown on Figure 2. The proposed development areas shown on Figure 2 were delineated by JKE to capture the extent of the proposed works, including tree/vegetation removal.

We understand that this report will be used to support the lodgement of a State Significant Development Application (SSDA), with regards to State Environmental Planning Policy No.55 – Remediation of Land (1998)[1].

A geotechnical investigation was undertaken in conjunction with this PSI/limited DSI by JK Geotechnics (JKG). The results of the geotechnical investigation are presented in a separate report (Ref: 34067BCrptRev2)[2]. This report should be read in conjunction with the JKG report.

1.1 Proposed Development Details

The proposed development comprises the expansion of the existing food processing operations at the site. The development is outlined in the following table:

Table 1-1: Overview of Proposed Development

Element	Proposed
Site Preparation	• Removal of existing car parking, driveway and ancillary structures; • Vegetation clearing; • Excavation for car park and bulk earthworks and supporting structures; • Drainage connections; and • Land stabilisation.
Development summary	• Construction of a new processing facility (24,775sqm) with first-floor amenities in the northwest corner of the site; • Construction of a new ingredient silo building (1,000sqm) along the Huntingwood Drive frontage; • Construction of a storage building (270sqm) to the east of the existing building; • Construction of a new processing building (1,200sqm) and ingredient silo building (120sqm) to the south of the main facility; • Replacement of the existing on-site detention (OSD) basin with an OSD tank below the basement car park; and • Landscaped setbacks along both street frontages to screen the new processing facility and loading area.
Access and Parking	• New loading area above two levels of car parking (468 spaces) at the north-west corner of Huntingwood Drive and Brabham Drive. The basement will include

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

[2] Referred to as JKG report

Element	Proposed
	excavation up to approximately 3m deep to a finished floor level approximately to RL59m; • Trucks will utilise the existing access point adjacent to the eastern boundary of the site; and • The existing (westernmost) vehicle access to Huntingwood Drive will be retained and upgraded to provide access to the new basement car park.

1.2 Aims and Objectives

The primary aims of the investigation were to provide preliminary information in relation to contamination and soil waste in order to support the SSDA. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use(s) via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil and groundwater contamination conditions via implementation of a preliminary sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Provide a preliminary waste classification for off-site disposal of soil;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further intrusive investigation and/or remediation is required.

1.3 Scope of Work

The investigation was undertaken generally in accordance with a JKE proposal (Ref: EP54095P) of 7 May 2021 and written acceptance from the client of 10 May 2021. The scope of work included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- Preparation of a CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)[3], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[4] and SEPP55. A list of reference documents/guidelines is included in the appendices.

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

[4] Contaminated Land Management Act 1997 (NSW) (referred to as CLM Act 1997)

2 SITE INFORMATION

2.1 Background

JKG has previously carried out geotechnical investigations completed between 1988 and 1993 which comprised the drilling of 52 boreholes using both auger and rock coring techniques. Twenty-two (22) boreholes were drilled within or immediately adjacent to the current development areas. The boreholes typically encountered shallow fill or topsoil, overlying residual silty clay and shale (siltstone bedrock).

2.2 Site Identification

Table 2-1: Site Identification

Current Site Owner (certificate of title):	The Trust Company Limited
Site Address:	65 Huntingwood Drive, Huntingwood
Lot & Deposited Plan:	Lot 1 in DP 866251
Current Land Use:	Industrial (food processing and distribution)
Proposed Land Use:	Industrial (food processing and distribution)
Local Government Authority:	Blacktown Council
Current Zoning:	IN2 – Light Industrial (Blacktown Local Environmental Plan 2015)
Site Area (m^2) (approx.):	164,000 (16.4ha)
RL (AHD in m) (approx.):	60
Geographical Location (decimal degrees) (approx.):	Latitude: -33.797434 Longitude: 150.871965
Site Location Plan:	Figure 1
Sample Location Plan:	Figure 2

2.3 Site Location and Regional Setting

The site is located within the Huntingwood Industrial Estate, 32km west of the Sydney Central Business District and 4km south of Blacktown Town Centre. The site is situated along the southern boundary of Huntingwood, bordering the Western Motorway (M4) to the south, Huntingwood Drive to the north and Brabham Drive to the west. The site is located approximately 1.6km to the north-west of the Prospect Reservoir.

2.4 Topography

The regional topography is characterised by a west facing hillside/slope. The site generally slopes towards the west at approximately 3°-4°, in sympathy with the regional topography. Parts of the site appear to have been levelled to account for the slope and accommodate the existing development.

2.5 Site Inspection

A walkover inspection of the site was undertaken by JKE on 14 and 20 May 2021. The inspection was limited to accessible parts of the proposed development areas and immediate surrounds. An internal inspection of buildings was not undertaken and the southern area of the site (i.e. south of the southern-most proposed development area) was not inspected.

A summary of the inspection findings is outlined in the following subsections:

2.5.1 Current Site Use and/or Indicators of Former Site Use

At the time of the inspection, the site was occupied by the existing Arnott's Biscuits food processing (bakery) facility. The site included manufacturing facilities, administration offices, staff amenities, maintenance areas and logistical support facilities (i.e. loading docks and driveways). Outdoor areas included landscaped areas, staff/visitor car parks and outdoor recreational area including tennis and basketball courts and grassed sports oval.

2.5.2 Buildings, Structures and Roads

The site was occupied by a large 'L' shaped multi-storey building located across the eastern and southern areas. This building was used as the processing/packaging facility of Arnott's Biscuits. Other buildings included a smaller rectangular shaped building located within the central area of the site which was used as an amenities block, and an engineering/maintenance building located off the south-eastern corner of the main 'L' shaped building. The engineering building was of steel construction founded on a concrete pavement. All other buildings were of concrete and steel construction with corrugated iron roof. No existing basements were observed within the site.

Asphaltic concrete paved areas were located centrally at the site (within the proposed development area) which included a larger staff carpark and an adjacent smaller visitor carpark located to the west of the main manufacturing building. Other asphaltic paved areas included internal access roads and associated concrete paved footpaths accessible from Huntingwood Drive to the north and a roundabout feature located to the south-east of the staff carpark. All paved areas appeared in good condition, with no obvious areas of settlement or cracking observed.

2.5.3 Boundary Conditions, Soil Stability and Erosion

The site was bound by steel security fencing that was approximately 2m high. No areas of significant erosion or soil instability were observed at the site.

2.5.4 Presence of Drums/Chemical Storage and Waste

Waste including general rubbish and recyclables were observed in appropriate storage bins positioned along the side of the central amenities building. Minor (suspected) fuel and gas storage were observed to be respectively stored in fireproof cabinets and steel cages located adjacent to the engineering building. This included 1-2 jerry cans and small gas cylinders. This area was on top of the concrete pavement and there was no staining observed, however, it is noted this area was only observed from a distance beyond the security fence. Considering the minor nature of the storage area, the storage was not considered to be a suspected source of potential contamination.

Internal areas of the remaining onsite buildings were not accessible at the time of the inspection.

2.5.5 Evidence of Cut and Fill

The site appeared to have been cut within the north-western area to accommodate the existing grassed oval (which is understood to also serve as a detention basin). A soil batter approximately 1.5m high was observed along parts of the northern and western site boundaries. Additionally, the eastern area of the site in the area of the main manufacturing building was generally elevated from the majority of the site levels with a localised slope towards the west at approximately 11°-12° that extended from the floor level of the main manufacturing building. Other localised areas of filling (i.e. mounding) were also observed within landscaped areas of the site.

2.5.6 Visible or Olfactory Indicators of Contamination (odours, spills etc)

No visible or olfactory indicators of contamination such as odours or spills were observed within the accessible areas of the site during the inspection.

2.5.7 Drainage and Services

Surface runoff from the site was expected to flow towards the west in keeping with the site topography. The grassed oval was understood to be a detention basin. Local stormwater drains were observed within paved areas of the site and along road curb gutters. Surface runoff received by onsite stormwater infrastructure was assumed to discharge into the regional stormwater system.

2.5.8 Sensitive Environments

Sensitive environments such as wetlands, ponds, creeks or extensive areas of natural vegetation were not identified on site or in the immediate surrounds.

2.5.9 Landscaped Areas and Visible Signs of Plant Stress

Exotic grasses, shrubs and native trees up to approximately 10m high were located within land scaped areas of the site located throughout the open areas of the site, with the exception of paved areas (i.e. the carparks and internal access roads). No signs of dieback or phyto-toxic stress were noted based on a cursory examination of the onsite vegetation.

2.6 Surrounding Land Use

During the site inspection, JKE observed the following land uses in the immediate surrounds:

- North – Huntingwood Drive and commercial warehouse properties beyond Huntingwood Drive;
- South – Arnott's Biscuits distribution centre (activities included truck operations and food product distribution);
- East – Neighbouring commercial property including endeavour energy (commercial offices) and associated carparks; and
- West – Brabham Drive and large warehouse property (Hunter & northern Logistics).

JKE did not observe any land uses in the immediate surrounds that were identified as potential contamination sources for the site.

2.7 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the investigation in order to establish whether any major underground services exist at the site or in the immediate vicinity that could act as a preferential pathway for contamination migration. There were no major services shown on these plans (i.e. such as major sewers etc) that were considered to be potential preferential pathways for contamination migration.

Various local services including the stormwater network were observed during the site inspection as documented previously. These types of services may act as potential preferential pathways for contamination migration and are not shown on the DBYD plans.

2.8 Section 10.7 Planning Certificate

The section 10.7 (2 and 5) planning certificates were reviewed for the investigation. Copies of the certificates are attached in the appendices. A summary of the relevant information is outlined below:

- The land is not deemed to be: significantly contaminated; subject to a management order; subject of an approved voluntary management proposal; or subject to an on-going management order under the provisions of the CLM Act 1997;
- The land is not the subject of a Site Audit Statement (SAS);
- The land does not include or comprise critical habitat; and
- The land is not located in a conservation area and does not contain an item of environmental heritage.

The Section 10.7 Certificate also notes the following with regards to contaminated land:

"Council has adopted a Contaminated Lands Policy and an Asbestos Policy which may restrict development on the subject land.

The Land Contamination Policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. The Asbestos Policy applies where land contains, or is likely to have contained in the past, buildings or structures that were erected prior to the banning of asbestos. Both policies should be considered in the context of relevant State legislation and guidelines.

Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land."

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information was reviewed for the investigation. The information was sources from the Lotsearch report attached in the appendices. The report indicates that the site is underlain by Bringelly Shale of the Wianamatta Group, which typically consists of shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff.

3.2 Acid Sulfate Soil (ASS) Risk and Planning

The site is not located in an ASS risk area according to the risk maps prepared by the Department of Land and Water Conservation.

3.3 Hydrogeology

Hydrogeological information presented in the Lotsearch report indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of low to moderate productivity. There were three registered bores within the report buffer of 1,000m. These were all located over 1km to the north-east of the site and were utilised for monitoring purposes.

The desktop information reviewed for the investigation indicated that the subsurface conditions at the site are likely to consist of relatively low permeability (residual) soils overlying shallow bedrock. The potential for viable groundwater abstraction and use of groundwater under these conditions is considered to be low. There is a reticulated water supply in the area and consumption of groundwater is not expected to occur. Use of groundwater is not proposed as part of the development.

Considering the local topography and surrounding land features, JKE anticipate groundwater to flow towards the west.

3.4 Receiving Water Bodies

Surface water bodies were not identified in the immediate vicinity of the site. The closest, down-gradient surface water body appeared to be Eastern Creek, located approximately 950m to the west of the site.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs

Historical aerial photographs were reviewed for the investigation. The information was sourced for the Lotsearch report. JKE has reviewed the photographs and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1930	**On-site:** The site appeared to be largely vacant, possibly used for grazing purposes. There appeared to be at least one structure located in the central eastern section of the site and the land associated with this property may have been utilised for market garden purposes. **Off-site:** The surrounds appeared similar to the site and were most likely utilised for grazing and market garden purposes.
1943	The site and surrounding land uses appeared generally similar to the previous photograph. There were at least three additional, rectangular shed-type structures in the central and central-eastern sections of the site.
1949	The site and surrounding land uses appeared generally similar to the previous photograph. There were a number of residential-type structures and ancillary structures (i.e. sheds) in the north-western section of the site. Market gardens were also visible in the north-western section of the site.
1956 1961	The site and surrounding land uses appeared generally similar to the previous photograph. Demolition of several on-site structures had occurred, and several new structures were visible in the northern areas of the site.
1965 1970 1978 1982 1986	The site and surrounding land uses appeared generally similar to the previous photograph. Market garden-type land use had intensified in the northern half of the site from 1965 onwards. There were a number of additional structures present (likely to be residences and associated sheds) and some previously visible structures were demolished throughout this period.
1991	**On-site:** The southern part of the site had been redeveloped and included a large, warehouse-type industrial building, two smaller buildings to the west of the larger building, and associated car park areas. Two circular structures (potentially above ground water tanks) were located towards the south-eastern corner of the site. A number of the previously visible structures in the central and northern parts of the site had been demolished, however numerous structures remained. It appeared that the market garden activities had ceased in the central/northern site areas. **Off-site:** Grazing/market garden-type uses appeared also to have ceased in the surrounds. The area to the east of the site appeared to be under development and this area included a relatively large building and car park.
1994	**On-site:** The southern part of the site appeared generally similar to the previous photograph. The majority of the structures had been removed from the remainder of the site and these areas appeared to be vacant and grassed. **Off-site:** Further commercial/industrial-type redevelopment had occurred to the east and north of the site.

Year	Details
2000 2009	**On-site:** The central and northern parts of the site had been redeveloped by 2000 and the overall site layout appeared generally consistent with the current Arnott's Biscuits facility. **Off-site:** Further commercial/industrial-type redevelopment had occurred to the north of the site.
2015 2020	**On-site:** The site appeared generally similar to the previous photograph, with the exception of an addition to the warehouse/building in the south-western section of the site. **Off-site:** Further commercial/industrial-type redevelopment had occurred in the surrounds in 2015, most notably to the west and south of the site.

4.2 Review of Historical Land Title Records

Historical land title records were reviewed for the investigation. The record search was undertaken by InfoTrack. Copies of the title records are attached in the appendices. The title records indicated the following:

- The site formerly comprised a number of individual lots. These lots were owned by various individuals with occupations listed as farmers, dairy farmers, market gardeners and poulterers from the early 1900s up until around 1980. These occupations were consistent with the suspected land uses identified in the aerial photographs during this period;
- The occupation of one proprietor was a dry cleaner (1957 to 1971). Based on an assessment of the aerial photographs for this section of the site during that period, it is considered unlikely that dry cleaning activities occurred on site; and
- Site ownership was progressively transferred to corporate entities from around 1989.

It is noted that Table 1 of the SEPP55 Planning Guidelines (1998)[5] list agricultural/horticultural activities as activities that may cause contamination.

4.3 Review of Council Records

A search of council records is currently underway. Should the results alter the CSM they will be made available when received.

4.4 SafeWork NSW Records

SafeWork NSW records in relation to the registered storage of dangerous goods were reviewed for the investigation. Copies of relevant documents are attached in the appendices. The records identified various storage areas, most of which related to the storage of minor quantities of chemicals in above-ground areas. These included above ground tanks with sodium hydroxide, and roofed stores, flammable liquid cabinets and corrosive liquid cabinet containing acetylene and liquefied petroleum gas, ethanol, hydrochloric acid and sodium hydroxide within the main 'L' shaped manufacturing building. These areas/chemicals were not considered to pose a risk in the context of land contamination.

The records identified two 55,000L underground storage tanks (USTs) that were listed as containing diesel. The precise location of these USTs was not ascertainable from the records, however, they appeared to be

[5] DUAP/EPA, (1998). *Managing Land Contamination Planning Guidelines SEPP55-Remediation of Land.* (referred to as the SEPP55 Planning Guidelines)

located in the south-western section of the site (see Figure 2 in Appendix A). The USTs are considered to be a potential source of contamination in general, however, it is noted that they are not located in close proximity to the proposed development areas.

4.5 NSW EPA and Department of Defence Records

A review of the NSW EPA and Department of Defence databases was undertaken for the investigation. Information from the following databases were sourced from the Lotsearch report:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of sites notified in accordance with the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[6];
- Licensed activities under the Protection of the Environment Operations Act (1997)[7];
- Sites being investigated under the NSW EPA per-and polyfluoroalkyl substances (PFAS) investigation program;
- Sites being investigated by the Department of Defence for PFAS contamination; and
- Sites being managed by the Department of Defence for PFAS contamination.

The search included the site and surrounding areas in the report buffer. There were no records pertaining to the site. The records did not identify any nearby off-site areas that were deemed to represent potential off-site sources of contamination. The POEO licence for Cookers Bulk Oil Systems located approximately 185m to the east of the site relates to a cooking oil distributer and is not of concern.

4.6 Historical Business Directory and Additional Lotsearch Information

Historical business records and other relevant information were reviewed for the investigation. The information was sourced from the Lotsearch report. Many of the records related to road matches for business along the Great Western Highway to the north of the site. On this basis, there were no records of interest.

4.7 Summary of Site History Information

A time line summary of the historical land uses and activities is presented in the following table. The information presented in the table is based on a weight of evidence assessment of the site history documentation and observations made by JKE.

Table 4-2: Summary of Historical Land Uses / Activities

Year(s)	On-site - Potential Land Use / Activities	Off-site - Potential Land Use / Activities
At least 1930 to 1961	Agricultural-type land uses were evident, likely including grazing and market gardens, and possibly dairy and poultry farming.	Agricultural-type land uses were evident, likely including grazing and market gardens.

[6] NSW EPA, (2015). *Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997.* (referred to as Duty to Report Contamination)

[7] Protection of the Environment Operations Act 1997 (NSW) (referred to as POEO Act 1997)

Year(s)	On-site - Potential Land Use / Activities	Off-site - Potential Land Use / Activities
	Construction and demolition of various structures occurred, including residential and agricultural-type structures.	
1960s to mid-1980s	Market garden-type land use intensified during this period. Construction and demolition of various associated structures occurred.	As above.
Late 1980s to present	The southern part of the site was redeveloped for industrial-type use some time between 1986 and 1991, with the remainder of the site redeveloped between 1994 and 2000. The industrial use was associated with food manufacturing/ processing (Arnott's Biscuits). Demolition of the remaining residential and agricultural structures occurred. Substantial earthworks likely occurred to construct the industrial facility.	Commercial/industrial redevelopment of the surrounds occurred progressively.

4.8 Integrity of Site History Information

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

5 CONCEPTUAL SITE MODEL

NEPM (2013) defines a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM for the site is presented in the following sub-sections and is based on the site information (including the site inspection information) and the review of site history information. Reference should also be made to the figures attached in the appendices.

A review of the CSM in relation to source, pathway and receptor (SPR) linkages has been undertaken as part of the Tier 1 risk assessment process, as outlined in Section 10.

5.1 Potential Contamination Sources/AEC and CoPC

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

Table 5-1: Potential (and/or known) Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material – The site appears to have been historically filled to achieve the existing levels. The fill may have been imported from various sources and could be contaminated. It is also possible that the site was filled with site-won soils. These soils could have been impacted by hazardous building materials (e.g. lead and asbestos) from the demolition of historical structures.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Fuel storage – The dangerous goods records identified two USTs for diesel storage in the south-western section of the site (see Figure 2). Based on the suspected location of the USTs, they are unlikely to have impacted the proposed development areas, however, they still represent an AEC.	TRH, BTEX and naphthalene
Historical agricultural use – The site appears to have been used for grazing and market garden purposes (and possibly dairy and poultry farming). This could have resulted in contamination across the site via use of machinery, application of pesticides and building/ demolition of various structures. Irrigation pipes made from asbestos cement may also be associated with this AEC.	Heavy metals, TRH, PAHs, OCPs, PCBs and asbestos JKE note that OCPs only became commercially available in the 1940s. Prior to this time pesticides were predominantly heavy metal compounds.
Use of pesticides – Pesticides may have been used beneath the buildings and/or around the site for typical pest control applications.	Heavy metals and OCPs
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. These materials may also be present in the existing buildings/ structures on site.	Asbestos, lead and PCBs

JKE note that herbicides have not been included as CoPC as herbicides are not commonly found at residual concentrations likely to pose a risk to human health or the environment (NSW DEC 2005, *Guidelines for Assessing Former Orchards and Market Gardens*).

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

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

Table 5-2: CSM

Potential mechanism for contamination	Potential mechanisms for contamination include: • Fill material – importation of impacted material, 'top-down' impacts (e.g. placement of fill, leaching from surficial material etc), or sub-surface release (e.g. impacts from buried material); • Fuel storage – 'top-down', spills (e.g. during filling of the tanks and/or dispensing activities), or sub-surface release (e.g. from leaking tank or pipework); • Historical agricultural use – 'top-down' and spills (e.g. application of pesticides, refuelling or repairing machinery, and other activities at the ground surface level); • Use of pesticides – 'top-down' and spills (e.g. during normal use, application and/or improper storage); and • Hazardous building materials – 'top-down' (e.g. demolition resulting in surficial impacts in unpaved areas).
Affected media	Soil and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site users (including adults in an occupational scenario), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users in commercial/industrial areas. Ecological receptors include terrestrial organisms and plants within unpaved areas.
Potential exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and future use of the site. Potential exposure pathways for ecological receptors include primary/direct contact and ingestion. Exposure during future site use could occur via direct contact with soil in unpaved areas such as gardens, inhalation of airborne asbestos fibres during soil disturbance, inhalation of vapours within enclosed spaces such as buildings and basements, or exposure to groundwater in a drained basement scenario.
Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into the proposed basement and/or building (either from soil contamination or volatilisation of contaminants from groundwater); • Contact (dermal, ingestion or inhalation) with exposed soils in landscaped areas and/or unpaved areas; and

	• Migration of groundwater into the basement in a drained basement scenario.
Presence of preferential pathways for contaminant movement	On-site underground service infrastructure such as the stormwater network may act as preferential pathways for contaminant migration.

6 SAMPLING, ANALYSIS AND QUALITY PLAN

6.1 Data Quality Objectives (DQO)

Data Quality Objectives (DQOs) were developed to define the type and quality of data required to achieve the project objectives outlined in Section 1.2. The DQOs were prepared with reference to the process outlined in Schedule B2 of NEPM (2013). The seven-step DQO approach for this project is outlined in the following sub-sections.

The DQO process is validated in part by the Data Quality Assurance/Quality Control (QA/QC) Evaluation. The Data (QA/QC) Evaluation is summarised in Section 8.1 and the detailed evaluation is provided in the appendices.

6.1.1 Step 1 - State the Problem

The CSM identified potential sources of contamination/AEC at the site that may pose a risk to human health and the environment. Investigation data is required to assess the contamination status of the site, assess the risks posed by the contaminants in the context of the proposed development, and assess whether remediation is required. This information will be considered by the consent authority in exercising its planning functions in relation to the development proposal.

A waste classification is required prior to off-site disposal of excavated soil/bedrock.

6.1.2 Step 2 - Identify the Decisions of the Study

The objectives of the investigation are outlined in Section 1.2. The decisions to be made reflect these objectives and are as follows:

- Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?
- Are any results above the SAC?
- Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

6.1.3 Step 3 - Identify Information Inputs

The primary information inputs required to address the decisions outlined in Step 2 include the following:

- Existing relevant environmental data from previous reports;
- Site information, including site observations and site history documentation;
- Sampling of potentially affected media, including soil and groundwater;
- Observations of sub-surface variables such as soil type, photo-ionisation detector (PID) concentrations, odours and staining, and groundwater physiochemical parameters;
- Laboratory analysis of soils and groundwater for the CoPC identified in the CSM; and
- Field and laboratory QA/QC data.

6.1.4 Step 4 - Define the Study Boundary

The sampling will be confined to the site boundaries as shown in Figure 2, but will be focussed on the main development area in the north-western section of the site. The sampling and will be limited vertically to a depth of approximately 0.5-1m into the natural soil for contamination sampling purposes (spatial boundary). The groundwater investigation will be limited to a depth of 6mBGL.

The sampling was completed 14 May 2021 (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

6.1.5 Step 5 - Develop an Analytical Approach (or Decision Rule)

6.1.5.1 Tier 1 Screening Criteria

The laboratory data will be assessed against relevant Tier 1 screening criteria (referred to as SAC), as outlined in Section 7. Exceedances of the SAC do not necessarily indicate a requirement for remediation or a risk to human health and/or the environment. Exceedances are considered in the context of the CSM and valid SPR-linkages.

For this investigation, the individual results have been assessed as either above or below the SAC. Statistical evaluation of the dataset via calculation of mean values and/or 95% upper confidence limit (UCL) values has not been undertaken due to the spatial distribution of the data and the number of samples submitted for analysis (i.e. the sample design was non-probabilistic).

6.1.5.2 Field and Laboratory QA/QC

Field QA/QC included analysis of inter-laboratory duplicates, intra-laboratory duplicates, trip spike, trip blank and rinsate samples. Further details regarding the sampling and analysis undertaken, and the acceptable limits adopted, is provided in the Data Quality (QA/QC) Evaluation in the appendices.

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the attached laboratory reports. These criteria were developed and implemented in accordance with the laboratory's National Association of Testing Authorities, Australia (NATA) accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

In the event that acceptable limits are not met by the laboratory analysis, other lines of evidence are reviewed (e.g. field observations of samples, preservation, handling etc) and, where required, consultation with the laboratory is undertaken in an effort to establish the cause of the non-conformance. Where uncertainty exists, JKE typically adopt the most conservative concentration reported (or in some cases, consider the data from the affected sample as an estimate).

6.1.5.3 Appropriateness of Practical Quantitation Limits (PQLs)

The PQLs of the analytical methods are considered in relation to the SAC to confirm that the PQLs are less than the SAC. In cases where the PQLs are greater than the SAC, a discussion of this is provided.

6.1.6 Step 6 – Specify Limits on Decision Errors

To limit the potential for decision errors, a range of quality assurance processes are adopted. A quantitative assessment of the potential for false positives and false negatives in the analytical results is undertaken with reference to Schedule B(3) of NEPM (2013) using the data quality assurance information collected.

Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. For this investigation, the null hypothesis has been adopted which is that, there is considered to be a complete SPR linkage for the CoPC identified in the CSM unless this linkage can be proven not to (or unlikely to) exist. The null hypothesis has been adopted for this investigation. Quantitative limits on decision errors have not been established as the sampling plan is non-probabilistic.

6.1.7 Step 7 - Optimise the Design for Obtaining Data

The most resource-effective design will be used in an optimum manner to achieve the investigation objectives. Adjustment of the investigation design can occur following consultation or feedback from project stakeholders. For this investigation, the design was optimised via sampling from the geotechnical borehole locations.

The sampling plan and methodology are outlined in the following sub-sections.

6.2 Soil Sampling Plan and Methodology

The soil sampling plan and methodology adopted for this investigation is outlined in the table below:

Aspect	Input
Sampling Density	Samples were collected from six locations as shown on the attached Figure 2. The sampling density was not designed to meet the minimum sampling density for hotspot identification, as outlined in the NSW EPA Contaminated Sites Sampling Design Guidelines (1995)[8].
Sampling Plan	The sampling locations were placed on a judgemental sampling plan and were broadly positioned for site coverage over the main proposed development area, in the north-western section of the site. Sampling did not occur in the vicinity of the smaller warehouse proposed development area in the south-eastern section of the site.
Set-out and Sampling Equipment	Sampling locations were set out using a tape measure. In-situ sampling locations were checked for underground services by an external contractor prior to sampling. Samples were collected using a drill rig equipped with spiral flight augers. Soil samples were obtained from a Standard Penetration Test (SPT) split-spoon sampler, or directly from the auger when conditions did not allow use of the SPT sampler.
Sample Collection and Field QA/QC	Soil samples were obtained on 14 May 2021 in accordance with standard field procedures. Soil samples were collected from the fill and natural profiles based on field observations. The sample depths are shown on the logs attached in the appendices.

[8] NSW EPA, (1995), *Contaminated Sites Sampling Design Guidelines.* (referred to as EPA Sampling Design Guidelines 1995)

Aspect	Input
	Samples were placed in glass jars with plastic caps and teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. During sampling, soil at selected depths was split into primary and duplicate samples for field QA/QC analysis. The field splitting procedure included splitting the soil by hand and alternately filling the sampling containers to obtain a representative split sample.
Field Screening	A portable Photoionisation Detector (PID) fitted with a 10.6mV lamp was used to screen the samples for the presence of volatile organic compounds (VOCs). PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. VOC data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases. PID calibration records are maintained on file by JKE.
Decontami-nation and Sample Preservation	Sampling personnel used disposable nitrile gloves during sampling activities. Re-usable sampling equipment was decontaminated using Decon and potable water. Soil samples were preserved by immediate storage in an insulated sample container with ice or ice bricks. On completion of the fieldwork, the samples were stored temporarily in fridges in the JKE warehouse before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard chain of custody (COC) procedures.

6.3 Groundwater Sampling Plan and Methodology

One groundwater monitoring well (MW103) was installed in BH103 to a depth of 6mBGL. The well installation details are shown on the respective borehole log attached in the appendices. The well was dry on the date of installation and remained dry when we returned on 20 May 2021. On this basis, groundwater sampling did not occur.

6.4 Analytical Schedule

Analysis was targeted at the fill samples, generally with two samples per borehole (covering representative fill profiles) analysed for the CoPC associated with fill.

6.4.1 Laboratory Analysis

Samples were analysed by an appropriate, NATA Accredited laboratory using the analytical methods detailed in Schedule B(3) of NEPM 2013. Reference should be made to the laboratory reports attached in the appendices for further details.

Table 6-1: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicates, trip blanks, trip spikes and field rinsate samples)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	269253
Inter-laboratory duplicates	Envirolab Services Pty Ltd VIC, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	25961

7 SITE ASSESSMENT CRITERIA (SAC)

The SAC were derived from the NEPM 2013 and other guidelines as discussed in the following sub-sections. The guideline values for individual contaminants are presented in the attached report tables and further explanation of the various criteria adopted is provided in the appendices.

Soil data were compared to relevant Tier 1 screening criteria in accordance with NEPM (2013) as outlined below.

7.1 Human Health

- Health Investigation Levels (HILs) for a 'commercial/industrial' exposure scenario (HIL-D);
- Health Screening Levels (HSLs) for a 'commercial/industrial' exposure scenario (HSL-D). HSLs were calculated based on conservative assumptions including a 'sand' type and a depth interval of 0m to 1m;
- HSLs for direct contact presented in the CRC Care Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document (2011)[9]; and
- Asbestos was assessed on the basis of presence/absence (i.e. detected or not detected).

7.2 Environment (Ecological – terrestrial ecosystems)

- Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for an 'urban residential and public open space' (URPOS) exposure scenario. The criterion for benzo(a)pyrene has been increased from the value presented in NEPM (2013) based on the Canadian Soil Quality Guidelines[10];
- ESLs were adopted based on the soil type;
- EILs for selected metals were calculated based on the most conservative added contaminant limit (ACL) values presented in Schedule B(1) of NEPM (2013) and published ambient background concentration (ABC) values presented in the document titled Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (1995)[11]. This method is considered to be adequate for the Tier 1 screening.

7.3 Management Limits for Petroleum Hydrocarbons

Management limits for petroleum hydrocarbons (as presented in Schedule B1 of NEPM 2013) were considered.

7.4 Waste Classification

Data for the waste classification assessment were assessed in accordance with the Waste Classification Guidelines, Part 1: Classifying Waste (2014)[12] as outlined in the following table:

[9] Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC Care), (2011). Technical Report No. 10 - *Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document*

[10] Canadian Council of Ministers of the Environment, (1999). *Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)* (referred to as the Canadian Soil Quality Guidelines)

[11] Olszowy, H., Torr, P., and Imray, P., (1995), *Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4*. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

[12] NSW EPA, (2014). *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

Table 7-1: Waste Categories

Category	Description
General Solid Waste (non-putrescible)	• If Specific Contaminant Concentration (SCC) ≤ Contaminant Threshold (CT1) then Toxicity Characteristics Leaching Procedure (TCLP) not needed to classify the soil as general solid waste; and • If TCLP ≤ TCLP1 and SCC ≤ SCC1 then treat as general solid waste.
Restricted Solid Waste (non-putrescible)	• If SCC ≤ CT2 then TCLP not needed to classify the soil as restricted solid waste; and • If TCLP ≤ TCLP2 and SCC ≤ SCC2 then treat as restricted solid waste.
Hazardous Waste	• If SCC > CT2 then TCLP not needed to classify the soil as hazardous waste; and • If TCLP > TCLP2 and/or SCC > SCC2 then treat as hazardous waste.
Virgin Excavated Natural Material (VENM)	Natural material (such as clay, gravel, sand, soil or rock fines) that meet the following: • That has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial mining or agricultural activities; • That does not contain sulfidic ores or other waste; and • Includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved from time to time by a notice published in the NSW Government Gazette.

8 RESULTS

8.1 Summary of Data (QA/QC) Evaluation

The data evaluation is presented in the appendices. In summary, JKE are of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

8.2 Subsurface Conditions

A summary of the subsurface conditions encountered during the investigation is presented in the following table. Reference should be made to the borehole logs attached in the appendices for further details.

Table 8-1: Summary of Subsurface Conditions

Profile	Description
Pavement	Asphaltic Concrete (AC) pavement was encountered at the surface in BH106. The AC was approximately 0.03m thick.
Fill	Fill was encountered at the surface or beneath the pavement in all boreholes and extended to a maximum depth of 4mBGL. The fill depths are shown on Figure 2. The fill depths indicated that the site had been extensively filled since the previous JKG investigations in the 1980s-1990s. The fill typically comprised silty clay soils with gravels (sandstone, ironstone and siltstone). Root fibres were observed in the fill in BH103 and BH105. There were no staining or odours in the fill.
Natural Soil	Residual silty clay soil was encountered beneath the fill and extended to depths ranging from 2.7mBGL to 5.7mBGL. There were no staining or odours in the natural soil.
Bedrock	Siltstone bedrock was encountered beneath the natural soil and extended to the termination depth of each borehole. There were no staining or odours in the bedrock.
Groundwater	Groundwater seepage was not encountered in the boreholes during drilling. All boreholes remained dry on completion of drilling and a short time after.

8.3 Field Screening

PID soil sample headspace readings are presented in attached report tables and the COC documents attached in the appendices. The results ranged from 0ppm to 0.2ppm isobutylene equivalents which indicated a lack of PID detectable VOCs. PID readings in the MW103 headspace were also low.

8.4 Soil Laboratory Results

The soil laboratory results were assessed against the SAC presented in Section 7. Individual SAC are shown in the report tables attached in the appendices. All results were below the SAC. All waste classification results were below the CT1 thresholds.

9 WASTE CLASSIFICATION ASSESSMENT

9.1 Preliminary Waste Classification of Fill

Based on the results of the waste classification assessment, and at the time of reporting, a preliminary classification of **General Solid Waste (non-putrescible)** is assigned to the fill. Further investigation and assessment are required to confirm the waste classification prior to off-site disposal.

We note that the contaminant concentrations in the fill samples were generally low in the context of the waste guidelines. Therefore, the fill material may be suitable for recycling at a licensed facility, or alternatively, assessed and classified for beneficial re-use under a Resource Recovery Order/Exemption (e.g. Excavated Natural Material – ENM). These options should be explored further considering the quantity of waste that is expected to be generated during the basement construction.

9.2 Classification of Natural Soil and Bedrock

The investigation did not include analysis of natural soil or bedrock. Further investigation and waste classification of the natural clay and siltstone would be required in order to assign a waste classification to this material. Based on the low contaminant concentrations in the overlying fill, the natural soil and bedrock is expected to classify as VENM for waste disposal and re-use purposes.

10 DISCUSSION

10.1 Contamination Sources/AEC and Potential for Site Contamination

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

- Fill;
- Fuel storage (in USTs);
- Historical agricultural use;
- Use of pesticides; and
- Hazardous building materials.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, JKE are of the opinion that there is a potential for site contamination. The historical assessment indicated that the site has been extensively used for agricultural/horticultural activities which are listed in Table 1 of the SEPP55 Planning Guidelines as activities that may cause contamination. This triggers a need for a Detailed Site Investigation (DSI) under SEPP55.

10.2 Tier 1 Risk Assessment and Review of CSM

For a contaminant to represent a risk to a receptor, the following three conditions must be present:

1. Source – The presence of a contaminant;
2. Pathway – A mechanism or action by which a receptor can become exposed to the contaminant; and
3. Receptor – The human or ecological entity which may be adversely impacted following exposure to contamination.

If one of the above components is missing, the potential for adverse risks is relatively low.

Based on the analytical results, the contaminant levels in the samples analysed were below the SAC and therefore were not detected at concentrations that could pose a risk in the context of the proposed land use. Potential sources of contamination do exist however, and the preliminary investigation did not fully characterise these risks.

In addition to the identified AEC/potential sources of contamination, the occurrence of deep fill at the site warrants further consideration in relation to the potential occurrence of hazardous ground gases such as methane and carbon dioxide. This will need to occur as part of the DSI.

Due to the number of previous residential and agricultural structures that were built and demolished at the site throughout the 1900s, JKE is of the opinion that the potential for asbestos occurrence in the fill is relatively high. The boreholes drilled for this investigation did not identify an obvious former fill or topsoil layer beneath the overlying fill that was used during the site redevelopment. On this basis, it is possible that the original fill/topsoil was mixed in with other soils as part of the overall cut/fill earthworks prior to construction of the buildings. The DSI must include bulk field screening for asbestos in accordance with the NEPM 2013 requirements.

10.3 Decision Statements

The decision statements are addressed below:

> *Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?*

Yes, as noted in Section 10.1. Further consideration of hazardous ground gases such as methane and carbon dioxide is also warranted due to the presence of deep fill.

> *Are any results above the SAC?*

No.

> *Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?*

The investigation has not identified any actual or potential contamination issues that would be expected to preclude the proposed development of the site for the purpose described in Section 1.1. A DSI is required to establish whether the site is suitable in its current state without the need for remediation, or whether remediation is required.

10.4 Data Gaps

The primary data gaps relate to the overall sampling density, the absence of groundwater data and the absence of details relating to the filling history. These gaps must be addressed via the DSI.

11 CONCLUSIONS AND RECOMMENDATIONS

The investigation included a review of historical information and sampling from six boreholes concurrently with the geotechnical investigation. The historical information indicated that the site was used for agricultural purposes (including grazing, market gardens and possibly dairy and poultry farming) prior to being redeveloped from the late 1980s onwards. The redevelopment included a large industrial facility associated with the Arnott's Biscuits processing and distribution centre.

The boreholes drilled for this investigation identified relatively deep fill (up to 4m deep), overlying residual silty clay soil and shale bedrock. A groundwater monitoring well was installed at one location, however groundwater was not encountered in the well to a depth of 6mBGL.

Soil samples analysed during the investigation did not identify contaminant concentrations above the SAC. However, the potential contamination sources/AEC trigger a need for a DSI based on the SEPP55 Planning Guidelines.

The investigation has not identified any actual or potential contamination issues that would be expected to preclude the proposed development of the site for the purpose described in Section 1.1. On this basis JKE is of the opinion that the site can be made suitable for the proposed development. A DSI is required to establish whether the site is suitable in its current state without the need for remediation, or whether remediation is required. A SAQP must be prepared for the DSI prior to commencement. It would be reasonable for the DSI to be limited to the proposed development areas considering the scope of the SSDA.

A preliminary waste classification of 'general solid waste (non-putrescible)' was assigned to the fill. Further waste classification will be required prior to off-site disposal of waste generated during the proposed development works.

JKE consider that the report objectives outlined in Section 1.2 have been addressed.

12 LIMITATIONS

The report limitations are outlined below:

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

Important Information About This Report

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

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

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

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

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

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

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

Investigation Limitations
Although information provided by a site investigation can reduce exposure to the risk of the presence of contamination, no environmental site investigation can eliminate the risk. Even a rigorous professional investigation may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Investigations by Design Professionals

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

Logs Should not be Separated from the Investigation Report

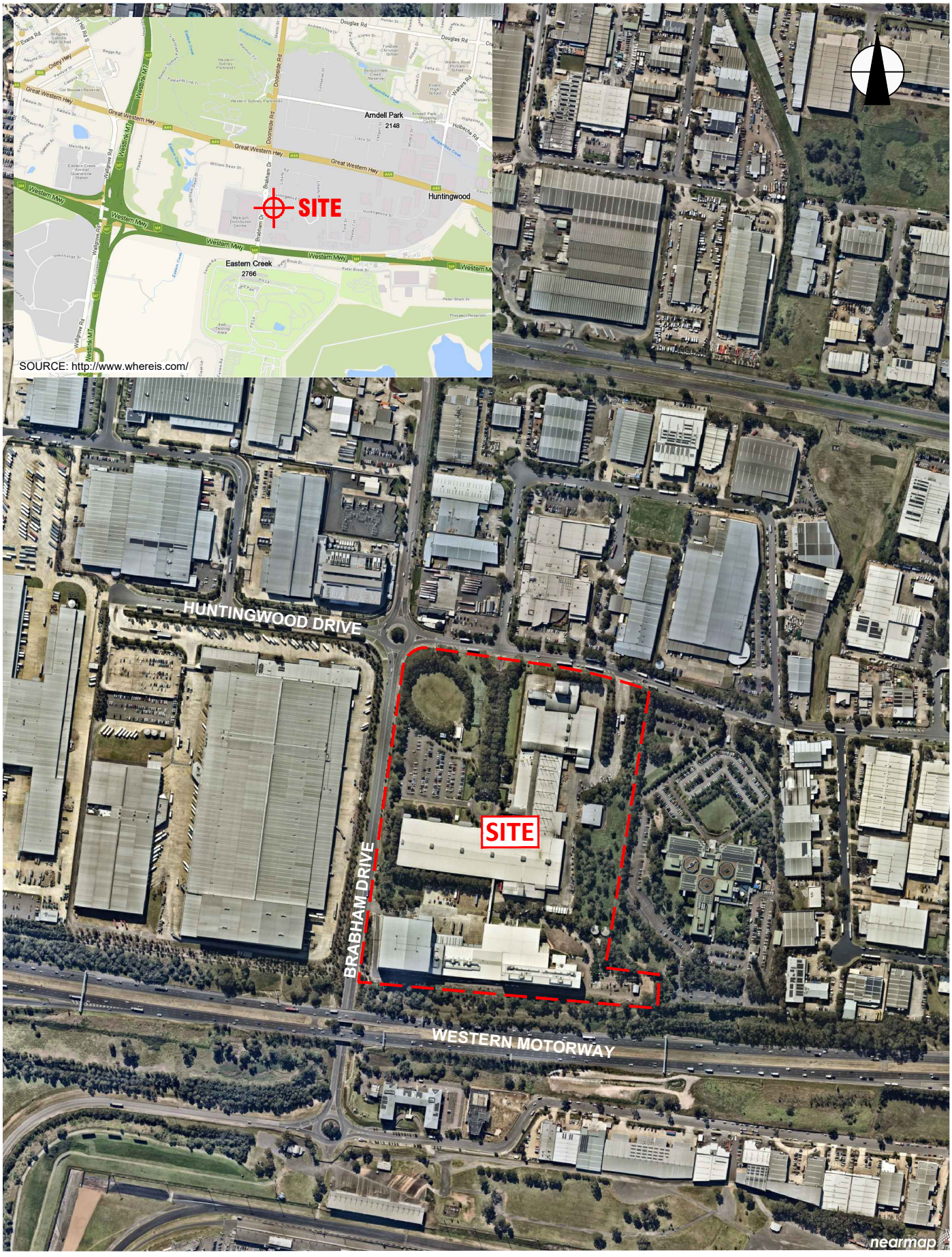
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other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

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

Read Responsibility Clauses Closely

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

Appendix A: Report Figures



AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

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

Title: **SITE LOCATION PLAN**

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

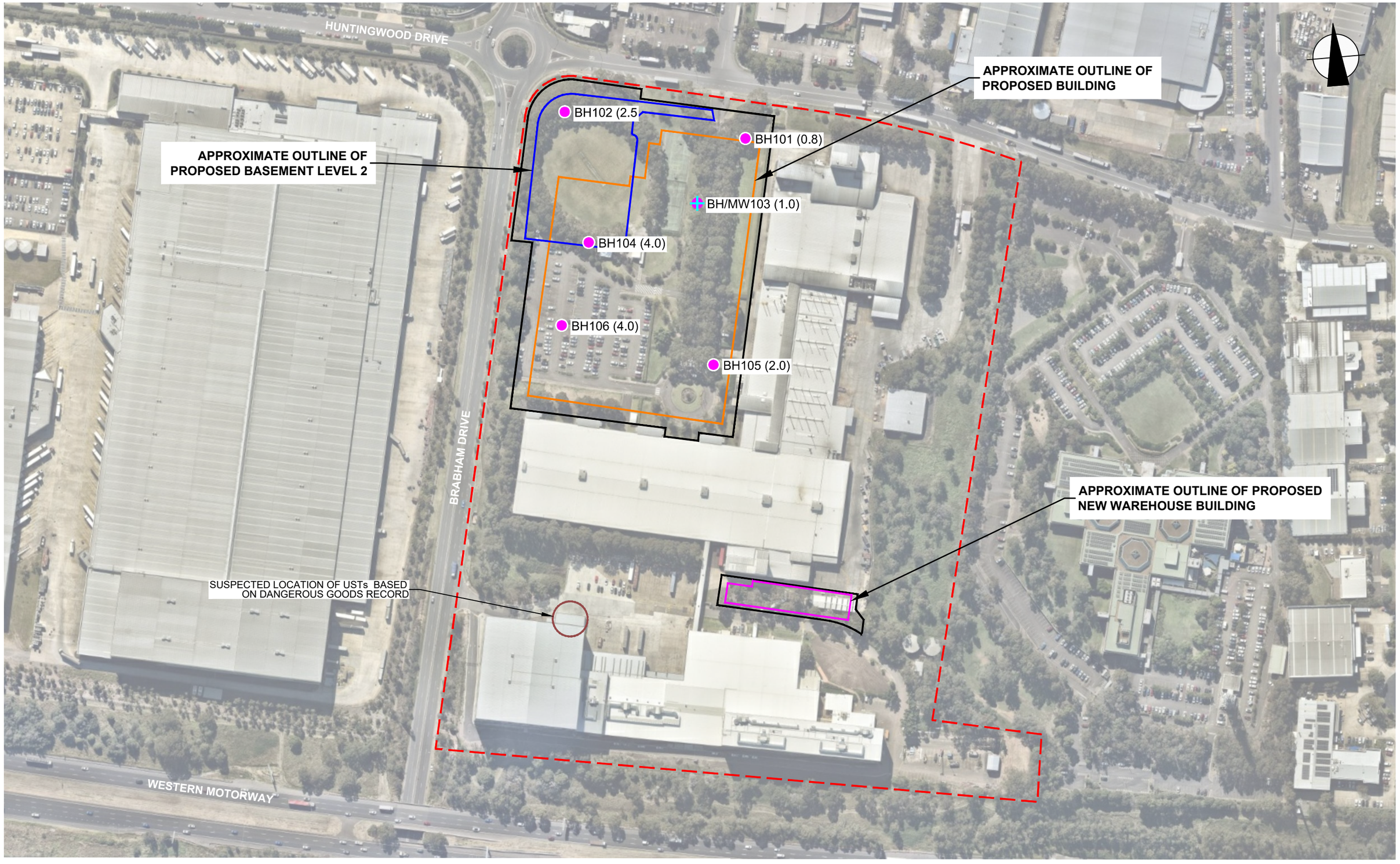
Project No: E34067P

Figure No: 1

JKEnvironments

PLOT DATE: 8/06/2021 5:00:35 PM DWG FILE: Z:\5 EIS\5C EIS JOBS\3400'S\E34067P HUNTINGWOOD\CAD\E34067P.DWG

© JK ENVIRONMENTS



LEGEND

- APPROXIMATE SITE BOUNDARY
- BH(Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH/MW(Fill Depth) — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- APPROXIMATE OUTLINE OF PROPOSED DEVELOPMENT AREA

0 25 50 75 100 125
SCALE 1:2500 @A3 METRES

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

Title: **SAMPLE LOCATION PLAN**

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Project No: E34067P

Figure No: 2

JKEnvironments

PLOT DATE: 17/06/2021 10:15:00 AM DWG FILE: Z:\5 EIS\5C EIS JOBS\34000'S\E34067P HUNTINGWOOD\CAD\E34067P.DWG

© JK ENVIRONMENTS

Appendix B: Site Information and Site History

Lotsearch Environmental Risk and Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 13 May 2021 16:25:04

Reference: LS020374 EP

Address: 65 Huntingwood Drive, Huntingwood, NSW 2148

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	16/04/2021	16/04/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	14/04/2021	12/04/2021	Monthly	1000m	0	0	2
Contaminated Land Records of Notice	Environment Protection Authority	03/05/2021	03/05/2021	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	11/05/2021	11/10/2017	Monthly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	12/05/2021	07/03/2017	Quarterly	1000m	0	0	1
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	0	0	3
EPA PFAS Investigation Program	Environment Protection Authority	12/05/2021	28/04/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	29/04/2021	29/04/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	29/04/2021	29/04/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	26/04/2021	26/04/2021	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	11/05/2021	11/05/2021	Monthly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	0	0	7
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	0	1	5
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	0	1	5
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	63
Points of Interest	NSW Department of Finance, Services & Innovation	18/02/2021	18/02/2021	Quarterly	1000m	0	0	11
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	16/02/2021	16/02/2021	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	16/02/2021	16/02/2021	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	17/02/2021	17/02/2021	Quarterly	1000m	0	1	5
State Forest	Forestry Corporation of NSW	25/02/2021	14/02/2021	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000m	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000m	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000m	0	0	3

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Geological Units 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	1	1	2
Geological Structures 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	0	0	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	1	1	2
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	06/05/2021	26/02/2021	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	2	2	2
Dryland Salinity Potential of Western Sydney	NSW Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000m	1	1	3
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	16/02/2021	16/02/2021	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	10	12	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	06/05/2021	07/12/2018	Monthly	1000m	0	1	1
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	06/05/2021	30/04/2021	Monthly	1000m	1	3	16
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	23/02/2021	20/11/2019	Quarterly	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	23/02/2021	20/11/2019	Quarterly	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	15/02/2021	30/11/2020	Quarterly	1000m	0	0	1
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	06/05/2021	30/04/2021	Monthly	1000m	0	0	2
Bush Fire Prone Land	NSW Rural Fire Service	10/05/2021	29/04/2021	Weekly	1000m	0	0	3
Remnant Vegetation of the Cumberland Plain	NSW Office of Environment & Heritage	07/10/2014	04/08/2011	Unknown	1000m	0	2	8
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	24/02/2021	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000m	0	1	4
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	0	1	5
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	10/05/2021	10/05/2021	Weekly	10000m	-	-	-

Site Diagram

65 Huntingwood Drive, Huntingwood, NSW 2148

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 164507m²

Total Perimeter: 1.74km

Scale: 0 25 50 100 Meters

Data Sources: Data Sources: Aerial Imagery: © Aerometrex Pty Ltd

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

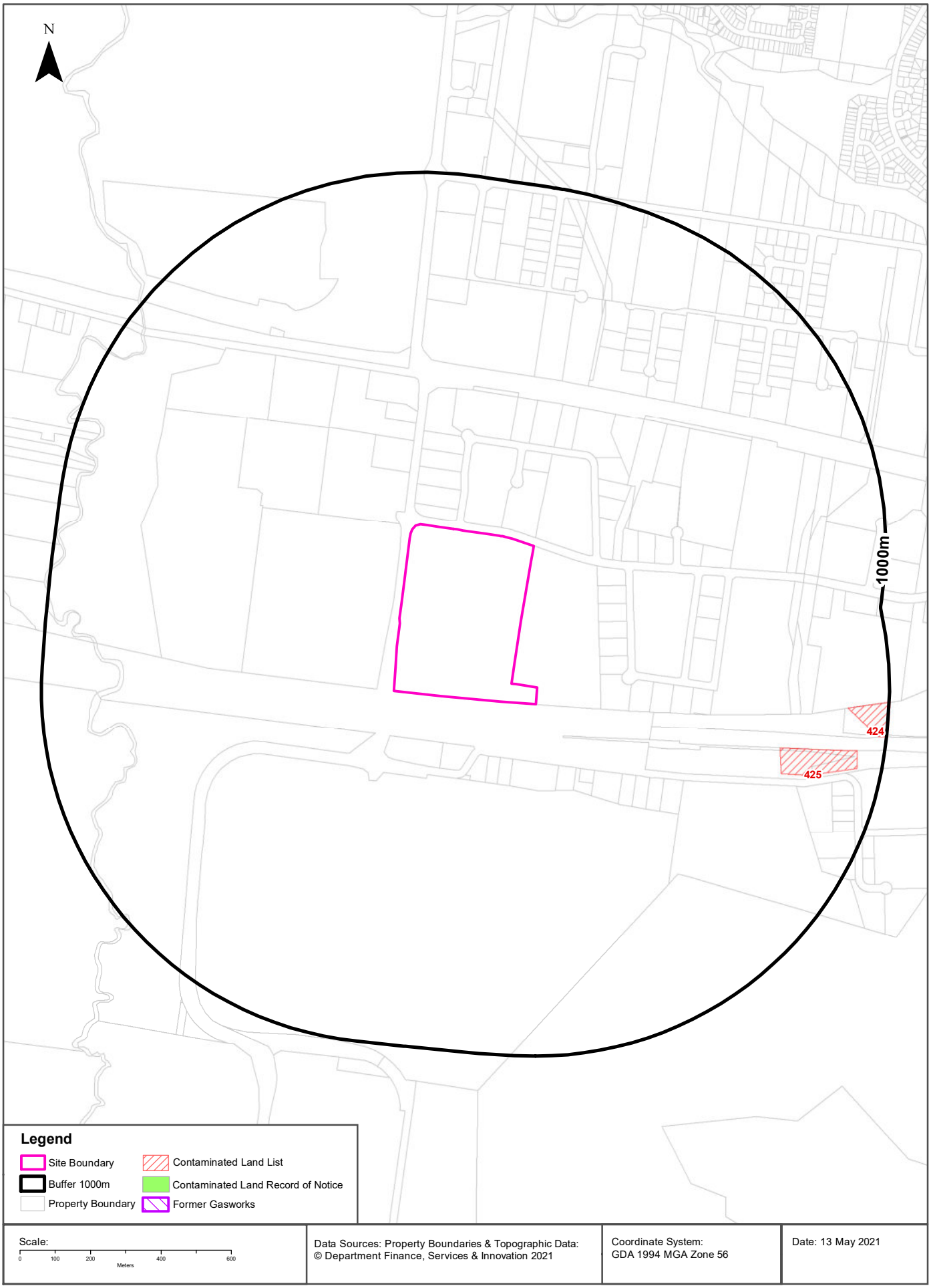
Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System: GDA 1994 MGA Zone 56

Date: 13 May 2021

Contaminated Land

65 Huntingwood Drive, Huntingwood, NSW 2148



Contaminated Land

65 Huntingwood Drive, Huntingwood, NSW 2148

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
425	Caltex Service Station M4 Motorway Westbound	M4 (Westbound) MOTORWAY	Eastern Creek	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	703m	East
424	Caltex Service Station	M4 (Eastbound) MOTORWAY	Eastern Creek	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	882m	East

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

65 Huntingwood Drive, Huntingwood, NSW 2148

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

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

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

Former Gasworks

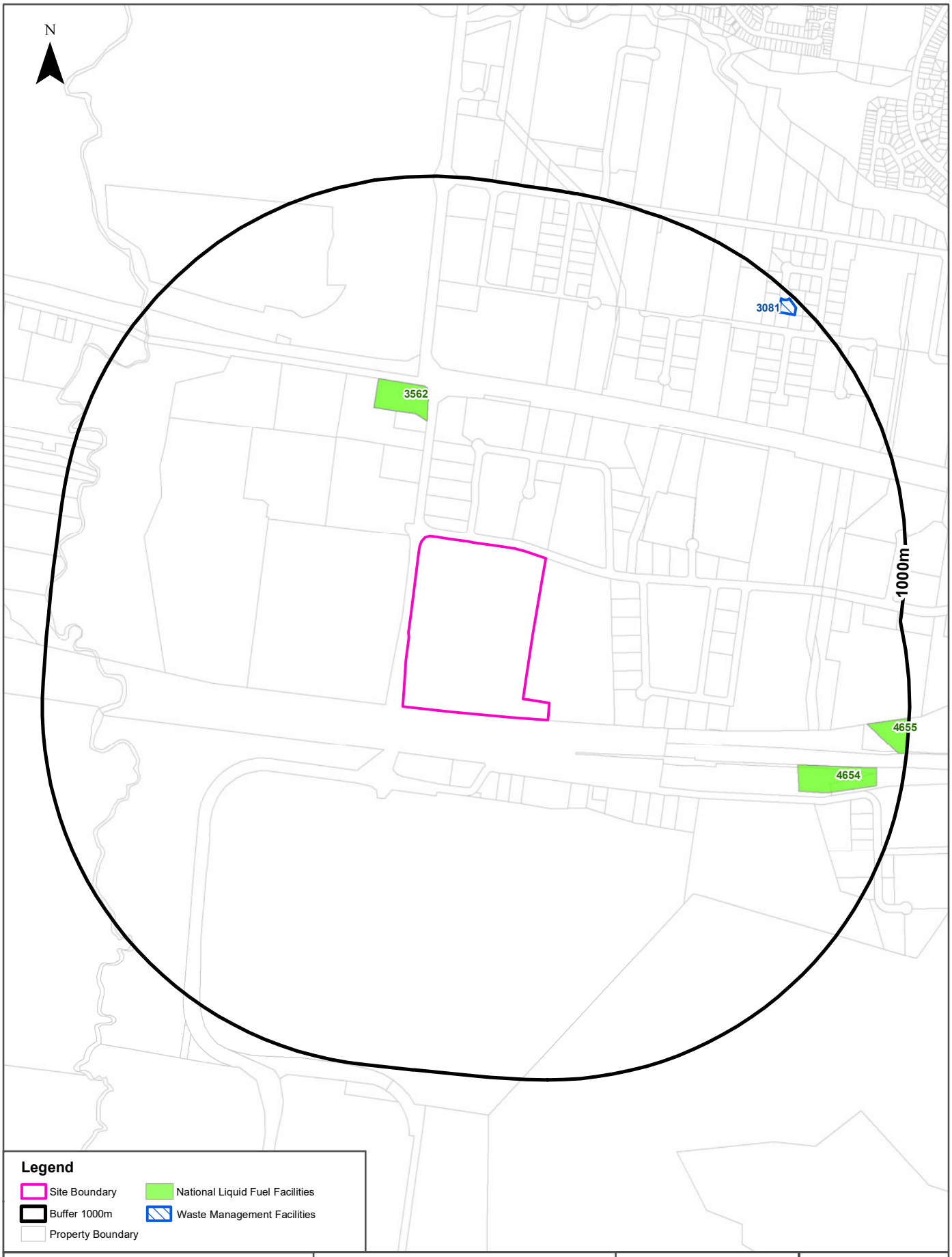
Former Gasworks within the dataset buffer:

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

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

Waste Management & Liquid Fuel Facilities

65 Huntingwood Drive, Huntingwood, NSW 2148



Waste Management & Liquid Fuel Facilities

65 Huntingwood Drive, Huntingwood, NSW 2148

National Waste Management Site Database

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

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
3081	State Waste Services (NSW) Pty Ltd	State Waste Services (NSW)	9 Kenoma Place	Arndell Park	Reprocessing	<Null>	Operational	<Null>	Clinical Waste Facility. (T)	Premise Match	942 m	North East

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

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
3562	Shell	Coles Express Eastern Creek	611 Great Western Highway	Eastern Creek	Petrol Station	Operational		25/07/2011	Premise Match	321m	North
4654	Caltex	Caltex Eastern Creek	M4 Western Motorway West Bound	Eastern Creek	Petrol Station	Operational		25/07/2011	Premise Match	703m	East
4655	Caltex	Caltex Eastern Creek	M4 Western Motorway East Bound	Eastern Creek	Petrol Station	Operational		25/07/2011	Premise Match	882m	East

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

PFAS Investigation & Management Programs

65 Huntingwood Drive, Huntingwood, NSW 2148

EPA PFAS Investigation Program

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

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

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

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

65 Huntingwood Drive, Huntingwood, NSW 2148

Defence 3 Year Regional Contamination Investigation Program

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

65 Huntingwood Drive, Huntingwood, NSW 2148

EPA Other Sites with Contamination Issues

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

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

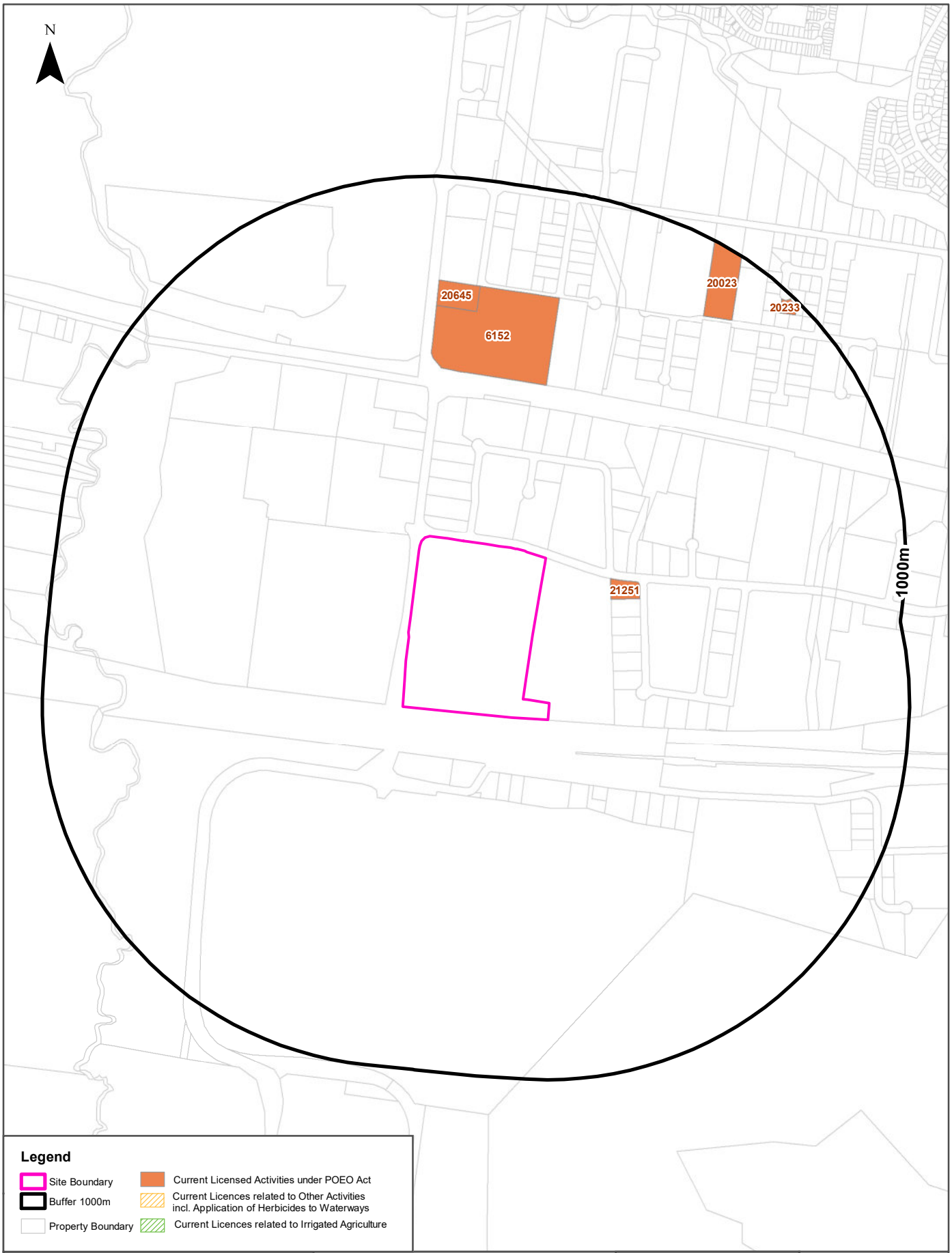
Sites within the dataset buffer:

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

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

Current EPA Licensed Activities

65 Huntingwood Drive, Huntingwood, NSW 2148



EPA Activities

65 Huntingwood Drive, Huntingwood, NSW 2148

Licensed Activities under the POEO Act 1997

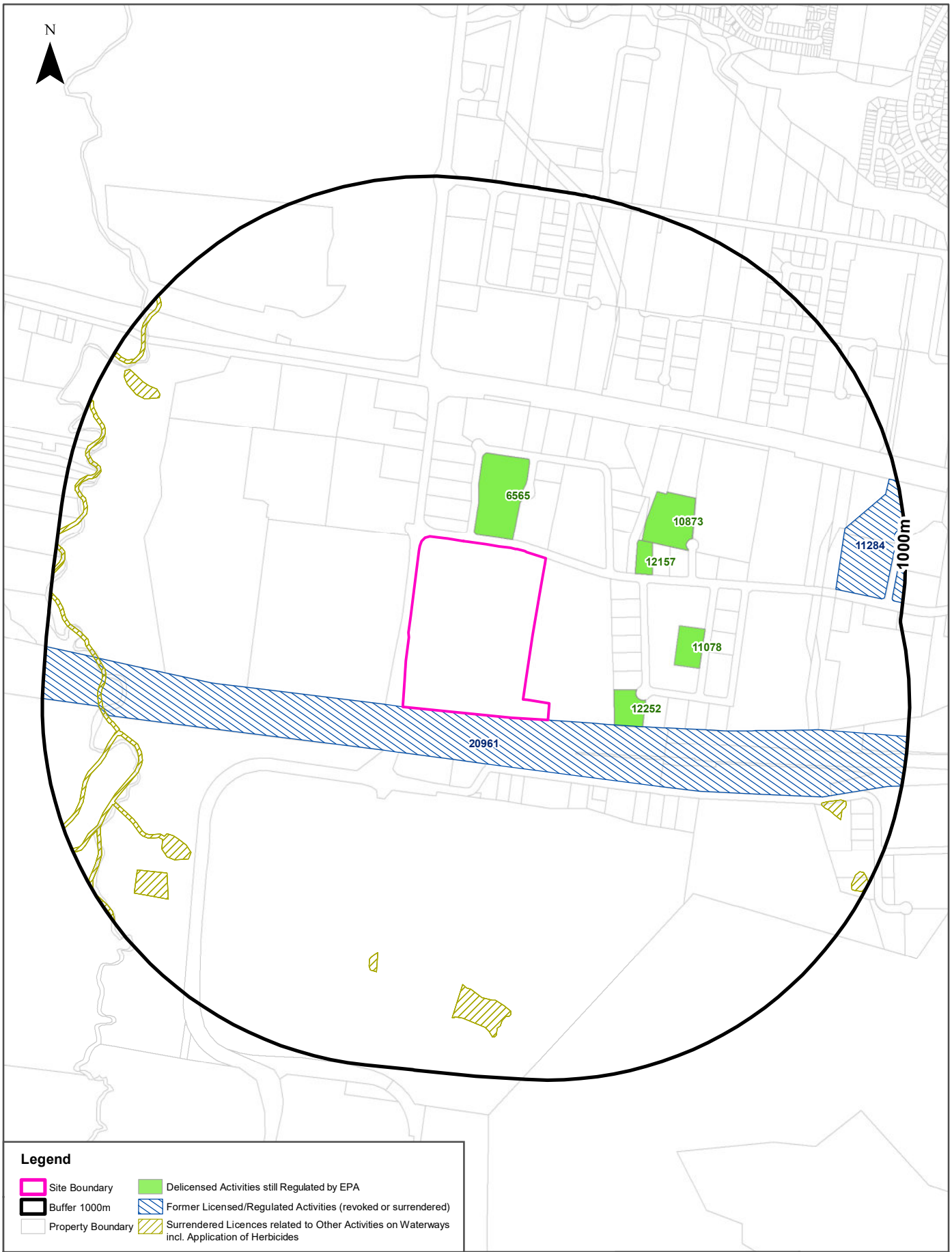
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
21251	COOKERS BULK OIL SYSTEM PTY LTD		2 Healey Circuit, HUNTINGWOOD , NSW 2148		Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	185m	East
6152	TOLL NORTH PTY LTD	TOLL CHEMICAL LOGISTICS	616 GREAT WESTERN HIGHWAY	ARNDELL PARK	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	462m	North
6152	TOLL NORTH PTY LTD	TOLL CHEMICAL LOGISTICS	616 GREAT WESTERN HIGHWAY	ARNDELL PARK	General chemicals storage	Premise Match	462m	North
20645	BUDGET WASTE RECYCLING PTY LIMITED		311 DOONSIDE ROAD, ARNDELL PARK, NSW 2148		Waste storage - other types of waste; Recovery of general waste	Premise Match	636m	North
20023	ELGAS LTD	Elgas	22 Holbeche Road	ARNDELL PARK	Petroleum products storage	Premise Match	803m	North East
20233	MED-X PTY LTD	9 Kenoma Place, Arndell Park NSW 2148	9 Kenoma Place	ARNDELL PARK	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	942m	North East
20233	MED-X PTY LTD	9 Kenoma Place, Arndell Park NSW 2148	9 Kenoma Place	ARNDELL PARK	Non-thermal treatment of hazardous and other waste	Premise Match	942m	North East

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

Delicensed & Former Licensed EPA Activities

65 Huntingwood Drive, Huntingwood, NSW 2148



EPA Activities

65 Huntingwood Drive, Huntingwood, NSW 2148

Delicensed Activities still regulated by the EPA

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

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
6565	SONY DADC AUSTRALIA PTY LIMITED	SONY DADC	60 HUNTINGWOOD DRIVE	HUNTINGWOOD	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	23m	North
12252	ALFA LAVAL AUSTRALIA PTY LTD	Alfa Laval Australia Pty Limited	14 Healey Circuit	HUNTINGWOOD	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	178m	South East
12157	WARTSILA AUSTRALIA PTY LTD	Wartsila Australia Pty Ltd	48 Huntingwood Drive	HUNTINGWOOD	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	249m	North East
10873	SIGMA COACHAIR GROUP PTY LTD	SIGMA COACHAIR GROUP PTY LTD	3 Distillers Place	HUNTINGWOOD	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	271m	North East
11078	SCIENTIFIC GAMES PRODUCTS (AUSTRALIA) PTY LTD	SCIENTIFIC GAMES PRODUCTS (AUSTRALIA) PTY LTD	4 Ford Street	HUNTINGWOOD	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	360m	East

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

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

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

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
20961	FULTON HOGAN CONSTRUCTION PTY LTD	, M4 - East of Reservoir Road to East of Mamre Road, PARRAMATTA, NSW 2150,	Surrendered	30/06/2017	Road construction	Road Match	0m	South
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South West
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South West
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South West
11284	GLAXOSMITHKLINE AUSTRALIA PTY LTD	1 Decker Place, HUNTINGWOOD, NSW 2148	Surrendered	02/11/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	810m	East

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

Historical Business Directories

65 Huntingwood Drive, Huntingwood, NSW 2148

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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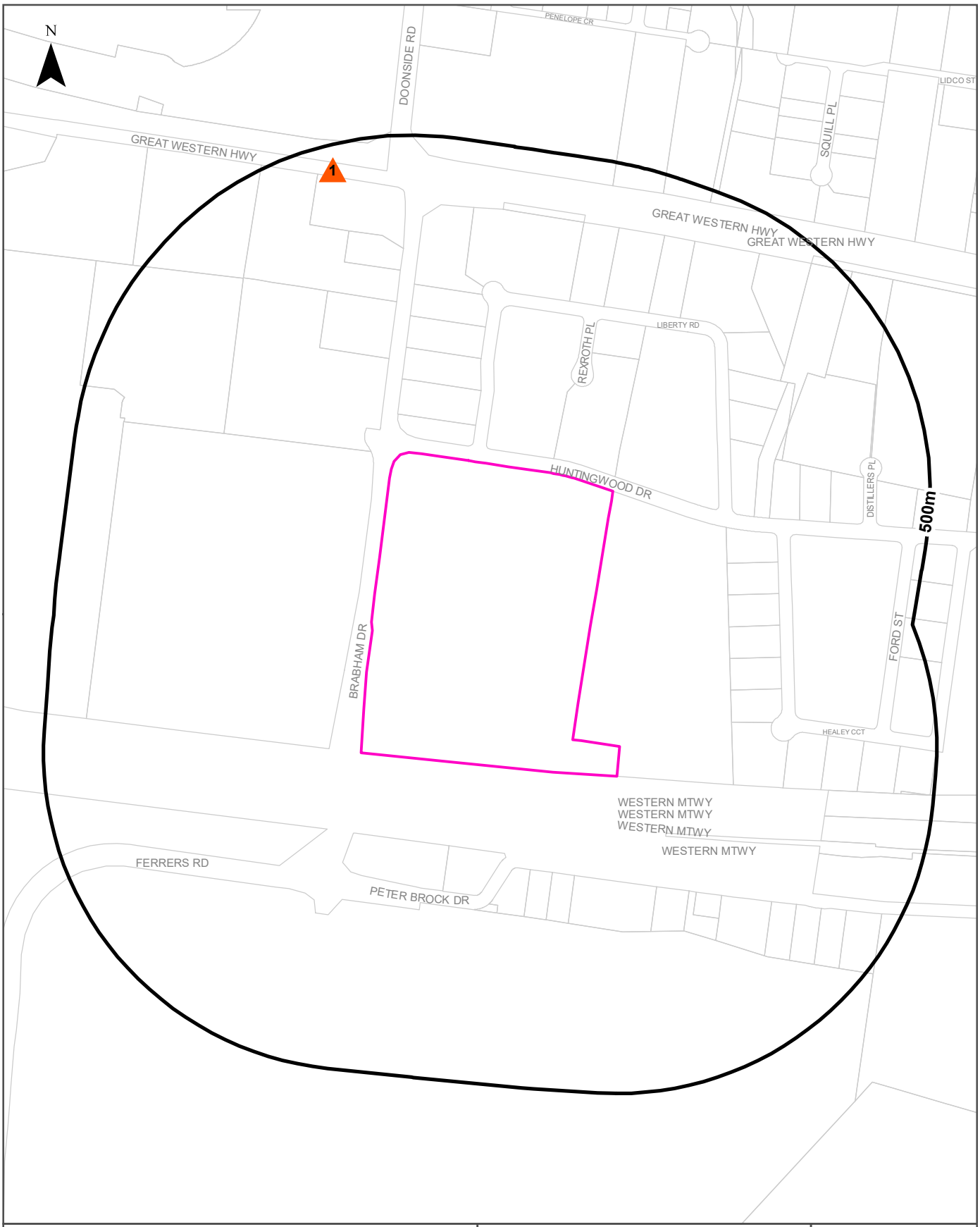
Dry Cleaners, Motor Garages & Service Stations

65 Huntingwood Drive, Huntingwood, NSW 2148



Legend

- Site Boundary
- Buffer 500m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 110 220 330 440 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 13 May 2021

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Historical Business Directories

65 Huntingwood Drive, Huntingwood, NSW 2148

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

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

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

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

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR GARAGES & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hwy., Eastern Creek. 2766	18928	1993	Road Match	423m
	Motor Garages & Service Stations	Esso Eastern Creek Service Station, Great Western H'way, Eastern Creek 2766	97369	1991	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hghwy, Eastern Creek. 2766	11547	1990	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece), Great Western Hghwy, Eastern Creek. 2766	18374	1990	Road Match	423m
	MOTOR GARAGE & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hghwy, Eastern Creek. 2766	65005	1989	Road Match	423m
	MOTOR GARAGE & SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece), Great Western Hghwy, Eastern Creek. 2766	5706	1989	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hghwy, Eastern Creek. 2766	59222	1988	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece), Great Western Hghwy, Eastern Creek. 2766	64183	1988	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western H'way., Eastern Creek. 2766	64624	1986	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece), Great Western H'way., Eastern Creek. 2766	65677	1986	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hghwy, Eastern Creek. 2766	39623	1985	Road Match	423m
	MOTOR GARAGES & SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece)., Great Western Hghwy., Eastern Creek. 2766	45798	1985	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Eastern Creek Service Station, Great Western Hghwy, Eastern Creek. 2766	28203	1984	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Vireeken Bros. Pty. Ltd. (Golden Fleece) Great Western Hghwy., Eastern Creek. 2766	34359	1984	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Eastern Creek Service Station., Great Western H'way., Eastern Creek. 2766	14627	1983	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Vreeken Bros. Pty. Ltd. (Golden Fleece)., Great Western H'way., Eastern Creek 2766	21802	1983	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Eastern Creek Service Station, Great Western H'way, Eastern Creek. 2766.	56692	1982	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Vreeken Bros. Pty. Ltd. (Golden Fleece), Great Western H'way., Eastern Creek. 2766.	57802	1982	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Eastern Creek Service Station., Great Western H'way., Eastern Creek. 2766	3245	1981	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Eastern Creek Service Station., Great Western Highway., Eastern Creek. 2766	52894	1980	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Service Centre., Great Western Highway., Eastern Creek. 2766.	41426	1979	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Service Centre, Great Western H'way. Eastern Creek. 2766	49965	1978	Road Match	423m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station., Great Western H'way., Eastern Creek 2766	30156	1976	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Golden Fleece Service Station., Great Western H'way., Eastern Creek. 2766	58942	1975	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Eastern Creek Service Station., Great Western Hghwy., Eastern Creek	8017	1972	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	16649	1972	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Eastern Creek Service Station., Great Western Hghwy., Eastern Creek	56695	1971	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	2121	1971	Road Match	423m
	MOTOR GARAGES & ENGINEERS(M6S6)	Eastern Creek Service Station., Great Western Highway., EASTERN CREEK	337713	1970	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Vreeken Bros., Great Western Highway., EASTERN CREEK	341602	1970	Road Match	423m
	MOTOR GARAGES & ENGINEERS.	Eastern Creek Service Station., Great Western Hghwy, Eastern Creek	42108	1969	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy Eastern Creek	47750	1969	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Eastern Creek Service Station., Great Western Hghwy., Eastern Creek	25648	1968	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	31185	1968	Road Match	423m
	MOTOR GARAGES & ENGINEERS.	Eastern Creek Service Station., Great Western Hghwy., Eastern Creek	7092	1967	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	15663	1967	Road Match	423m
	MOTOR GARAGES & ENGINEERS.	Eastern Creek Service Station., Great Western Hghway., Eastern Creek	56041	1966	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	1238	1966	Road Match	423m
	Motor Garages & Engineers	Eastern Creek Service Station, Great Western Highway. Eastern Creek	122587	1965	Road Match	423m
	Motor Service Stations - Petrol, Oil, Etc.	Vreeken Bros., Great Western Highway. Eastern Creek	125661	1965	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Currie's Service Station., Great Western Highway Eastern Creek	43786	1964	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Eastern Creek Service Station., Great Western Highway Eastern Creek	43787	1964	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	51949	1964	Road Match	423m
	MOTOR GARAGES & ENGINEERS.	Currie's Service Station., Great Western Hghwy., Eastern Creek	29346	1962	Road Match	423m
	MOTOR GARAGES & ENGINEERS.	Eastern Creek Service Station., Western Hghwy., Eastern Creek	29347	1962	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Vreeken Bros., Great Western Hghwy., Eastern Creek	38138	1962	Road Match	423m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	City Prices Store, Doonside Turnoff, Great Western Hghwy. EASTERN CREEK	350474	1961	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Currie's Service Station, Great Western Highway., EASTERN CREEK	347002	1961	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Eastern Creek Service Station, Western Highway., EASTERN CREEK	347081	1961	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	City Prices Store, Doonside Turnoff., Great Western Hghwy., Eastern Creek	24157	1959	Road Match	423m
	MOTOR GARAGES & ENGINEERS	Curries Service Station., Great Western Hghwy., Eastern Creek	14004	1959	Road Match	423m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR GARAGES & ENGINEERS	Eastern Creek Service Station., Western Hghwy., Eastern Creek	14005	1959	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, ETC.	City Prices Store Doonside Turnoff., Great Western Hghwy., Eastern Creek	9452	1958	Road Match	423m
	MOTOR GARAGE/ENGINEERS.	Curries Service Station., Great Western Hghwy., Eastern Crk	926	1958	Road Match	423m
	MOTOR GARAGE/ENGINEERS.	Eastern Creek Service Station., Western Hghwy., Eastern Ck	999	1958	Road Match	423m
	MOTOR SERVICE STATIONS-PETROL, ETC.	City Prices Store Doonside Turnoff., Great Western Hghwy., Eastern Creek	61838	1956	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Curries Service Station., Great Western Hghwy., Eastern Crk	57520	1956	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Eastern Creek Service Station., Western Hghwy., Eastern Ck	57587	1956	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Curries Service Station (D. Currie, Propr.)., Great Western Hghwy., Eastern Creek	49140	1954	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Eastern Creek Service Station., Western Hghwy., Eastern Ck	49204	1954	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Curries Servicea Station (D. Currie Propr.)., Great Western Hghwy., Eastern Creek	39891	1953	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS.	Curries Service Station (D. Currie Propr.)., Great Western Hghwy., Eastern Creek	31546	1952	Road Match	423m
	MOTOR GARAGES &/OR ENGINEERS	Curries Service Station (d. Currie, Propr.)., Great Western Highway., Eastern Creek	83655	1950	Road Match	423m

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Aerial Imagery 2020

65 Huntingwood Drive, Huntingwood, NSW 2148

Scale:	Data Sources: Aerial Imagery: © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 13 May 2021

0 40 80 120 160 Meters

Aerial Imagery 2015

65 Huntingwood Drive, Huntingwood, NSW 2148

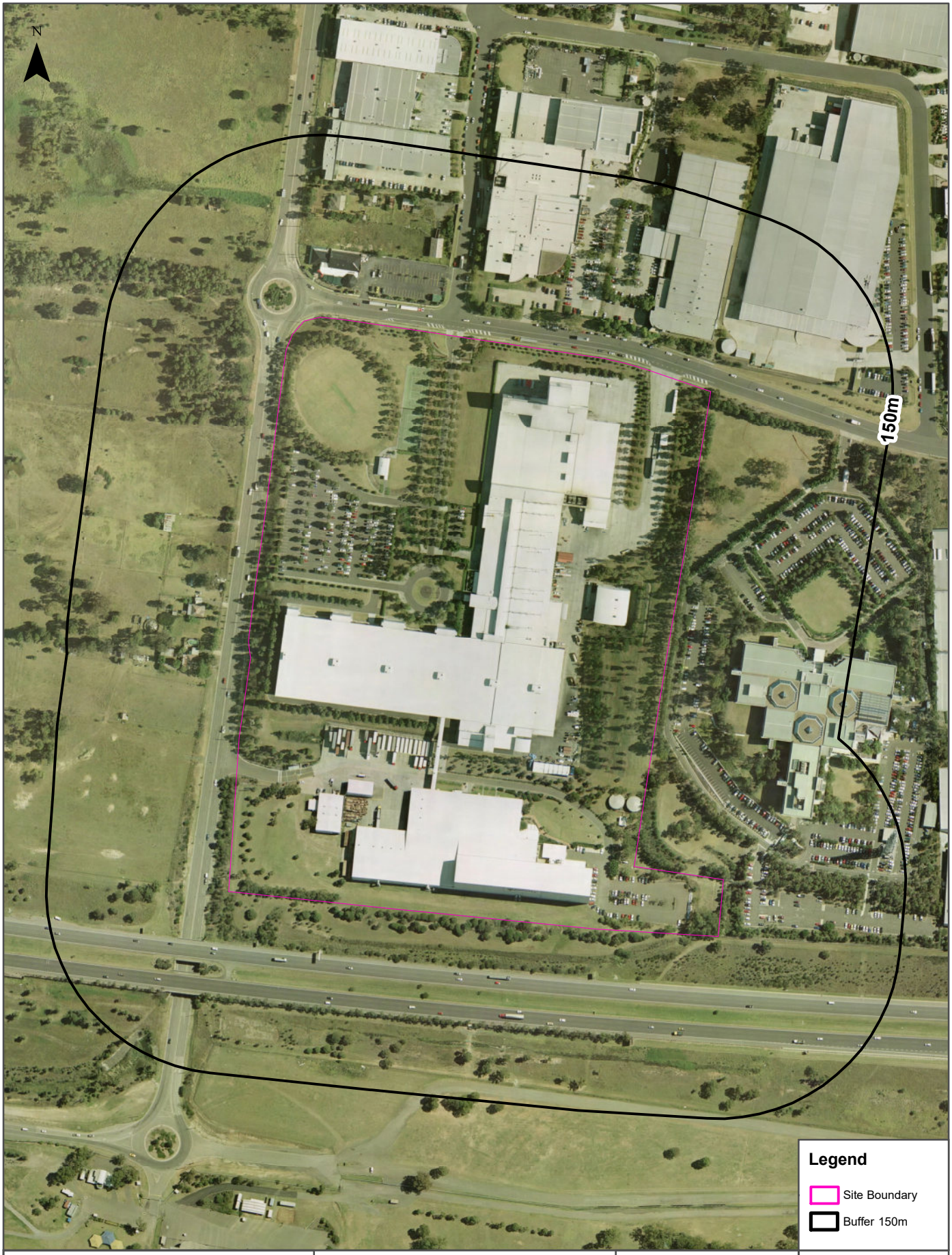
Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 13 May 2021
0 40 80 120 160 Meters	© Aerometrex Pty Ltd	GDA 1994 MGA Zone 56	

Aerial Imagery 2009

65 Huntingwood Drive, Huntingwood, NSW 2148

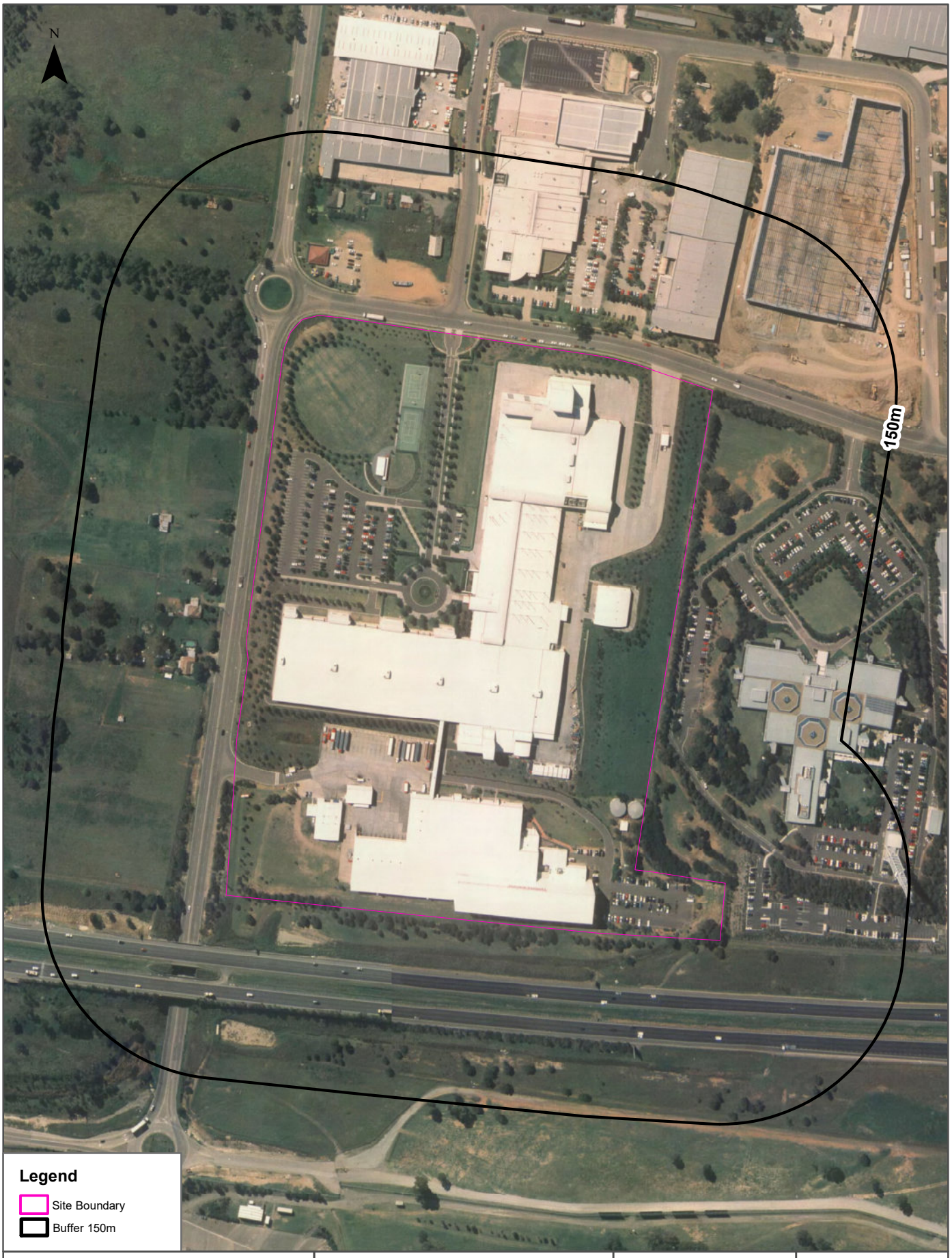
Aerial Imagery 2005

65 Huntingwood Drive, Huntingwood, NSW 2148



Aerial Imagery 2000

65 Huntingwood Drive, Huntingwood, NSW 2148



Aerial Imagery 1994

65 Huntingwood Drive, Huntingwood, NSW 2148

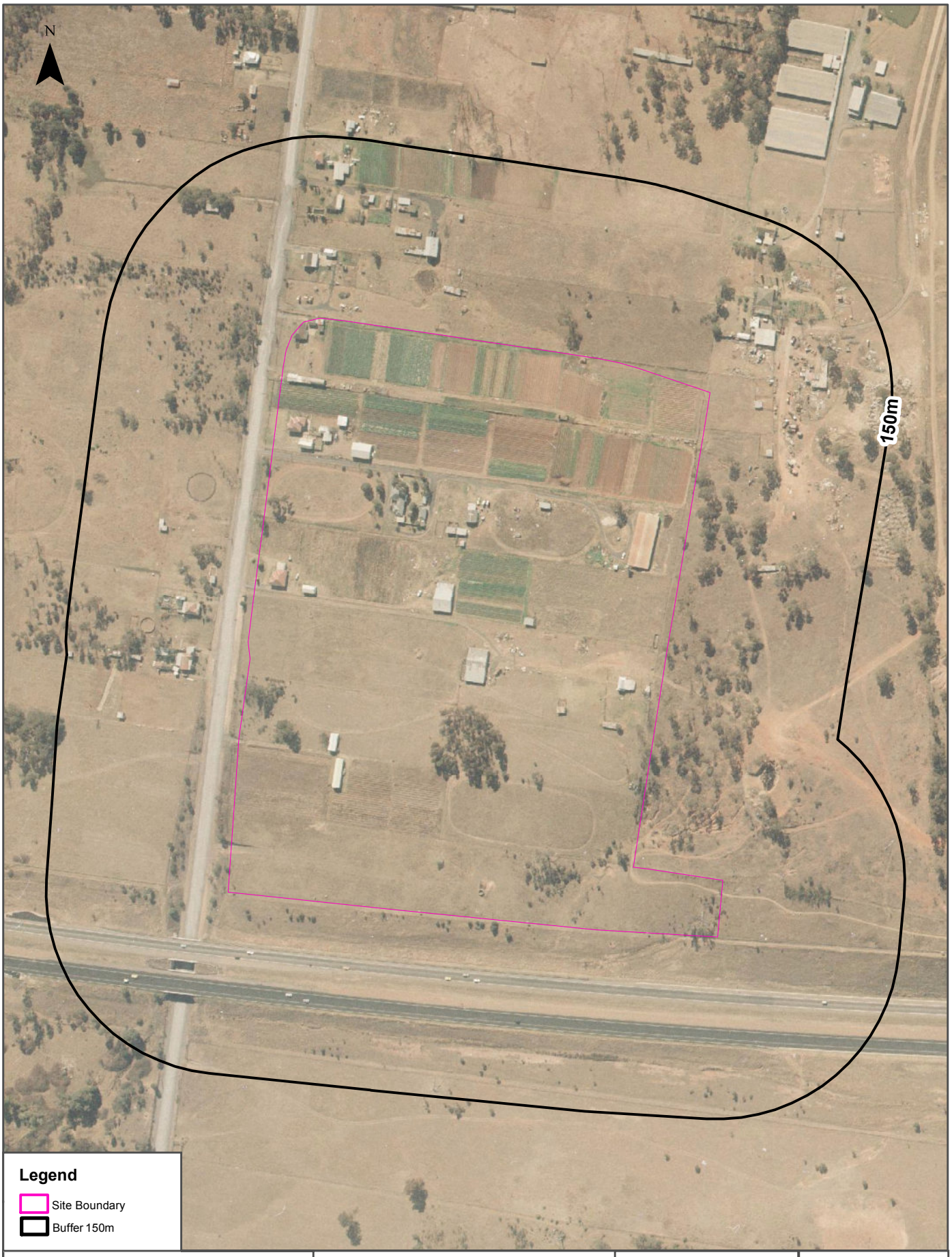
Aerial Imagery 1991

65 Huntingwood Drive, Huntingwood, NSW 2148

Scale: 0 40 80 120 160 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 13 May 2021

Aerial Imagery 1986

65 Huntingwood Drive, Huntingwood, NSW 2148

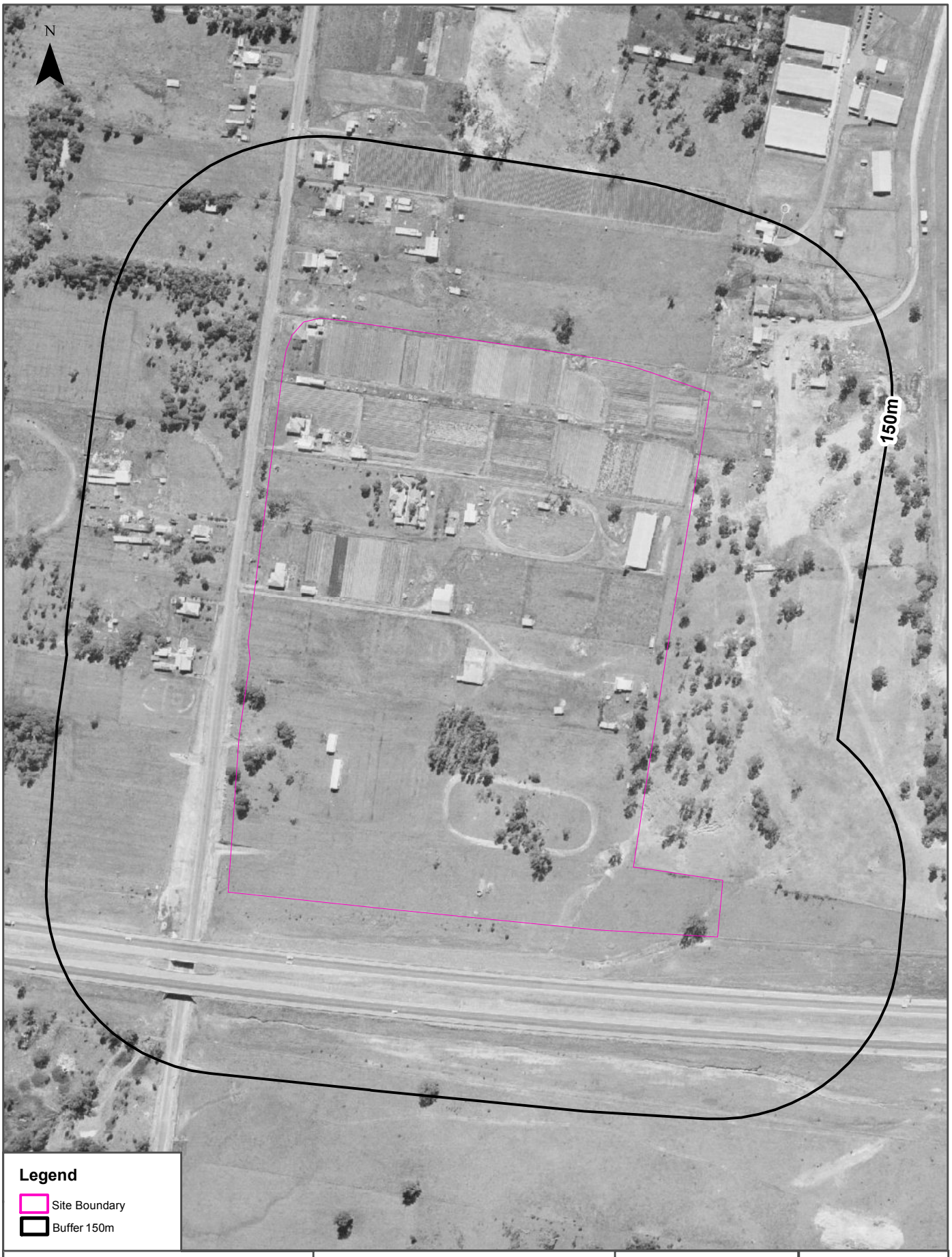


Aerial Imagery 1982

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1978

65 Huntingwood Drive, Huntingwood, NSW 2148



Aerial Imagery 1970

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1965

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1961

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1956

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1949

65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1943

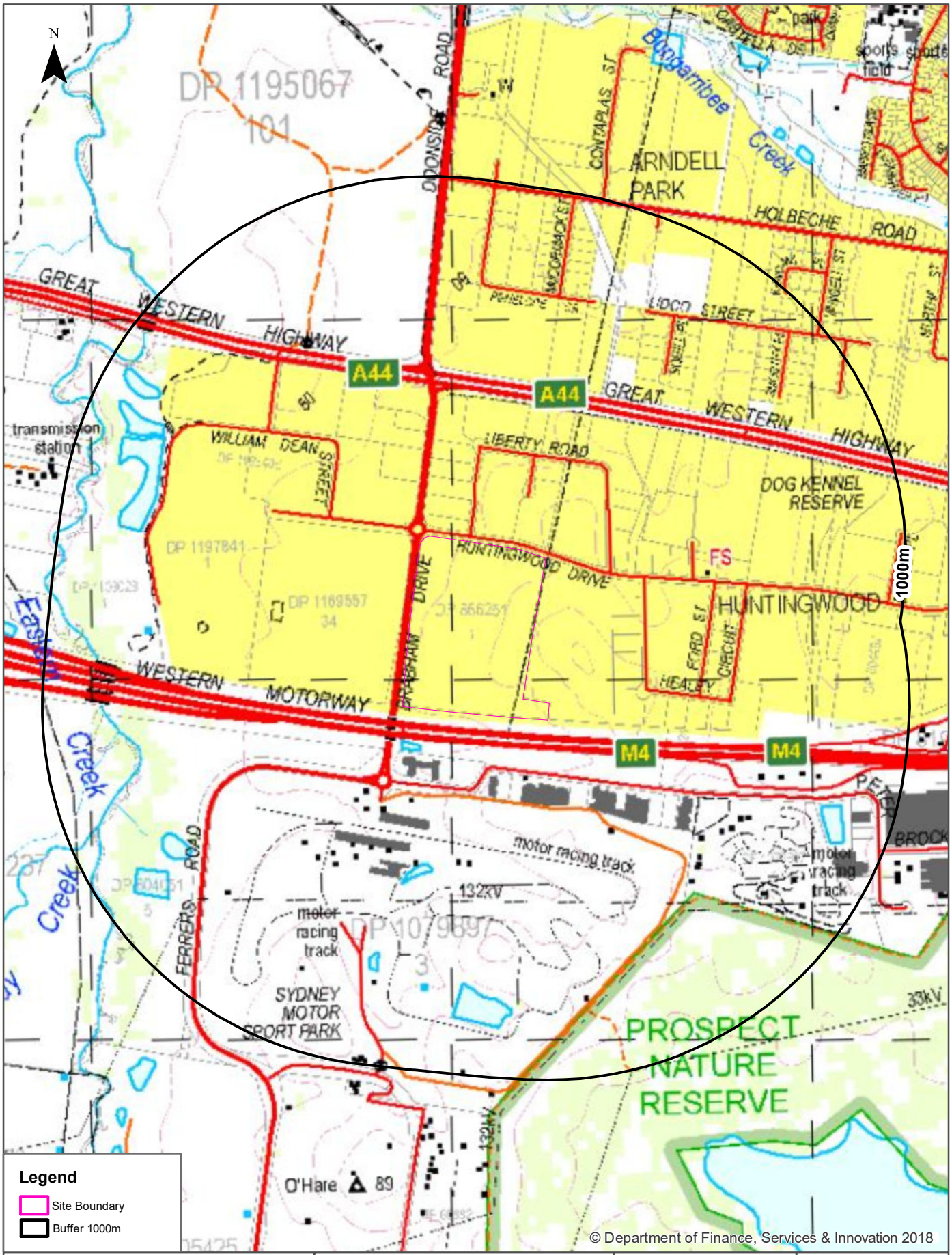
65 Huntingwood Drive, Huntingwood, NSW 2148

Aerial Imagery 1930

65 Huntingwood Drive, Huntingwood, NSW 2148

Topographic Map 2015

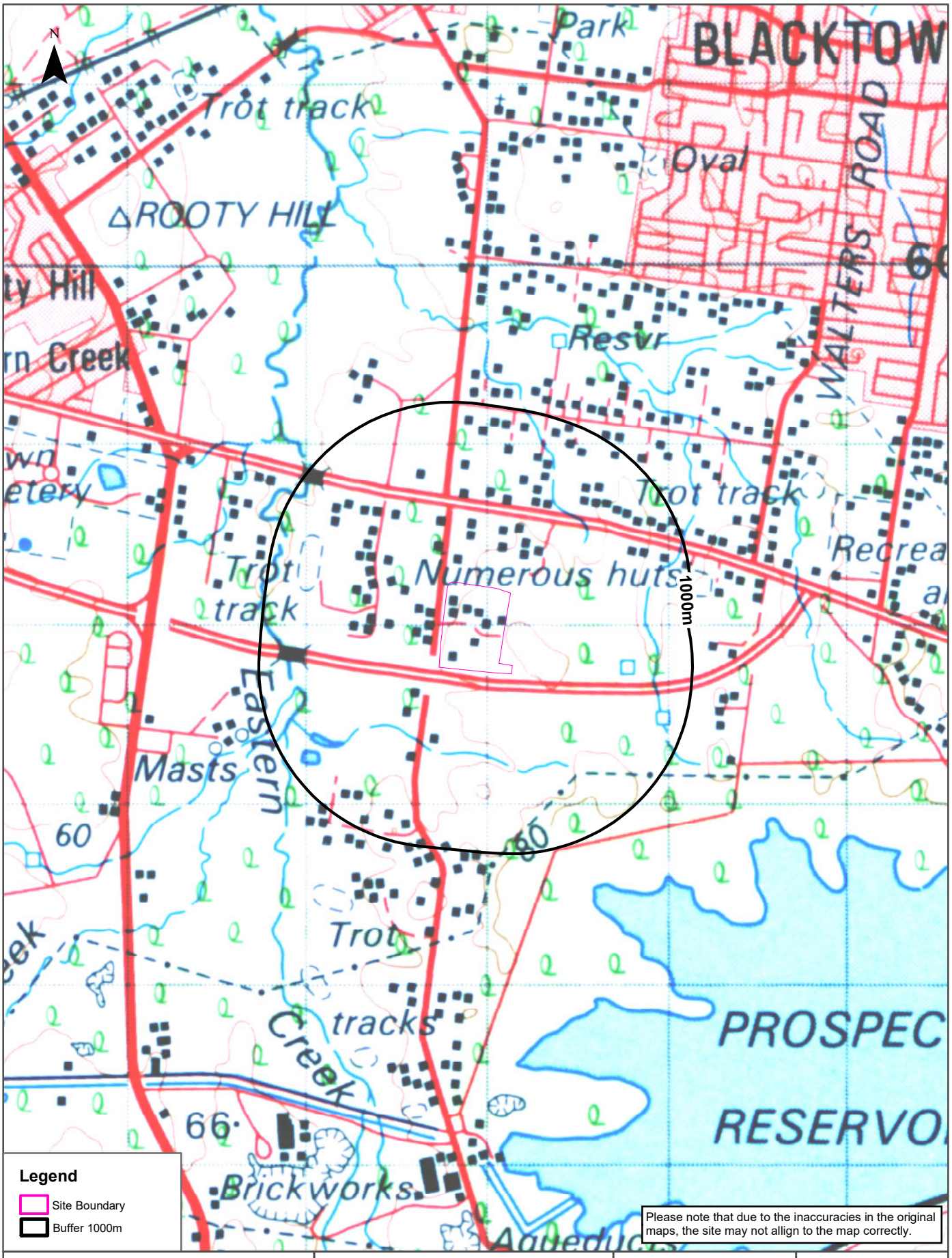
65 Huntingwood Drive, Huntingwood, NSW 2148



Scale: 0 170 340 Meters 510 680	Data Sources: Topographic Map Data © NSW Land and Property Information	Coordinate System: GDA 1994 MGA Zone 56	Date: 13 May 2021

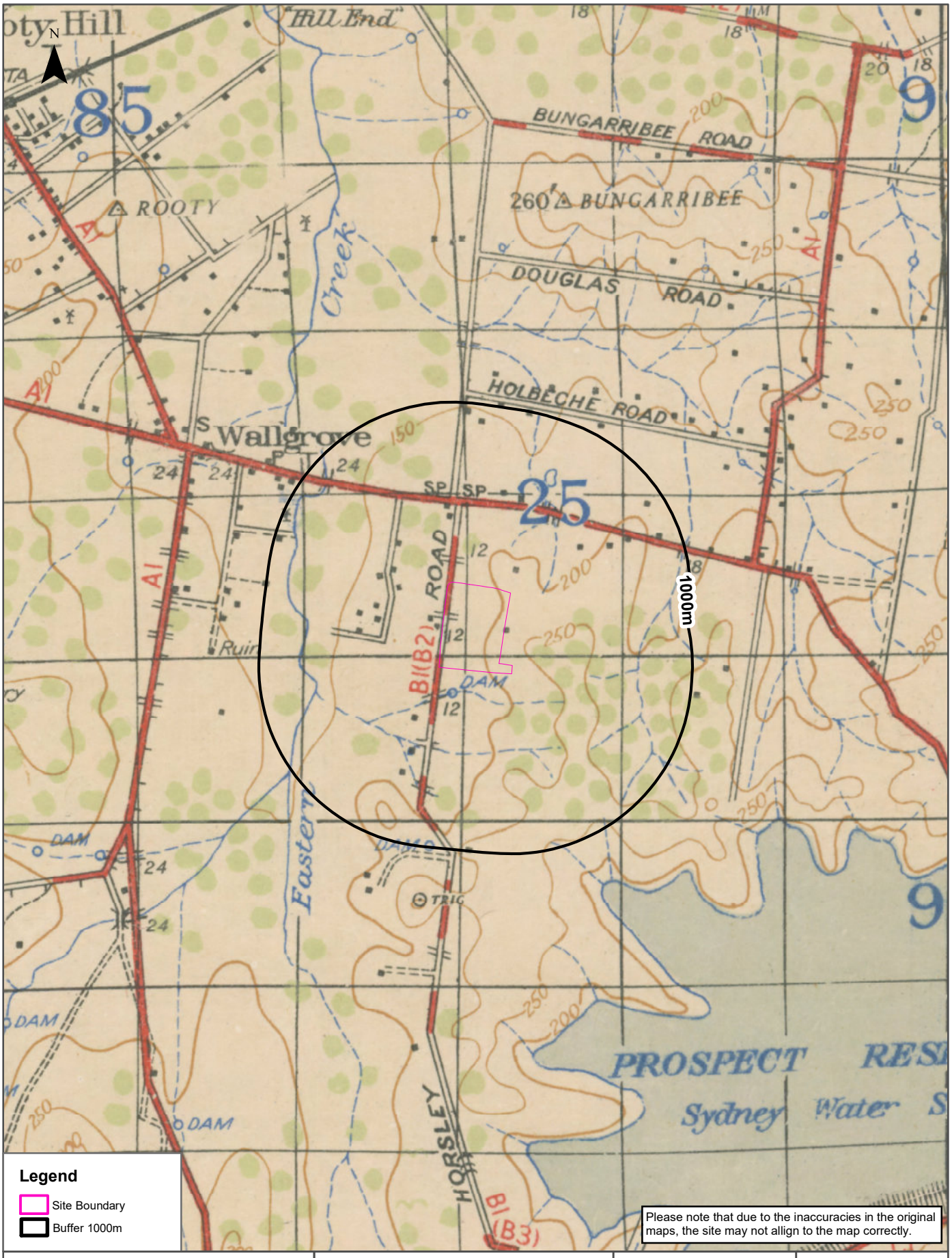
Historical Map 1975

65 Huntingwood Drive, Huntingwood, NSW 2148



Historical Map c.1942

65 Huntingwood Drive, Huntingwood, NSW 2148



Scale: 0 330 660 990 1,320 Meters

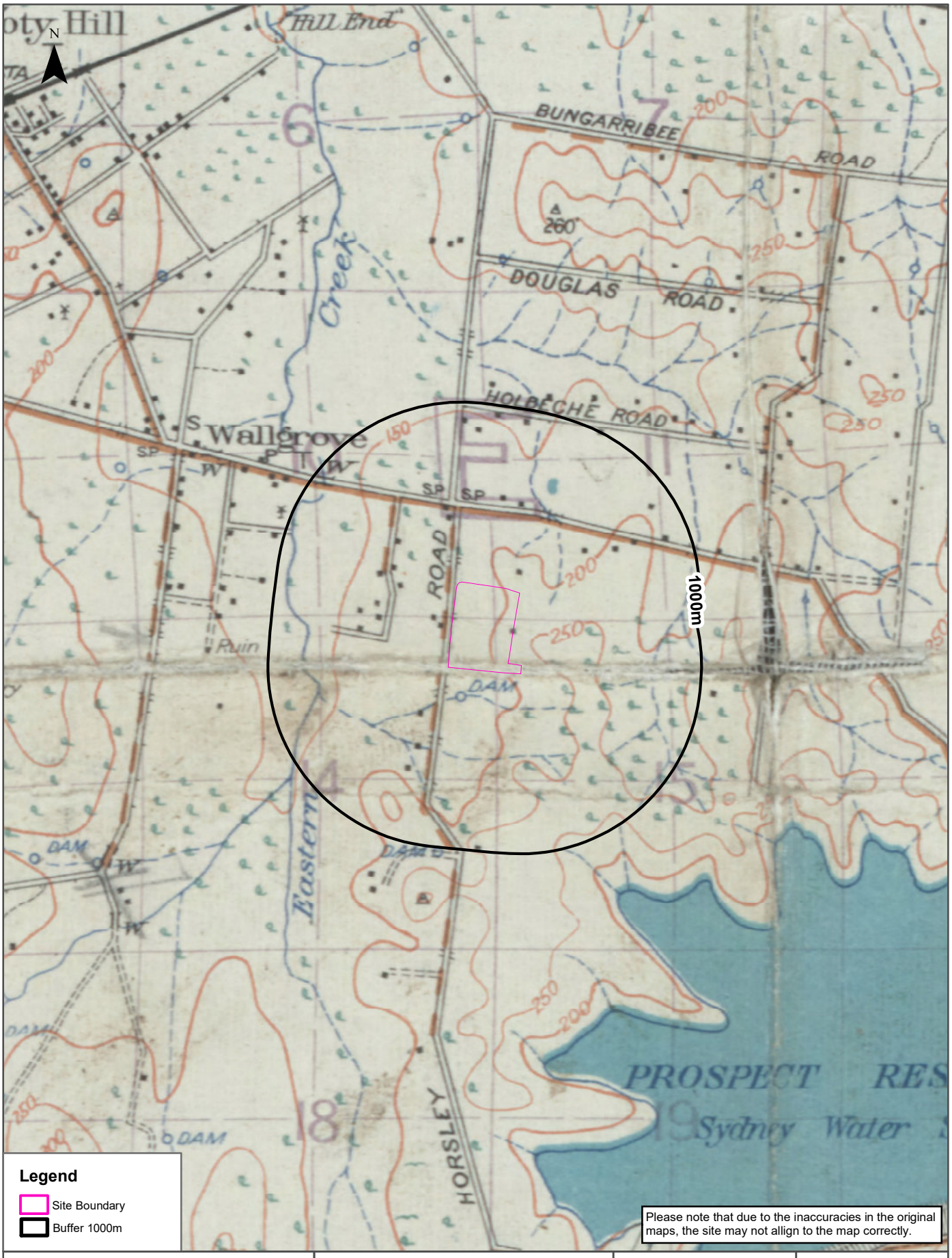
Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 13 May 2021

Historical Map c.1929

65 Huntingwood Drive, Huntingwood, NSW 2148



Scale: 0 330 660 990 1,320 Meters

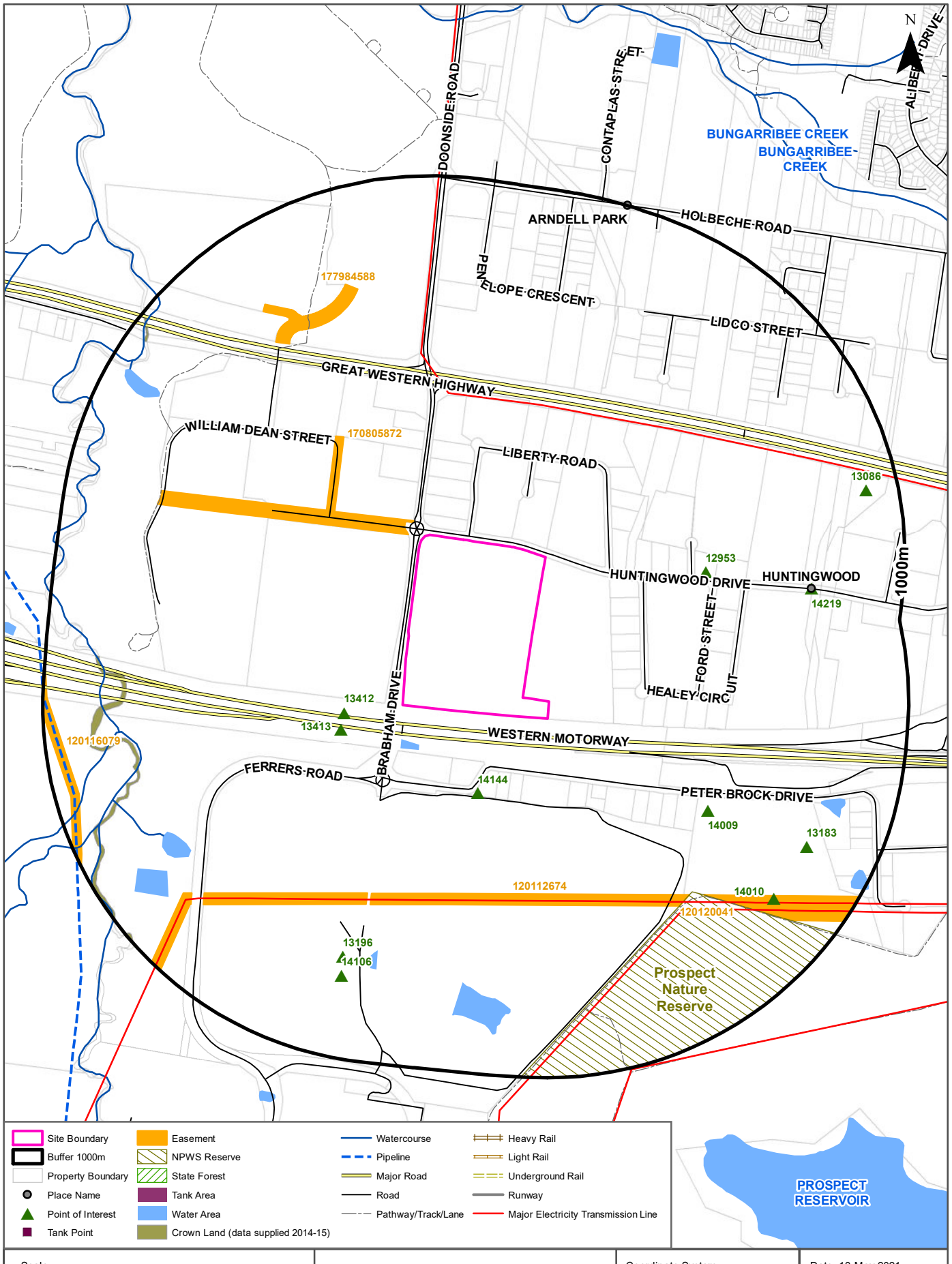
Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 13 May 2021

Topographic Features

65 Huntingwood Drive, Huntingwood, NSW 2148



Topographic Features

65 Huntingwood Drive, Huntingwood, NSW 2148

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
13412	Roadside Emergency Telephone	366	164m	South West
13413	Roadside Emergency Telephone	365	184m	South West
14144	Sewage Works	Sewage Works	223m	South
12953	Fire Station	HUNTINGWOOD FIRE STATION	448m	East
14009	Parking Area	Parking Area	514m	South East
13196	Motor Racing Track	SYDNEY MOTOR SPORT PARK RACEWAY	719m	South
14219	Suburb	HUNTINGWOOD	745m	East
14106	Park	SYDNEY MOTOR SPORT PARK	771m	South
13183	Motor Racing Track	EASTERN CREEK KART RACEWAY	804m	South East
14010	Parking Area	Parking Area	805m	South East
13086	Park	DOG KENNEL RESERVE	911m	East

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

65 Huntingwood Drive, Huntingwood, NSW 2148

Tanks (Areas)

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

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

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

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
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Major Easements

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
170805872	Primary	Right of way	Var	40m	North West
120112674	Primary	Undefined		489m	South
177984588	Primary	Right of way	Var	654m	North West
120120041	Primary	Undefined		737m	South East
120116079	Primary	Undefined		932m	West

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

65 Huntingwood Drive, Huntingwood, NSW 2148

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N0938	NATURE RESERVE	Prospect Nature Reserve	28/02/2007	628m	South East

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)
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Elevation Contours (m AHD)

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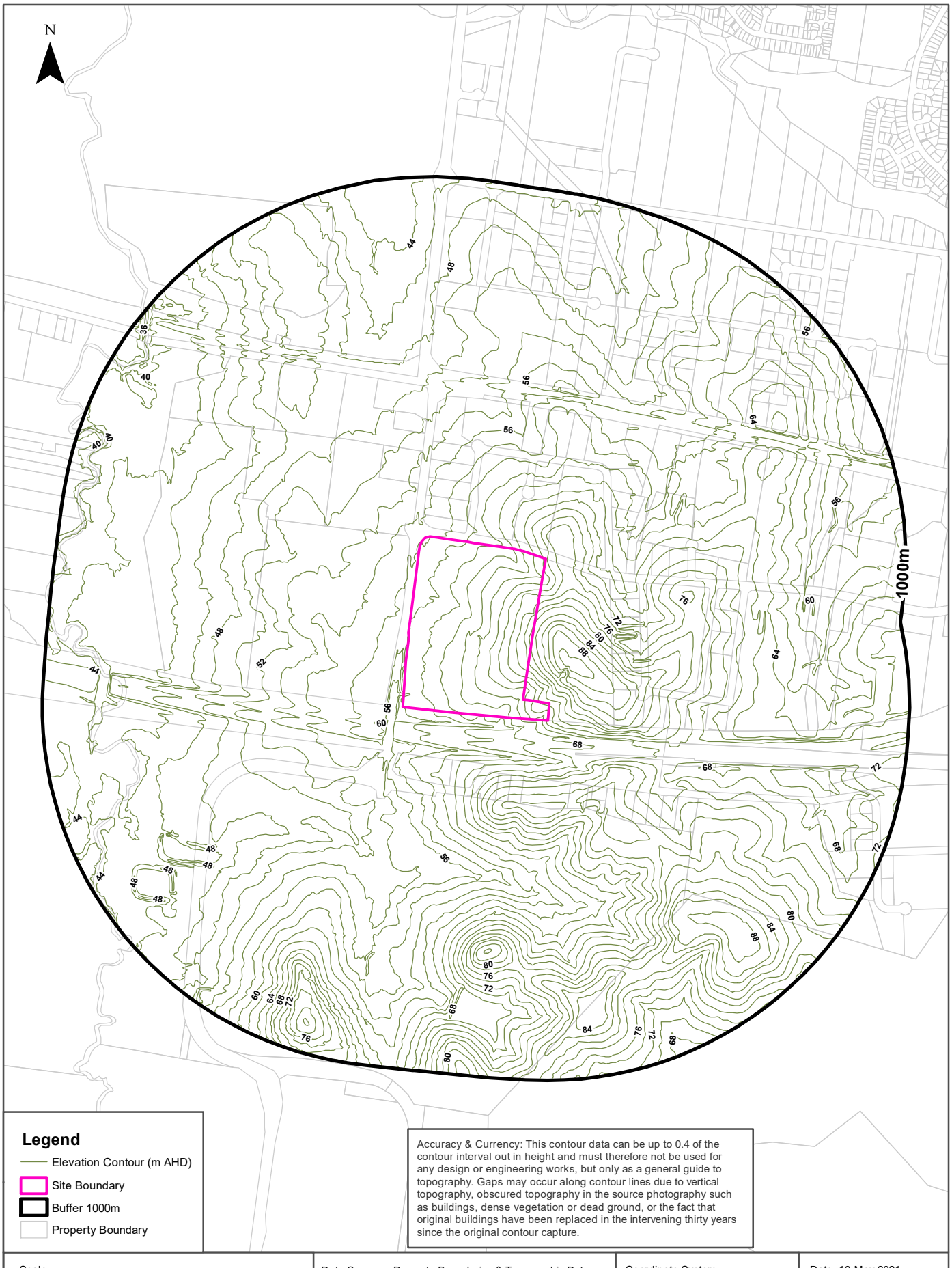

Hydrogeology & Groundwater

65 Huntingwood Drive, Huntingwood, NSW 2148

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

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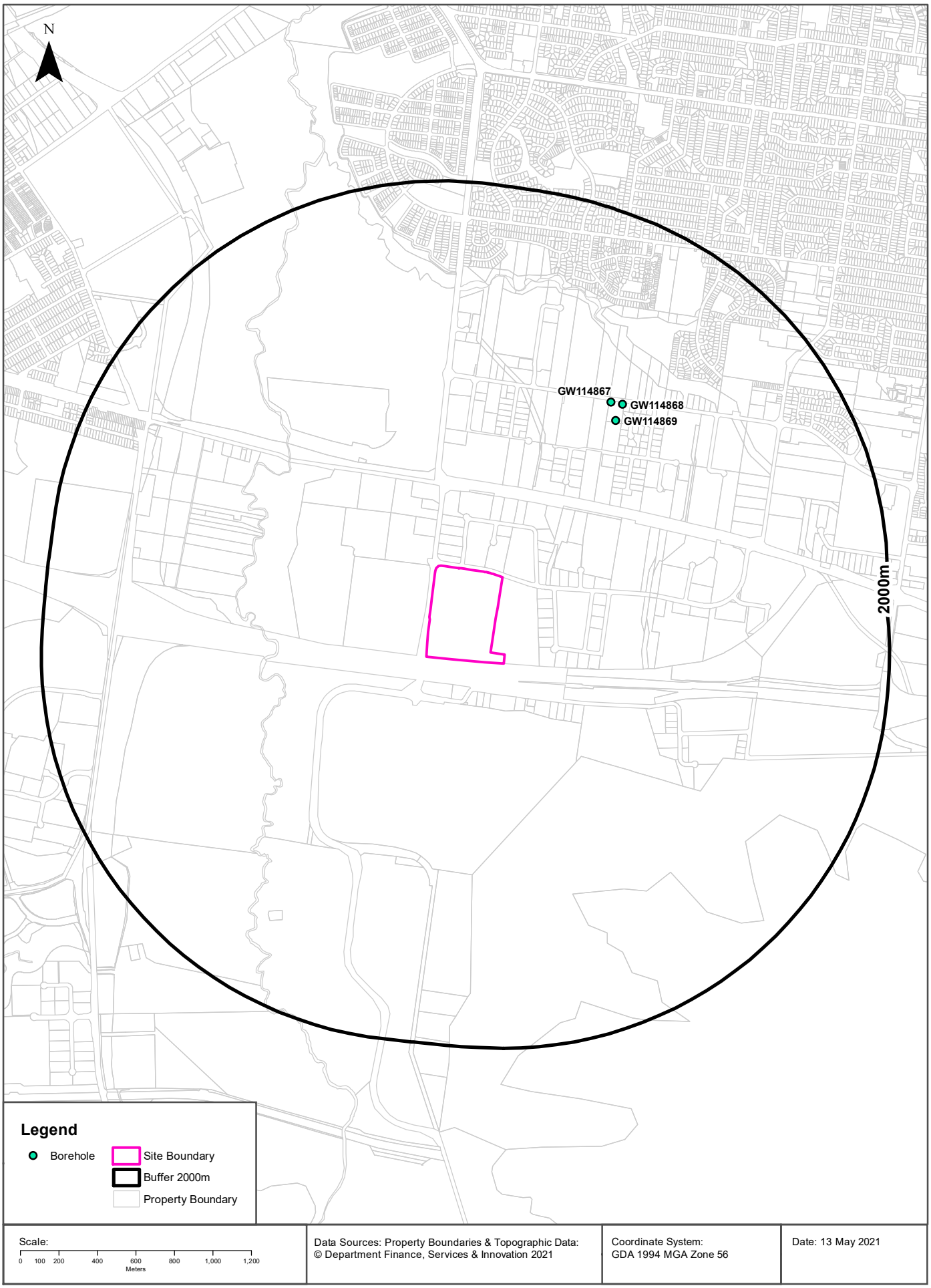

Hydrogeology & Groundwater

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Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW114869	10BL604980			Monitoring Bore	Monitoring Bore		01/01/2010	7.00	7.00					1004m	North East
GW114867	10BL604980			Monitoring Bore	Monitoring Bore		01/01/2010	7.00	7.00					1070m	North East
GW114868	10BL604980			Monitoring Bore	Monitoring Bore		01/01/2010	7.00	7.00					1093m	North East

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

Hydrogeology & Groundwater

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Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
No related drill log data			

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

65 Huntingwood Drive, Huntingwood, NSW 2148

Geology

65 Huntingwood Drive, Huntingwood, NSW 2148

Geological Units 1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dist	Dir
Rwb	Shale, carbonaceous claystone,claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group (undifferentiated)		Middle Triassic		Penrith	0m	On-site
Qal	Fine-grained sand, silt and clay				Quaternary		Penrith	632m	West

Geological Structures 1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Distance	Direction
Fold	Penrith Basin	Fold, position accurate	Penrith	185m	South West

Geological Data Source : NSW Department of Industry, Resources & Energy
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Naturally Occurring Asbestos Potential

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Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

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

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

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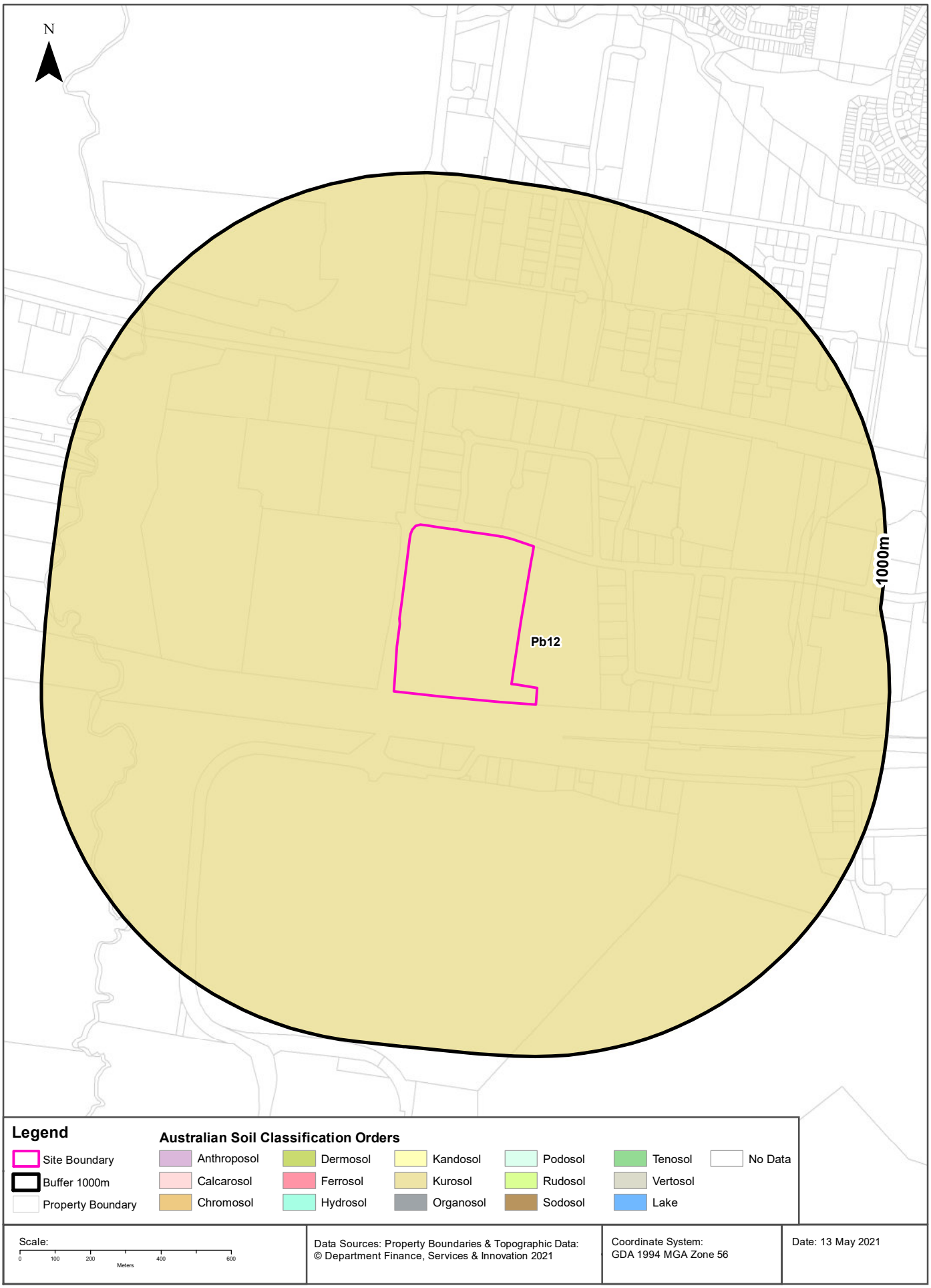

Soils

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Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO
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Soil Landscapes of Central and Eastern NSW

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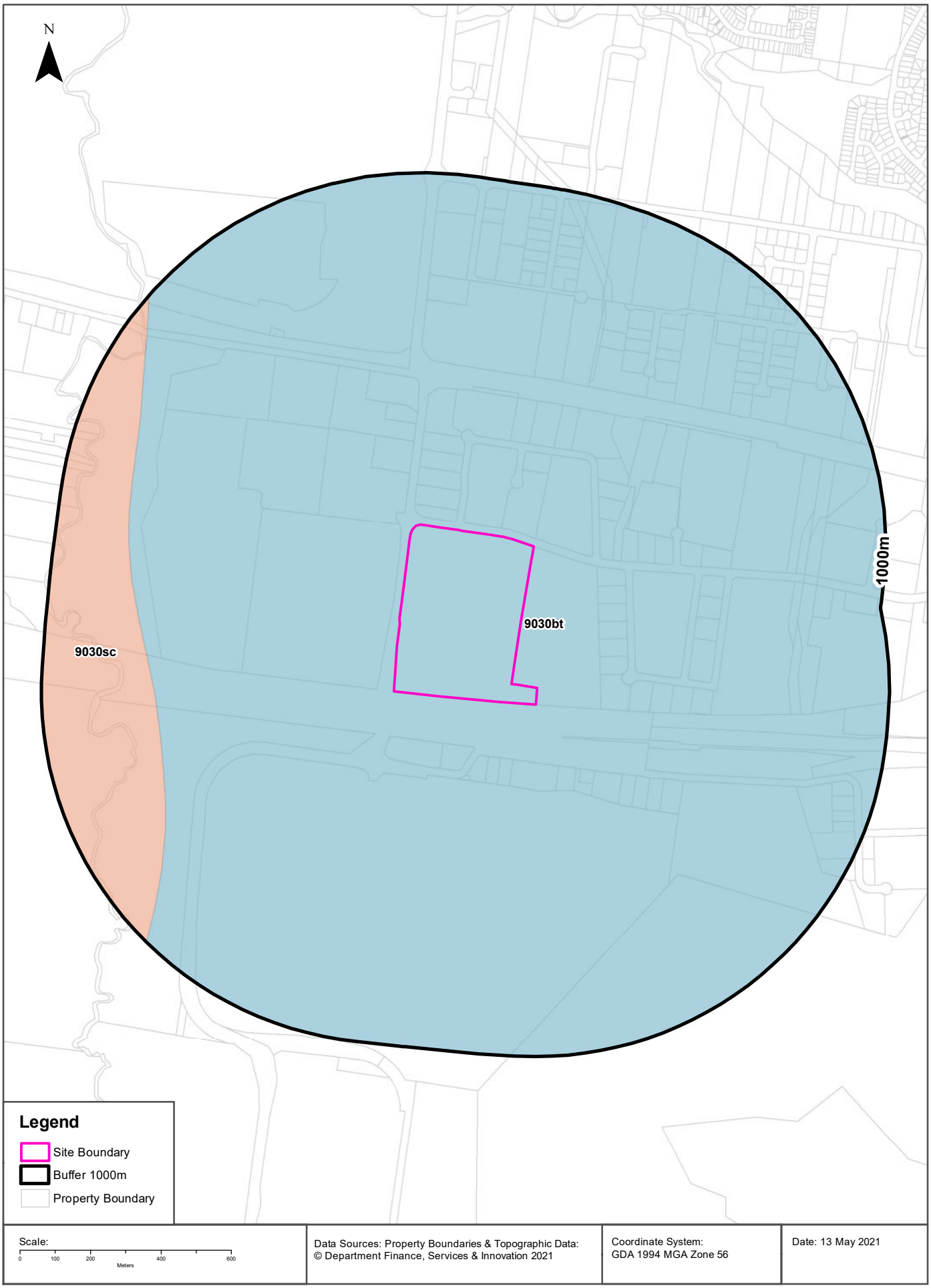

Soils

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Soil Landscapes of Central and Eastern NSW

Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9030bt	Blacktown	0m	On-site
9030sc	South Creek	674m	West

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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Acid Sulfate Soils

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Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
N/A		

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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Atlas of Australian Acid Sulfate Soils

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Acid Sulfate Soils

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Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
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Dryland Salinity

65 Huntingwood Drive, Huntingwood, NSW 2148

Dryland Salinity

65 Huntingwood Drive, Huntingwood, NSW 2148

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	0m	On-site
High hazard or risk	High hazard or risk	High hazard or risk	0m	On-site

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

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	On-site
234	HIGH	Area of High Salinity Potential	187m	North East
227	HIGH	Area of High Salinity Potential	243m	South West

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

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Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Mining & Exploration Titles

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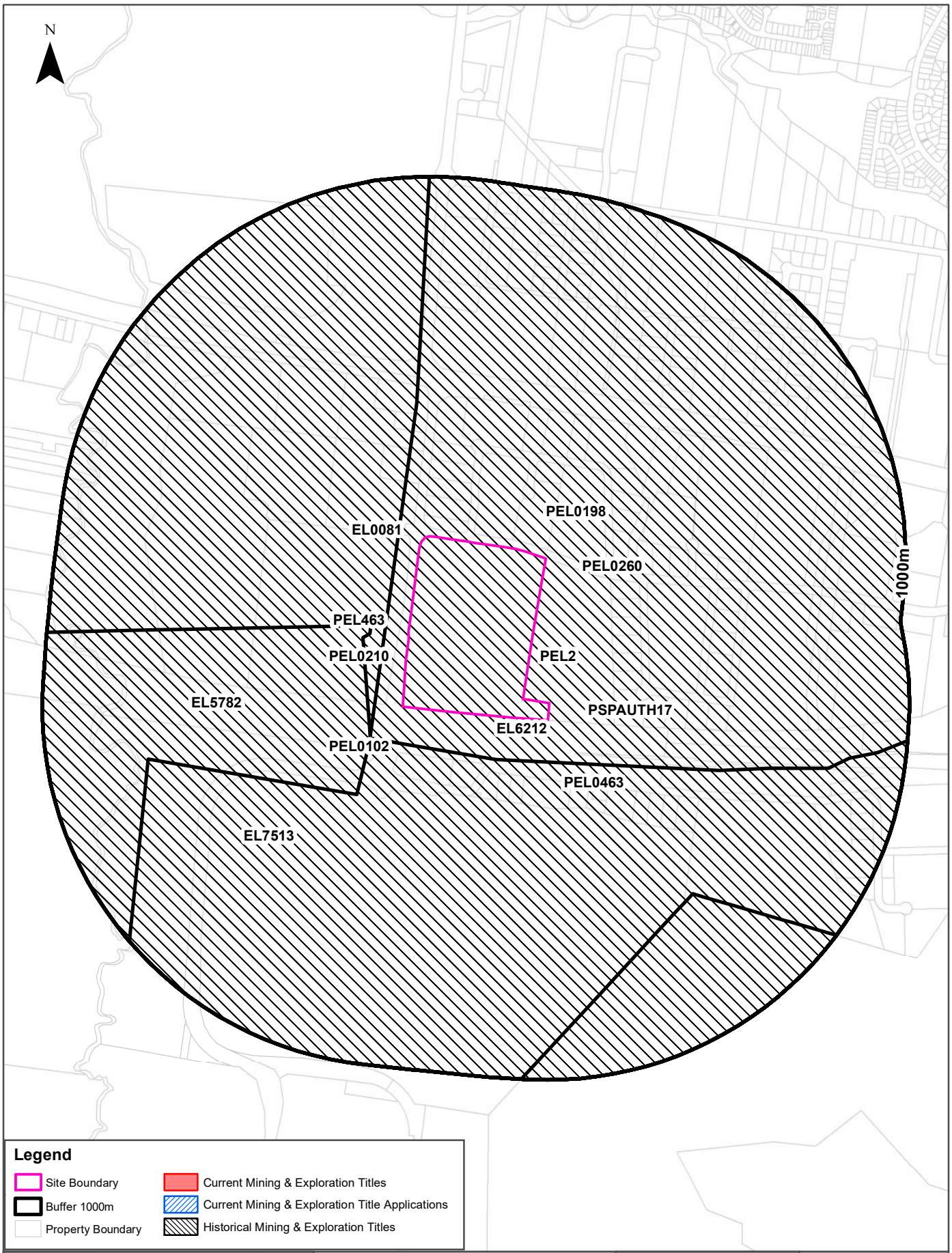

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 13 May 2021

Mining

65 Huntingwood Drive, Huntingwood, NSW 2148

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

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Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PSPAUTH17	MACQUARIE ENERGY PTY LTD	8/03/2007	7/03/2008	PETROLEUM	Petroleum	0m	On-site
PEL2	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
EL6212	HOT ROCK ENERGY PTY LTD,LONGREACH OIL LIMITED	4 Mar 2004	3 Mar 2013	MINERALS	Geothermal	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	9/09/1981	8/03/1993	PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	22/10/2008	6/03/2015	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD			MINERALS		0m	On-site
EL7513	GRADIENT ENERGY LIMITED	7 Apr 2010	15 Apr 2011	MINERALS	Geothermal	63m	South West
EL5782	THE AUSTRAL BRICK CO PTY LTD	05 Oct 2000	22 Feb 2002	MINERALS	Clay shale, Brick clay	96m	West

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

SEPP State Significant Precincts

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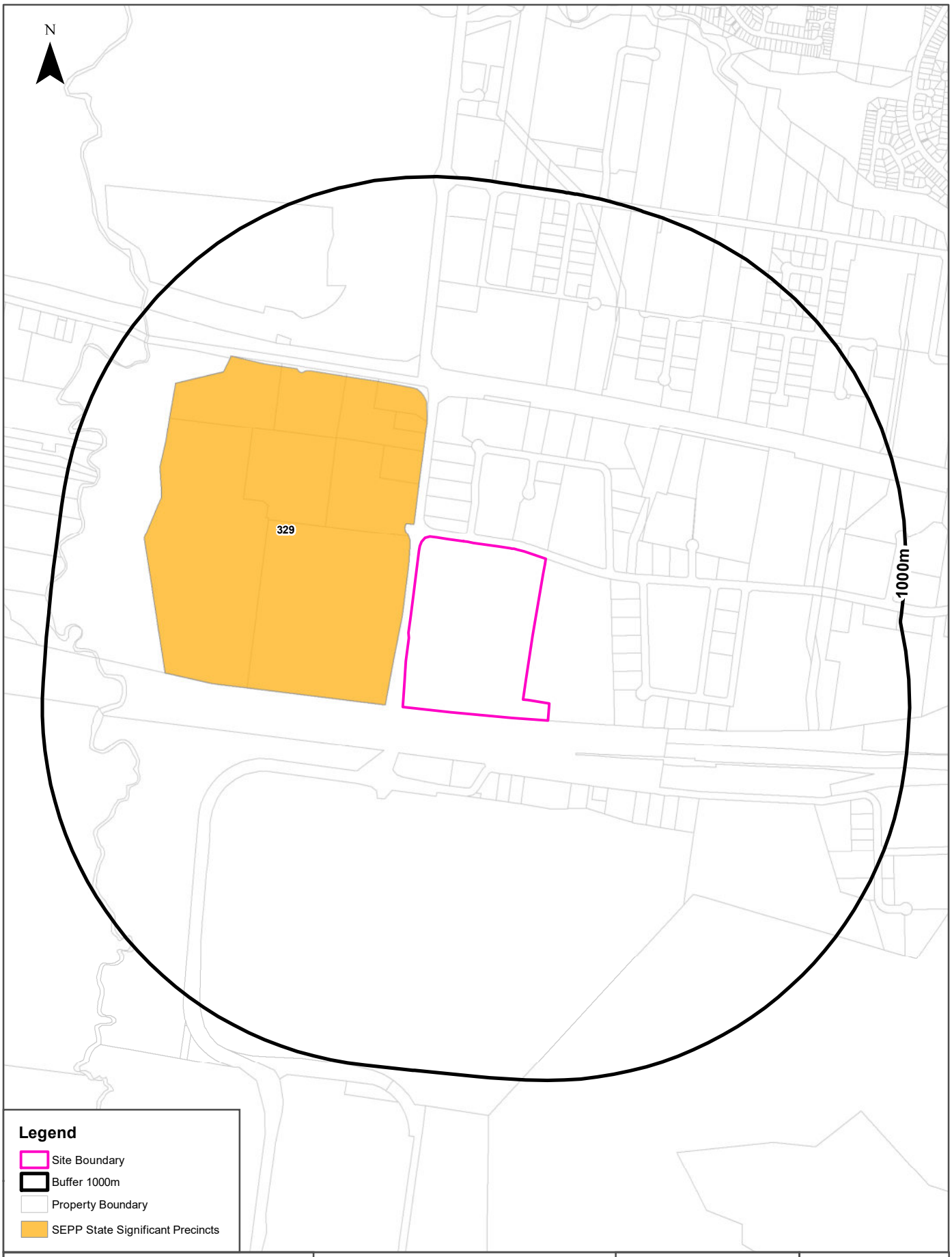

State Environmental Planning Policy

65 Huntingwood Drive, Huntingwood, NSW 2148

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
329	Huntingwood West	State Environmental Planning Policy (State Significant Precincts) 2005	25/05/2005	25/05/2005	25/05/2005		24m	North West

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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EPI Planning Zones

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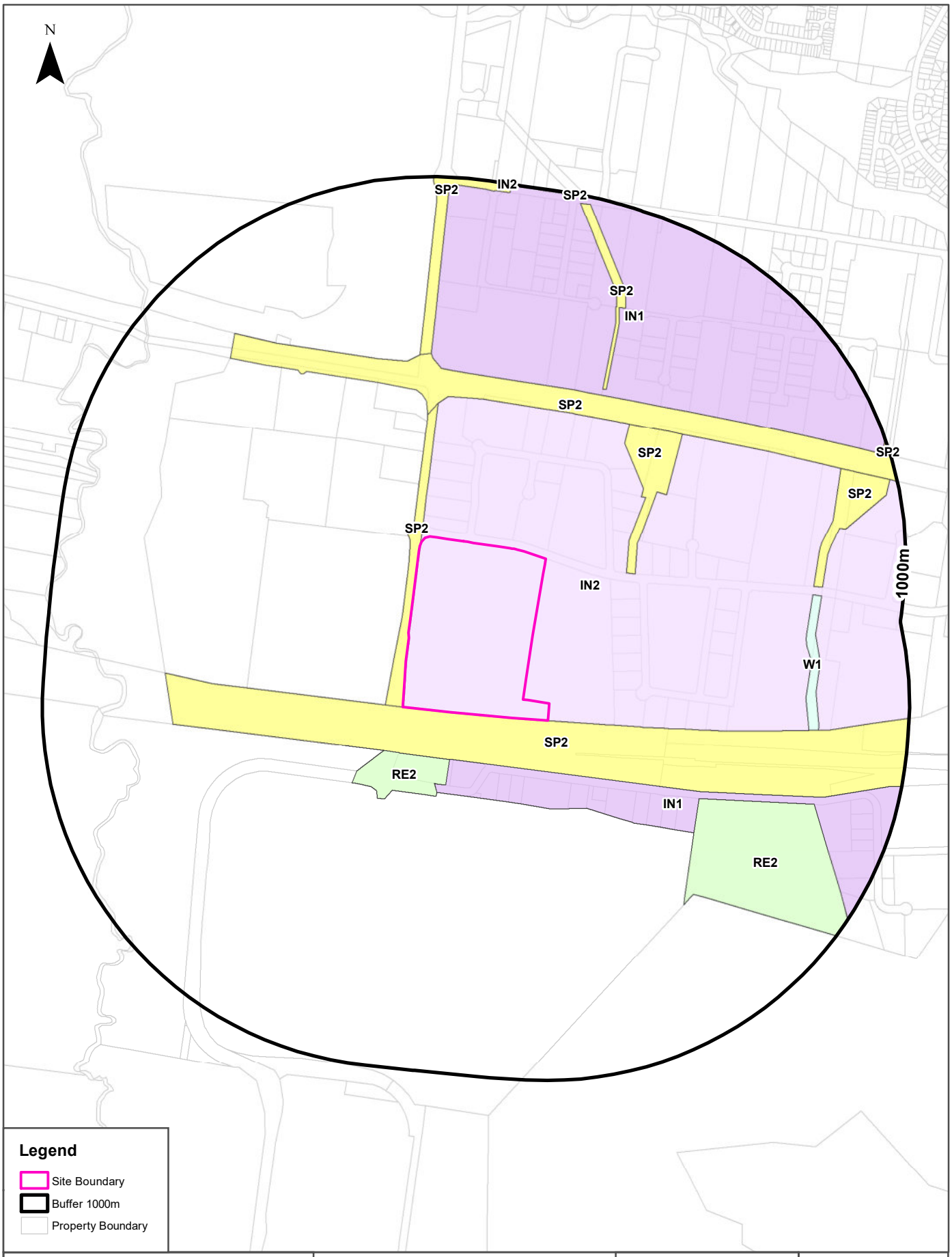

Scale: 0 100 200 400 600 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021 Planning: NSW Crown Copyright - Planning & Environment	Coordinate System: GDA 1994 MGA Zone 56	Date: 13 May 2021

Environmental Planning Instrument

65 Huntingwood Drive, Huntingwood, NSW 2148

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
IN2	Light Industrial		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		0m	On-site
SP2	Infrastructure	Local Road	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		0m	North West
SP2	Infrastructure	Classified Road	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		0m	South East
RE2	Private Recreation		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		127m	South West
IN1	General Industrial		State Environmental Planning Policy (Western Sydney Employment Area) 2009	08/11/2013	08/11/2013	11/06/2020	Blacktown Local Environmental Plan Amendment (Western Sydney Employment Area) 2013	131m	South East
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		225m	North East
IN1	General Industrial		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		462m	North East
RE2	Private Recreation		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		471m	South East
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		498m	North
SP2	Infrastructure	Local Road	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		506m	North
W1	Natural Waterways		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		711m	East
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		747m	East
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		969m	North East
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		997m	North
IN2	Light Industrial		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		997m	North
IN2	Light Industrial		Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	18/12/2020		999m	North

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Heritage Items

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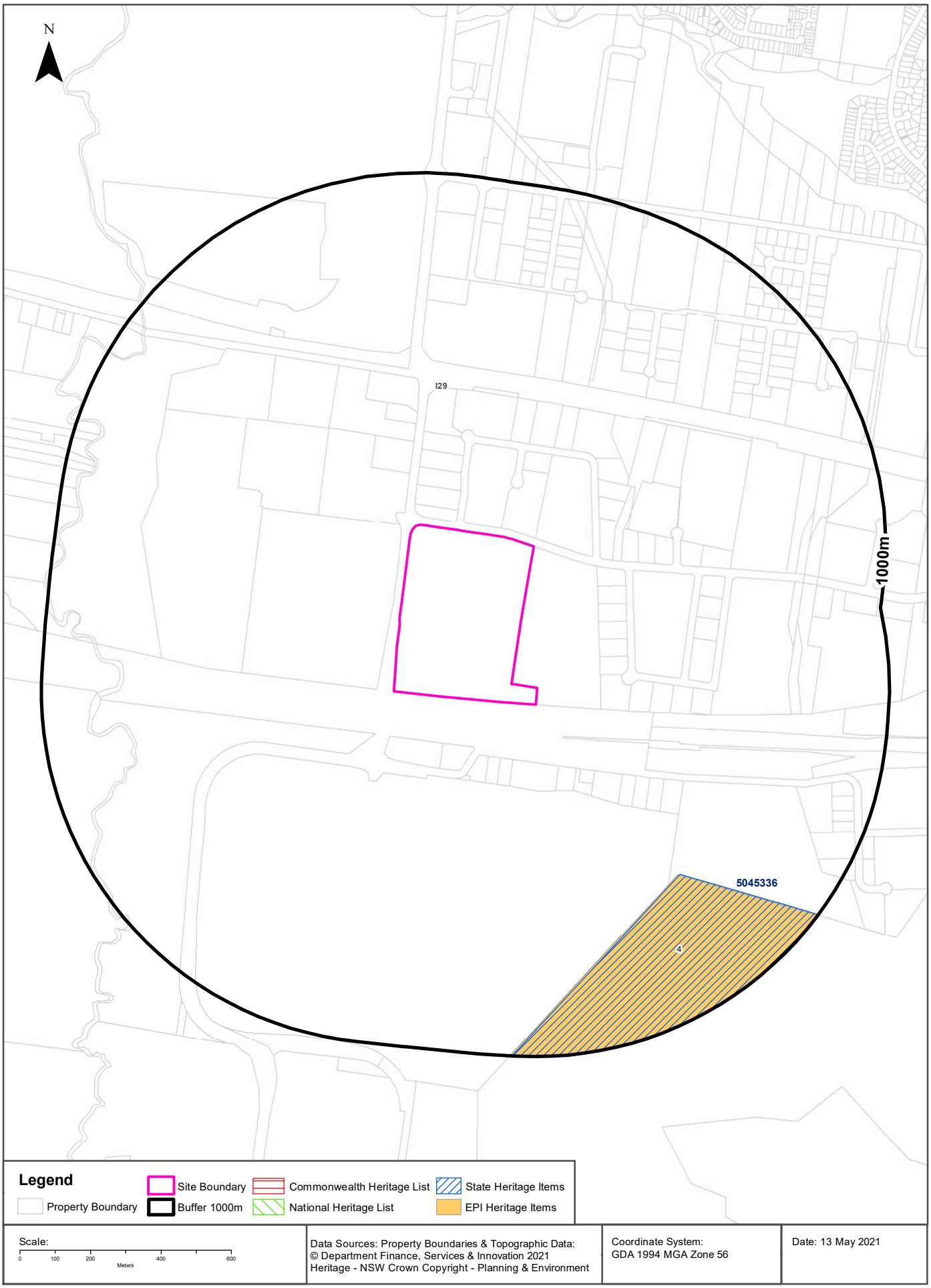

Heritage

65 Huntingwood Drive, Huntingwood, NSW 2148

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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State Heritage Register - Curtilages

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045336	Prospect Reservoir and surrounding area	Reservoir Road, Prospect	BLACKTOWN	18/11/1999	01370	2144	633m	South East

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
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Environmental Planning Instrument - Heritage

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I29	Seven Milestones	Item - General	Local	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	07/07/2015	394m	North
4	Prospect Reservoir and surrounding area	Item - General	State	State Environmental Planning Policy (Western Sydney Parklands) 2009	26/10/2012	26/10/2012	26/10/2012	628m	South East

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

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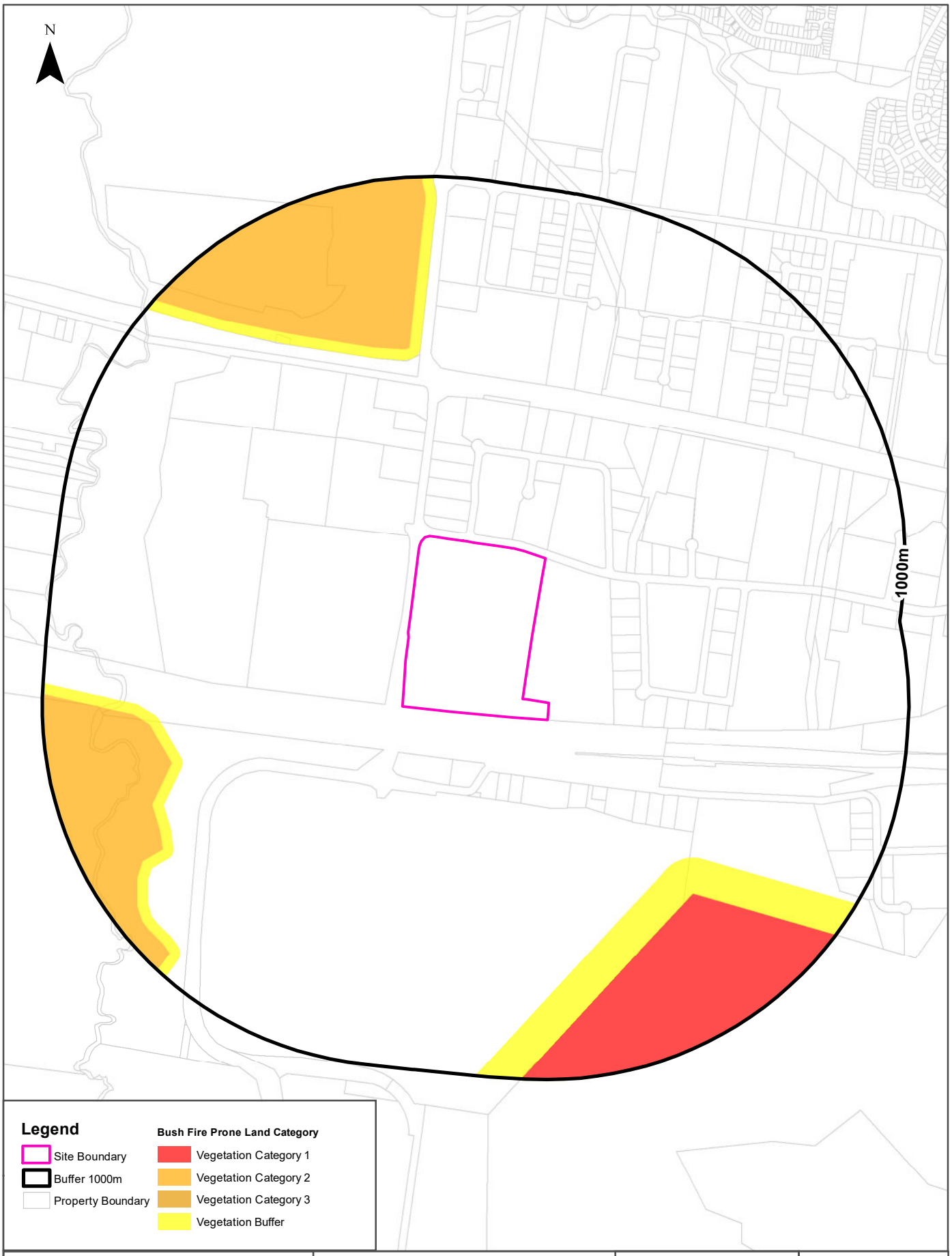

Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2021. Property Boundaries: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 13 May 2021

Natural Hazards

65 Huntingwood Drive, Huntingwood, NSW 2148

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	493m	North West
Vegetation Category 2	523m	North West
Vegetation Category 1	628m	South East

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

Ecological Constraints - Vegetation & Ramsar Wetlands

65 Huntingwood Drive, Huntingwood, NSW 2148

Scale: 0 100 200 400 600 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021	Coordinate System: GDA 1994 MGA Zone 56	Date: 13 May 2021

Ecological Constraints

65 Huntingwood Drive, Huntingwood, NSW 2148

Remnant Vegetation of the Cumberland Plain

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

Description	Crown Cover	Distance	Direction
10 - Shale Plains Woodland	Crown cover greater than 10%	17m	North West
10 - Shale Plains Woodland	Crown cover less than 10%	58m	West
9 - Shale Hills Woodland	Crown cover less than 10%	166m	South East
10 - Shale Plains Woodland	Crown cover less than 10% (urban areas)	183m	North
9 - Shale Hills Woodland	Crown cover greater than 10%	694m	South East
11 - Alluvial Woodland	Crown cover greater than 10%	710m	South West
11 - Alluvial Woodland	Crown cover less than 10%	714m	West
11 - Alluvial Woodland	Crown cover less than 10% (urban areas)	771m	North East

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

What Ramsar Wetland areas exist within the dataset buffer?

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

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

65 Huntingwood Drive, Huntingwood, NSW 2148

Ecological Constraints

65 Huntingwood Drive, Huntingwood, NSW 2148

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Moderate potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	11m	North West
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	235m	North West
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	719m	South West
Terrestrial	Low potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	911m	South

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

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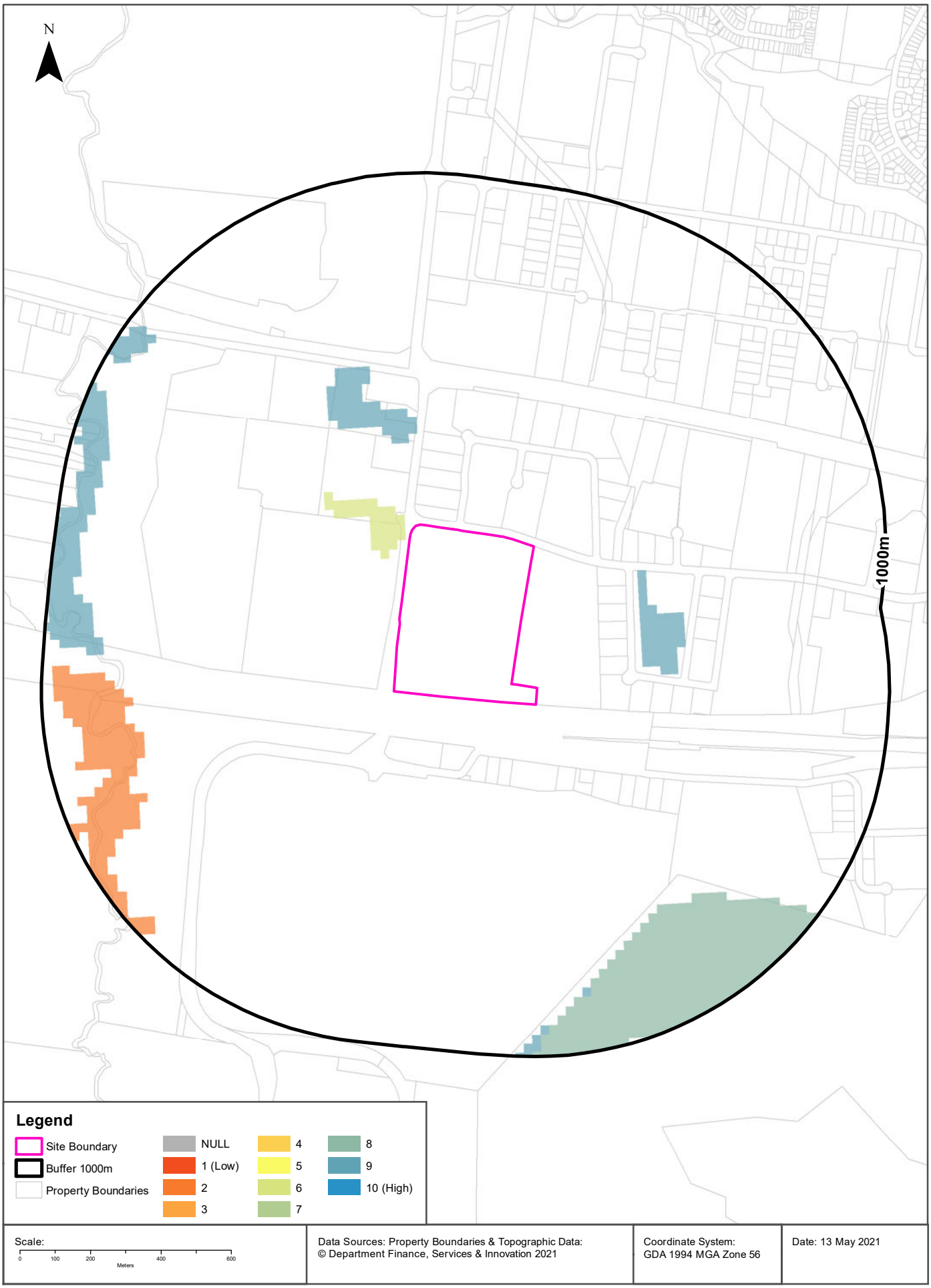

Ecological Constraints

65 Huntingwood Drive, Huntingwood, NSW 2148

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	6	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	11m	North West
Terrestrial	9	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	235m	North West
Terrestrial	8	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	662m	South East
Terrestrial	2	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	719m	South West
Terrestrial	9	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	828m	West

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

65 Huntingwood Drive, Huntingwood, NSW 2148

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Certhionyx variegatus	Pied Honeyeater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Todiramphus chloris	Collared Kingfisher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Allocasuarina glareicola		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Cynanchum elegans	White-flowered Wax Plant	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Endangered Population	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Micromyrtus minutiflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia nutans	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pilularia novae-hollandiae	Austral Pillwort	Endangered	Category 3	Not Listed	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Pterostylis gibbosa	Illawarra Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pultenaea parviflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Pultenaea pedunculata	Matted Bush-pea	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.

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

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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Land Title Records

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

Address: 65 Huntingwood Drive, Huntingwood NSW 2470

Description: - Lot 1 D.P. 866251

As regards to the part numbered 1 on the attached cadastral records enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.08.1915 (1915 to 1919)	Lindsay Victor Learmonth (Stock Dealer or Farmer)	Book 1065 No. 572
22.01.1919 (1919 to 1923)	George Third (Farmer)	Book 1147 No. 309
21.09.1923 (1923 to 1931)	Simpson Third (Labourer now Farmer)	Book 1320 No. 182
22.05.1931 (1931 to 1934)	Edward George Higgins (Contractor)	Book 1626 No. 678
13.04.1934 (1934 to 1947)	Simpson Third (Farmer)	Book 1687 No. 190
05.11.1947 (1947 to 1989)	George Charles Friend (Farmer) (And his deceased estate)	Book 2035 No. 707
27.02.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	Book 3780 No. 36 Now 1/866251

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

As regards to the part numbered 2 on the attached cadastral records enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1928)	John Burke (Retired Farmer)	Book 1433 No. 102
20.07.1928 (1928 to 1952)	George Charles Friend (Farmer)	Book 1524 No. 632
14.05.1952 (1952 to 1953)	Victor Muscat (Market Gardener) Vince Falzon (Market Gardener) Paul Falzon (Market Gardener) Charlie Falzon (Market Gardener)	Book 2213 No. 595
08.01.1953 (1953 to 1953)	Abraham Aboud (Poulterer)	Book 2237 No. 408
06.11.1953 (1953 to 1969)	Myles Kenneth Magnay (Labourer)	Book 2271 No. 393 (Book 2332 No. 152 – Re-Registration) Now Vol 10890 Fol 143
10.11.1969 (1969 to 1978)	Charles Tabone (Market Gardener) Jean Tabone (Married Woman)	Vol 10890 Fol 143
28.08.1978 (1978 to 1989)	Donato D'Ascanio (Spray Painter) Lucia D'Ascanio (Married Woman)	Vol 10890 Fol 143 Now 2/521450
27.02.1989 (1989 to 1989)	Jamani Pty Limited	2/521450
27.02.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	2/521450 Now 1/866251

As regards to the part numbered 3 on the attached cadastral records enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1928)	John Burke (Retired Farmer)	Book 1433 No. 102
20.07.1928 (1928 to 1952)	George Charles Friend (Farmer)	Book 1524 No. 632
14.05.1952 (1952 to 1953)	Victor Muscat (Market Gardener) Vince Falzon (Market Gardener) Paul Falzon (Market Gardener) Charlie Falzon (Market Gardener)	Book 2213 No. 595
08.01.1953 (1953 to 1953)	Abraham Aboud (Poulterer)	Book 2237 No. 408
06.11.1953 (1953 to 1969)	Myles Kenneth Magnay (Labourer)	Book 2271 No. 393 (Book 2332 No. 152 – Re-Registration) Now Vol 10890 Fol 142
10.11.1969 (1969 to 1989)	Charles Tabone (Market Gardener) Jean Tabone (Married Woman)	Vol 10890 Fol 142 Now 1/521450
23.05.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	1/521450 Now 1/866251

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

As regards to the part numbered 4 on attached Cadastral Records Enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
07.11.1927 (1927 to 1949)	Francis William Watts (Civil Servant)	Book 1493 No. 702
11.03.1949 (1949 to 1952)	Alexander Hilton Sanderson (Farmer) Anne Campbell Sanderson (Married Woman)	Book 2081 No. 681
18.01.1952 (1952 to 1954)	John William Miller (Dairy Farmer)	Book 2204 No. 884
27.09.1954 (1954 to 1957)	Joseph Frederick Maurice Jones (Clicker) Isabella May Jones (Married Woman)	Book 2317 No. 627
19.02.1957 (1957 to 1962)	Martin Hanich Kathleen Hanich Frank Hanich (Now Deceased)	Book 2405 No. 892
22.05.1962 (1962 to 1989)	Charlie Tabone (Market Gardener) Or Charles Tabone Jean Tabone (Married Woman)	Book 2616 No. 53 Then Volume 13811 Folio 236 Now 8/38784
23.05.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	8/38784 Now 1/866251

As regards to the part numbered 5 on attached Cadastral Records Enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
07.11.1927 (1927 to 1949)	Francis William Watts (Civil Servant)	Book 1493 No. 702
11.03.1949 (1949 to 1952)	Alexander Hilton Sanderson (Farmer) Anne Campbell Sanderson (Married Woman)	Book 2081 No. 681
18.01.1952 (1952 to 1954)	John William Miller (Dairy Farmer)	Book 2204 No. 884
23.07.1954 (1954 to 1954)	Henry John Knight Houlsby (Accountant)	Book 2297 No. 470
23.07.1954 (1954 to 1957)	Sarah Hodgetts (Widow)	Book 2297 No. 471 Now Volume 7312 Folio 147
01.11.1957 (1957 to 1971)	Trevor James Macleod (Dry Cleaner)	Volume 7312 Folio 147
28.01.1971 (1971 to 1989)	Joseph Gatt (Poultry Process Worker) Victoria Gatt (Married Woman)	Volume 7312 Folio 147 Now 7/38784
15.11.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	7/38784 Now 1/866251

ABN: 36 092 724 251
Ph: 02 9099 7400
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Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards to the part numbered 6 on attached Cadastral Records Enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
07.11.1927 (1927 to 1949)	Francis William Watts (Civil Servant)	Book 1493 No. 702
11.03.1949 (1949 to 1952)	Alexander Hilton Sanderson (Farmer) Anne Campbell Sanderson (Married Woman)	Book 2081 No. 681
18.01.1952 (1952 to 1954)	John William Miller (Dairy Farmer)	Book 2204 No. 884
10.03.1954 (1954 to 1958)	Joseph Parnis (Market Gardener)	Book 2281 No. 557
14.04.1958 (1958 to 1959)	Michael Camilleri (Market Gardener)	Book 2442 No. 500
23.05.1959 (1959 to 1989)	Bill Camilleri (Market Gardener) Or Manwel Bill Camilleri Or Manwell Bill Camilleri	Book 2486 No. 755 Then Volume 13811 Folio 235 Now 6/38784
20.11.1989 (1989 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	6/38784 Now 1/866251

As regards to the part numbered 7.1 on attached Cadastral Records Enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
07.11.1927 (1927 to 1949)	Francis William Watts (Civil Servant)	Book 1493 No. 702
11.03.1949 (1949 to 1952)	Alexander Hilton Sanderson (Farmer) Anne Campbell Sanderson (Married Woman)	Book 2081 No. 681
18.01.1952 (1952 to 1954)	John William Miller (Dairy Farmer)	Book 2204 No. 884
10.03.1954 (1954 to 1958)	Joseph Parnis (Market Gardener)	Book 2281 No. 557
14.04.1958 (1958 to 1989)	Michael Camilleri (Market Gardener)	Book 2442 No. 500 Then Volume 12769 Folio 132 Now 5/38784
28.06.1989 (1989 to 1990)	H.S. Dove Pty Limited Now Liberty Holdings Pty Limited Vanberg Pty Limited	5/38784 Now 1 to 3/800812
04.05.1990 (1990 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	1 to 3/800812 Now 1/866251

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

As regards to the part numbered 7.2 on attached Cadastral Records Enquiry: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
07.11.1927 (1927 to 1949)	Francis William Watts (Civil Servant)	Book 1493 No. 702
11.03.1949 (1949 to 1952)	Alexander Hilton Sanderson (Farmer) Anne Campbell Sanderson (Married Woman)	Book 2081 No. 681
18.01.1952 (1952 to 1954)	John William Miller (Dairy Farmer)	Book 2204 No. 884
10.03.1954 (1954 to 1958)	Joseph Parnis (Market Gardener)	Book 2281 No. 557
14.04.1958 (1958 to 1989)	Michael Camilleri (Market Gardener)	Book 2442 No. 500 Then Volume 12769 Folio 132 Now 5/38784
21.06.1926 (1926 to 1927)	Bernard Burke (Laborer)	Book 1433 No. 102
28.06.1989 (1989 to 1992)	H.S. Dove Pty Limited Now Liberty Holdings Pty Limited Vanberg Pty Limited	5/38784 Now 4 & 5/800812
23.12.1992 (1992 to 1992)	Civil & Civic Pty Limited	4 & 5/800812
23.12.1992 (1992 to 1997)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	4 & 5/800812 Now 1/866251

Continued as to the whole of the land: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
20.02.1997 (1997 to 2020)	Arnott's Biscuits Limited Then Arnott's Biscuits Pty Ltd	1/866251
09.01.2020 (2020 to Date)	# The Trust Company (Australia) Limited # The Trust Company Limited	1/866251

 # Denotes current registered proprietor

Continued Over:

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

Leases: -

- 11.06.1996 (2218044): Lease to Metsouth Energy being switching station shown as "Substation Premises" in D.P. 815719. Expires 30.06.2020. Option of renewal 25 years.
    - 26.06.2017 (AM475160): Lease of lease 2218044 to Edwards A Pty Limited, Eric Epsilon Asset Corporation 1 Pty Ltd, Eric Epsilon Asset Corporation 2 Pty Ltd, Eric Epsilon Asset Corporation 3 Pty Ltd & Eric Epsilon Asset Corporation 4 Pty Ltd Expires: See Dealing. Clause 2.3 (b) (ii).
    - 26.06.2017 (AM475161): Lease of lease AM475160 to Edwards O Pty Ltd, Eric Epsilon Operator Corporation 1 Pty Ltd, Eric Epsilon Operator Corporation 2 Pty Ltd, Eric Epsilon Operator Corporation 3 Pty Ltd & Eric Epsilon Operator Corporation 4 Pty Ltd Expires: See Dealing. Clause 12.1.
- 26.06.2017 (AM475226): Change of Name affecting lease 2218044 lessee now Epsilon Distribution Ministerial Holding Corporation.
- 09.01.2020 (AP818508): Lease to Arnott's Biscuits Pty Ltd Expires: 27.12.2051. Option of Renewal: 10 years and 4 further option of 10 years.

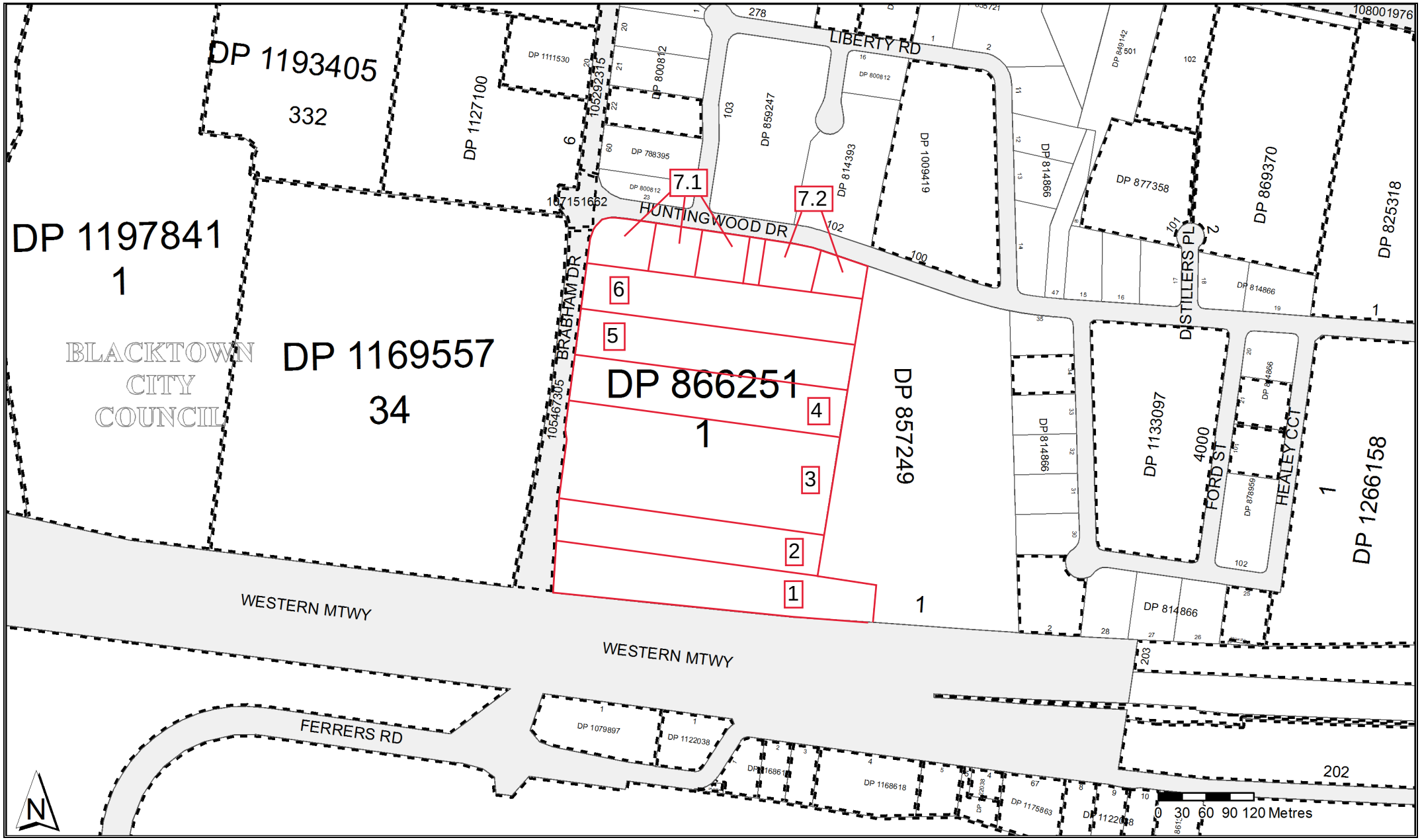
Easements: -

- 29.03.1990 (D.P. 800812): Easement for Electricity purposes 2.75 wide affecting the par shown so burdened in the title diagram.
- 14.02.1991 (D.P. 808313): Right of Carriageway variable width affecting the part shown so burdened in the title diagram.
    - 03.09.1996 (2135723): Released in so far as it benefits Lots 1 & 2 in D.P. 857249.
- 10.04.1992 (D.P. 815719): Easement to drain water 1.5 wide affecting the part shown so burdened in the title diagram.
- 10.04.1992 (D.P. 815719): Right of Carriageway variable width affecting the part shown so burdened in the title diagram.
- 10.04.1992 (D.P. 815719): Easement for underground cableways 1 wide & variable width affecting the part shown so burdened in the title diagram.

Yours Sincerely
Taylor Wilson
(Checked by Mark Groll)
27th May 2021

Cadastral Records Enquiry Report : Lot 1 DP 866251

Locality : HUNTINGWOOD
Parish : PROSPECT
LGA : BLACKTOWN
County : CUMBERLAND



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This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

Req:R889063 /Doc:DP 0038784 P /Rev:06-Mar-2019 /NSW LRS /Prt:21-May-2021 09:52 /Seq:1 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

InfoTrack

NEGATIVE PREPARED

REG'D PLAN F943681.

FP 38784

Shire of Blacktown.

PLAN

No 884 Bk. 2204 JRH. 6.4.54

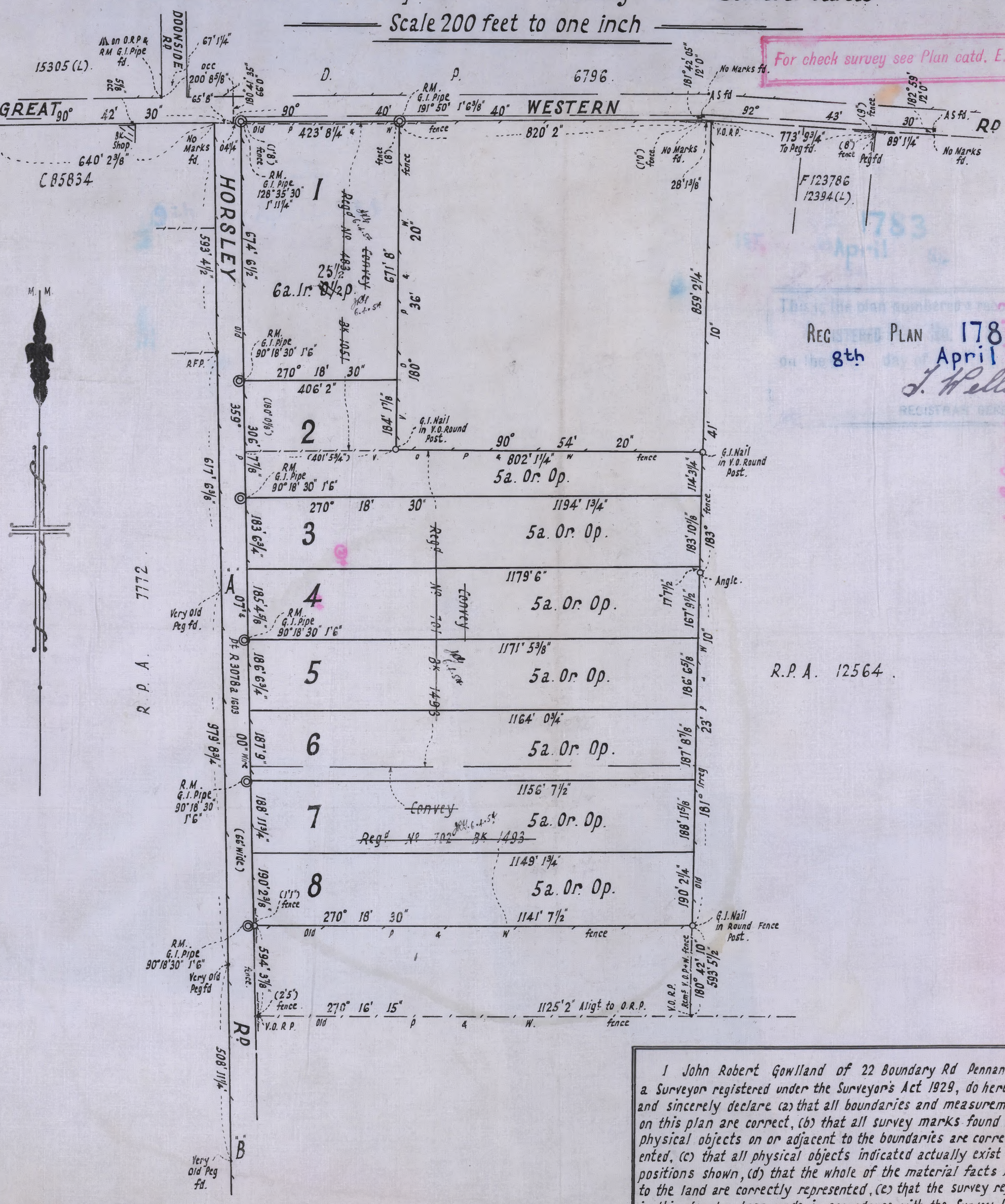
of subdivision of the land in Conveyance Regd ~~No 483 Bk 1051, No 701 Bk 1493 & No 702 Bk 1493~~

Parish of Prospect County of Cumberland

Scale 200 feet to one inch

For check survey see Plan catd. E.S. 54/8.

REG PLAN 1784
8th April 54
J. Wells



Plan approved by Council.
Covered by Council Clerk's
Certificate No.52 of
18th August, 1953.

Shire Clerk, Blacktown.

Subscribed and declared before me at Sydney
this 30th day of July 1953 A.D.

James H. George J.P.
Justice of Peace.

Datum Line of Azimuth A-B.

I John Robert Gowland of 22 Boundary Rd Pennant Hills, a Surveyor registered under the Surveyor's Act 1929, do hereby solemnly and sincerely declare (a) that all boundaries and measurements shown on this plan are correct, (b) that all survey marks found and relevant physical objects on or adjacent to the boundaries are correctly represented, (c) that all physical objects indicated actually exist in the positions shown, (d) that the whole of the material facts in relation to the land are correctly represented, (e) that the survey represented in this plan has been made in accordance with the Survey Practice Regulations 1933 under my supervision the character and extent of which was as required by the Survey Practice Regulations 1933 and was completed on the 25th day of July 1953 and the reference marks have been placed as shown hereon.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900.

J.R. Gowland

Surveyor registered under the Surveyor's Act, 1929.

Req:R879117 /Doc:DP 0802109 P /Rev:09-Nov-1992 /Sts:OK.OK /Pgs:ALL /Prt:19-Dec-2017 11:37 /Seq:1 of 1
Ref:huntingwood /Src:M

PLAN FORM 2

Plan Drawing only to appear in this space

*OFFICE USE ONLY

DP 802109

Registered 20-7-1990

C.A.

Title System: TORRENS

Purpose: CONSOLIDATION

Ref. Map U 8252-2, 3 #

Last Plan DP 521450, DP 797874

PLAN OF CONSOLIDATION OF Pt LOT 2 D.P. 521450 AND LOT 1 D.P. 797874

Lengths are in metres Reduction Ratio 1: 2500

Local Government Area / City: BLACKTOWN

Locality: HUNTINGWOOD

Parish: PROSPECT

County: CUMBERLAND

This is sheet 1 of my plan in sheets. (Delete if inapplicable).

I, JOHN W. MENZIES of 1 MAXIM STREET, WEST RYDE a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan is accurate and has been made in accordance with the Surveyors Practice Regulations, 1933 and any general requirements of the Department of Lands, which were in force on the 20th March 1990.

Signature: J. W. Menzies

Surveyor registered under Surveyors Act, 1929, as amended. Date of Survey: 20th March 1990. Datum Line of Azimuth: "A" – "B"

Plans Used in preparation of survey/compilation

D.P. 244378	D.P. 797874
D.P. 747150	D.P. 228919
D.P. 38784	D.P. 521450
D.P. 800812	D.P. 800811

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

PLAN ENDORSED IN L.T.O. AT SURVEYOR REQUEST

N001KIA

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

Director

Director

DIAGRAM NOT TO SCALE

GREAT WESTERN HIGHWAY

RMG1P TO RMC.B. 92° 19' 40" - 235·29 BY D.P. 228919
92° 28' 00" - 235·29 BY ME

D.P. 800812

D.P. 89242

D.P. 228919

D.P. 533515

D.P. 747150

D.P. 512953

D.P. 521450 Pt. 1

SCHEDULE OF PERMANENT MARKS FD. (D.H.E.W.) IN KERB

1	151° 09' 20"	4·98	L 25·27
2	180° 09' 40"	3·815	L 19·51
3	270° 09'	3·935	L 17·195
4	258° 53' 50"	3·475	L 17·325
5	178° 51' 40"	3·72	L 19·37
6	154° 08' 20"	7·67	

HUNTINGWOOD DRIVE

HORSLEY ROAD

MOTORWAY (VIDE D.P. 244378)

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

Plans Base ..... Scale .....

Council Clerk's Certificate

I hereby certify that —

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

*(b) the requirements of Part 3 Division 2 of the Water Board Act 1987 and Water Supply Authorities Act 1987

have been complied with by the applicant in relation to the proposed ..... (insert "new road" "subdivision" or "consolidated lot") set out hereon.

Subdivision No. .....

Date .....

(Signature) ..... Council Clerk

Council File No. .....

*This part is not certified to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the area of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.

† Delete if inapplicable.

AMENDMENTS BY ME 19-6-90
J. W. Menzies

SURVEYOR'S REFERENCE: 6938-357

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

357

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 31st July, 1990

Plan Drawing only to appear in this space

OFFICE USE ONLY

DP 866251

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

Registered: 19.2.1997

C.A.: NE9531 OF 9.10.1996

Title System: TORRENS

Purpose: CONSOLIDATION

Ref.Mic: U8252-3

Lost Plans: DP800812, DP38784, DP521450, DP815719, DP848157

PLAN OF CONSOLIDATION OF
LOTS 1, 2, 3, 4, & 5 D.P. 800812
LOTS 6, 7 & 8 D.P. 38784, PART OF
LOT 1 D.P. 521450
LOT 30 D.P. 815719
LOT 1 D.P. 848157

Lengths are in metres. Reduction Ratio 1:2000

L.G.A.: BLACKTOWN

Locality: HUNTINGWOOD

Parish: PROSPECT

County: CUMBERLAND

This is Sheet ... of my plan in ... sheets.
(Delete if inapplicable)

I, JOHN K. CURDIE
of 1 MAXIM STREET, WEST RYDE

a surveyor registered under the Surveyors Act, 1929 as amended, hereby certify that the survey represented in this plan is accurate and has been made in accordance with the Survey Practice Regulation, 1990 and any special requirements of the Department of Lands, and was completed on

16TH DECEMBER 1994

Signature: ...
Surveyor registered under Surveyors Act, 1929, as amended.
Datum Line of Azimuth: 'A'-'B'
Type and date of survey

Plans used in preparation of survey/completion

D.P. 38784	D.P. 831329
D.P. 521450	D.P. 815719
D.P. 800812	D.P. 804991
D.P. 802109	D.P. 848157

PANEL FOR USE ONLY (for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

IT IS INTENDED TO DEDICATE THE ROAD WIDENING IN BRABHAM DR. AS PUBLIC ROAD

Crown Lands Office Approval

PLAN APPROVED ... Authorised Officer

Land District ...

Paper No. ...

Field Book ... pages ...

Council Clerk's Certificate

I hereby certify that -

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

* (b) the requirements of section 348 of the Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, Hunter District Water, Sewerage, and Drainage Act, 1938, as amended

have been complied with by the applicant in relation to the proposed Consolidation & Road Widening (insert "new road", "subdivision" or "consolidation" as set out herein)

Subdivision No. ...

Date ...

Signature: ...

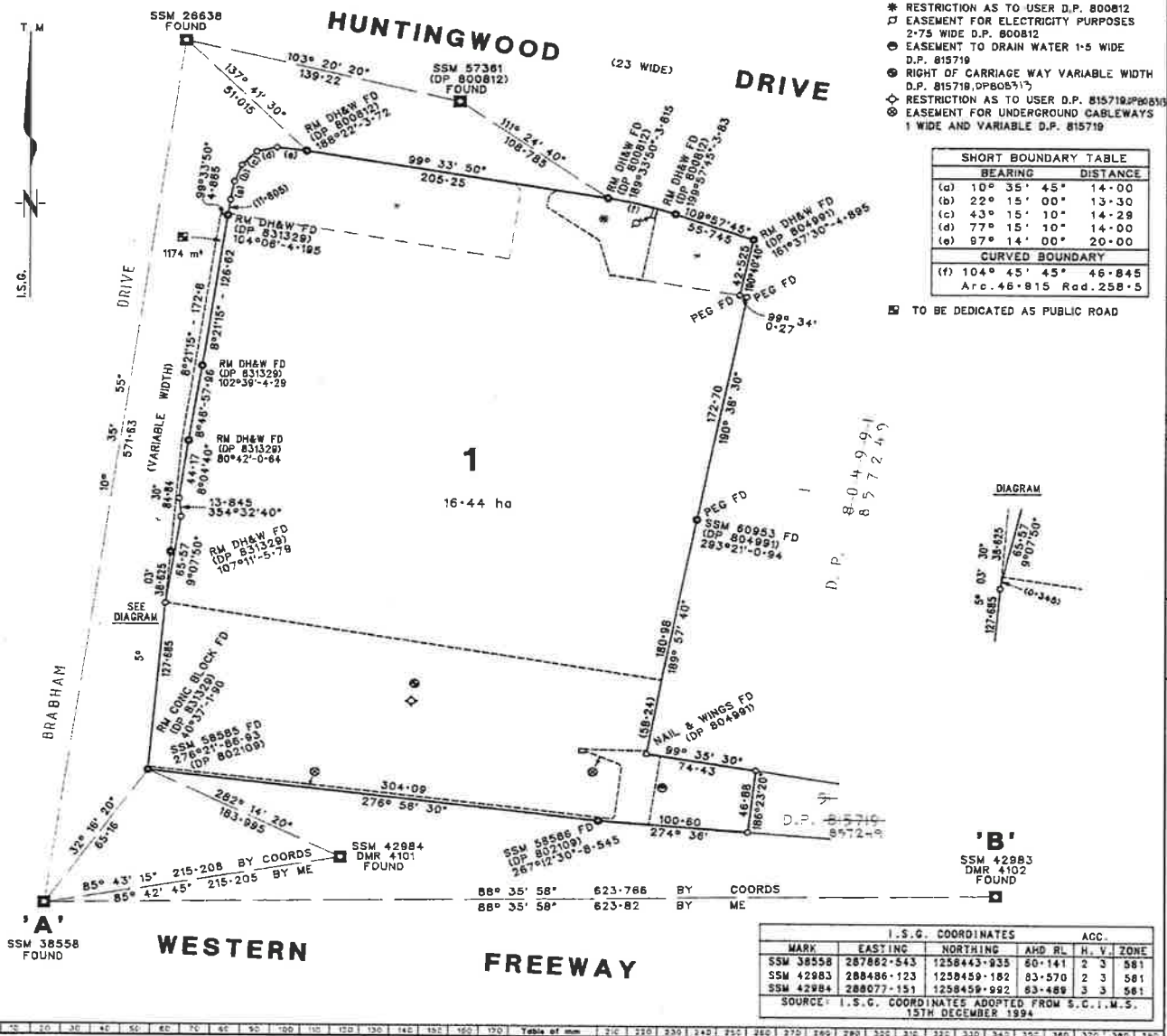
Council Seal

Council File No. ...

* This part of certificate is to be deleted where the application is also for a consolidation or at the opening of a new road or where the land is not situated in whole within the areas of operations of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board.

† Delete if inapplicable

SURVEYOR'S REFERENCE: 7591A.G01-406



* RESTRICTION AS TO USER D.P. 800812
EASEMENT FOR ELECTRICITY PURPOSES 2·75 WIDE D.P. 800812
EASEMENT TO DRAIN WATER 1·5 WIDE D.P. 815719
RIGHT OF CARRIAGE WAY VARIABLE WIDTH D.P. 815719, DP803513
RESTRICTION AS TO USER D.P. 815719, DP803513
EASEMENT FOR UNDERGROUND CABLEWAYS 1 WIDE AND VARIABLE D.P. 815719

TO BE DEDICATED AS PUBLIC ROAD

SHORT BOUNDARY TABLE		
	BEARING	DISTANCE
(a)	10° 35' 45"	14·00
(b)	22° 15' 00"	13·30
(c)	43° 15' 10"	14·29
(d)	77° 15' 10"	14·00
(e)	97° 14' 00"	20·00
CURVED BOUNDARY		
(f)	104° 45' 45"	46·845
	Arc 46·815 Rad. 258·5	

	I.S.G. COORDINATES			ACC.		
MARK	EASTING	NORTHING	AHD RL	H.	V.	ZONE
SSM 38558	287862·543	1258443·935	60·141	2	3	561
SSM 42983	288486·123	1258459·182	83·570	2	3	561
SSM 42984	288077·151	1258459·992	83·489	3	3	561

SOURCE: I.S.G. COORDINATES ADOPTED FROM S.C.I.M.S. 15TH DECEMBER 1994

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DP 866251

406

Req:R941024 /Doc:DP 0866251 P /Rev:20-Feb-1997 /Sts:OK.OK /Pgs:ALL /Prt:12-Jan-2018 09:24 /Seq:1 of 1
Ref:huntingwood /Src:M

Req:R884027 /Doc:CT 10890-142 CT /Rev:04-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:1 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

10890142

NEW SOUTH WALES

CERTIFICATE OF TITLE

[redacted]OPERTY ACT, 1900, as amended.

Application No. 45244

Vol. 10890 Fol. 142

MA

CANCELLED 25-9-1968

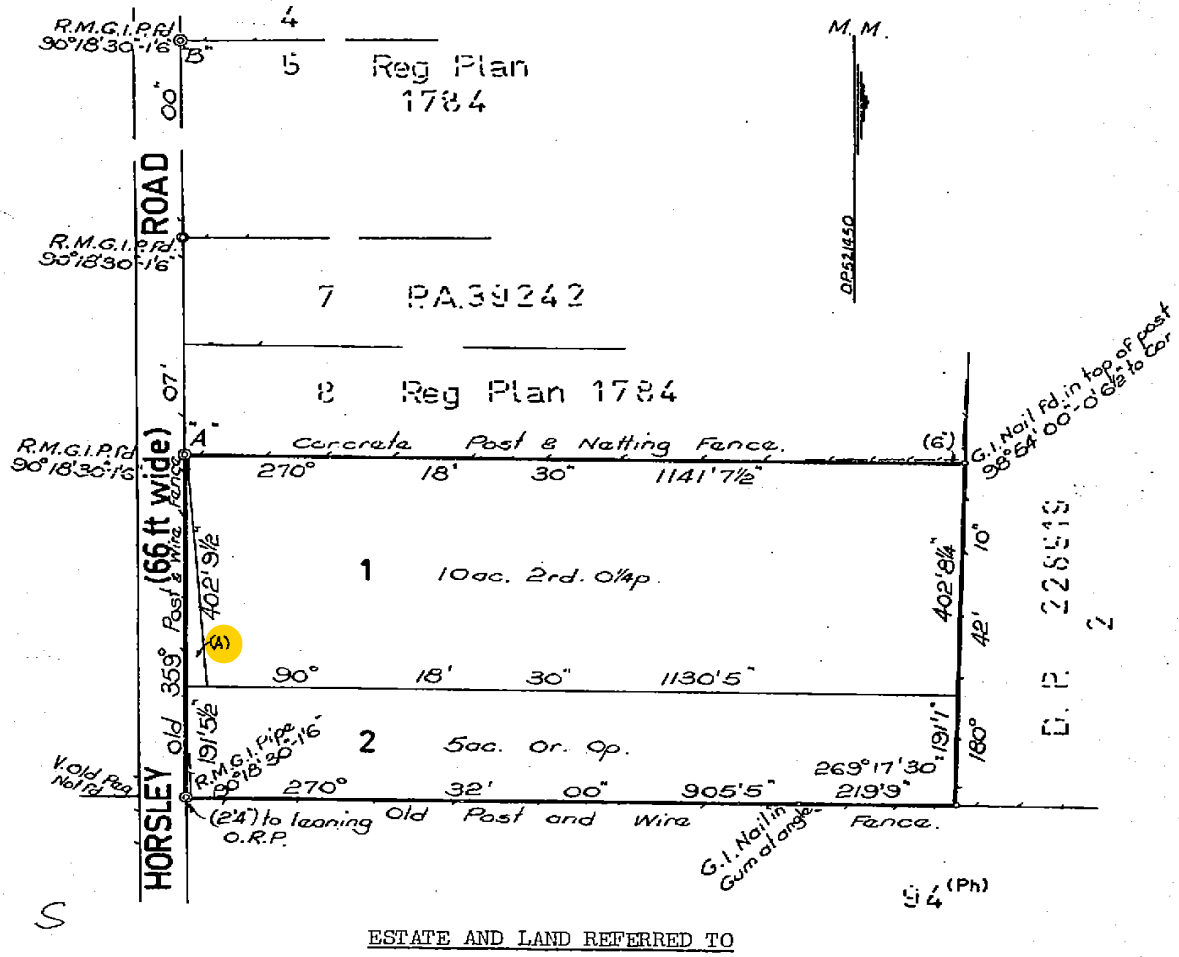
(Page 1) Vol. 10890 Fol. 142

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. SEE AUTO FOLIO

Witness M Flint

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 521450 at Eastern Creek in the Municipality of Blacktown Parish of Prospect and County of Cumberland being part of Portion 176 granted to Samuel Terry on 19-10-1831 and part of Portion 175 granted to Thomas Duke Allen on 10-1-1845.

FIRST SCHEDULE

~~MYLES KENNETH MAGNAY, of Eastern Creek, Labourer.~~

GRY

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Registrar General.

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

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

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

V. C. N. BLIGHT, GOVERNMENT PRINTER

Vol. 10890 Fol 142

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Charles Tabone of Eastern Creek, market Gardener and Jean Tabone, his wife as joint tenants	Transfer	L649551	10:11:1969	26:11:1969	

L302702 L649550 DP244378 CNI CT 20-8-7 CT 5-12-2 P566400 Lot 7 DP244378

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
~~Mortgage~~	~~L302702~~	~~13-1-1969~~	~~to The Commercial Bank of Australia Limited~~	30-1-1969		Discharged	L649550	
Transfer	P566400	PART OF	The land designated (A) in ~~the plan~~ lease Lot 7 in D.P. 244378 as public road vested in The Commissioner for Main Roads	16-2-1976				

AA

CANCELLED

SEE AUTO FOLIO

(Page 2 of 2 pages)

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

Req:R884027 /Doc:CT 10890-142 CT /Rev:04-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:2 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 3:40PM

FOLIO: 1/521450

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 10890 FOL 142

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
4/7/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/1989	Y375486	TRANSFER	EDITION 1
9/7/1993	DP831329	DEPOSITED PLAN	
1/11/1993		AMENDMENT: LOCAL GOVT AREA	
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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Received: 26/05/2021 15:40:07

RP 13

STAMP DUTY [redacted]

Y375486

TRANSFER

REAL PROPERTY ACT, 1900

T EB | 1 of 1 | X
$ 42

R1/1.

	Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
DESCRIPTION OF LAND Note (a)	Folio Identifier 1/521450 (formerly Certificate of Title Volume 10890 Folio 142) and Folio Identifier 8/38784	WHOLE	Eastern Creek
TRANSFEROR Note (b)	CHARLES TABONE AND JEAN TABONE		

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 3,850,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ARNOTT'S BISCUITS LIMITED of 170 Kent Street, Sydney

OFFICE USE ONLY: S.

TENANCY Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f)

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

DATE

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

[signature] Signature of Witness

MICHAEL J. FITZPATRICK Name of Witness (BLOCK LETTERS)

SOLICITOR Address and occupation of Witness
PARRAMATTA

J. Tabone
C. Tabone
Signature of Transferor

Note (g)

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

.... Signature of Witness

.... Name of Witness (BLOCK LETTERS)

.... Address and occupation of Witness

[signature]
Solicitor for ~~xxxxxxx~~ Transferee
H. W. Edwards

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

LODGED BY CLAYTON UTZ
Solicitors
Level 23, Australia Square
George Street
SYDNEY NSW 2000

Delivery Box Number SYDNEY DX 370 - 185H

LOCATION OF DOCUMENTS

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

OFFICE USE ONLY

Checked	Passed	REGISTERED - -19
EB11 MP		
Signed	Extra Fee	

Secondary Directions			
Delivery Directions	CT	185H	

NSW ... ON STAMP DUTY 10/05/89

Req:R884028 /Doc:CT 10890-143 CT /Rev:04-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:1 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

10890143

NEW SOUTH WALES

[redacted]FICATE OF TITLE

[redacted]OPERTY ACT, 1900, as amended.

Application No.45244

Vol. 10890 Fol. 143

CANCELLED

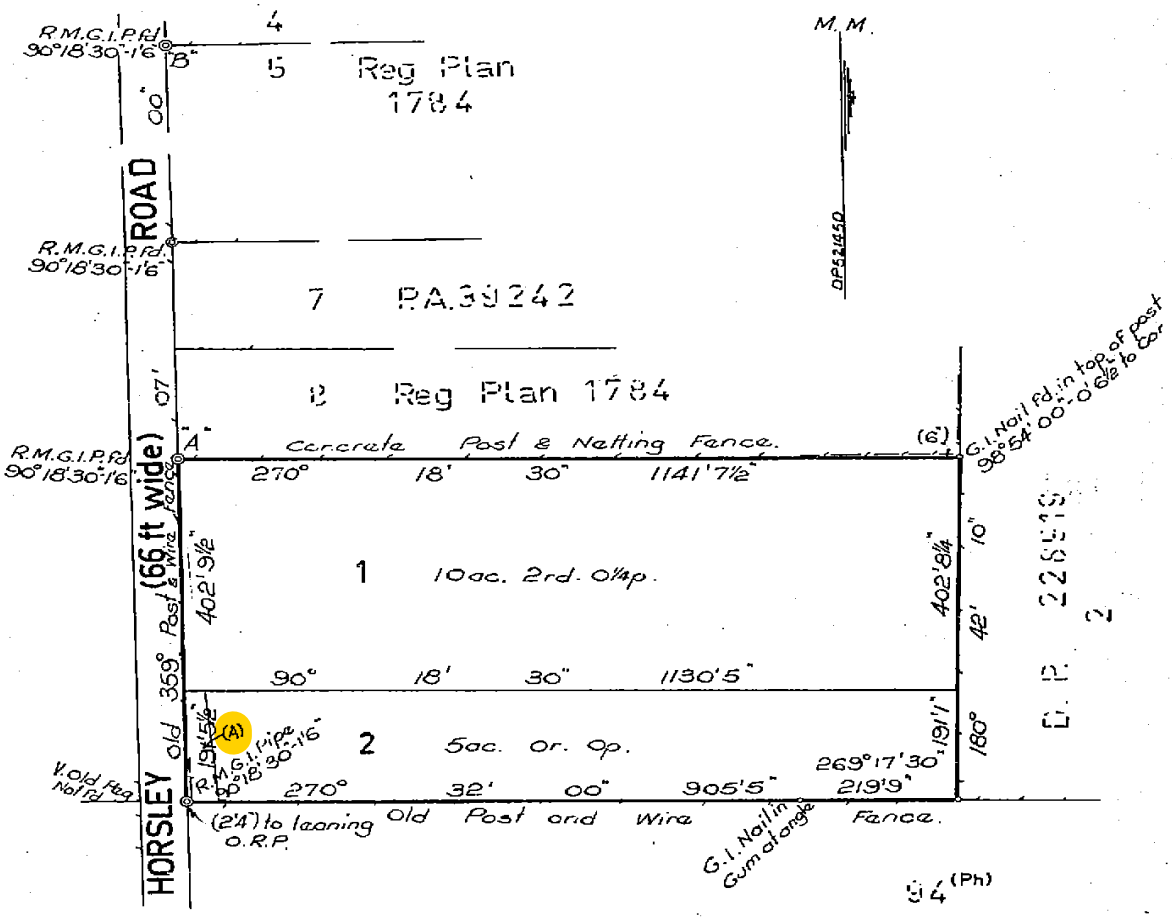
MA Edition Issued 23-9-1968

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. SEE AUTO FOLIO

Witness M.Flint

Registrar General.

PLAN SHOWING LOCATION OF LAND



S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 521450 at Eastern Creek in the Municipality of Blacktown Parish of Prospect and County of Cumberland being part of Portion 176 granted to Samuel Terry on 19-10-1831 and part of Portion 175 granted to Thomas Duke Allen on 10-1-1845.

FIRST SCHEDULE (continued overleaf)

~~MYLES KENNETH MAGNAY, of Eastern Creek, Labourer.~~

GRY

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Registrar General.

(Page 1) Vol. 10890 Fol. 143

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

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

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

Req:R884028 /Doc:CT 10890-143 CT /Rev:04-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:2 of 2
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V. C. N. BLIGHT, GOVERNMENT PRINTER

Vol 10890 Fol 143

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
~~Charles Tabone of Eastern Creek Market Gardener and Jean Tabone his wife as joint tenants~~ Donato D'Ascanio of Smithfield, Spray Painter and Lucia D'Ascanio, his wife, as joint tenants	~~Transfer~~ Transfer	~~L649551~~ Q827390	~~10.11.1969~~ ------	~~20.11.1969~~ 28-8-1978	

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Transfer	P566400	PART OF	The land designated (A) in the plan hereon being lot 8 in D.P. 244378 no public road vested in The Commissioner for Main Roads	16-2-1976		

CANCELLED

SEE AUTO FOLIO

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

X
LL649551 E
DP 244378
CT
CT 20-8-74
CT 15-12-75
P566400 lot 8 DP 244378
Q827390 TE R

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 3:38PM

FOLIO: 2/521450

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 10890 FOL 143

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
4/7/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
14/9/1988	X830953	CAVEAT	
27/2/1989	Y200148	WITHDRAWAL OF CAVEAT	
27/2/1989	Y200149	TRANSFER	
27/2/1989	Y200150	TRANSFER	EDITION 1
1/8/1990	DP802109	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS
1/11/1993		AMENDMENT: LOCAL GOVT AREA	

*** END OF SEARCH ***

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Received: 26/05/2021 15:38:18

Req:R965761 /Doc:DL Y200149 /Rev:26-Aug-2010 /Sts:OK.SC /Pgs:ALL /Prt:17-Jan-2018 12:58 /Seq:1 of 1
Ref:huntingwood /Src:M

RP 13

STAMP DUTY

[redacted] (1)

$1.00

OFFICE USE ONLY

Y200149

TRANSFER

REAL PROPERTY ACT, 1900

T 3 | 2 of 3 | X

$ 112

2/3

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
VOLUME 10890 FOLIO 143 101 2/5211450	WHOLE	Eastern Creek

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

DONATO D'ASCANIO of Smithfield, Spray Painter and LUCIA D'ASCANIO his wife.

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $750,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

JAMANI PTY LIMITED of 55 Kitchener Street, St. Ives.

OFFICE USE ONLY

HYST

TENANCY Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f)

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

DATE

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

..... Signature of Witness

ALAN D. AYLING
Name of Witness (BLOCK LETTERS)

SOLICITOR FAIRFIELD
Address and occupation of Witness

Lucia D'Ascanio
Donato D'Ascanio
Signature of Transferor

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

Note (g)

..... Signature of Witness

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

..... Address and occupation of Witness

~~Signature of Transferee~~
SOLICITOR FOR TRANSFEREE
S D ROGERS

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

LODGED BY CLAYTON UTZ
SOLICITORS
Ph: 259-2525
185H DX370
Delivery Box Number

LOCATION OF DOCUMENTS

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

OFFICE USE ONLY

Checked	Passed	REGISTERED -19
Signed	Extra Fee	27 FEB 1989

Secondary Directions	
Delivery Directions	CSH $

NSW $**********1.00 STAMP DUTY 30/01/89 2230 C

Req:R965762 /Doc:DL Y200150 /Rev:26-Aug-2010 /Sts:OK.OK /Pgs:ALL /Prt:17-Jan-2018 12:58 /Seq:1 of 1
Ref:huntingwood /Src:M

RP 13

STAMP DUTY

[redacted]

$1 —

OF

Y200150

TRANSFER

REAL PROPERTY ACT, 1900

T 3 3 of 3 A

$ 1/2

A3/3

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Certificate of Title Volume 10890 Folio 143 now being Folio Identifier 2/521450.	WHOLE	at Eastern Creek

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

JAMANI PTY LIMITED

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 750,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ARNOTT'S BISCUITS LIMITED a company duly incorporated in the Australian Capital Territory and having its principal place of business in New South Wales at 16th Floor, 168-170 Kent Street, Sydney in the said State.

OFFICE USE ONLY

S

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

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

DATE

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

THE COMMON SEAL of JAMANI PTY LIMITED was
Signature of Witness

hereunto affixed by authority of the
Name of Witness (BLOCK LETTERS)

board of directors in the presence of:
Address and occupation of Witness

JAMANI PTY. LIMITED Common Seal

Signature of Transferor DIRECTOR

Kay E Roach SECRETARY

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

Note (g)

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

XXXXXXXX Transferee

Solicitor for the G. LIVANES

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

LODGED BY CLAYTON UTZ SOLICITORS Ph: 259-2525

185H DX370

Delivery Box Number

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Signed	Extra Fee	27 FEB 1989	Delivery Directions	C.T. 1851 4

Req:R884029 /Doc:CT 13811-236 CT /Rev:02-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:1 of 2
© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

[redacted]ICATE OF TITLE

[redacted] PROPERTY ACT, 1900

13811236

NEW SOUTH WALES

IVA No. 44412

Vol. 13811 Fol. 236

EDITION ISSUED
1 3 1979

(Page 1) Vol. 13811 Fol. 236

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.

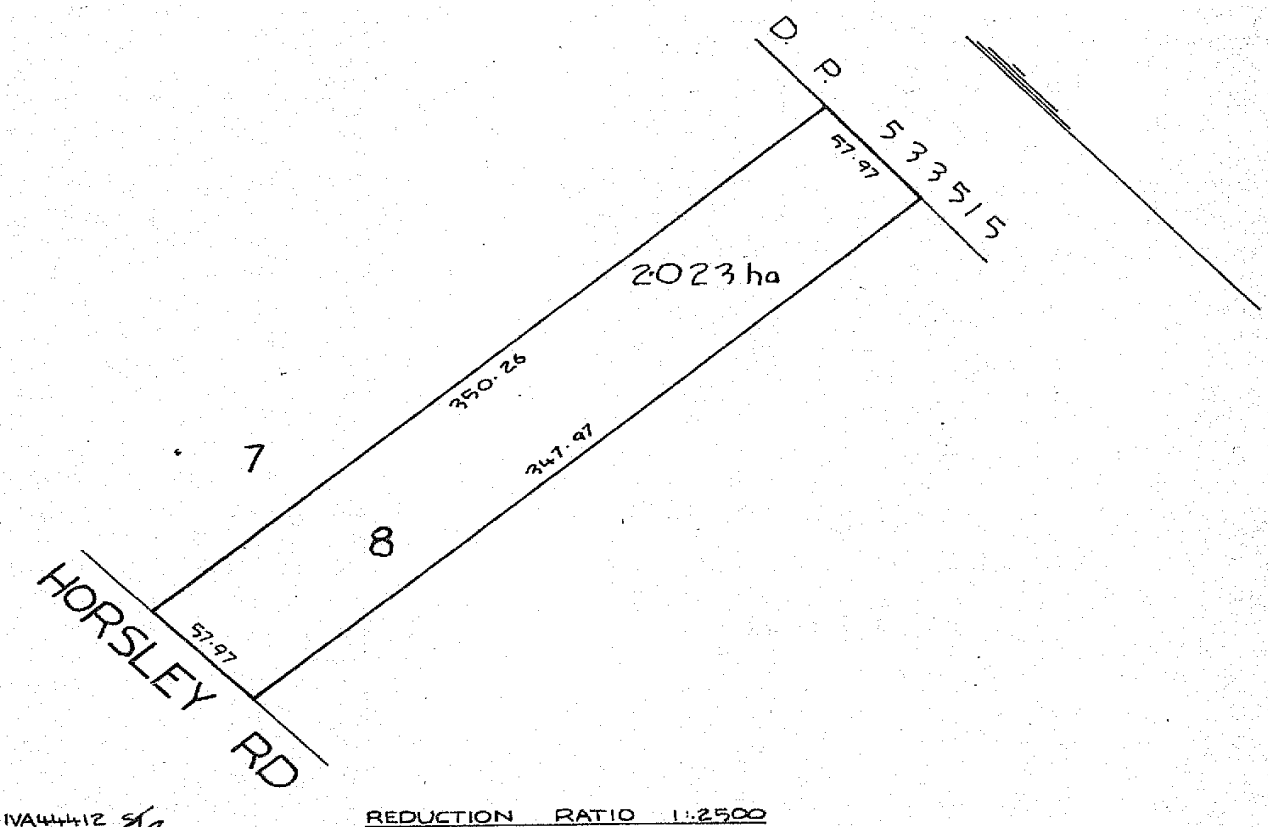
CANCELLED

Registrar General.

PLAN SHOWING LOCATION OF LAND

SEE AUTO FOLIO

LENGTHS ARE IN METRES



IVA44412 S/9

REDUCTION RATIO 1:2500

ESTATE AND LAND REFERRED TO

S Estate in Fee Simple in Lot 8 in Deposited Plan 38784 at Eastern Creek in the Municipality of Blacktown Parish of Prospect and County of Cumberland being part of Portion 175 granted to Thomas Duke Allen on 10-1-1845 and part of Portion 176 granted to Samuel Terry on 19-10-1831.

FIRST SCHEDULE

CHARLES TABONE of Eastern Creek, Market Gardener and JEAN TABONE, his wife as Joint Tenants.

SECOND SCHEDULE

GR4

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. CAUTION. The land within described is held subject to any subsisting interest (as defined in Section 28A Real Property Act, 1900). 1·3·1979

QG

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

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

RG 2/62

Vol. 13811 Fol 236

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT		REGISTERED	Signature of Registrar General
	NATURE	NUMBER		

SECOND SCHEDULE (continued)

INSTRUMENT		PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
NATURE	NUMBER					
		CANCELLED				
		SEE AUTO RULE				

(Page 2 of 2 pages)

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

Req:R884029 /Doc:CT 13811-236 CT /Rev:02-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:2 of 2
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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 8:44AM

FOLIO: 8/38784

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13811 FOL 236

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/1989	Y375486	TRANSFER	EDITION 1
28/8/1989	Y539872	REQUEST	EDITION 2
9/7/1993	DP831329	DEPOSITED PLAN	
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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Req:R912624 /Doc:DL Y375486 /Rev:25-Aug-2010 /NSW LRS /Pgs:ALL /Prt:26-May-2021 08:44 /Seq:1 of 1
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RP 13

STAMP DUTY

[redacted]

Y375486

TRANSFER

REAL PROPERTY ACT, 1900

T FB | 1 of 1 | X
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R1/1.

DESCRIPTION OF LAND Note (a)	Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
	Folio Identifier 1/521450 (formerly Certificate of Title Volume 10890 Folio 142) and Folio Identifier 8/38784	WHOLE	Eastern Creek

TRANSFEROR Note (b): CHARLES TABONE AND JEAN TABONE

ESTATE Note (c): (the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 3,850,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d): ARNOTT'S BISCUITS LIMITED of 170 Kent Street, Sydney

OFFICE USE ONLY: S.

TENANCY Note (e): ~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f): subject to the following PRIOR ENCUMBRANCES 1. ..... 2. ..... 3. .....

DATE

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

..... Signature of Witness

MICHAEL J. FITZPATRICK Name of Witness (BLOCK LETTERS)

SOLICITOR Address and occupation of Witness

PARRAMATTA

J. Tabone

C. Tabone

..... Signature of Transferor

Note (g)

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

..... Signature of Witness

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

..... Address and occupation of Witness

Solicitor for ~~xxxxxxx~~ transferee

H. W. Edwards

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

LODGED BY CLAYTON UTZ
Solicitors
Level 23, Australia Square
George Street
SYDNEY NSW 2000

Delivery Box Number SYDNEY DX 370 - 185H

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Signed	Extra Fee	

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Delivery Directions	CT	185H

NSW [illegible] DD STAMP DUTY [illegible]

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 8:42AM

FOLIO: 7/38784

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 7312 FOL 147

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
2/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
15/11/1989	Y699620	TRANSFER	EDITION 1
9/7/1993	DP831329	DEPOSITED PLAN	
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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Received: 26/05/2021 08:42:32

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© Office of the Registrar-General /Src:INFOTRACK /Ref:65 Huntingwood, Huntingwood

RP 13

STAMP DUTY

[redacted]

Y699620

TRANSFER

REAL PROPERTY ACT, 1900

T

CB 1 of 1 X

$ 44.

R11.

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier 7/38784	WHOLE	City of Blacktown

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

JOSEPH GATT and VICTORIA GATT

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 2,000,000.00
and transfers an estate in fee simple
in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ARNOTT'S BISCUITS LIMITED

OFFICE USE ONLY

S

TENANCY Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f)

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

DATE 1 November 1989

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

JOSEPH GATT by his Attorney VINCENT JOHN GATT pursuant to Power of Attorney Registered Book 3776 No.946

EXECUTION Note (g)

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

..... Signature of Witness

MICHAEL JOHN FITZPATRICK
Name of Witness (BLOCK LETTERS)

SOLICITOR
Address and occupation of Witness

PARRAMATTA

..... Signature of Transferor

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

Note (g)

..... Signature of Witness

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

..... Address and occupation of Witness

.....

Solicitor for ~~Signature of Transferor~~ Transferee
H.W. Edwards

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

LODGED BY

CLAYTON UTZ
SOLICITORS
Ph: 239-2525

185H DX370
Delivery Box Number

LOCATION OF DOCUMENTS		
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		In L.T.O. with
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Signed	Extra Fee	15 NOV 1989	Delivery Directions	CT 185H

031089 4005 04 001000182/08 $1.00

Req:R884030 /Doc:CT 13811-235 CT /Rev:02-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:1 of 2
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[redacted]ICATE OF TITLE

[redacted] PROPERTY ACT, 1900

13811235

NEW SOUTH WALES

IVA No. 44411

Vol. 13811 Fol. 235

EDITION ISSUED
1 3 1979

13811 Fol. 235

(Page 1) Vol.

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.

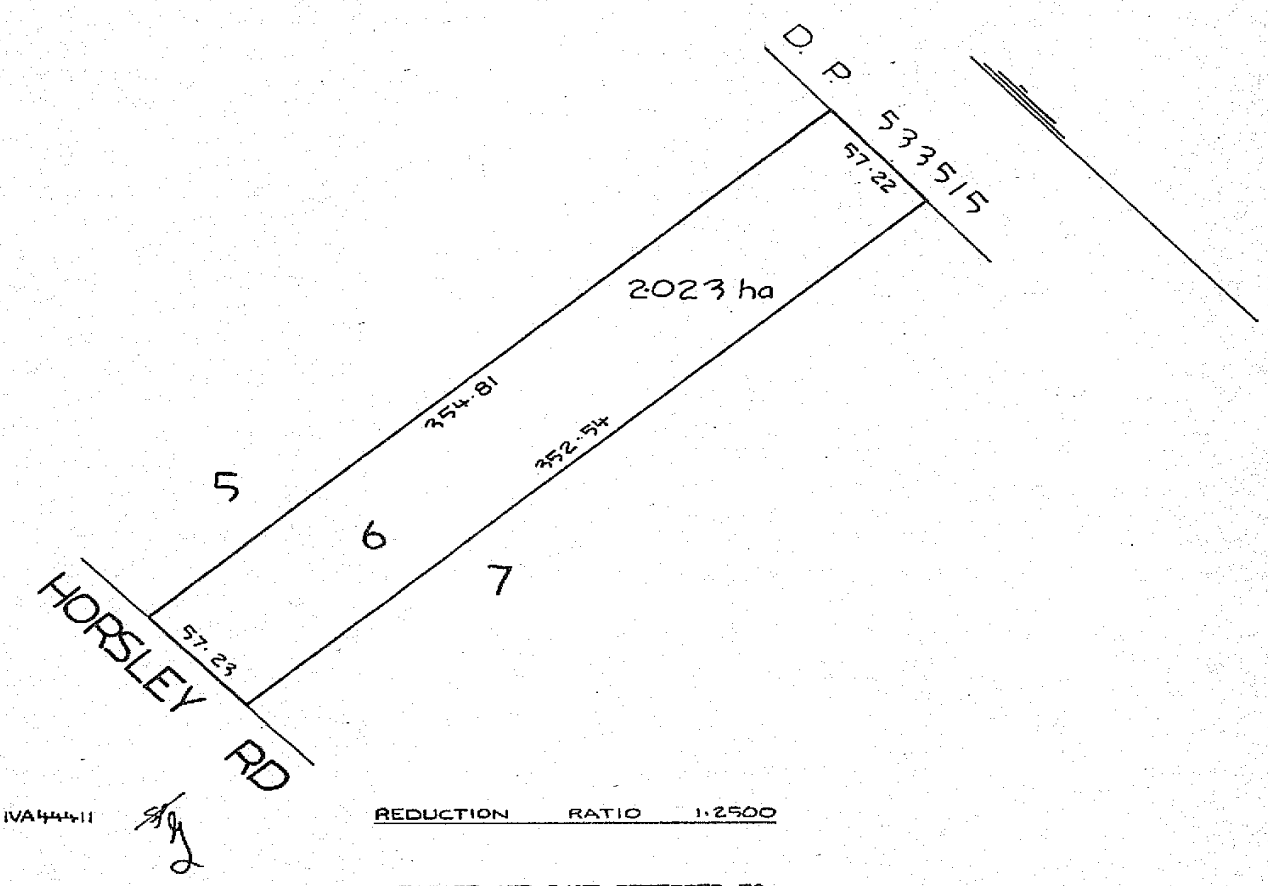
CANCELLED

Registrar General.

SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



IVA44411

REDUCTION RATIO 1:2500

ESTATE AND LAND REFERRED TO

S Estate in Fee Simple in Lot 6 in Deposited Plan 38784 at Eastern Creek in the Municipality of Blacktown Parish of Prospect and County of Cumberland being part of Portion 175 granted to Thomas Duke Allen on 10-1-1845 and part of Portion 176 granted to Samuel Terry on 19-10-1831.

FIRST SCHEDULE

MANWEL BILL CAMILLERI of Eastern Creek, Market Gardener.

SECOND SCHEDULE

GRY

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.

QG 2. CAUTION. The land within described is held subject to any subsisting interest (as defined in Section 28A Real Property Act, 1900). 1-3-1979

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

RG 2/62

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

Vol. 13811 Fol. 235

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT		REGISTERED	Signature of Registrar General
	NATURE	NUMBER		

SECOND SCHEDULE (continued)

INSTRUMENT		PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
NATURE	NUMBER					
		CANCELLED				
		SEE AMD FOLIO				

(Page 2 of 2 pages)

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

Req:R884030 /Doc:CT 13811-235 CT /Rev:02-Feb-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:2 of 2
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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 1:59PM

FOLIO: 6/38784

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13811 FOL 235

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
20/11/1989	Y699619	TRANSFER	
20/11/1989	Y699618	REQUEST	EDITION 1
9/7/1993	DP831329	DEPOSITED PLAN	
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

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Received: 26/05/2021 13:58:59

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RP 13

STAMP DUTY

Y699619

TRANSFER

REAL PROPERTY ACT, 1900

T

3 2 of 2 X

$ 44

R 1/2

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier 6/38784	WHOLE	at Eastern Creek

DESCRIPTION OF LAND Note (a)

031089 4005 04 00100182/07

TRANSFEROR Note (b)

MANWEL BILL CAMILLERI

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 2,000,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ARNOTT'S BISCUITS LIMITED

OFFICE USE ONLY

S

TENANCY Note (e)

~~as joint tenants/tenants in common~~

$1.00

PRIOR ENCUMBRANCES Note (f)

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

DATE 1 November 1989.

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

..... Signature of Witness

DST JOHL Name of Witness (BLOCK LETTERS)

Penrith Hill Address and occupation of Witness

Solicitor

M.B. Camilleri Signature of Transferor

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

Note (g)

..... Signature of Witness

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

..... Address and occupation of Witness

Solicitor for ~~Signature of Transferee~~

H.W. Edwards

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

LODGED BY CLAYTON UTZ SOLICITORS Ph: 259-2525 DX 370

185 H

Delivery Box Number

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Signed	Extra Fee		Delivery Directions			

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13769132

[redacted]ICATE OF TITL[redacted]

NEW SOUTH WALES

[redacted]L PROPERTY ACT, 1900

IVA No. 44410

Vol. 13769 Fol. 132

EDITION ISSUED
3 1 1979

13769 Fol. 132

(Page 1) Vol.

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

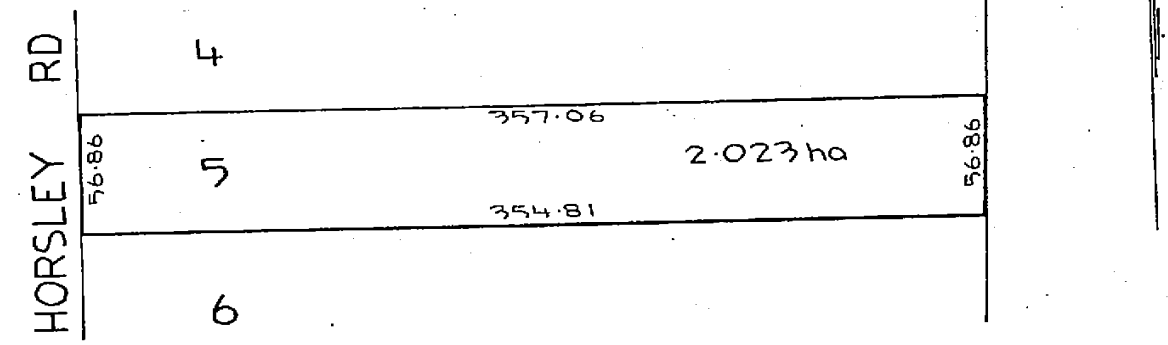
Registrar General.

CANCELLED

SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



IVA44410 R.A

REDUCTION RATIO 1:2500

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 5 in Deposited Plan 38784 in Municipality of Blacktown Parish of Prospect and County of Cumberland being part of Portion 175 granted to Thomas Duke Allen on 10-1-1845 and part of Portion 176 granted to Samuel Terry on 19-10-1831.

FIRST SCHEDULE

MICHAEL CAMILLERI of Eastern Creek, Market Gardiner.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. CAUTION. The land within described is held subject to any subsisting interest (as defined in Section 28A Real Property Act, 1900). 3.1.1979

ARY QT

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

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

Vol. 13769 Fol. 132

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT		REGISTERED	Signature of Registrar General
	NATURE	NUMBER		

SECOND SCHEDULE (continued)

INSTRUMENT		PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
NATURE	NUMBER					
		CANCELLED				
		SEE AUTO FOLIO				

(Page 2 of 2 pages)

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

Req:R884025 /Doc:CT 13769-132 CT /Rev:27-Jan-2011 /NSW LRS /Pgs:ALL /Prt:20-May-2021 13:10 /Seq:2 of 2
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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

26/5/2021 2:03PM

FOLIO: 5/38784

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13769 FOL 132

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
28/9/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
12/10/1988	X860234	CAVEAT	
28/6/1989	Y438950	WITHDRAWAL OF CAVEAT	
28/6/1989	Y438951	TRANSFER	
28/6/1989	Y438952	MORTGAGE	
28/6/1989	Y438953	CHARGE	EDITION 1
23/2/1990	Y857671	REQUEST	
23/2/1990	Y857676	DISCHARGE OF MORTGAGE	
23/2/1990	Y857677	DISCHARGE OF CHARGE	EDITION 2
12/3/1990	Y857669	CHANGE OF NAME	EDITION 3
29/3/1990	Y857684	MORTGAGE	
29/3/1990	Y857685	CHARGE	
29/3/1990	DP800812	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS
18/4/1995	O154811	DEPARTMENTAL DEALING	
2/9/1999	6159022	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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1985

$1.00

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 913 STAMPED

Y438951

TRANSFER

REAL PROPERTY ACT, 1900

T

3 2 of 4 X R2/4

$ 42

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Volume: 13769 Folio: 132 being the whole IN FOLIO 5/38184	WHOLE	Eastern Creek

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

MICHAEL CAMILLERI

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 820,000.00

ESTATE Note (c)

and transfers an estate in fee simple

in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

H.S.DOVE PTY LIMITED & VANBERG PTY LIMITED both of 5-7 Havilah Street, Chatswood

OFFICE USE ONLY

TC2

TENANCY Note (e)

as ~~joint tenants~~/tenants in common in equal shares

PRIOR ENCUMBRANCES Note (f)

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

DATE 14 June, 1989

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

Signature of Witness

DST JONES

Name of Witness (BLOCK LETTERS)

Penrith

Address and occupation of Witness

Solicitor

Signature of Transferor

Note (g)

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Solicitor for the ~~Signature of Transferee~~

M L McCormack

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

LODGED BY

Westgarth Middleton

Delivery Box Number 6765

LOCATION OF DOCUMENTS

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Checked	Passed	REGISTERED - -19	Secondary Directions			
Signed	Extra Fee	28 JUN 1989	Delivery Directions			

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 3:13PM

FOLIO: 1/800812

First Title(s): OLD SYSTEM
Prior Title(s): 5/38784

Recorded	Number	Type of Instrument	C.T. Issue
29/3/1990	DP800812	DEPOSITED PLAN	FOLIO CREATED EDITION 1
4/5/1990	Y972152	DISCHARGE OF MORTGAGE	
4/5/1990	Y972153	DISCHARGE OF CHARGE	
4/5/1990	Y972154	TRANSFER	EDITION 2
22/1/1997	2777062	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 3
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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Req:R917748 /Doc:DL Y972154 /Rev:30-Jul-2010 /NSW LRS /Pgs:ALL /Prt:26-May-2021 15:14 /Seq:1 of 2
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RP 13

STAMP DUTY [redacted]

Y972154

TRANSFER

REAL PROPERTY ACT, 1900

T

3 | 3 of 3 |

$ 44 |

R 3/3

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifiers 1/800812, 2/800812 & 3/800812	WHOLE	Eastern Creek

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

LIBERTY HOLDINGS PTY. LIMITED and VANBERG PTY. LIMITED

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 1,684,000 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

ARNOTT'S BISCUITS LIMITED

OFFICE USE ONLY

S

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

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

DATE 12 April 1990

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

FOR EXECUTION BY TRANSFERORS SEE ANNEXURE

..... Signature of Witness

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

JANESE WALLS ..... Address and occupation of Witness

32 Goodhope St, Padbury $1.00

..... Signature of Transferor

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

Note (g)

..... Signature of Witness

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

..... Address and occupation of Witness

..... Solicitor for ~~Signature of~~ Transferee
H.W. Edwards

170490 5005 04 00107526 001

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

LODGED BY
CLAYTON UTZ
SOLICITORS
Ph: 259-2525
185H . DX370
Delivery Box Number

LOCATION OF DOCUMENTS		
CT	OTHER	
		Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED - -19
EC10 S		
Signed	Extra Fee	

Secondary Directions		
Delivery Directions	CT	185H

Req:R917748 /Doc:DL Y972154 /Rev:30-Jul-2010 /NSW LRS /Pgs:ALL /Prt:26-May-2021 15:14 /Seq:2 of 2
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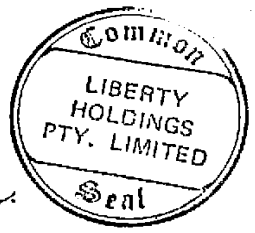
THIS PAGE IS THE ANNEXURE TO TRANSFER BETWEEN LIBERTY HOLDINGS PTY. LIMITED & VANBERG PTY. LIMITED AS TRANSFERORS AND ARNOTT'S BISCUITS LIMITED AS TRANSFEREES

The Common Seal of
LIBERTY HOLDINGS PTY. LIMITED
was hereunto affixed by
authority of the Directors
and in the presence of:



.....
Director

.....
Secretary

The Common Seal of
VANBERG PTY. LIMITED
was hereunto affixed by
authority of the Directors
and in the presence of:

.....
Director

.....
Secretary

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/5/2021 3:16PM

FOLIO: 4/800812

First Title(s): OLD SYSTEM
Prior Title(s): 5/38784

Recorded	Number	Type of Instrument	C.T. Issue
29/3/1990	DP800812	DEPOSITED PLAN	FOLIO CREATED EDITION 1
18/10/1990	Z272412	CAVEAT	
15/11/1990	Z330408	CAVEAT	
16/12/1992	E982383	CAVEAT	
23/12/1992	E989344	TRANSFER BY MORTGAGEE UNDER POWER OF SALE	
23/12/1992	E989345	TRANSFER	EDITION 2
19/2/1997	DP866251	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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Received: 26/05/2021 15:15:58

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E 989344 U

B

D

ISFER BY MORTGAGEE UNDER POWER OF SALE

REAL PROPERTY ACT, 1900
(See Instructions for Completion on back of form)

TP

of

$

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier 4/800812 Folio Identifier 5/800812	WHOLE	Eastern Creek

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

FINANCE CORPORATION OF AUSTRALIA LIMITED ACN 007 556 514

OFFICE USE ONLY: N

(the abovenamed TRANSFEROR) being the registered proprietor of MORTGAGE No. Y857684

dated 9 February 1990, from the MORTGAGOR,

MORTGAGOR Note (c)

LIBERTY HOLDINGS PTY LIMITED AND VANBERG PTY LIMITED in equal shares

Note (d)

hereby acknowledges receipt of the consideration of $885,000.00 and, as mortgagee under the abovementioned mortgage, transfers in exercise of power of sale an estate in fee simple in the land above described to the undermentioned TRANSFEREE

TRANSFEREE Note (b)

CIVIL & CIVIC PTY LIMITED ACN 000 098 162

OFFICE USE ONLY

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

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

2. ..... 3. .....

161292 390404 00146794403

DATE OF TRANSFER 16 December 1992

$2.00

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

Signature of Witness

EVAN SUMMERSON
Name of Witness (BLOCK LETTERS)

110 MILLER ST. NORTH SYDNEY
FINANCE MANAGER
Address and occupation of Witness

EXECUTED BY FINANCE CORPORATION OF AUSTRALIA LIMITED A.C.N. 007 556 514 by being signed sealed and delivered by its Attorney RODNEY JOHN SUTTON who certifies that he is the ACTING STATE MANAGER PROPERTY FINANCE in the New South Wales Division of Esanda Finance Corporation Limited) pursuant to Power of Attorney registered No. 524 Book 3688, in the presence of

Signature of Transferor

Note (g)

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Solicitor for the Signature of Transferee

Catherine M Murphy

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

LODGED BY
CLAYTON UTZ
SOLICITORS
Ph: 259-2525
185 H
Delivery Box Number
DX370 e.c. 923985

LOCATION OF DOCUMENTS

CT	OTHER	
		Herewith.
		In R.G.O. with .....
		Produced by .....

OFFICE USE ONLY

Extra Fee	Checked by	REGISTERED – –19			
			4480		
			OFF	M,	Y857684
			OFF	C	Y857685
			OFF	X	2272412
			OFF	X	2330408
Dup. Mtge. Destroyed	Yes / No ✓	Registrar General			

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RP13

TRANSFER

Real Property Act, 1900

E 989345 S

[redacted]

Office of State Revenue use only

OFFICE OF STATE REVENUE S3 11/12
STAMP DUTY 1992/93
DUTY $ 2.00 1ST REC Nº 1467944/01

B

(A) **LAND TRANSFERRED**

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

Folio Identifiers 4/800812 and 5/800812

(B) **LODGED BY**

L.T.O. Box

Name, Address or DX and Telephone

CLAYTON UTZ
SOLICITORS
Ph: 259-2525
185 H DX370

REFERENCE (max. 15 characters):

(C) **TRANSFEROR** CIVIL & CIVIC PTY. LIMITED ACN 000 098 162

(D) ~~acknowledges receipt of the consideration of $[redacted]~~

and as regards the land specified above transfers to the transferee an estate in fee simple **pursuant to a Declaration of Trust dated 16 December 1992.**

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

(F) **TRANSFEREE**

(G) T

ARNOTT'S BISCUITS LIMITED ACN 008 435 729

as joint tenants/tenants in common

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATE OF EXECUTION** 16 December 1992

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

THE COMMON SEAL of

~~Signature of Witness~~

CIVIL & CIVIC PTY LIMITED (A.C.N. 000 098 162)

~~Name of Witness (BLOCK LETTERS)~~

was affixed in accordance with its Articles

~~Address of Witness~~

of Association in the presence of:

Common Seal — CIVIL & CIVIC PTY LIMITED A.C.N. 000 098 162

Secretary / Director

~~Signature of Transferor~~

DIRECTOR

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Solicitor for ~~Signature of~~ Transferee

G Livanes

CHECKED BY (office use only)

OFF X E982383

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

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
20/5/2021 12:58PM

FOLIO: 1/866251

First Title(s): OLD SYSTEM
Prior Title(s): 6-8/38784 1/521450
1-5/800812 30/815719
1/848157

Recorded	Number	Type of Instrument	C.T. Issue
20/2/1997	DP866251	DEPOSITED PLAN	FOLIO CREATED EDITION 1
26/6/2017	AM475160	LEASE	
26/6/2017	AM475161	SUB-LEASE	
26/6/2017	AM475162	MORTGAGE OF LEASE	
26/6/2017	AM475226	CHANGE OF NAME	
15/5/2018	AM895553	VARIATION OF MORTGAGE	
23/12/2019	AP800870	PRIORITY NOTICE	
9/1/2020	AP805980	TRANSFER	
9/1/2020	AP818508	LEASE	EDITION 2
24/1/2020	AP856450	CAVEAT	
10/3/2021	AQ842093	RESTRICTION ON USE OF LAND BY/VESTED IN PRESCRIBED AUTHORITY	
10/3/2021	AQ842094	RESTRICTION ON USE OF LAND BY/VESTED IN PRESCRIBED AUTHORITY	
10/3/2021	AQ842095	POSITIVE COVENANT	
10/3/2021	AQ842096	POSITIVE COVENANT	

*** END OF SEARCH ***

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System Document Identification

Form Number: 01T-e
Template Number: T_nsw16
ELN Document ID: 547962425
ELN NOS ID: 547962427

TRANSFER

New South Wales
Real Property Act 1900

Land Registry Document Identification

AP805980

Stamp Duty: 9733732-001

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect 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.

LODGED BY:

Responsible Subscriber: HERBERT SMITH FREEHILLS ABN 98773882646
Address: 161 Castlereagh ST
Sydney 2000
Telephone:
PEXA Subscriber Number: 19739
Customer Account Number: 502146U
Document Collection Box: 27C
Client Reference: MJGM:120818933

LAND TITLE REFERENCE

1/866251

TRANSFEROR

ARNOTT'S BISCUITS PTY LTD ACN 008435729
Registered company

The justification for the difference in transferor name to the name on the Land Title being ARNOTT'S BISCUITS LIMITED resulting from Incorporated Name Change

Evidence Type: Change Of Name Certificate For Organisation
Evidence Date: 22/11/2019
Evidence Document Reference: 251
Evidence Jurisdiction: AUST

TRANSFEREE

THE TRUST COMPANY (AUSTRALIA) LIMITED ACN 000000993
Registered company
Share of whole of land/interest: 1/ 2

THE TRUST COMPANY LIMITED ACN 004027749
Registered company
Share of whole of land/interest: 1/ 2

Tenancy: Tenants in Common

CONSIDERATION

The transferor acknowledges receipt of the consideration of $437,580,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor.

Party Represented by Subscriber:

ARNOTT'S BISCUITS PTY LTD

Req:R888687 /Doc:DL AP805980 /Rev:27-Dec-2019 /NSW LRS /Prt:21-May-2021 09:20 /Seq:2 of 2
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Signed By: Michael Joseph Graves
Signer Capacity: Practitioner Certifier
PEXA Signer Number: 19191
Digital Signing Certificate Number: 52483

Signed for Subscriber: PARTNERS OF ALLENS ABN 47702595758

ALLENS

Subscriber Capacity: Representative Subscriber
PEXA Subscriber Number: 8443
Customer Account Number: 501337
Date: 24/12/2019

SIGNING FOR TRANSFEREE

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee.

Party Represented by Subscriber:

THE TRUST COMPANY (AUSTRALIA) LIMITED
THE TRUST COMPANY LIMITED

Signed By: Nicholas Cowie
Signer Capacity: Practitioner Certifier
PEXA Signer Number: 53507
Digital Signing Certificate Number: 23073

Signed for Subscriber: PARTNERS OF HERBERT SMITH FREEHILLS ABN 98773882646

HERBERT SMITH FREEHILLS

Subscriber Capacity: Representative Subscriber
PEXA Subscriber Number: 19739
Customer Account Number: 502146
Date: 24/12/2019

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 1/866251

SEARCH DATE	TIME	EDITION NO	DATE
20/5/2021	12:57 PM	2	9/1/2020

LAND

LOT 1 IN DEPOSITED PLAN 866251
AT HUNTINGWOOD
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF PROSPECT COUNTY OF CUMBERLAND
TITLE DIAGRAM DP866251

FIRST SCHEDULE

THE TRUST COMPANY (AUSTRALIA) LIMITED
IN 1/2 SHARE
THE TRUST COMPANY LIMITED
IN 1/2 SHARE
AS TENANTS IN COMMON (T AP805980)

SECOND SCHEDULE (16 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP800812 RESTRICTION(S) ON THE USE OF LAND AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 DP800812 EASEMENT FOR ELECTRICITY PURPOSES 2.75 WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 DP808313 RIGHT OF CARRIAGEWAY VARIABLE WIDTH AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
2135723 RELEASED IN SO FAR AS IT BENEFITS LOTS 1 & 2 IN DP857249
5 DP808313 RESTRICTION(S) ON THE USE OF LAND AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
6 DP815719 EASEMENT TO DRAIN WATER 1.5 WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
7 DP815719 RIGHT OF CARRIAGEWAY VARIABLE WIDTH AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
8 DP815719 EASEMENT FOR UNDERGROUND CABLEWAYS 1 WIDE & VARIABLE WIDTH AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
9 DP815719 RESTRICTION(S) ON THE USE OF LAND AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
10 2218044 LEASE TO METSOUTH ENERGY BEING SWITCHING STATION SHOWN AS "SUBSTATION PREMISES" IN DP815719. EXPIRES 30.6.2020. OPTION OF RENEWAL 25 YEARS
AM475160 LEASE OF LEASE 2218044 TO EDWARDS A PTY LIMITED,

END OF PAGE 1 - CONTINUED OVER

SECOND SCHEDULE (16 NOTIFICATIONS) (CONTINUED)

ERIC EPSILON ASSET CORPORATION 1 PTY LTD, ERIC EPSILON ASSET CORPORATION 2 PTY LTD, ERIC EPSILON ASSET CORPORATION 3 PTY LTD & ERIC EPSILON ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).

AM475161 LEASE OF LEASE AM475160 TO EDWARDS O PTY LIMITED, ERIC EPSILON OPERATOR CORPORATION 1 PTY LTD, ERIC EPSILON OPERATOR CORPORATION 2 PTY LTD, ERIC EPSILON OPERATOR CORPORATION 3 PTY LTD & ERIC EPSILON OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1

AM475162 MORTGAGE OF LEASE AM475160 TO ANZ FIDUCIARY SERVICES PTY LTD

AM475226 CHANGE OF NAME AFFECTING LEASE 2218044 LESSEE NOW EPSILON DISTRIBUTION MINISTERIAL HOLDING CORPORATION

AM895553 VARIATION OF MORTGAGE AM475162

11 AP818508 LEASE TO ARNOTT'S BISCUITS PTY LTD EXPIRES: 27/12/2051. OPTION OF RENEWAL: 10 YEARS AND 4 FURTHER OPTION OF 10 YEARS.

* 12 AP856450 CAVEAT BY ARNOTT'S BISCUITS PTY LTD
* 13 AQ842093 RESTRICTION(S) ON THE USE OF LAND
* 14 AQ842094 RESTRICTION(S) ON THE USE OF LAND
* 15 AQ842095 POSITIVE COVENANT
* 16 AQ842096 POSITIVE COVENANT

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Section 10.7 Certificates

Applicant Details

Your reference E34067P MMP

JK ENVIRONMENTS
PO BOX 976
NORTH RYDE BC NSW 1670

Certificate Details

Certificate no. PL2021/08354 **Fee: $133.00**

Date issued 11 May 2021 **Urgency fee: N/A**

Receipt no. ePay Ref 139061

Property information

Property ID 324067 **Land ID** 324067

Legal description LOT 1 DP 866251

Address 65 HUNTINGWOOD DRIVE HUNTINGWOOD NSW 2148

County CUMBERLAND **Parish** PROSPECT

PLANNING CERTIFICATE (Section 10.7(2 & 5))

Blacktown City Council prepared this Planning Certificate under Section 10.7 of the *Environmental Planning and Assessment Act 1979*. The form and content of the Certificate is consistent with *Environmental Planning and Assessment Regulation 2000*.

Disclaimer

Blacktown City Council gives notice and points out to all users of the information supplied herein, that the information herein has been compiled by Council from sources outside of Council's control. While the information herein is provided with all due care and in good faith, it is provided on the basis that Council will not accept any responsibility for and will not be liable for its contents or for any consequence arising from its use, and every user of such information is advised to make all necessary enquiries from the appropriate organisations, institutions and the like.

Blacktown City Council also gives notice to all users of the information supplied herein, wherever any particular enquiry herein remains unanswered or has not been elaborated upon, such silence should not be interpreted as meaning or inferring either a negative or a positive response as the case may be.

Section 10.7(2)

The following information is provided under Section 10.7(2) of the *Environmental Planning and Assessment Act 1979*. The information relates to the subject land at the date of this Certificate.

---

1. Names of relevant planning instruments and development control plans

1.1 Environmental Planning Instrument

Blacktown Local Environmental Plan 2015 applies to the subject land.

1.2 Proposed Local Environmental Plans

Not applicable.

1.3 Other Applicable State Environmental Planning Policies

Attachment 1 contains a list of State Environmental Planning Policies that may apply to the carrying out of development on the subject land.

1.4 Proposed State Environmental Planning Policies

The following draft State Environmental Planning Policies (SEPPs) or Explanation of Intended Effects (EIE) are currently on exhibition or have been exhibited. For further information refer to https://www.planningportal.nsw.gov.au/draftplans

- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect from 31 March to 9 May 2021 to amend State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (Building Business Back Better).
- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect between 26 February and 28 April 2021 for the Design and Place SEPP.
- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect between 31 March and 12 May 2021 to review Clause 4.6 of the Standard Instrument Local Environmental Plan
- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect between 29 July and 9 September 2020 for the proposed new Housing Diversity SEPP.
- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect from 2 March to 16 March 2020 to amend State Environmental Planning Policy (State and Regional Development) 2011 to facilitate the efficient delivery of upgrades to existing water treatment facilities in NSW

- The NSW Department of Planning, Industry and Environment exhibited and Explanation of Intended Effect from 20 November to 17 December 2020 to amend the Infrastructure SEPP related to health services facilities.

- The NSW Department of Planning, Industry and Environment exhibited and Explanation of Intended Effect from 20 November to 17 December 2020 to amend the State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

- The NSW Department of Planning, Industry and Environment exhibited and Explanation of Intended Effect from 26 August to 2 November 2020 to recommend the creation of a new State Environmental Planning Policy for strategic conservation planning

- The NSW Department of Planning, Industry and Environment exhibited a Flood Prone Land Package from the 30 April to 25 June 2020

- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect from 7 September to 28 September 2018 to amend State Environmental Planning Policy (Sydney Region Growth Centres) 2006

- The NSW Department of Planning, Industry and Environment exhibited an Explanation of Intended Effect between 31 October 2017 and 31 January 2018 for the proposed Environment SEPP.

1.5 Development control plans

Blacktown Development Control Plan 2015 applies to the subject land.

2. Zoning and land use under relevant environmental planning instruments

The following information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.

2.1 Zoning

Under *Blacktown Local Environmental Plan 2015,* the land is zoned:

Zone IN2 Light Industrial

The following is an extract from Blacktown Local Environmental Plan 2015 outlining the types of development that may or may not be carried out in the above zone

1 Objectives of zone

- *To provide a wide range of light industrial, warehouse and related land uses.*
- *To encourage employment opportunities and to support the viability of centres.*

- *To minimise any adverse effect of industry on other land uses.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.*
- *To support and protect industrial land for industrial uses.*
- *To minimise adverse impacts on the natural environment.*

2 Permitted without consent

Nil

3 Permitted with consent

Building identification signs; Business identification signs; Depots; Food and drink premises; Funeral homes; Garden centres; Hardware and building supplies; Heliports; Industrial training facilities; Kiosks; Light industries; Neighbourhood shops; Oyster aquaculture; Places of public worship; Roads; Tank-based aquaculture; Warehouse or distribution centres; Vehicle sales or hire premises; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Camping grounds; Caravan parks; Cemeteries; Commercial premises; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Industries; Information and education facilities; Marinas; Open cut mining; Pond-based aquaculture; Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Restricted premises; Rural industries; Signage; Tourist and visitor accommodation; Veterinary hospitals; Waste or resource management facilities; Water recreation structures; Wharf or boating facilities; Wholesale supplies

2.2 Minimum land dimensions for the erection of a dwelling house

Not applicable

2.3 Critical habitat

The land does not include or comprise a critical habitat.

Note: Critical habitat registers are kept by the National Parks and Wildlife Service under the *Threatened Species Conservation Act 1995* and the Department of Fisheries under the *Fisheries Management Act 1994*.

2.4 Conservation areas

The land is not within a conservation area.

2.5 Environmental Heritage

The land does not contain an item of environmental heritage under the protection of Blacktown Local Environmental Plan 2015

3. Complying development

Complying development may or may not be carried out on the subject land under an Environmental Planning Policy. Council does not have sufficient information to determine the extent to which specific complying development may or may not be carried out.

4. Coastal protection

The subject land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. Mine subsidence

The subject land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act 1961*.

6. Road widening and road realignment

The subject land is not affected by road widening or road realignment under an environmental planning instrument.

7. Council and other public authority policies on hazard risk restrictions

7.1 Contaminated Lands Policy and Asbestos Policy Schedule 6

Council has adopted a Contaminated Lands Policy and an Asbestos Policy which may restrict development on the subject land.

The Land Contamination Policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. The Asbestos Policy applies where land contains, or is likely to have contained in the past, buildings or structures that were erected prior to the banning of asbestos. Both policies should be considered in the context of relevant State legislation and guidelines.

Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land.

7.2 Other policies on hazard risk restrictions

Council has not adopted any other policies to restrict the development of the subject land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils.

Note: Although Council has not adopted a specific policy to restrict development bushfire prone land, it is bound by state-wide bushfire legislation that may restrict development on the subject land. Additional information relating to bushfire prone land is provided at point 11 below.

7a. Flood related development controls information

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate

8. Land reserved for acquisition

Blacktown Local Environmental Plan 2015 makes provision for land included on the Land Reservation Acquisition Map to be acquired by a public authority.

9. Contributions plans

Council currently levies contributions under Section 7.11 of the *Environmental Planning & Assessment Act 1979* for facilities and services. The further development of the subject land may incur such contributions.

Contributions Plan No. 1 - 1980s Release Areas applies to the subject land.

9a. Biodiversity certified land

The land is not biodiversity certified land as defined by Part 7AA of the *Threatened Species Conservation Act 1995*.

10. Biobanking agreements

The land is not subject to any biobanking agreement under Part 7A of the *Threatened Species Conservation Act 1995*.

11. Bushfire prone land

The Rural Fires and Environmental Assessment Legislation Amendment Act 2002, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

Clear of any bush fire prone land

On land that is bush fire prone, certain development may require further consideration under Section 4.14 or Section 4.46 of the *Environmental Planning & Assessment Act 1979* and under Section 100B of the *Rural Fires Act 1997*.

12. Property vegetation plans

The subject land is not affected by a property vegetation plan under the *Native Vegetation Act 2003*. The Blacktown local government area is excluded from the operation of the *Native Vegetation Act 2003* (refer Schedule 1 Part 3 of that Act).

13. Orders under *Trees (Disputes Between Neighbours) Act 2006*

No. Council has not been notified of any order made under the *Trees (Disputes Between Neighbours) Act 2006* in relation to the subject land.

14. Site compatibility certificates and conditions for seniors housing

Land to which this Certificate applies is not subject to the above.

15. Site compatibility certificates for infrastructure

Land to which this Certificate applies is not subject to the above.

16. Site compatibility certificates and conditions for affordable rental housing

Land to which this Certificate applies is not subject to the above.

17. Paper subdivision information

Not applicable

18. Site verification certificates

Council is not aware of any site verification certificate applying to the subject land.

Under the *Contaminated Land Management Act 1997* and *Contaminated Land Management Amendment Act 2008*

(a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued

(b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued

(c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued

(d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued

(e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

19. Affected building notices and building product rectification orders

19.1 Affected building notices

Council is not aware of any affected building notice in force for the subject land.

19.2 Building product rectification orders

(a) Council is not aware of any building product rectification order in force for the subject land.

(b) Council is not aware of any notice of intention to make a building product rectification order being given for the subject land.

Section 10.7(5)

The following information is provided under Section 10.7(5) of the *Environmental Planning & Assessment Act 1979*. As per section 10.7(6) of the Act, Council shall not incur any liability in respect of any advice provided in good faith under section 10.7(5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

Planning Instruments and Covenants

The provisions of any covenant, agreement or instrument applying to this land that restrict or prohibit certain development may be inconsistent with the provisions of an environmental planning instrument. In such cases, the provisions of any such covenant, agreement or instrument may be overridden.

Loose-filled Asbestos Insulation

Some residential homes located in the Blacktown Local Government Area may potentially contain loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

Contact NSW Fair Trading for further information

Biodiversity and Threatened Species Conservation

The land is affected by a tree preservation control under Clause 5.9 of the Blacktown Local Environmental Plan 2015. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 2015, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Threatened Species Conservation Act 1995* provides for the conservation of threatened species, populations and ecological communities of animals and plants.

The *Threatened Species Conservation Act 1995* amended the *Environmental Planning and Assessment Act 1979* to require, amongst other things, that:

(a) A critical habitat (as defined in the *Threatened Species Conservation Act 1995*) be identified in environmental planning instruments, and

(b) Consent authorities and determining authorities must, when considering proposed development or an activity, assess whether it is likely to significantly affect threatened species, populations and ecological communities, or their habitats, and, if a significant effect is likely, to require the preparation of a species impact statement in accordance with the requirements of the *Threatened Species Conservation Act 1995*, and

(c) Consent authorities and determining authorities must, when considering proposed development or an activity, have regard to the relevant recovery plans and threat abatement plans.

The *Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. Items of national environmental significance include nationally threatened animal and plant species and ecological communities.

The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance.

For further information on this matter, please contact the Australian Government's Department of the Environment.

Attachment 1 – State Environmental Planning Policies

In addition to the principal environmental planning instrument identified in section 2.1 of this Certificate, the following State Environmental Planning Policies may also affect development on the subject land.

SEPP (Affordable Rental Housing) 2009

This policy aims to facilitate the increased supply and diversity of affordable rental and social housing in NSW and covers housing types including in-fill affordable housing, along with secondary dwellings (granny flats), boarding houses, group homes, social housing and supportive accommodation. Part 3 of the policy provides for the retention of existing affordable rental housing stock. Development applications to demolish, alter or add, change the use of, or strata subdivide existing low cost rental dwellings may require a contribution towards the provision of alternative affordable housing.

SEPP (Building Sustainability Index: BASIX) 2004

This policy aims to ensure consistency in the implementation of the BASIX scheme throughout the State by overriding provisions of other environmental planning instruments and development control plans that would otherwise add to, subtract from or modify any obligations arising under the BASIX scheme.

SEPP (Exempt and Complying Development Codes) 2008

This policy is also known as the Codes SEPP and includes a number of Codes that allow for certain types of development to be undertaken without the need for council approval as either Exempt Development or approved under a fast track system known as Complying Development, if the relevant standards are met.

SEPP (Sydney Region Growth Centres) 2006

This policy provides for the coordinated release of land for residential, employment and other urban development in the North West Growth Centre, the South West Growth Centre and the Wilton Growth Area. It provides development controls to enable the establishment of vibrant, sustainable and liveable neighbourhoods that provide for community well-being and high quality local amenity.

SEPP (Housing for Seniors or People with a Disability) 2004

This policy is also known as Seniors Housing SEPP and encourages the development of high quality and well-designed housing for older people and people with disabilities, while ensuring that it is in keeping with neighbourhood character. In October 2018, an amendment was made to change some

rules for site compatibility certificates and to make the relevant planning panel the determining authority for site compatibility certificates issued under the Seniors Housing SEPP.

SEPP (Infrastructure) 2007

This policy assists the NSW Government, private infrastructure providers, local councils and the communities they support by simplifying the process for providing infrastructure like hospitals, roads, railways, emergency services, water supply and electricity delivery, while ensuring appropriate levels of environmental assessment and consultation are undertaken. Recent changes introduce new provisions for correctional services, emergency and police services facilities and bushfire hazard reduction, ports and roads infrastructure, including facilities for electric vehicles, and other operational and housekeeping improvements.

SEPP (Miscellaneous Consent Provisions) 2007

This policy contains provisions for the erection of temporary structures, subdivision, the demolition of a building or work, certain change of use and fire alarm communication links.

SEPP (State Significant Precincts) 2005

The purpose of this Policy is to facilitate the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant precincts for the benefit of the State. It also aims to facilitate service delivery outcomes for a range of public services and to provide for the development of major sites for a public purpose or redevelopment of major sites no longer appropriate or suitable for public purposes.

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

This policy is also known as the Mining SEPP and governs the way that mining, petroleum production and extractive material resource proposals are assessed and developed in NSW.

SEPP No 1 - Development Standards

This policy provides flexibility in the application of development standards and allows Council to approve a development that does not comply with a development standard where it can be shown that the development standard is unreasonable or unnecessary.

SEPP No 19 - Bushland in Urban Areas

This policy protects and preserves bushland within urban areas because of its natural heritage, its aesthetic value and its value for recreational, educational or scientific purposes. The policy aims to protect bushland areas in public open space zones and reservations and ensures that bushland

preservation is given priority when local environmental plans are prepared.

SEPP No 21 - Caravan Parks

This policy applies to development for the purpose of caravan parks and camping grounds. The policy ensures that development consent is required for new caravan parks and camping grounds and for additional long term sites in existing caravan parks. It also requires that development consent be obtained from Council for the subdivision of land for lease purposes under the Local Government Act.

SEPP No. 30 - Intensive Agriculture
Requires development consent for cattle feedlots having a capacity of 50 or more cattle or piggeries having a capacity of 200 or more pigs. The policy sets out information and public notification requirements to ensure there are effective planning control over this export-driven rural industry. The policy does not alter if, and where, such development is permitted, or the functions of the consent authority.

SEPP No. 32 - Urban Consolidation
States the Government's intention to ensure that urban consolidation objectives are met in all urban areas throughout the State. The policy focuses on the redevelopment of urban land that is no longer required for the purpose it is currently zoned or used, and encourages local councils to pursue their own urban consolidation strategies to help implement the aims and objectives of the policy. Councils will continue to be responsible for the majority of rezonings. The policy sets out guidelines for the Minister to follow when considering whether to initiate a regional environmental plan (REP) to make particular sites available for consolidated urban redevelopment. Where a site is rezoned by an REP, the Minister will be the consent authority.

SEPP No 33 - Hazardous and Offensive Development

This policy applies to development defined as ‘potentially hazardous industry’ or ‘potentially offensive industry’. The policy ensures that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account.

SEPP No 55 - Remediation of Land

This policy promotes the remediation of contaminated land for the purpose of reducing risk of harm to human health. The policy includes considerations that are relevant in rezoning land and in determining development applications where remediation of land is required.

SEPP No. 62 - Sustainable Aquaculture
Encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identity and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

SEPP No 64 - Advertising and Signage

This policy sets out planning controls for advertising and signage in NSW and requires signage to be compatible with the future character of an area, provide effective communication in suitable locations and be of high quality design and finish. The policy also bans advertisements on parked trailers on roads, road shoulders, footpaths and nature strips, excluding advertising associated with the primary use of the trailer.

SEPP No 65 - Design Quality of Residential Apartment Development

This policy aims to improve the design quality of residential apartment development through the application of 9 design quality principles. The policy also provides requirements for a constituted design review panel to provide independent expert advice to council on the merit of residential flat developments. A design review panel is not mandatory.

Sydney Regional Environmental Plan No 30 - St Marys

This plan provides the planning framework for the planning and development of land known as Australian Defence Industries (ADI) site at St Marys.

SEPP (Western Sydney Employment Area) 2009

This policy aims to protect and enhance land in the Western Sydney Employment Area for employment purposes and to promote economic development and the creations of employment opportunities in Western Sydney. The policy provides for a coordinated approach to the planning, development and rezoning of land within the Western Sydney Employment Area and includes controls to ensure that development occurs in a logical, environmentally sensitive and cost-effective manner.

SEPP (Western Sydney Parklands) 2009

This policy provides the framework to enable the Western Sydney Parklands Trust to develop the Western Parklands into a multi-use urban parkland to meet a range of community needs and interests, including those that promote health and well-being in the community for Western Sydney.

SEPP (Western Sydney Recreation Area)
This policy enables development to be carried out for recreational, sporting and cultural purposes within the Western Sydney Recreation Area, including the development of a recreation area of state significance.

Authorised by Blacktown City Council
Proforma ID: 962980

End of Certificate

SafeWork NSW Records

NSW GOVERNMENT | SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D21/087917

7 June 2021

Mr Brendan Page
JK Environments Pty Ltd
bpage@jkenvironments.com.au

Dear Mr Page

RE SITE: 65 Huntingwood Drive Huntingwood NSW 2148

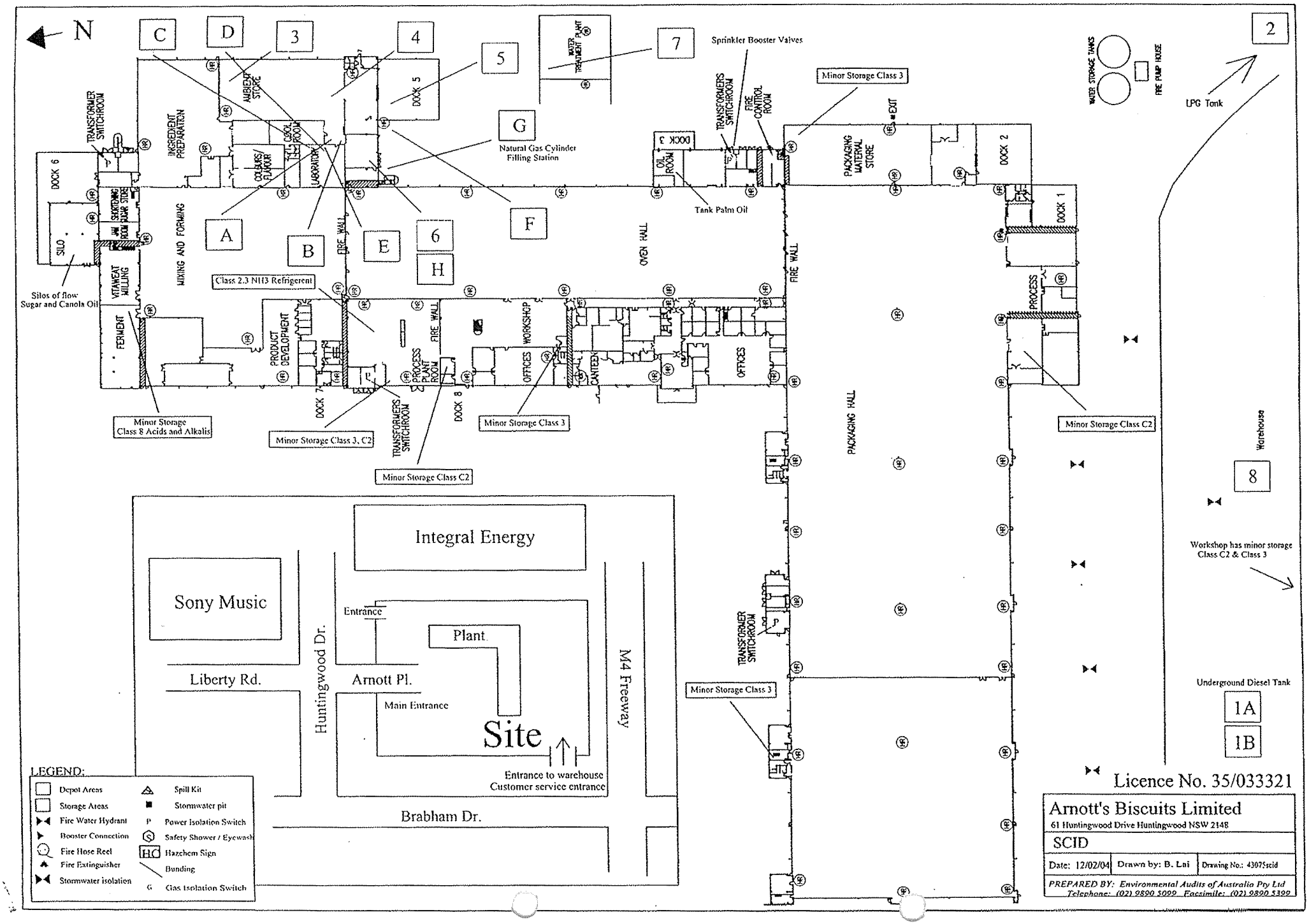
I refer to your site search request received by SafeWork NSW requesting information on Storage of Hazardous Chemicals for the above site.

Enclosed are copies of the documents that SafeWork NSW holds on record number 35/033321 and relating to the storage of Hazardous Chemicals at the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW


N
C
D
3
4
5
7
Sprinkler Booster Valves
2
G
Natural Gas Cylinder Filling Station
Minor Storage Class 3
LPG Tank
A
B
E
6
H
F
Tank Palm Oil
Silos of flow Sugar and Canola Oil
Class 2.3 NH3 Refrigerent
Minor Storage Class 8 Acids and Alkalis
Minor Storage Class 3, C2
Minor Storage Class C2
Minor Storage Class 3
Minor Storage Class C2
Workshop has minor storage Class C2 & Class 3
Underground Diesel Tank
1A
1B
8
Warehouse
Integral Energy
Sony Music
Entrance
Plant
Liberty Rd.
Arnott Pl.
Main Entrance
Site
Huntingwood Dr.
M4 Freeway
Entrance to warehouse
Customer service entrance
Brabham Dr.
LEGEND:
Depot Areas
Storage Areas
Fire Water Hydrant
Booster Connection
Fire Hose Reel
Fire Extinguisher
Stormwater isolation
Spill Kit
Stormwater pit
Power Isolation Switch
Safety Shower / Eyewash
Hazchem Sign
Bunding
Gas Isolation Switch
Licence No. 35/033321
Arnott's Biscuits Limited
61 Huntingwood Drive Huntingwood NSW 2148
SCID
Date: 12/02/04
Drawn by: B. Lai
Drawing No.: 43075scid
PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot Details

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
1A	Underground Tank	Class C1 / UN 00C1	55000 L	N/A
1B	Underground Tank	Class C1 / UN 00C1	55000 L	N/A
2	Aboveground Tank	Class 2.1 / UN 1075	4300 L	N/A
3	Flammable Liquid Cabinets	Class 3 PG II/III / UN Var.	200L x 5	N/A
4	Dispensing Cabinet	Class 3 PG II / UN 1170	205 L	N/A
5	Roof Store	Class 3 PG II/III / UN Var.	1500 L	375L
6	Gas Cylinder Store	Class 2.1 / UN 1075, 1001	250 L	N/A
7A	Aboveground Tank	Class 8 PG II/ UN 1824	1000 L	8000 L
7B	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
7C	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
8	Gas Cylinder Store	Class 2.1 / UN 1075	500 Kg	N/A

Exempt Storage Area

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
A	Corrosive Liquid Cabinet- acids	Class 8 PG II/III / UN 1789	160 L	N/A
B	Corrosive Liquid Cabinet- alkalis	Class 8 PG II / UN 1824	160 L	N/A
C	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	N/A
D	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	N/A
E	Corrosive Liquid Cabinet	Class 8 PG II/III / UN Var.	160 L	N/A
F	Aboveground Tank	Class 2.2 / UN 2178	5500 L	N/A
G	Gas Cylinders Store- empties	Class 2.1 2.2 / UN Var.	Empties	N/A
H	Gas Cylinders Store	Class 2.2 2.2(5.1) / UN Var.	200 Kg	N/A

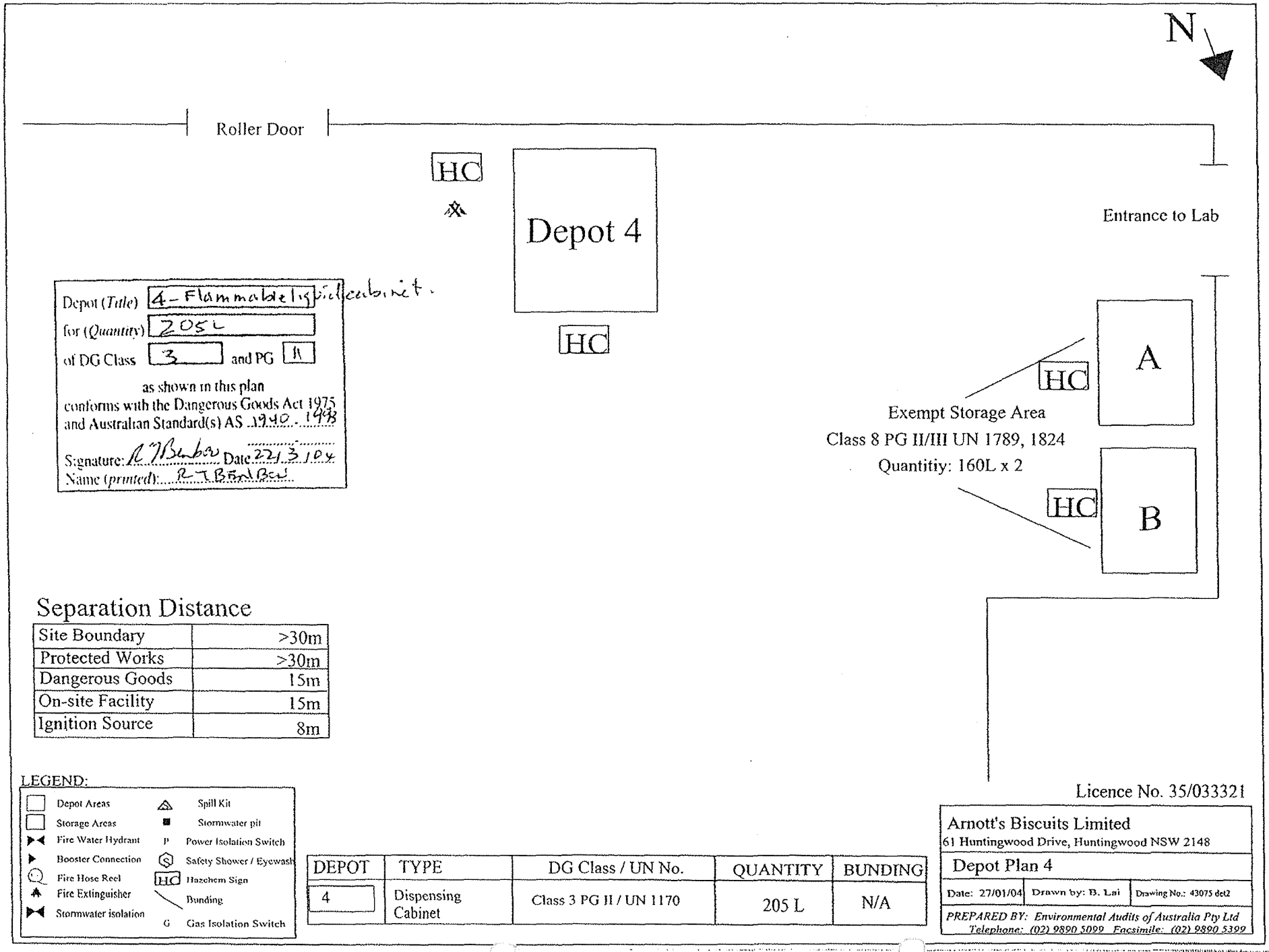
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Details

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	15m
On-site Facility	15m
Ignition Source	8m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- P Power Isolation Switch
- Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- G Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
4	Dispensing Cabinet	Class 3 PG II / UN 1170	205 L	N/A

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 4

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det2

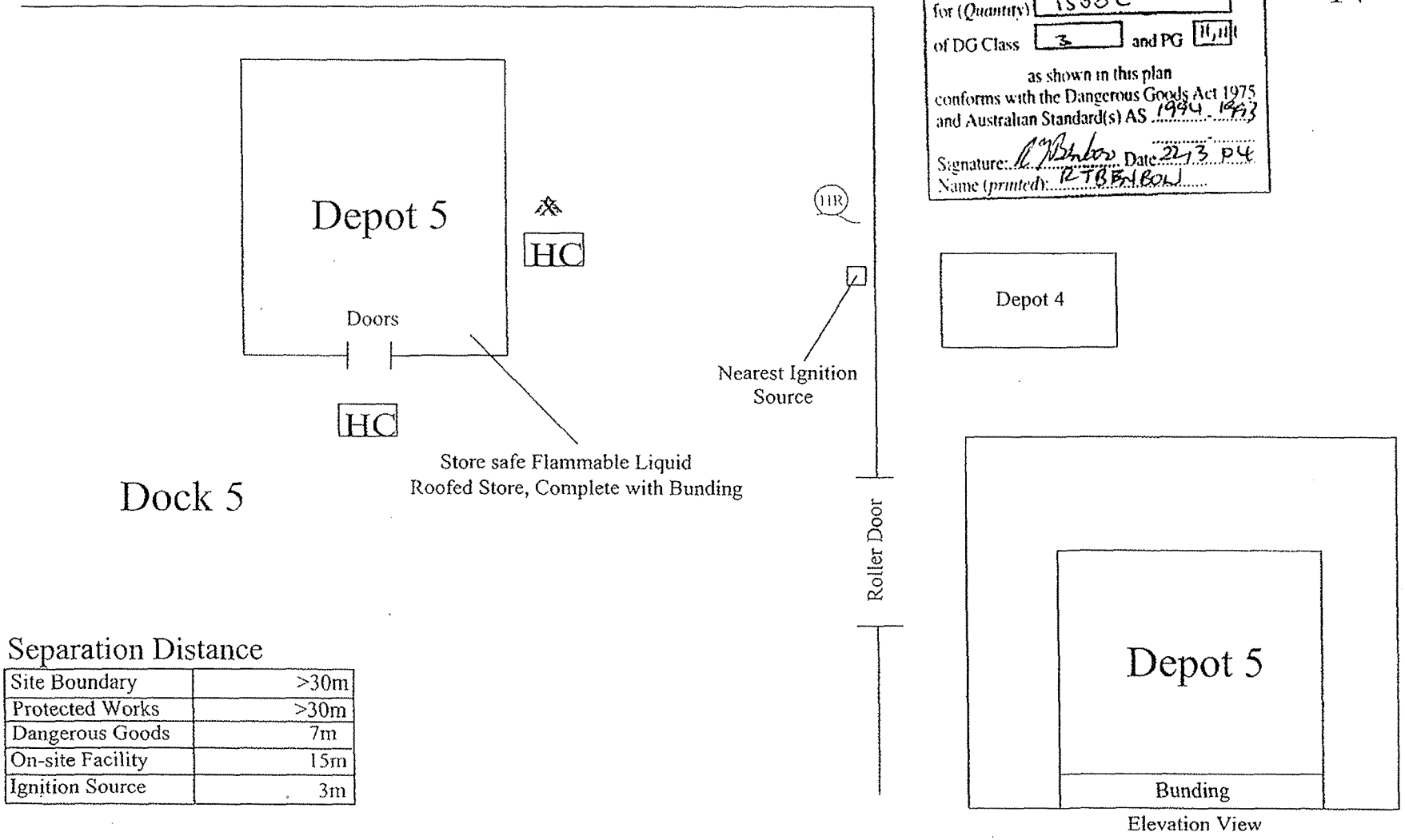
PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot (*Title*) 5 - roofed store
for (*Quantity*) 1500 L
of DG Class 3 and PG II, III

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 1940 - 1993

Signature: [signature] Date 22/3/04
Name (*printed*): R T BARLOW

N



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	7m
On-site Facility	15m
Ignition Source	3m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- P Power Isolation Switch
- Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- G Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
5	Roofed Store	Class 3 PG II/III / UN Var.	1500 L	375L

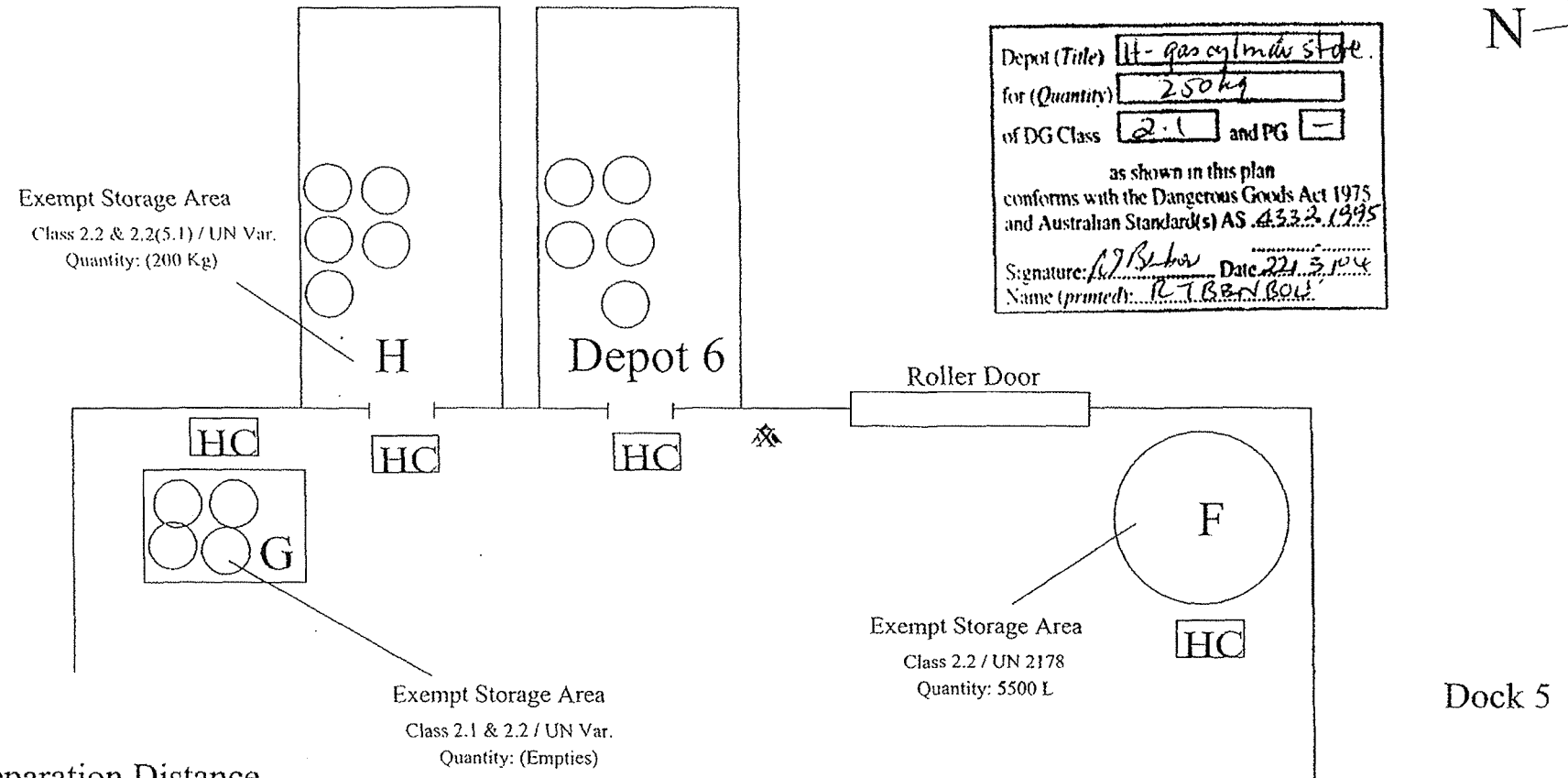
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 5

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det3

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	3m
On-site Facility	20m
Ignition Source	5m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- P Power Isolation Switch
- Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- G Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
6	Gas Cylinder Store	Class 2.1 / UN 1075, 1001	250 Kg	N/A

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 6

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det4

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot (Title) 7A, 7B, 7C 1BC ✓

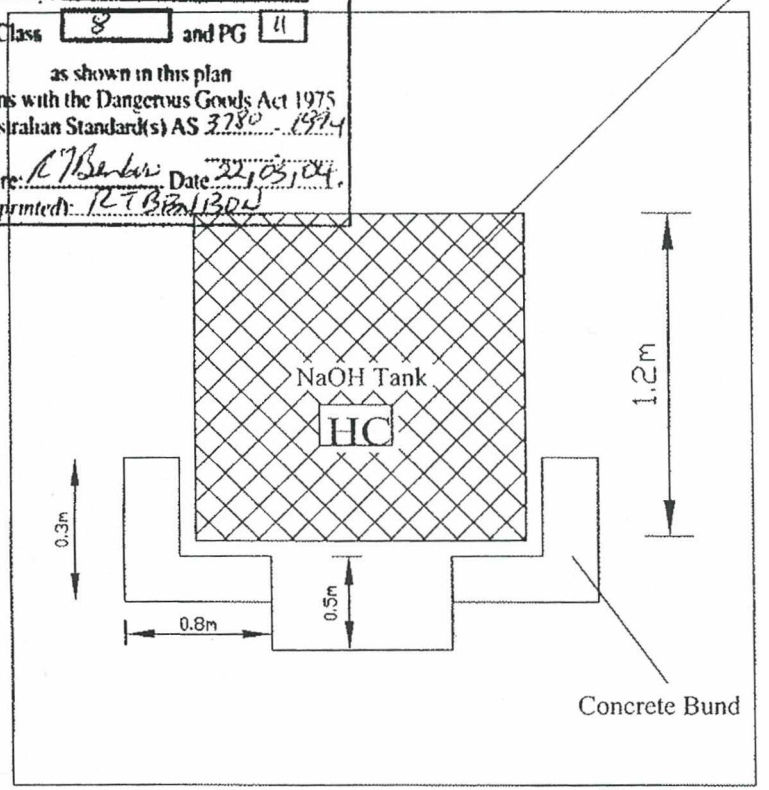
for (Quantity) 3X 1000L

of DG Class 8 and PG II

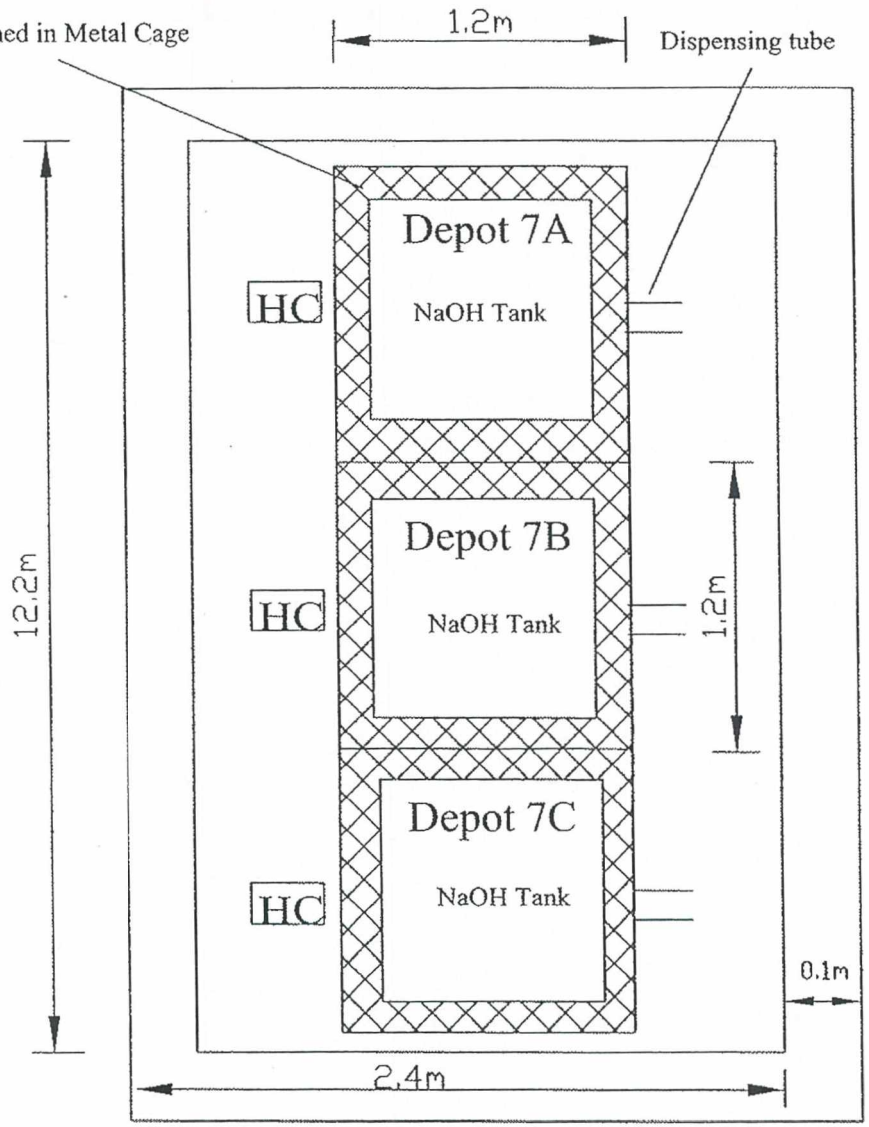
as shown in this plan conforms with the Dangerous Goods Act 1975 and Australian Standard(s) AS 3780 - 1994

Signature: [signature] Date 22/03/04.

Name (printed): R T Bilal Lai



Elevation View



Separation Distance

Site Boundary	20m
Protected Works	>30m
Dangerous Goods	Other Classes 20m
On-site Facility	3m
Ignition Source	3m

LEGEND:

Depot Areas		Spill Kit	
Storage Areas		Stormwater pit	
Fire Water Hydrant		P	Power Isolation Switch
Booster Connection		S	Safety Shower / Eyewash
Fire Hose Reel		HC	Hazchem Sign
Fire Extinguisher			Bunding
Stormwater isolation		G	Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
7A,7B,7C	Aboveground Tanks	Class 8 PG II / UN 1824	1000 L x 3	8000 L

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 7

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det5

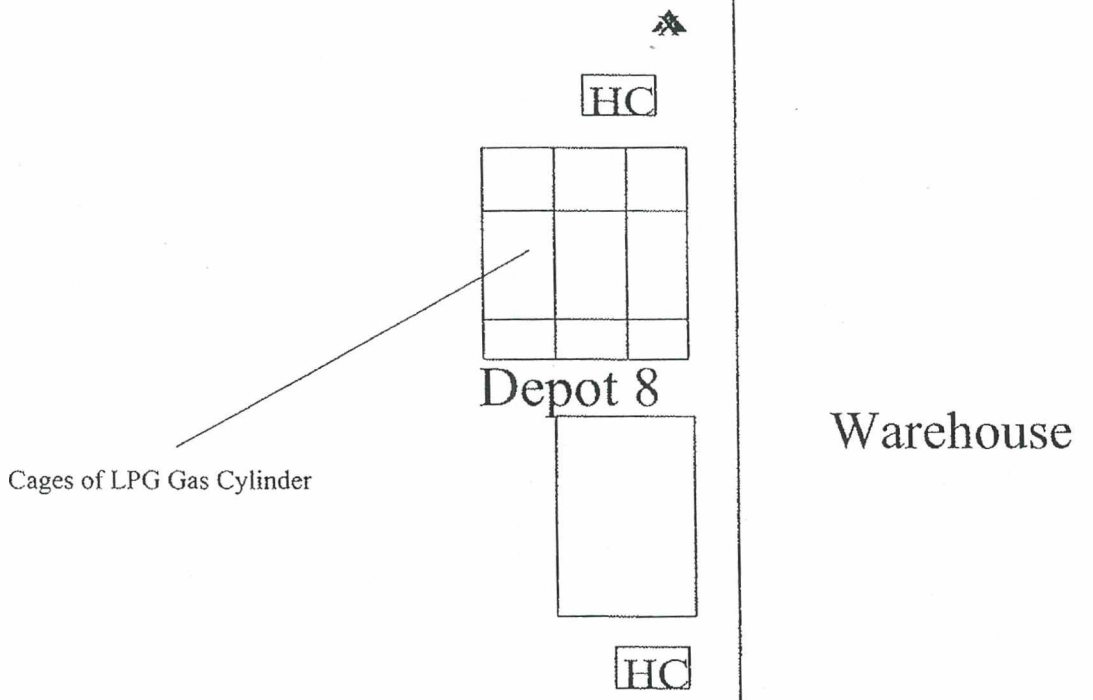
PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot (*Title*) 8 - Gas Cylinders
for (*Quantity*) 500kg.
of DG Class 2.1 and PG —

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 4332-1995

Signature: [signature] Date 22.3.04.
Name (*printed*): I. BELLAS

N



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	30m
On-site Facility	15m
Ignition Source	3m

LEGEND:

Depot Areas		Spill Kit	
Storage Areas		Stormwater pit	
Fire Water Hydrant	P	Power Isolation Switch	
Booster Connection	S	Safety Shower / Eyewash	
Fire Hose Reel	HC	Hazchem Sign	
Fire Extinguisher		Bunding	
Stormwater isolation	G	Gas Isolation Switch	

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
8	Gas Cylinder Store	Class 2.1 / UN 1075	500 Kg	N/A

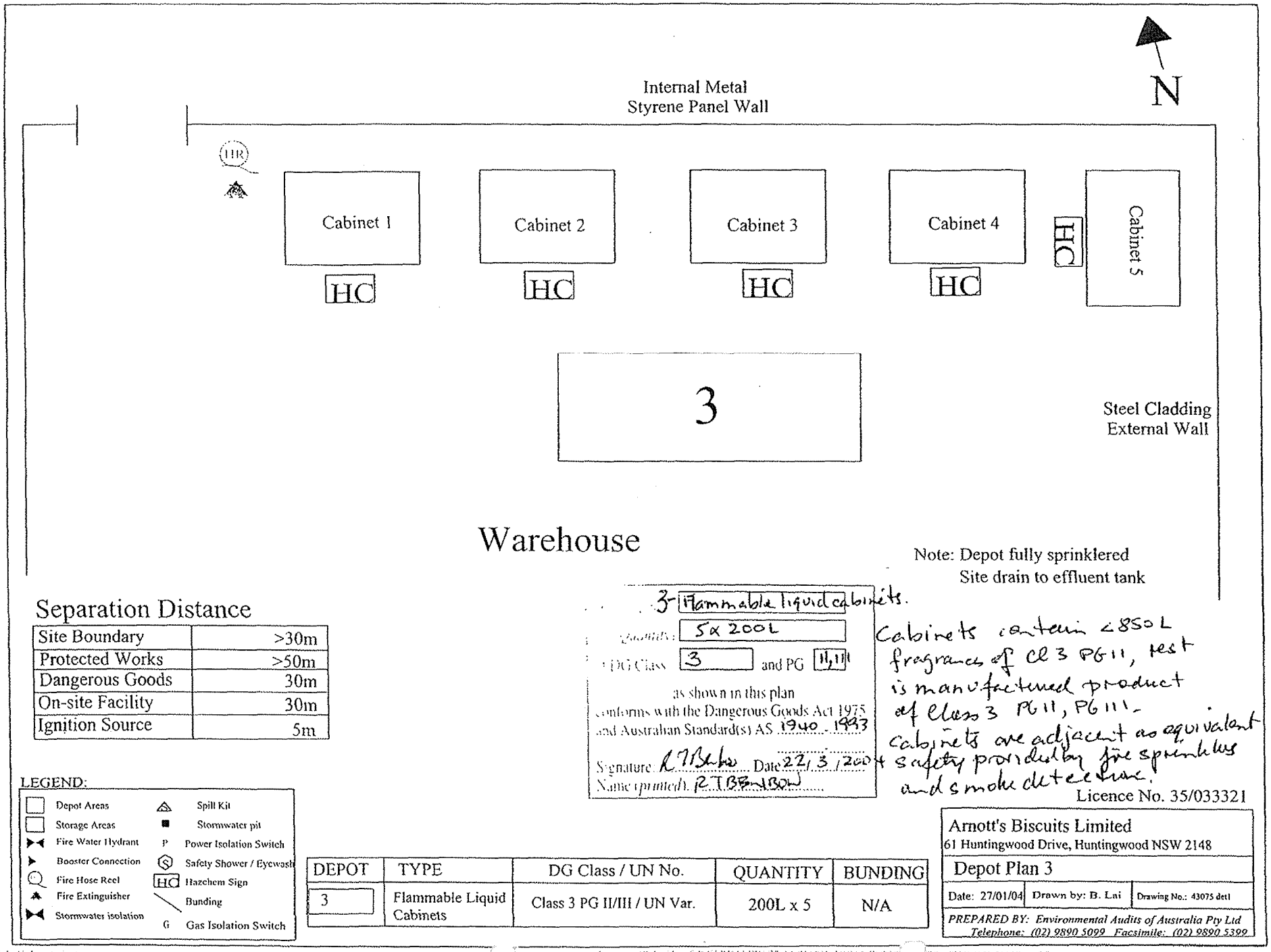
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 8

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det5

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



Note: Depot fully sprinklered
Site drain to effluent tank

Separation Distance

Site Boundary	>30m
Protected Works	>50m
Dangerous Goods	30m
On-site Facility	30m
Ignition Source	5m

3 Flammable liquid cabinets.

Quantity: 5 x 200L

DG Class: 3 and PG II, III

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 1940 - 1993

Signature: R T Barbo Date: 22/3/2004

Name (printed): R T BARBOUR

Cabinets contain < 850 L fragrances of Cl 3 PG II, test is manufactured product of class 3 PG II, PG III. Cabinets are adjacent as equivalent safety provided by fire sprinklers and smoke detectors.

LEGEND:

	Depot Areas		Spill Kit
	Storage Areas		Stormwater pit
	Fire Water Hydrant	P	Power Isolation Switch
	Booster Connection	S	Safety Shower / Eyewash
	Fire Hose Reel	HC	Hazchem Sign
	Fire Extinguisher		Bunding
	Stormwater isolation	G	Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
3	Flammable Liquid Cabinets	Class 3 PG II/III / UN Var.	200L x 5	N/A

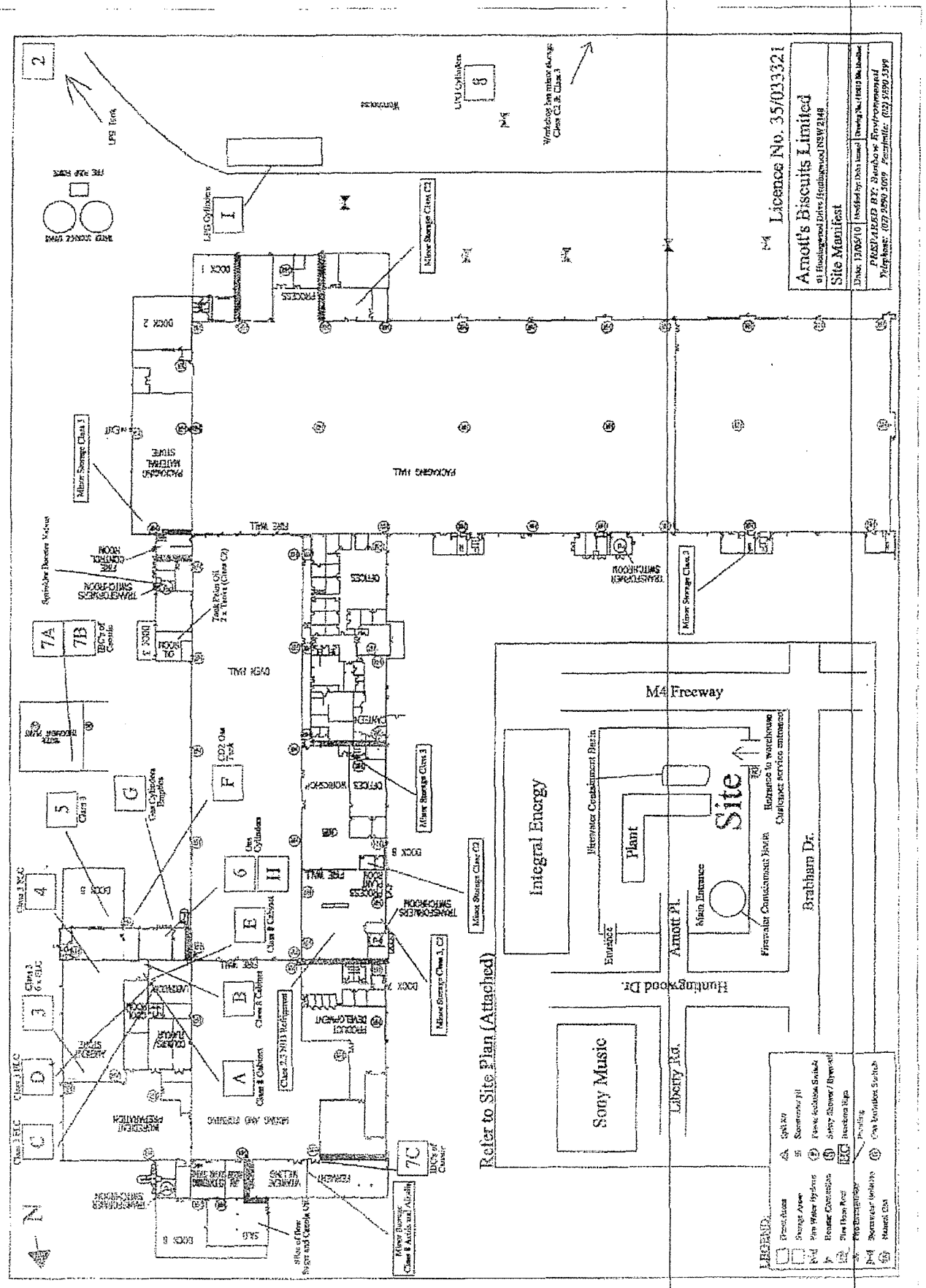
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

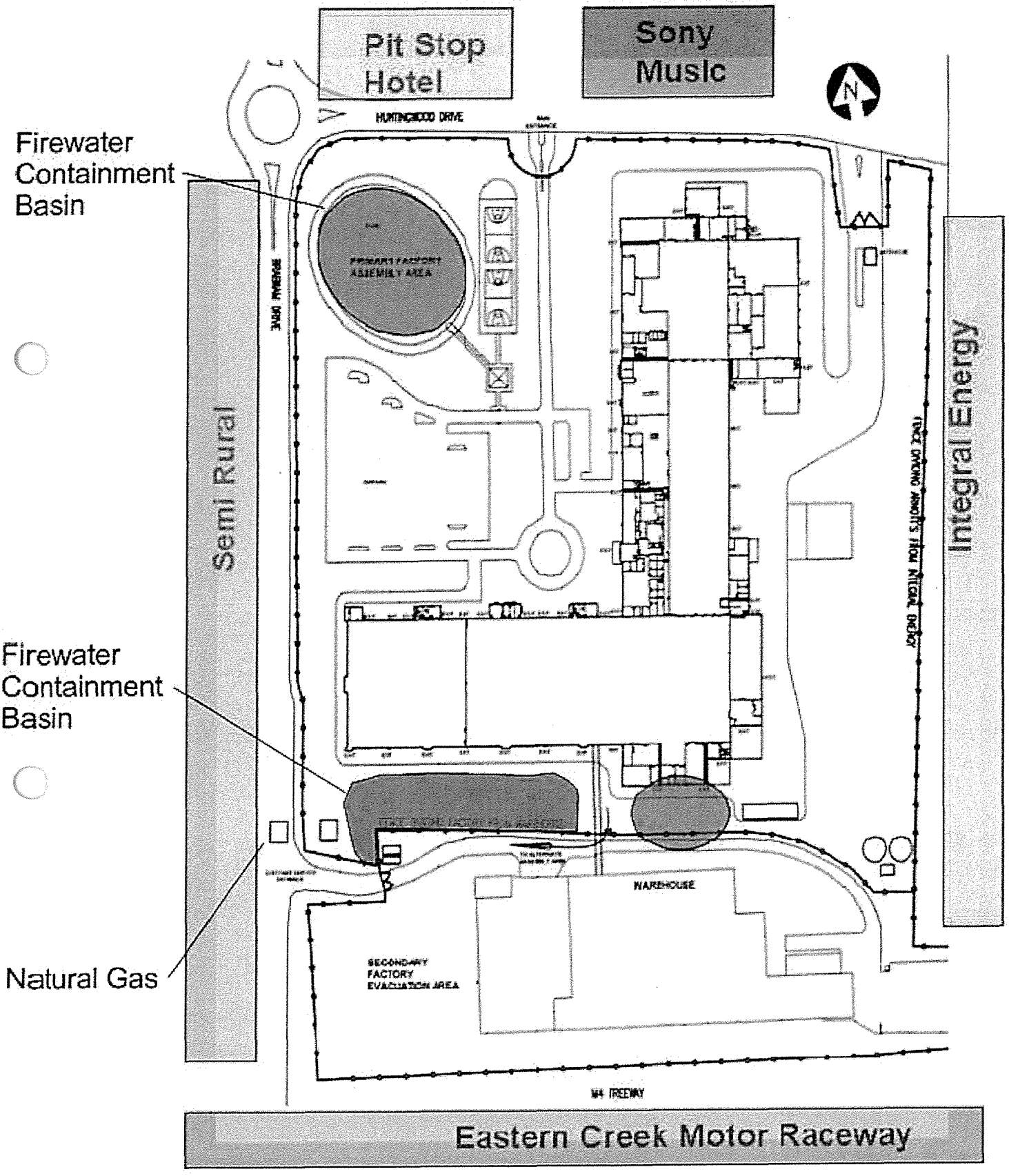
Depot Plan 3

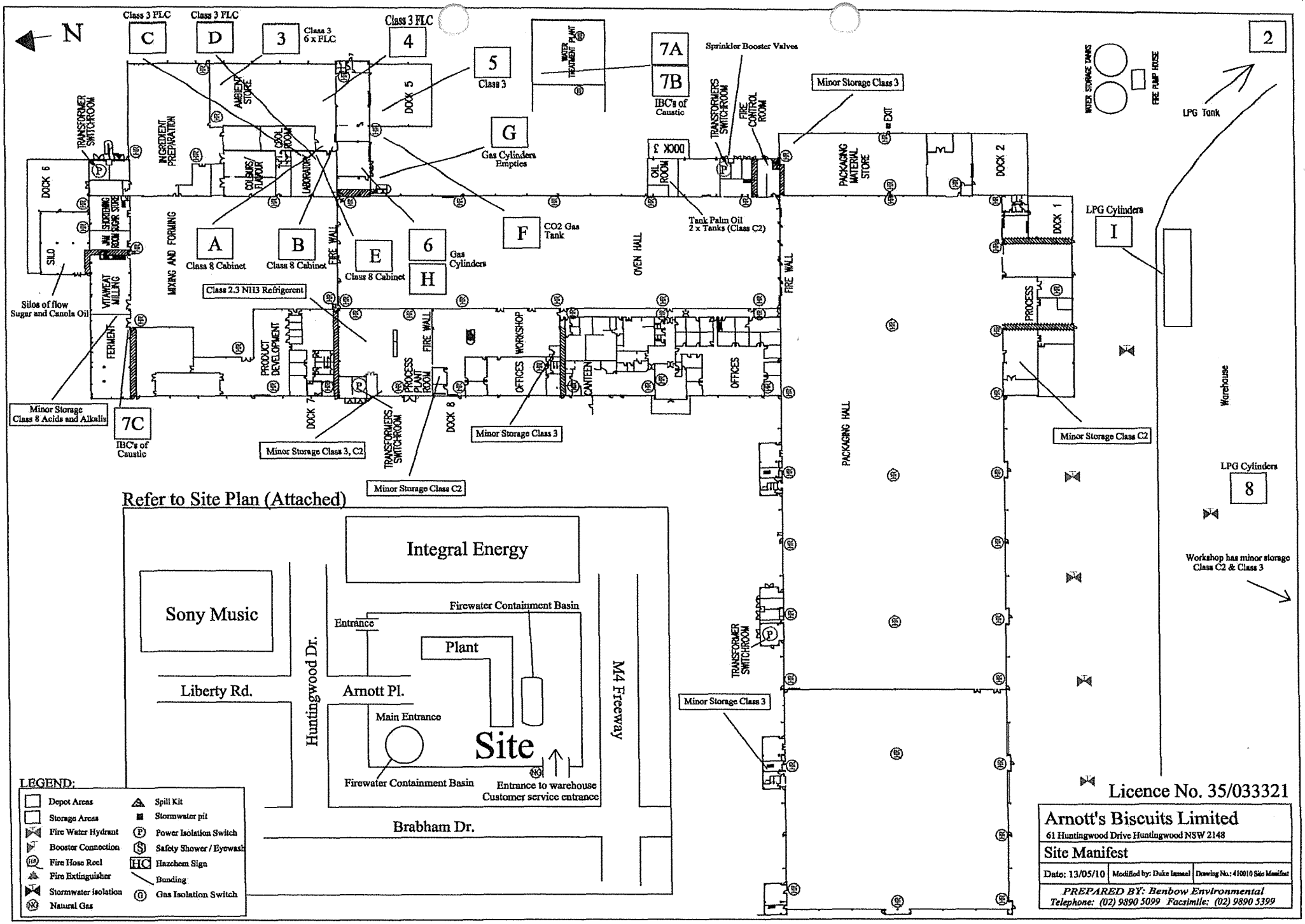
Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det1

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399


Arnott's Biscuits Limited
Site Manifest
Licence No. 35/033321
Refer to Site Plan (Attached)
Integral Energy
Sony Music
M4 Freeway
Site
Plant
Arnott Pl.
Huntingwood Dr.
Brabham Dr.
Liberty Rd.
PACKAGING HALL
OFFICES
LEGEND

Site Plan - Huntingwood 20/6/2006 ERP Neighbors




N
Class 3 FLC
C
Class 3 FLC
D
3
Class 3
6 x FLC
Class 3 FLC
4
5
Class 3
7A
7B
IBC's of Caustic
Sprinkler Booster Valves
Minor Storage Class 3
2
LPG Tank
WATER STORAGE TANKS
FIRE PUMP HOUSE
TRANSFORMER SWITCHROOM
INGREDIENT PREPARATION
AMBIENT STORE
COOL ROOM
COLOURS/ FLAVOUR
LABORATORY
DOCK 5
G
Gas Cylinders Empties
DOCK 3
OIL ROOM
TRANSFORMERS SWITCHROOM
FIRE CONTROL ROOM
PACKAGING MATERIAL STORE
DOCK 2
DOCK 1
DOCK 6
SILO
JAM SEASONING ROOM DOOR STORE
VITAWEAT MILLING
MIXING AND FORMING
A
Class 8 Cabinet
B
Class 8 Cabinet
FIRE WALL
E
Class 8 Cabinet
6
Gas Cylinders
H
F
CO2 Gas Tank
OVEN HALL
Tank Palm Oil
2 x Tanks (Class C2)
LPG Cylinders
I
Silos of flow Sugar and Canola Oil
Class 2.3 NH3 Refrigerent
FERMENT
PRODUCT DEVELOPMENT
DOCK 7
PROCESS PLANT ROOM
FIRE WALL
WORKSHOP
OFFICES
CANTEEN
OFFICES
FIRE WALL
PROCESS
Minor Storage Class 8 Acids and Alkalis
7C
IBC's of Caustic
Minor Storage Class 3, C2
TRANSFORMERS SWITCHROOM
DOCK 8
Minor Storage Class C2
Minor Storage Class 3
PACKAGING HALL
Minor Storage Class C2
Warehouse
LPG Cylinders
8
Workshop has minor storage Class C2 & Class 3
Refer to Site Plan (Attached)
Integral Energy
Sony Music
Firewater Containment Basin
Entrance
Plant
Huntingwood Dr.
M4 Freeway
Liberty Rd.
Arnott Pl.
Main Entrance
Site
Firewater Containment Basin
Entrance to warehouse
Customer service entrance
Brabham Dr.
TRANSFORMER SWITCHROOM
Minor Storage Class 3
LEGEND:
Depot Areas
Storage Areas
Fire Water Hydrant
Booster Connection
Fire Hose Reel
Fire Extinguisher
Stormwater isolation
Natural Gas
Spill Kit
Stormwater pit
Power Isolation Switch
Safety Shower / Eyewash
Hazchem Sign
Bunding
Gas Isolation Switch
Licence No. 35/033321
Arnott's Biscuits Limited
61 Huntingwood Drive Huntingwood NSW 2148
Site Manifest
Date: 13/05/10
Modified by: Dulu Ismael
Drawing No.: 410010 Site Manifest
PREPARED BY: Benbow Environmental
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot Details

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
2	Aboveground Tank	Class 2.1 / UN 1075	4300 L	N/A
3	Flammable Liquids Cabinet	Class 3 PG II/III / UN Var.	250L x 6	N/A
4	Dispensing Cabinet	Class 3 PG II / UN 1170	205 L	N/A
5	Roofed Store	Class 3 PG II/III / UN Var.	1500 L	375 L
6	Gas Cylinder Store	Class 2.1 / UN 1075, 1001	250 L	N/A
7A	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
7B	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
7C	Aboveground Tank	Class 8 PG II/ UN 1824	1000 L	1100 L
8	Gas Cylinder Store	Class 2.1 / UN 1075	1200 L	N/A

Exempt Storage Area

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
A	Corrosive Liquid Cabinet- acids	Class 8 PG II/III / UN 1789	160 L	40 L
B	Corrosive Liquid Cabinet- alkalis	Class 8 PG II / UN 1824	160 L	40 L
C	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	40 L
D	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	40 L
E	Corrosive Liquid Cabinet	Class 8 PG II/III / UN Var.	160 L	40 L
F	Aboveground Tank	Class 2.2 / UN 2178	5500 L	N/A
G	Gas Cylinders Store- empties	Class 2.1 2.2 / UN Var.	Empties	N/A
H	Gas Cylinders Store	Class 2.2 2.2(5.1) / UN Var.	500 L	N/A
I	Gas Cylinders Store	Class 2.1 / UN 1075	360 L	N/A

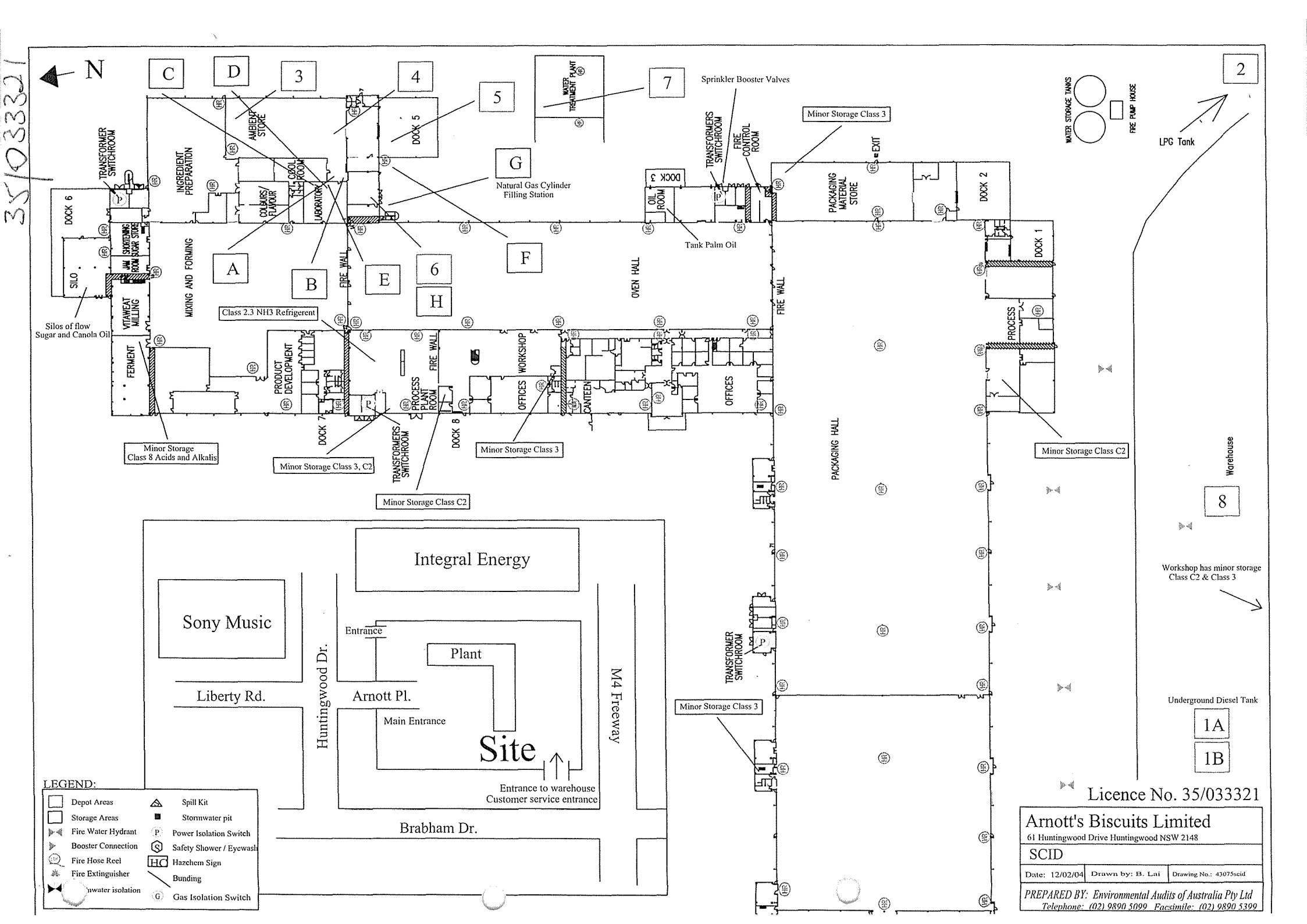
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Details

Date: 13/05/10	Modified by: Duke Ismael	Drawing No.: 410010 Depot Details

PREPARED BY: Benbow Environmental
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



35/033321

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive Huntingwood NSW 2148

SCID

Date: 12/02/04	Drawn by: B. Lai	Drawing No.: 43075scid

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot Details

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
1A	Underground Tank	Class C1 / UN 00C1	55000 L	N/A
1B	Underground Tank	Class C1 / UN 00C1	55000 L	N/A
2	Aboveground Tank	Class 2.1 / UN 1075	4300 L	N/A
3	Flammable Liquid Cabinets	Class 3 PG II/III / UN Var.	200L x 5	N/A
4	Dispensing Cabinet	Class 3 PG II / UN 1170	205 L	N/A
5	Roof Store	Class 3 PG II/III / UN Var.	1500 L	375L
6	Gas Cylinder Store	Class 2.1 / UN 1075, 1001	250 L	N/A
7A	Aboveground Tank	Class 8 PG II/ UN 1824	1000 L	8000 L
7B	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
7C	Aboveground Tank	Class 8 PG II / UN 1824	1000 L	8000 L
8	Gas Cylinder Store	Class 2.1 / UN 1075	500 Kg	N/A

Exempt Storage Area

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
A	Corrosive Liquid Cabinet- acids	Class 8 PG II/III / UN 1789	160 L	N/A
B	Corrosive Liquid Cabinet- alkalis	Class 8 PG II / UN 1824	160 L	N/A
C	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	N/A
D	Flammable Liquid Cabinet	Class 3 PG II/III / UN Var.	160 L	N/A
E	Corrosive Liquid Cabinet	Class 8 PG II/III / UN Var.	160 L	N/A
F	Aboveground Tank	Class 2.2 / UN 2178	5500 L	N/A
G	Gas Cylinders Store- empties	Class 2.1 2.2 / UN Var.	Empties	N/A
H	Gas Cylinders Store	Class 2.2 2.2(5.1) / UN Var.	200 Kg	N/A

Licence No. 35/033321

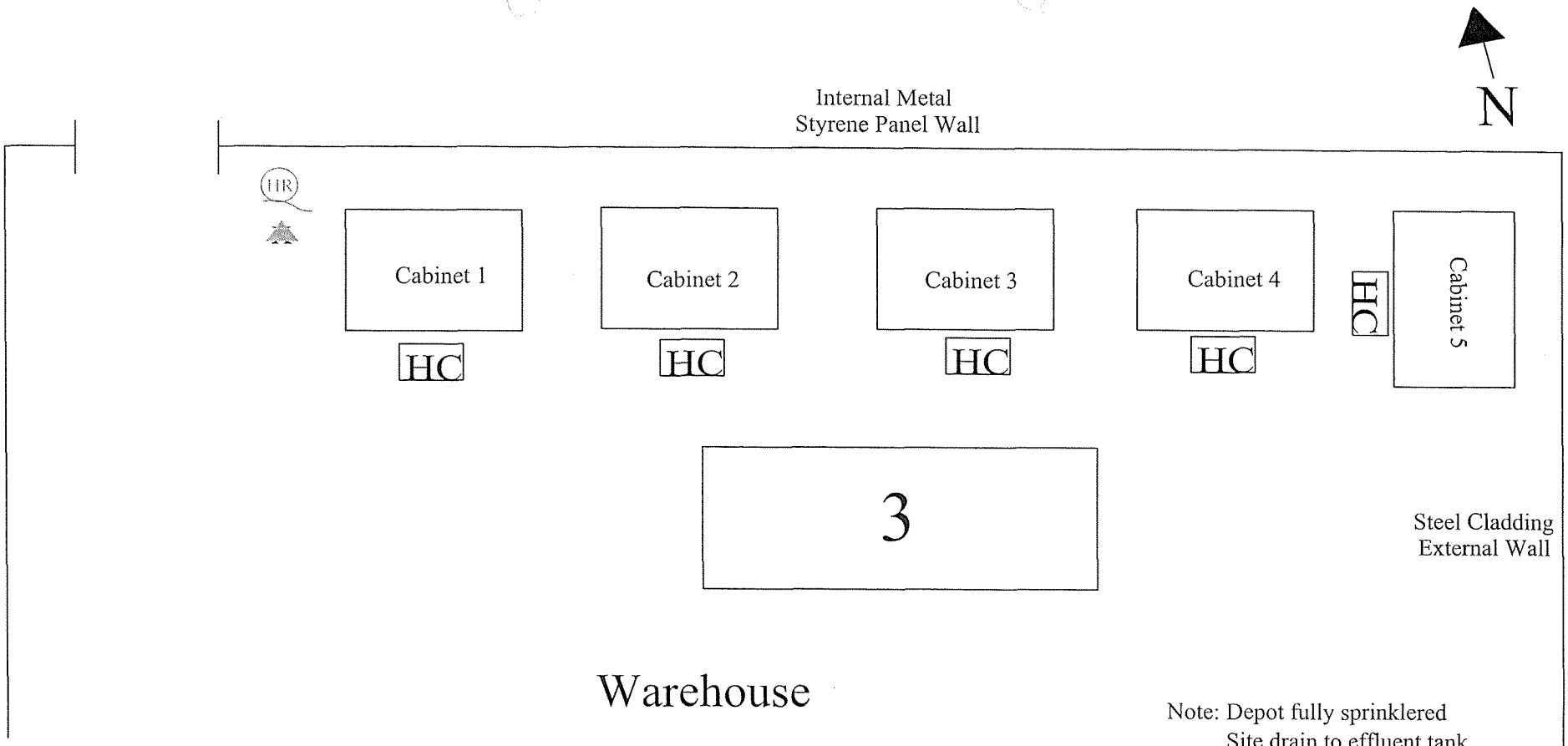
Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Details

Date: 27/01/04	Drawn by: B. Lai	Drawing No.: 43075 det

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

35/033321



Note: Depot fully sprinklered
Site drain to effluent tank

Separation Distance

Site Boundary	>30m
Protected Works	>50m
Dangerous Goods	30m
On-site Facility	30m
Ignition Source	5m

3 Flammable liquid cabinets.
Quantity: 5 x 200L
DG Class 3 and PG II, III
as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 1940 - 1993
Signature: R T Barbaro Date 22/3/2004
Name (printed): R T BARBARO

Cabinets contain <850L fragrances of Cl 3 PG II, test is manufactured product of Class 3 PG II, PG III. Cabinets are adjacent as equivalent safety provided by fire sprinklers and smoke detection.

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- Power Isolation Switch
- Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
3	Flammable Liquid Cabinets	Class 3 PG II/III / UN Var.	200L x 5	N/A

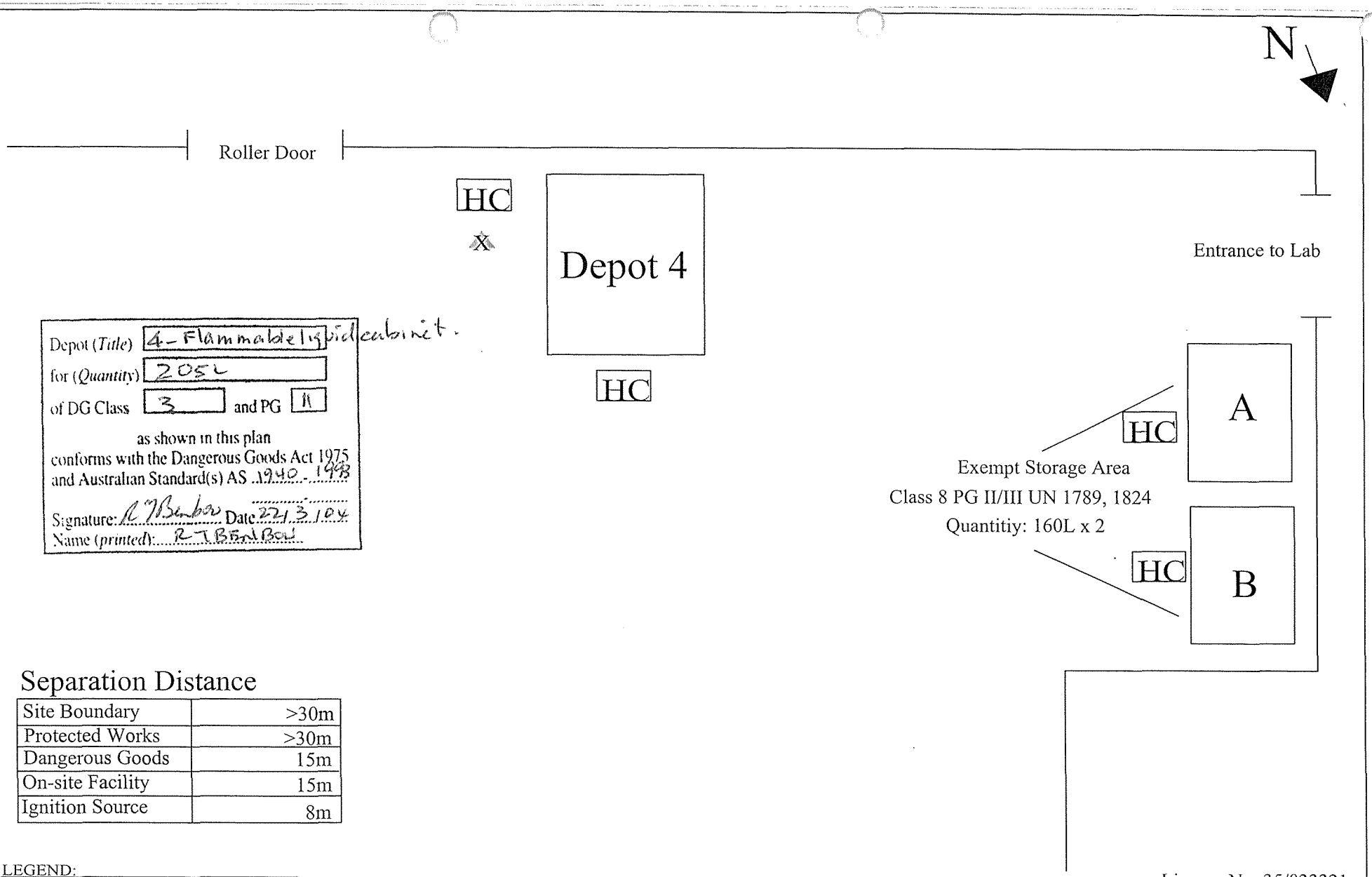
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 3

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det1

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	15m
On-site Facility	15m
Ignition Source	8m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- (P) Power Isolation Switch
- (S) Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- (G) Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
4	Dispensing Cabinet	Class 3 PG II / UN 1170	205 L	N/A

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 4

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 dct2

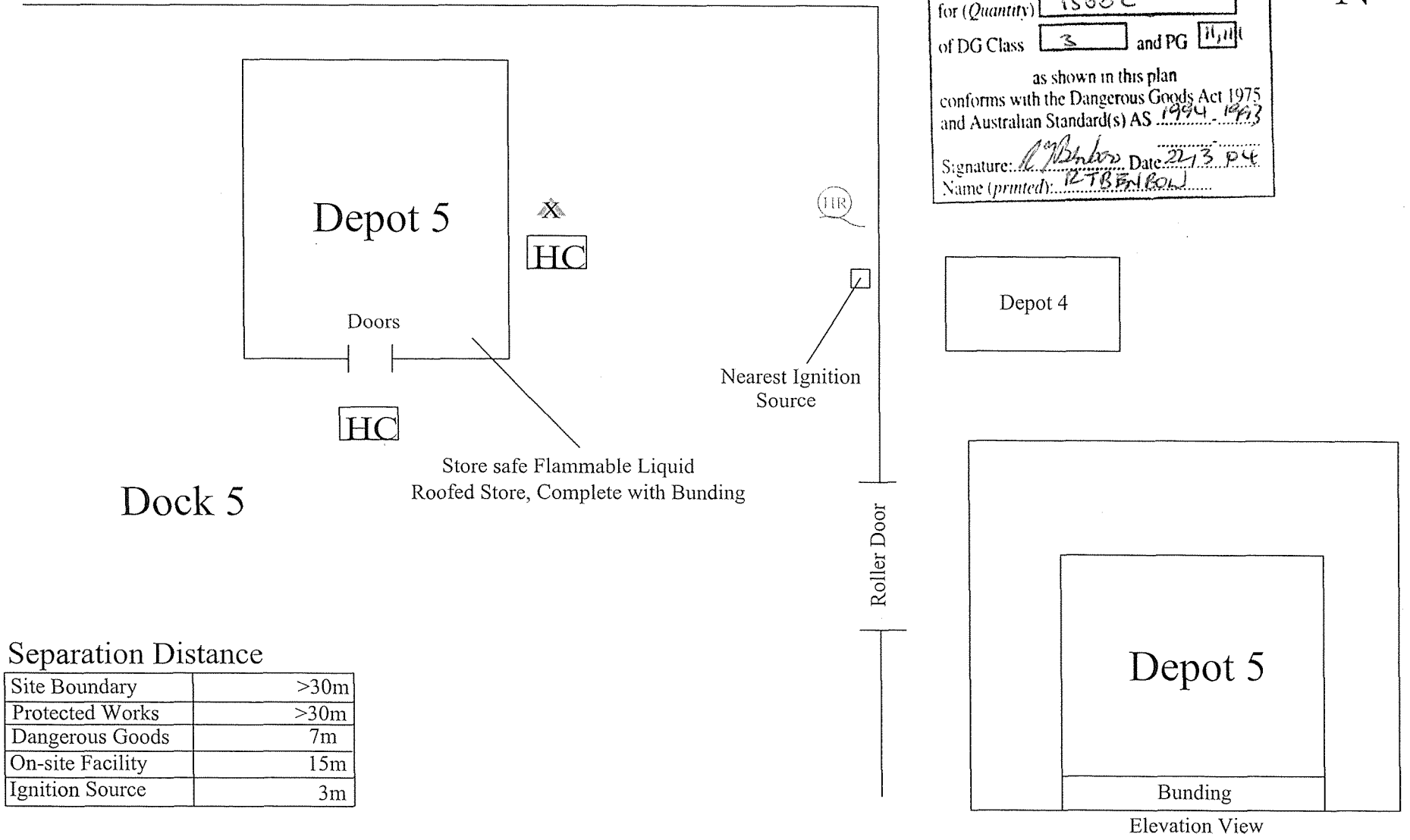
PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot (*Title*) 5 roofed store
for (*Quantity*) 1500L
of DG Class 3 and PG II, III

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 1994 - 1993

Signature: [signature] Date 22/3/04
Name (*printed*): R T BENBOW

N



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	7m
On-site Facility	15m
Ignition Source	3m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- Power Isolation Switch
- Safety Shower / Eyewash
- Hazchem Sign
- Bunding
- Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
5	Roofed Store	Class 3 PG II/III / UN Var.	1500 L	375L

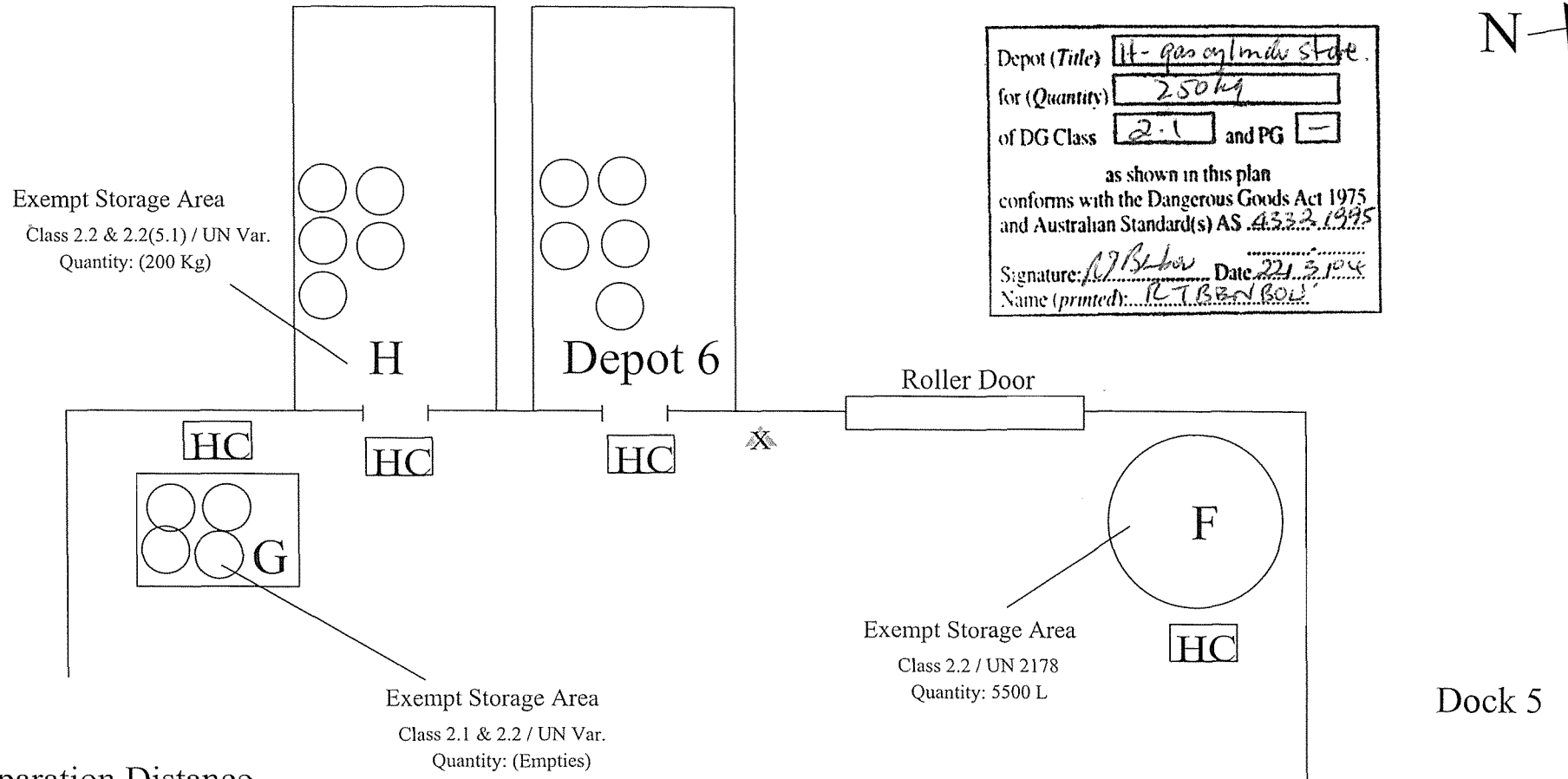
Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 5

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det3

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399



N

Depot (*Title*) 4- gas cylinder store.
for (*Quantity*) 250kg
of DG Class 2.1 and PG —
as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 4332.1995
Signature: [signature] Date 22.3.04
Name (*printed*): R T BROWN

Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	3m
On-site Facility	20m
Ignition Source	5m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- (P) Power Isolation Switch
- (S) Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- (G) Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
6	Gas Cylinder Store	Class 2.1 / UN 1075, 1001	250 Kg	N/A

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 6

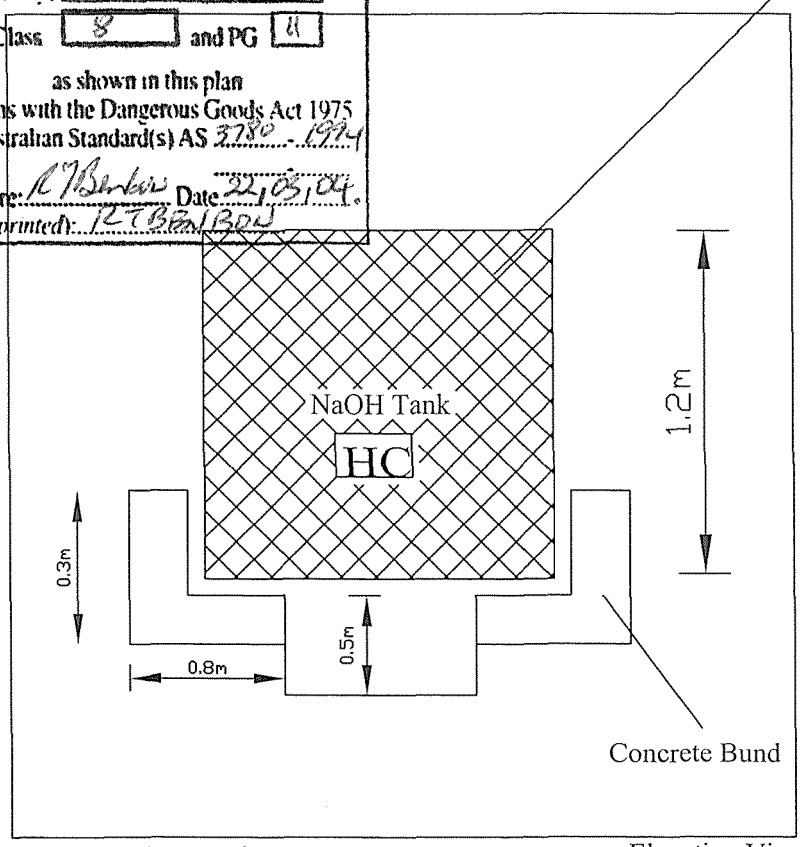
Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det4

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

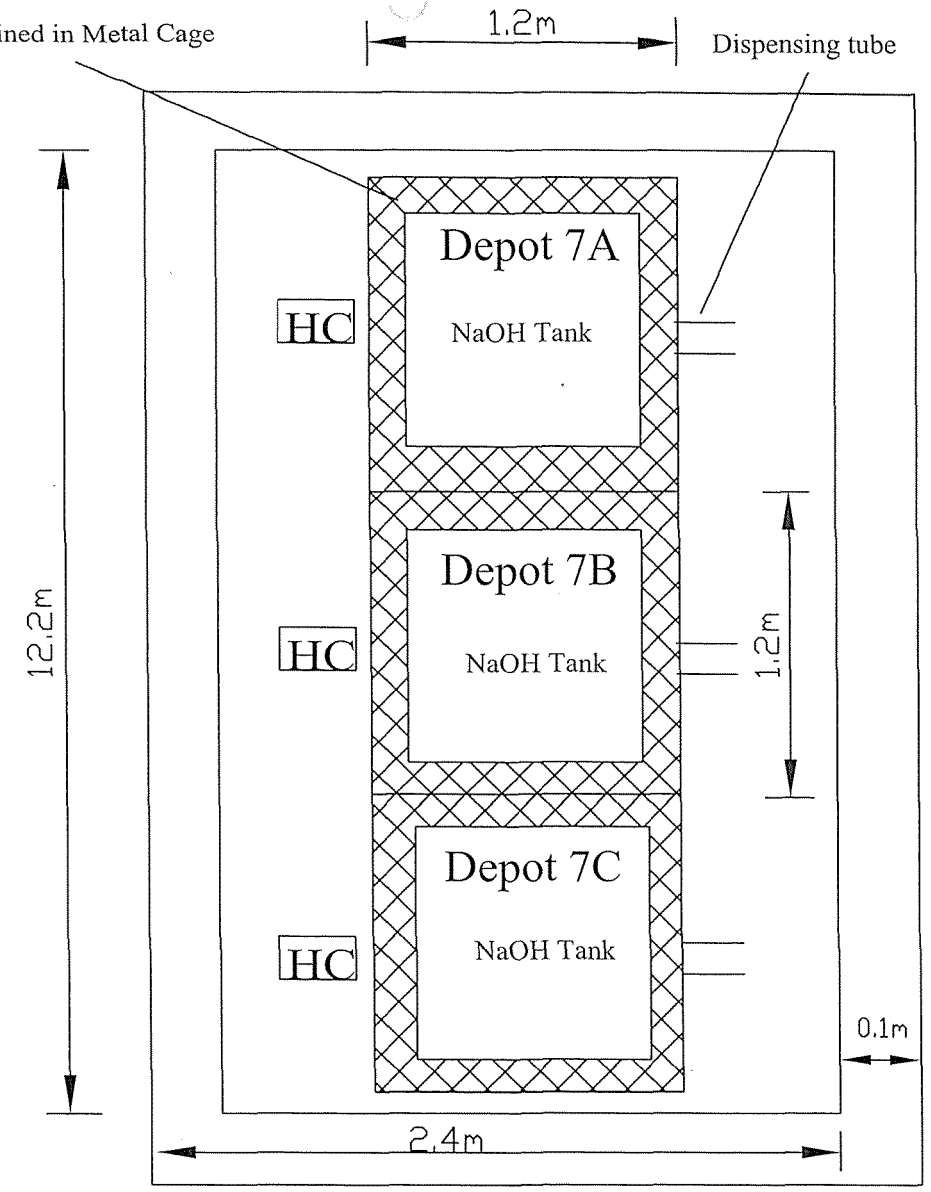
Depot (Title) 7A, 7B, 7C IBC
for (Quantity) 3X 1000L
of DG Class 8 and PG II

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 3780 - 1994

Signature: [signature] Date 22/03/04
Name (printed): R T BARLOW



Elevation View



Separation Distance

Site Boundary	20m
Protected Works	>30m
Dangerous Goods	Other Classes 20m
On-site Facility	3m
Ignition Source	3m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- P Power Isolation Switch
- S Safety Shower / Eyewash
- HC Hazchem Sign
- Bunding
- G Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
7A,7B,7C	Aboveground Tanks	Class 8 PG II / UN 1824	1000 L x 3	8000 L

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 7

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det5

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

Depot (*Title*) 8 - Gas Cylinder Cage

for (*Quantity*) 500kg.

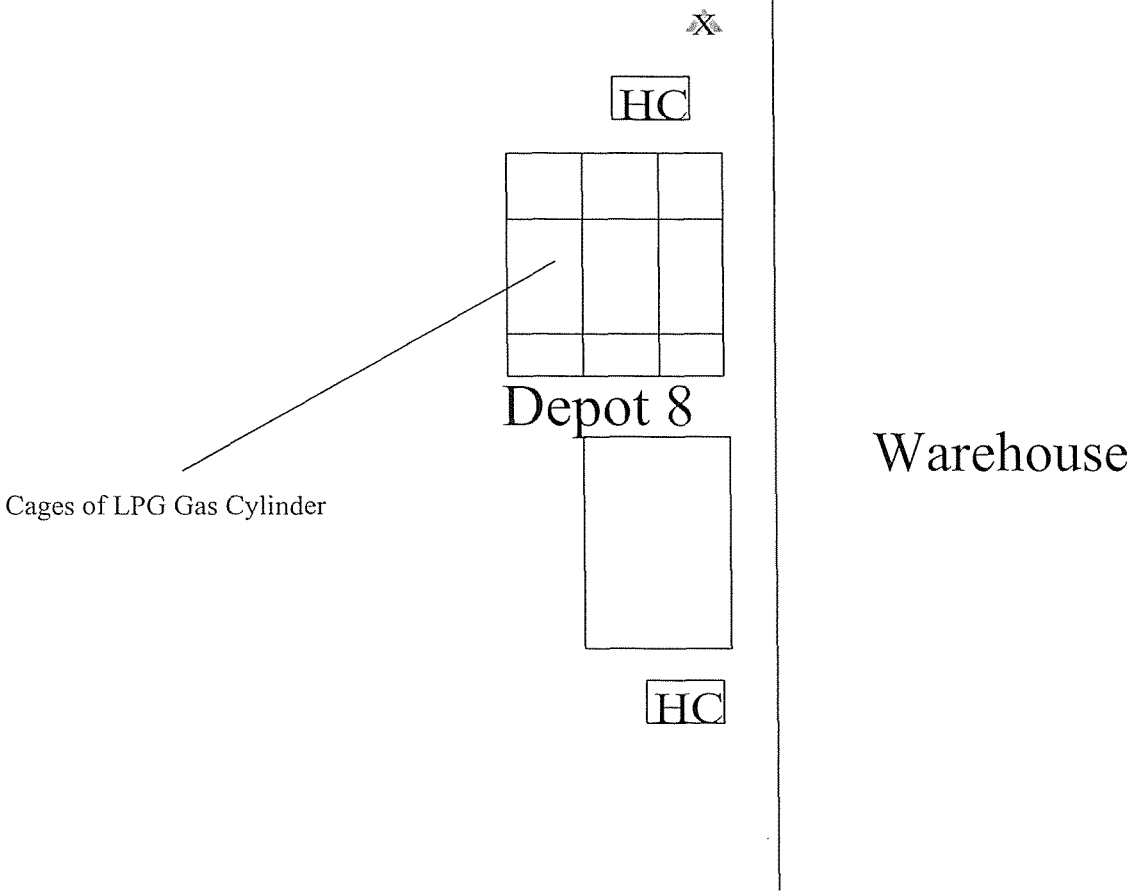
of DG Class 2.1 and PG –

as shown in this plan
conforms with the Dangerous Goods Act 1975
and Australian Standard(s) AS 4332-1995

Signature: [signature] Date 22.3.04

Name (*printed*): R.T.BELLAIS

N



Separation Distance

Site Boundary	>30m
Protected Works	>30m
Dangerous Goods	30m
On-site Facility	15m
Ignition Source	3m

LEGEND:

- Depot Areas
- Storage Areas
- Fire Water Hydrant
- Booster Connection
- Fire Hose Reel
- Fire Extinguisher
- Stormwater isolation
- Spill Kit
- Stormwater pit
- Power Isolation Switch
- Safety Shower / Eyewash
- Hazchem Sign
- Bunding
- Gas Isolation Switch

DEPOT	TYPE	DG Class / UN No.	QUANTITY	BUNDING
8	Gas Cylinder Store	Class 2.1 / UN 1075	500 Kg	N/A

Licence No. 35/033321

Arnott's Biscuits Limited
61 Huntingwood Drive, Huntingwood NSW 2148

Depot Plan 8

Date: 27/01/04 | Drawn by: B. Lai | Drawing No.: 43075 det5

PREPARED BY: Environmental Audits of Australia Pty Ltd
Telephone: (02) 9890 5099 Facsimile: (02) 9890 5399

What is a depot? See page 5 of the Guidance Notes.

PART C – Dangerous Goods Storage *Complete one section per depot.*

If you have more depots than the space provided, photocopy sufficient sheets first.

add UNS for 1A & 1B then add 2

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
1A	UNDERGROUND TANK	C1	55 000 L Existing

UN Number	Proper Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
add # 0001	DIESEL	3		30,000	L

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
1B	UNDERGROUND TANK	C1	55 000 L Existing

UN Number	Proper Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
add # 0001	DIESEL	3		30,000	L

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
add #2	~~CYLINDER IN USE~~ ABOVE GROUND TANK	2.1	4 300 L New Request

UN Number	Proper Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
1075	PETROLEUM GAS LIQUEFIED	2.1	LP GAS	3 000	L

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

COMPLIANCE PLATE
87605 L12239
TANK STP 4.3KL
139V8172

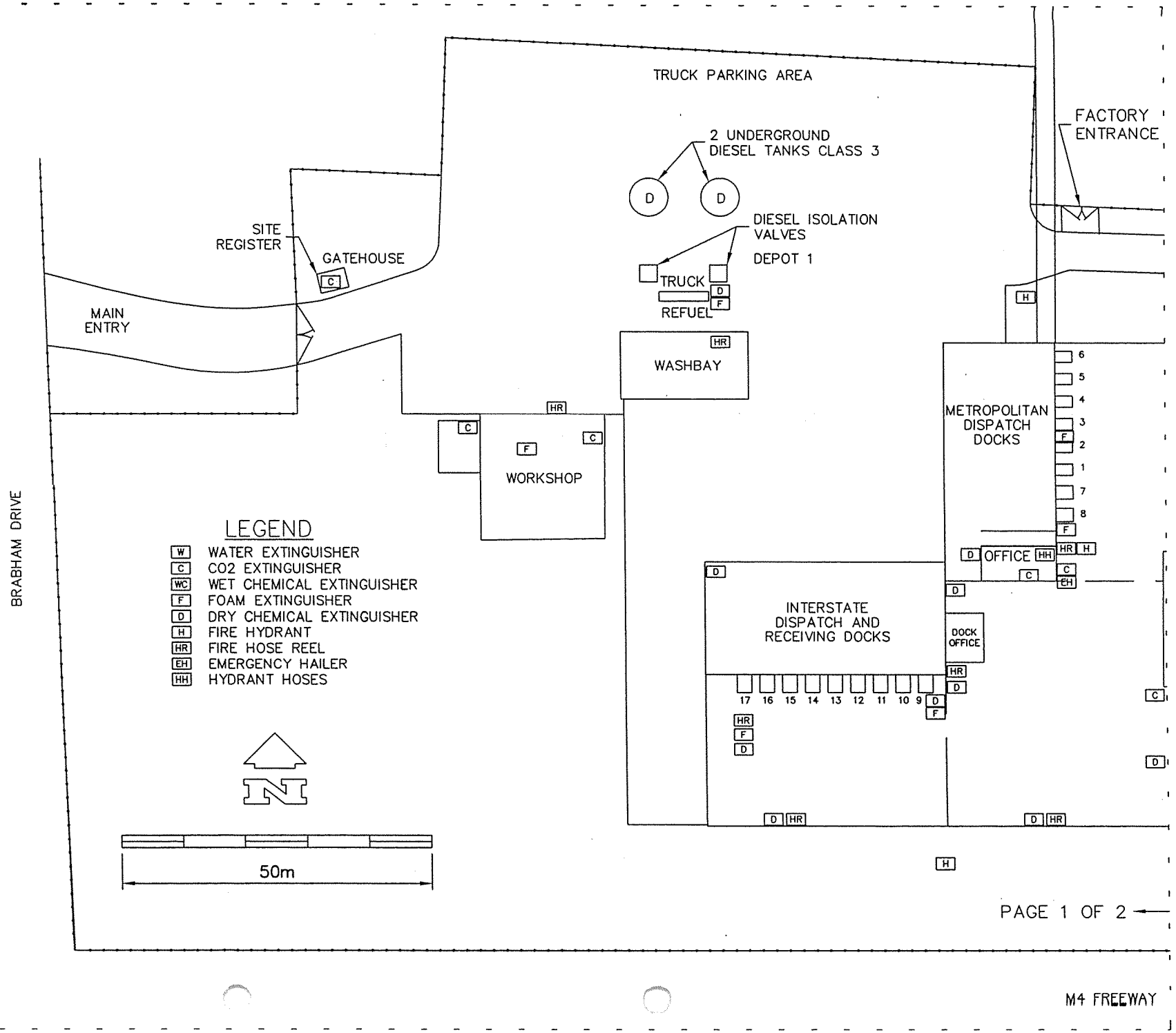
ARNOTT'S FACTORY
BISCUIT MANUFACTURING

Depot (Title) ARNOTTS BISCUIT
for (Quantity) 4.3KL LPG TANK
of DG Class 2.1 as shown in this plan conforms with
the Dangerous Goods Act 1975 and Australian
Standard AS 1596 - 1997 Date: 7/11/97
Signature:
Name (printed) DAN ALLEN

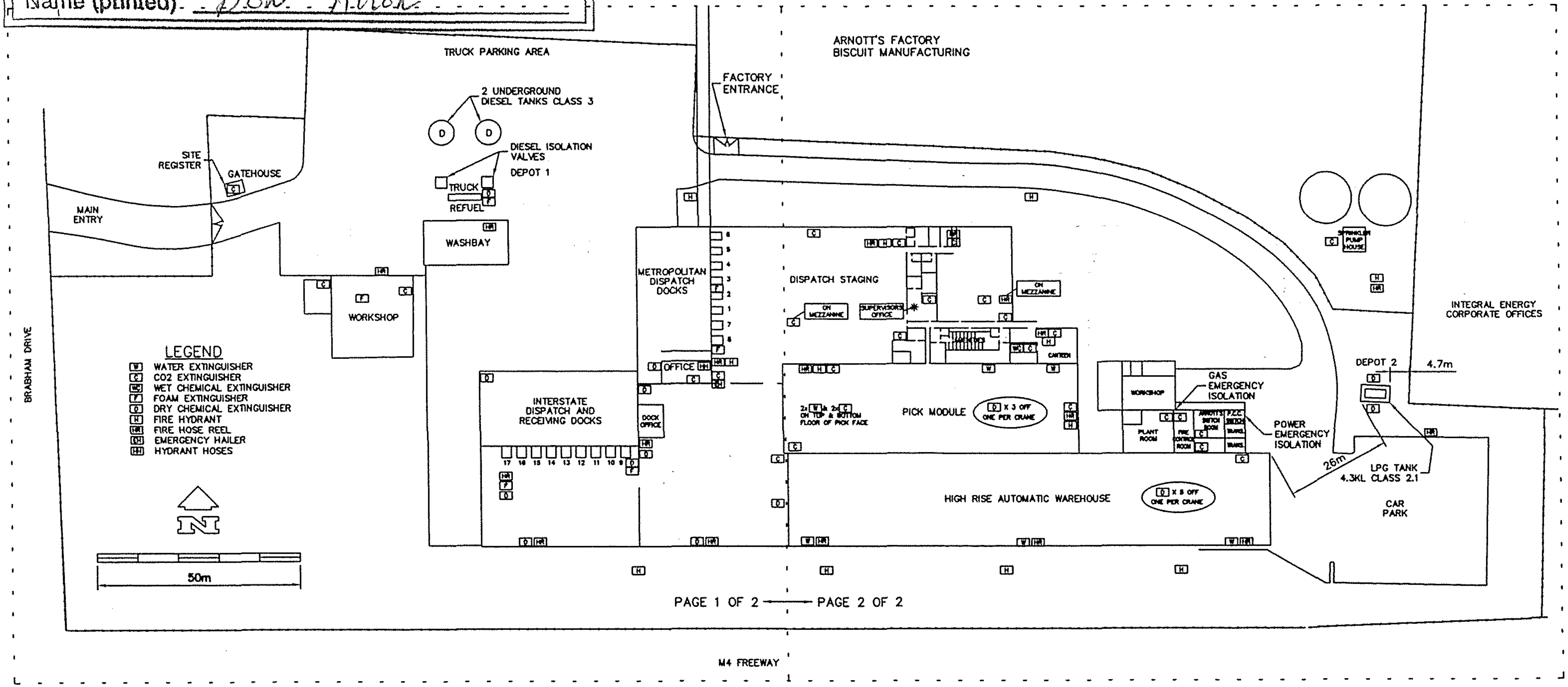
DISPATCH STAGING
ON MEZZANINE
SUPERVISORS OFFICE
ON MEZZANINE
AMENITIES
WC
CANTEEN
2x W & 2x C ON TOP & BOTTOM FLOOR OF PICK FACE
PICK MODULE
D X 3 OFF ONE PER CRANE
WORKSHOP
GAS EMERGENCY ISOLATION
PLANT ROOM
FIRE CONTROL ROOM
ARNOTT'S SWITCH ROOM
P.C.C. SWITCH
TRANS.
TRANS.
POWER EMERGENCY ISOLATION
HIGH RISE AUTOMATIC WAREHOUSE
D X 5 OFF ONE PER CRANE
SPRINKLER PUMP HOUSE
INTEGRAL ENERGY CORPORATE OFFICES
DEPOT 2
4.7m
26m
LPG TANK 4.3KL CLASS 2.1
CAR PARK

→ PAGE 2 OF 2

Depot (Title) ARNOTTS
for (Quantity) 4-3 HC LPG VAPOUR
of DG Class 2.1 as shown in this plan conforms with the Dangerous Goods Act 1975 and Australian Standard AS 1596 - 1997
Signature:
Date: 30 11 98
Name (printed) DON ALLEN



Depot (Title) ARNOTTS
for (Quantity) 4·3 KL LPG VAPOUR
of DG Class 2.1 as shown in this plan conforms with the Dangerous Goods Act 1975 and Australian Standard AS 1596 - 1997
Signature: [signature] Date: 30 / 11 / 99
Name (printed) DON ALLON

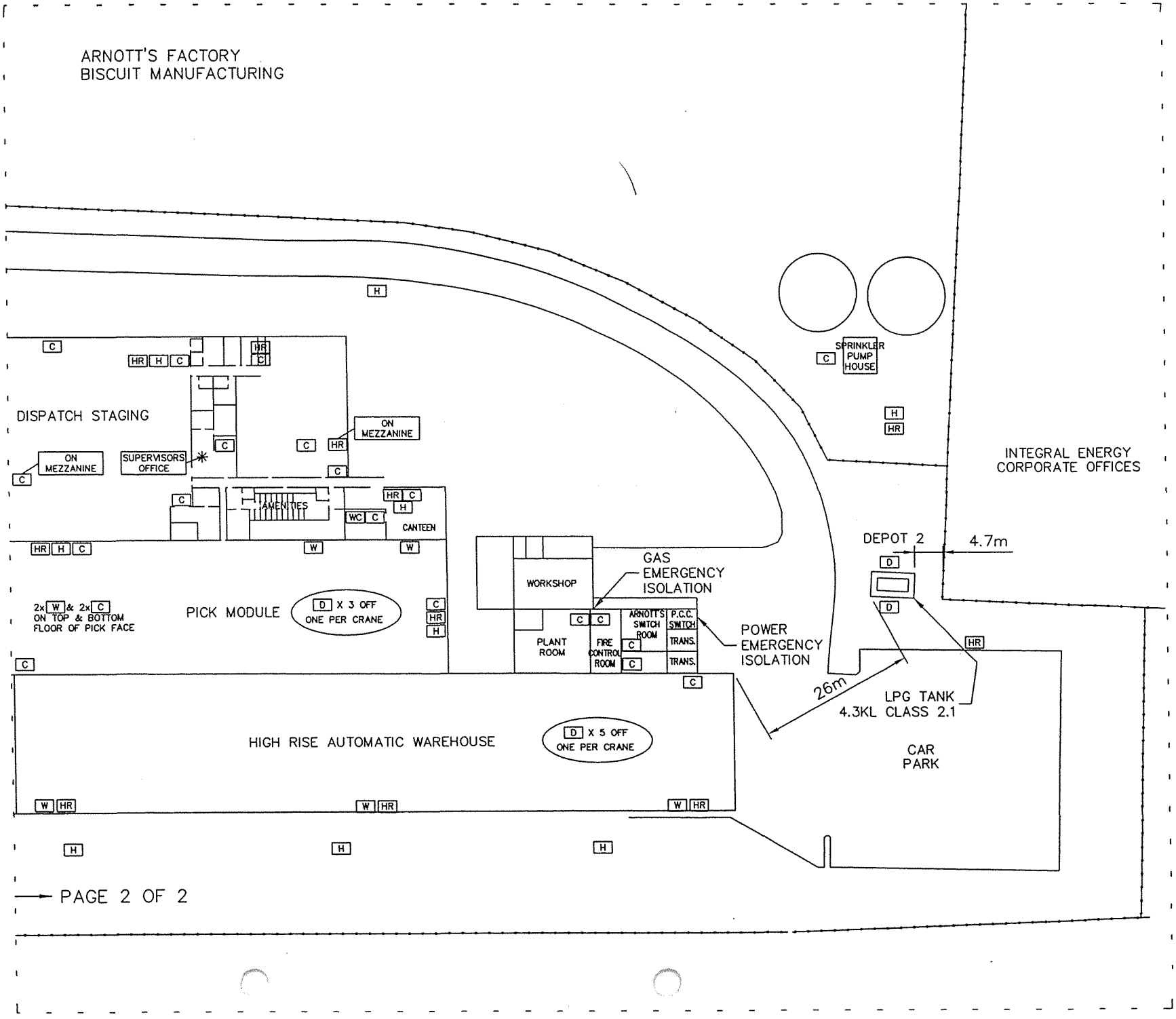


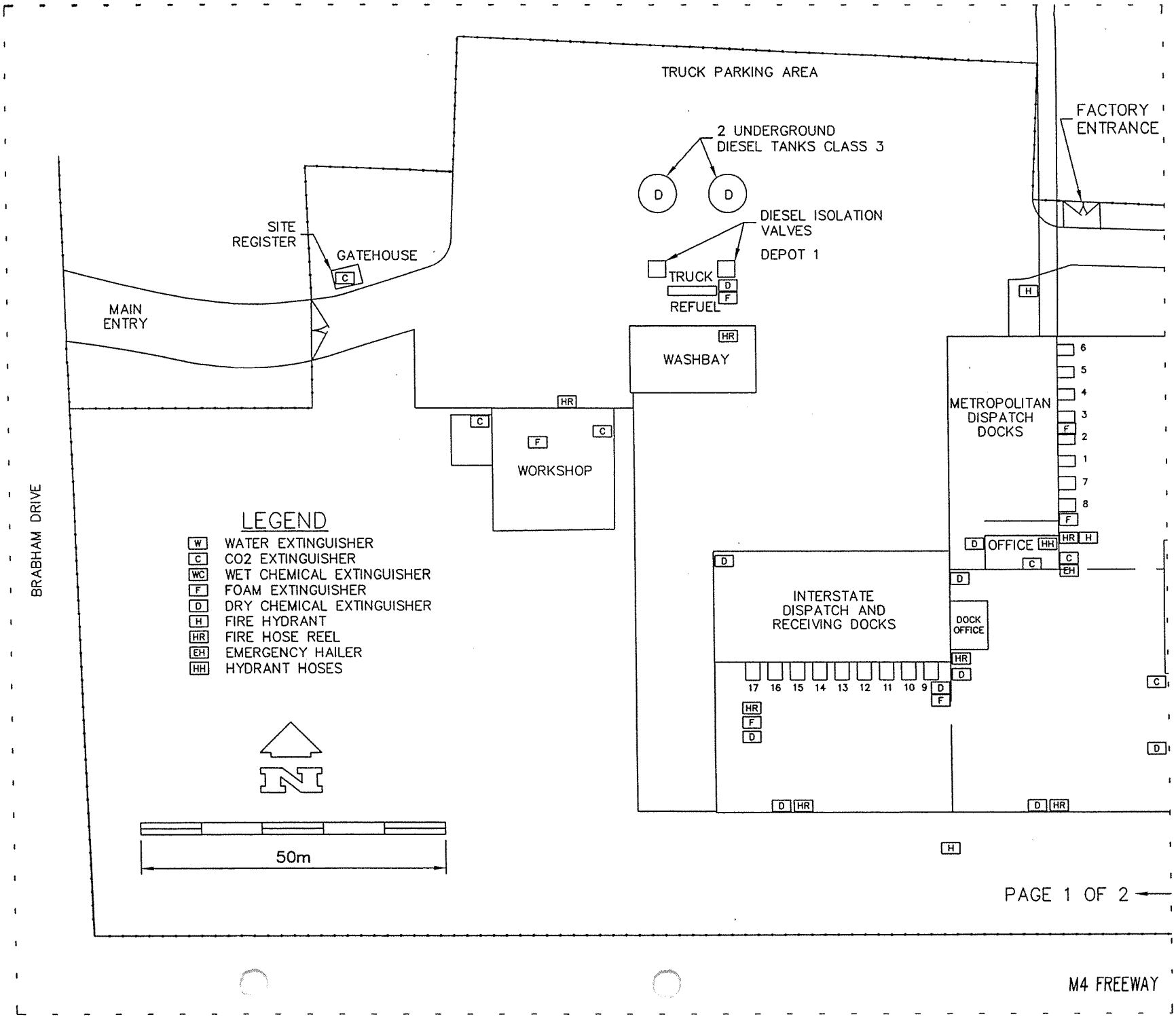
ISSUE B	ISSUE FOR SUBMISSION 17/9/98 L.FANTO
DATE	11-06-98
DRAWN	L.FANTO

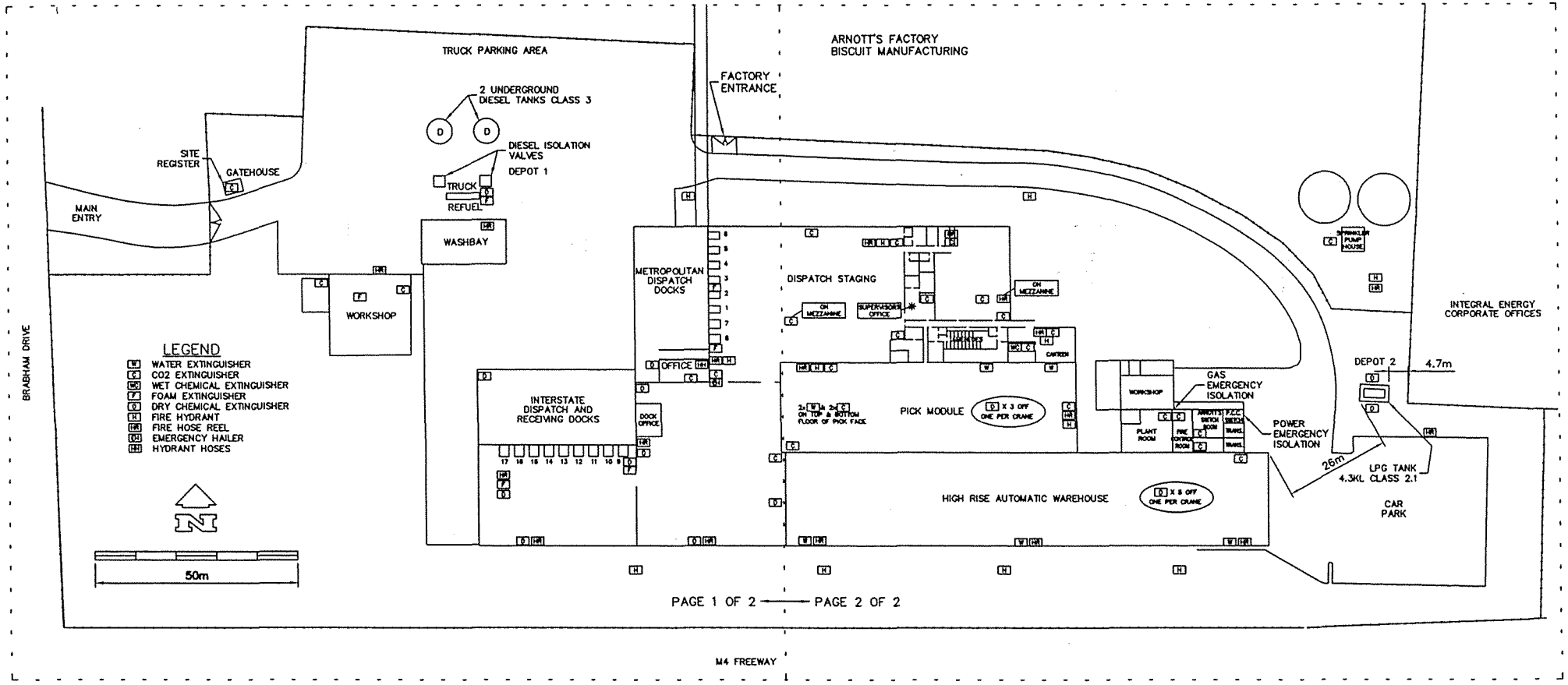
ARNOTT'S BISCUITS LIMITED
61 HUNTINGWOOD DRIVE, HUNTINGWOOD NSW 2148 – ACN 008 435 729

ARNOTT'S WAREHOUSE
BUILDING LAYOUT
HUNTINGWOOD

SCALE 1:500 A1
H45905 B
SHEET 1 OF 1


ARNOTT'S FACTORY
BISCUIT MANUFACTURING
DISPATCH STAGING
ON MEZZANINE
SUPERVISORS OFFICE
ON MEZZANINE
AMENITIES
WC
CANTEEN
2x W & 2x C ON TOP & BOTTOM FLOOR OF PICK FACE
PICK MODULE
D X 3 OFF ONE PER CRANE
WORKSHOP
GAS EMERGENCY ISOLATION
PLANT ROOM
FIRE CONTROL ROOM
ARNOTT'S SWITCH ROOM
P.C.C. SWITCH
TRANS.
TRANS.
POWER EMERGENCY ISOLATION
HIGH RISE AUTOMATIC WAREHOUSE
D X 5 OFF ONE PER CRANE
SPRINKLER PUMP HOUSE
INTEGRAL ENERGY CORPORATE OFFICES
DEPOT 2
4.7m
26m
LPG TANK 4.3KL CLASS 2.1
CAR PARK
PAGE 2 OF 2


TRUCK PARKING AREA
FACTORY ENTRANCE
2 UNDERGROUND DIESEL TANKS CLASS 3
D
D
DIESEL ISOLATION VALVES
DEPOT 1
SITE REGISTER
GATEHOUSE
C
MAIN ENTRY
TRUCK
REFUEL
D
F
H
HR
WASHBAY
METROPOLITAN DISPATCH DOCKS
6
5
4
3
2
1
7
8
F
HR
WORKSHOP
C
F
C
OFFICE
HH
HR
H
C
EH
D
INTERSTATE DISPATCH AND RECEIVING DOCKS
DOCK OFFICE
D
HR
17 16 15 14 13 12 11 10 9
D
F
HR
F
D
C
D
D HR
D HR
H
BRABHAM DRIVE
LEGEND
W WATER EXTINGUISHER
C CO2 EXTINGUISHER
WC WET CHEMICAL EXTINGUISHER
F FOAM EXTINGUISHER
D DRY CHEMICAL EXTINGUISHER
H FIRE HYDRANT
HR FIRE HOSE REEL
EH EMERGENCY HAILER
HH HYDRANT HOSES
N
50m
PAGE 1 OF 2
M4 FREEWAY



FAOMLAND

B	ISSUE FOR SUBMISSION	17/9/96	LFANTO			

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ARNOTT'S BISCUITS LIMITED
81 HUNTINGWOOD DRIVE, HUNTINGWOOD NSW 2148 — ACN 008 436 729

ARNOTT'S WAREHOUSE
BUILDING LAYOUT
HUNTINGWOOD

SCALE 1:500 | A1

H45905B

** CONDITIONAL LICENCE **

WorkCover New South Wales, 400 Kent Street, Sydney 2000 , Tel: (02) 9370 5000 ALL MAIL TO LOCKED BAG 10, CLARENCE STREET, SYDNEY 2000

35/033321

SCIENTIFIC SERVICES BRANCH
Dangerous Goods Licensing
ph. (02) 9370 5187 fax (02) 9370 6105
e-mail: scid@workcover.nsw.gov.au

WORKCOVER NEW SOUTH WALES

Licensee Contact: BRIAN JONES
Licensee: **ARNOTTS BISCUITS LTD** ACN 008 435 729
61 HUNTINGWOOD DR
HUNTINGWOOD NSW 2148

LICENCE FOR THE KEEPING OF DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATIONS THEREUNDER

Licence Number 35/033321 **Expiry Date** 29/05/1999 **No. of Depots** 2

Licensee Contact BRIAN JONES Ph. 02 9853 1111 Fax. 02 9853 1192

Premises Licensed to Keep Dangerous Goods
ARNOTTS BISCUITS LTD
61 HUNTINGWOOD DR HUNTINGWOOD 2148

Nature of Site MANUFACTURING N.E.C.

Major Supplier of Dangerous Goods BP

Emergency Contact for this Site BRIAN JONES Ph. 02 9853 1111

Site staffing 24 HRS 7 DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1A	**UNDERGROUND TANK**	**Class C1**	**55000 L**
	UN DIESEL		55000 L
1B	**UNDERGROUND TANK**	**Class C1**	**55000 L**
	UN DIESEL		55000 L

Licence has been issued on condition that a fully completed site sketch be submitted to WorkCover before 28 August 1998

PLEASE RETAIN AS PROOF OF LICENCE

Issued by Workcover Authority of New South Wales on 20 July 1998

What is a depot? See page 5 of the Guidance Notes.

PART C – Dangerous Goods Storage *Complete one section per depot.*

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity
19	toadd. UNDERGROUND TANKS	C1	~~40.000 LITRES~~ 55,000 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³
00C1	DIESEL	C1	II	ADF	55.000	L
00C1	DIESEL	C1	II	ADF	55000	L

u/g tank C1 55,000 L

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

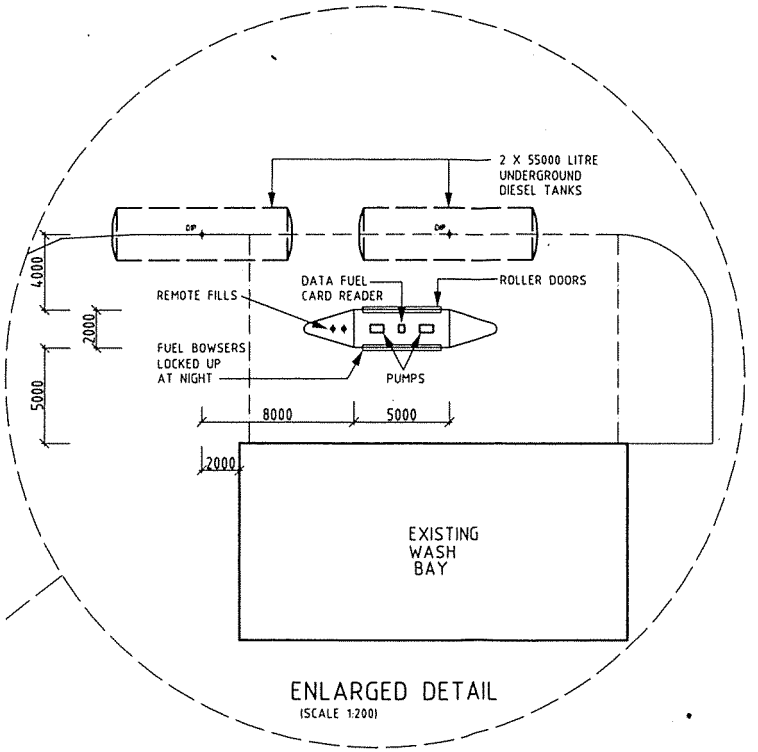
Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

Depot Number	Type of depot (see page 5)	Depot Class	Maximum storage capacity

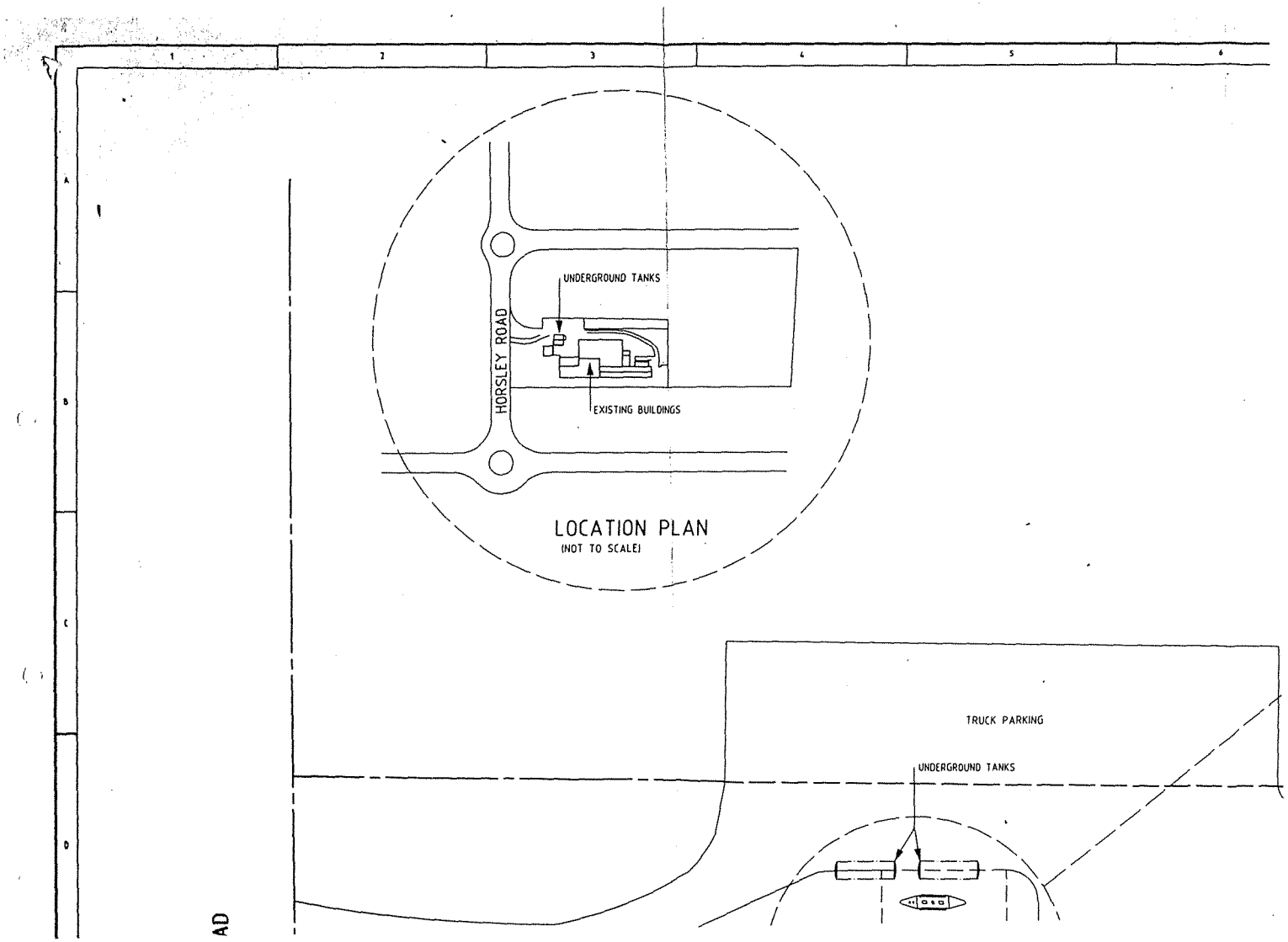
UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m³

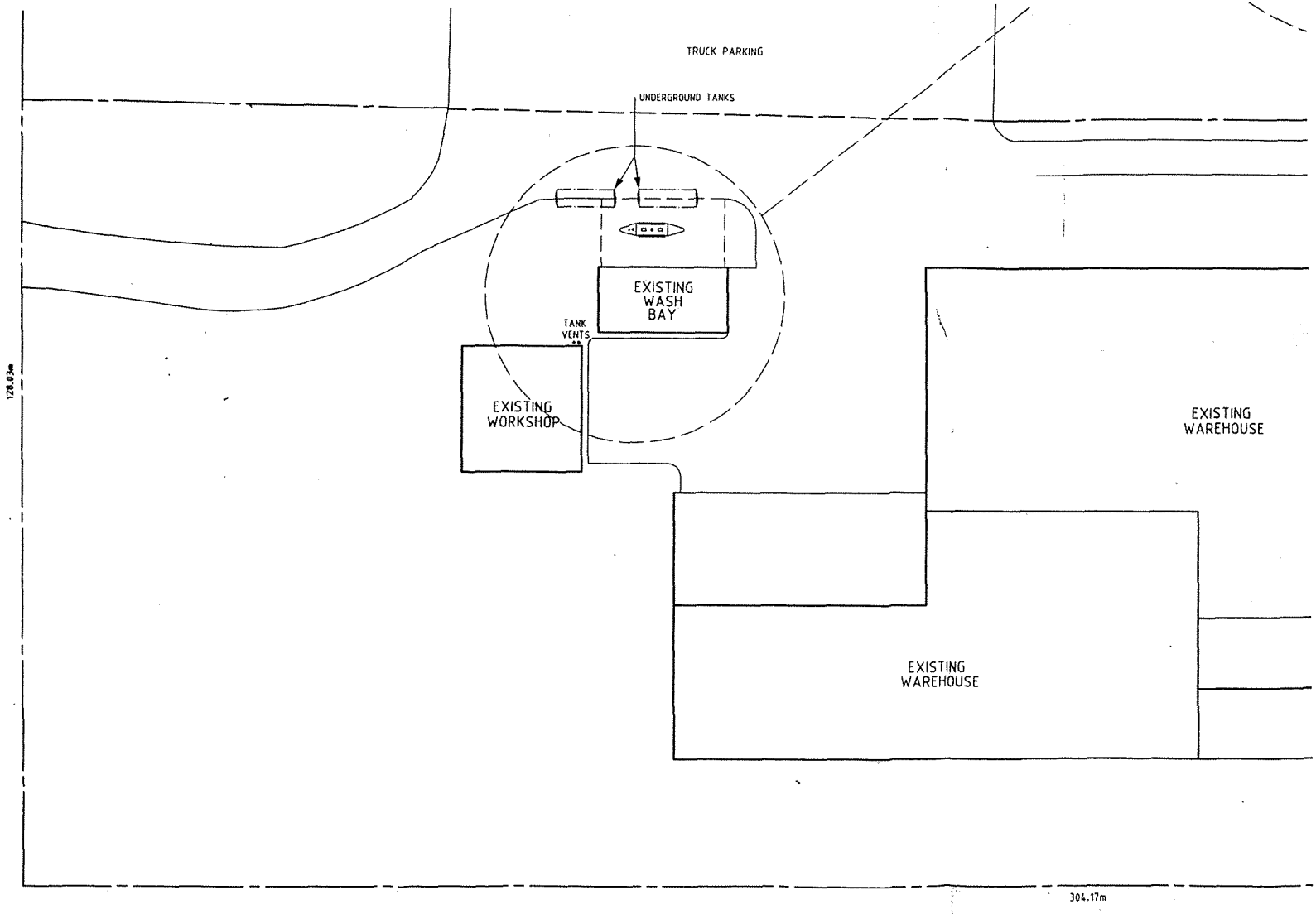
DRG No G15

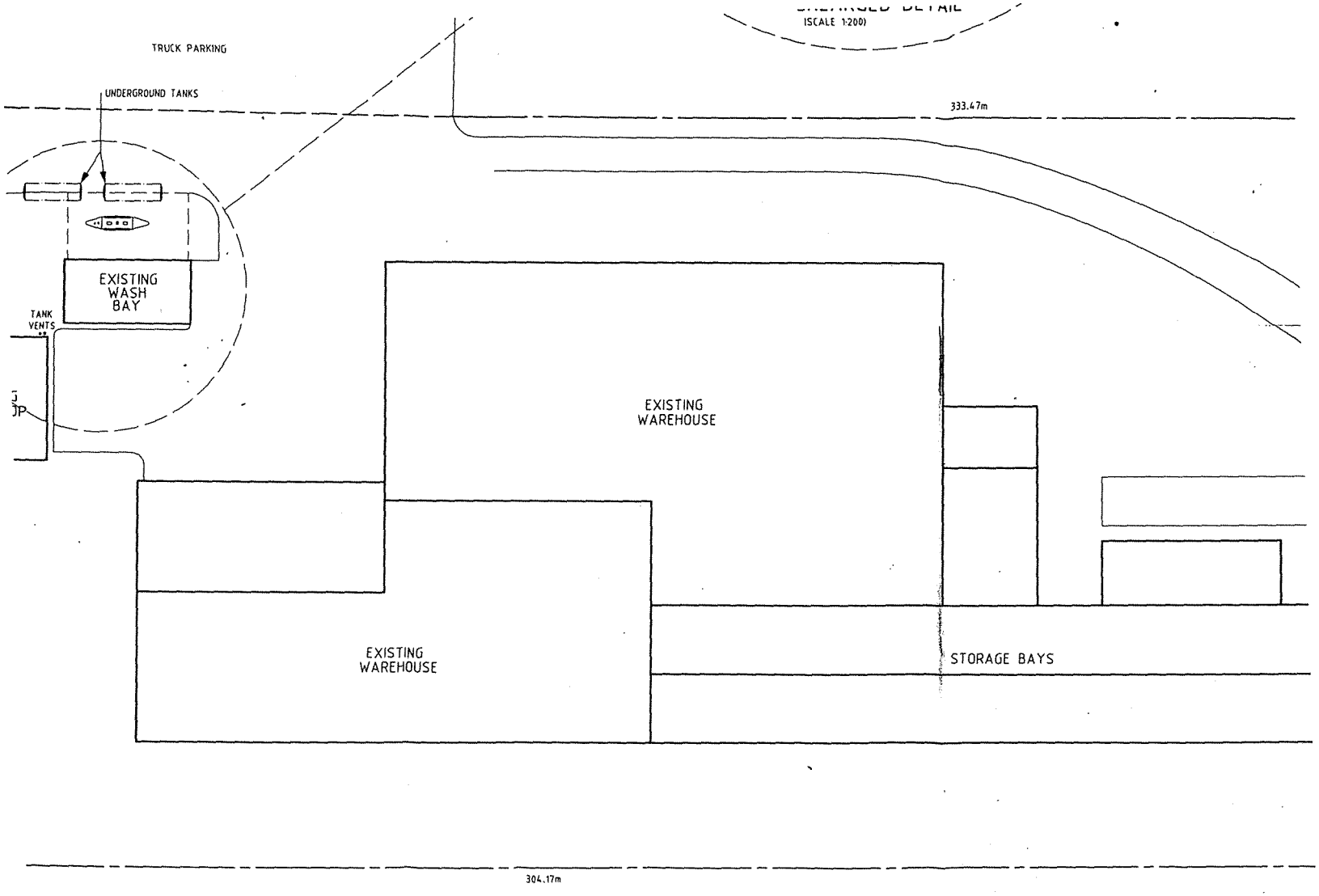


ENLARGED DETAIL
(SCALE 1:200)

333.47m


1
2
3
4
5
6
A
B
C
D
HORSLEY ROAD
UNDERGROUND TANKS
EXISTING BUILDINGS
LOCATION PLAN
(NOT TO SCALE)
TRUCK PARKING
UNDERGROUND TANKS
AD


TRUCK PARKING
UNDERGROUND TANKS
EXISTING WASH BAY
TANK VENTS
EXISTING WORKSHOP
EXISTING WAREHOUSE
EXISTING WAREHOUSE
128.83m
304.17m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TRUCK PARKING
UNDERGROUND TANKS
333.47m
EXISTING
WASH
BAY
TANK
VENTS
EXISTING
WAREHOUSE
EXISTING
WAREHOUSE
STORAGE BAYS
304.17m

Appendix C: Laboratory Results Summary Tables

ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

ABC:	Ambient Background Concentration
ACM:	Asbestos Containing Material
ADWG:	AustralianDrinking Water Guidelines
AF:	Asbestos Fines
ANZG	Australian and New Zealand Guidelines
B(a)P:	Benzo(a)pyrene
CEC:	Cation Exchange Capacity
CRC:	Cooperative Research Centre
CT:	Contaminant Threshold
EILs:	Ecological Investigation Levels
ESLs:	Ecological Screening Levels
FA:	Fibrous Asbestos
GIL:	Groundwater Investigation Levels
GSW:	General Solid Waste
HILs:	Health Investigation Levels
HSLs:	Health Screening Levels
HSL-SSA:	Health Screening Level-SiteSpecific Assessment
kg/L	kilograms per litre
NA:	Not Analysed
NC:	Not Calculated
NEPM:	National Environmental Protection Measure
NHMRC:	National Health and Medical Research Council
NL:	Not Limiting
NSL:	No Set Limit
OCP:	Organochlorine Pesticides
OPP:	Organophosphorus Pesticides
PAHs:	Polycyclic Aromatic Hydrocarbons
%w/w:	weight per weight
ppm:	Parts per million
PCBs:	Polychlorinated Biphenyls
PCE:	Perchloroethylene (Tetrachloroethylene or Teterachloroethene)
pH_{KCL} :	pH of filtered 1:20, 1M KCL extract, shaken overnight
pH_{ox} :	pH of filtered 1:20 1M KCl after peroxide digestion
PQL:	Practical Quantitation Limit
RS:	Rinsate Sample
RSL:	Regional Screening Levels
RSW:	Restricted Solid Waste
SAC:	Site Assessment Criteria
SCC:	Specific Contaminant Concentration
S_{Cr}:	Chromium reducible sulfur
S_{POS}:	Peroxide oxidisable Sulfur
SSA:	Site Specific Assessment
SSHSLs:	Site Specific Health Screening Levels
TAA:	Total Actual Acidity in 1M KCL extract titrated to pH6.5
TB:	Trip Blank
TCA:	1,1,1 Trichloroethane (methyl chloroform)
TCE:	Trichloroethylene (Trichloroethene)
TCLP:	Toxicity Characteristics Leaching Procedure
TPA:	Total Potential Acidity, 1M KCL peroxide digest
TS:	Trip Spike
TRH:	Total Recoverable Hydrocarbons
TSA:	Total Sulfide Acidity (TPA-TAA)
UCL:	Upper Level Confidence Limit on Mean Value
USEPA	United States Environmental Protection Agency
VOCC:	Volatile Organic Chlorinated Compounds
WHO:	World Health Organisation

Table Specific Explanations:

HIL Tables:

- The chromium results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.
- Carcinogenic PAHs is a toxicity weighted sum of analyte concentrations for a specific list of PAH compounds relative to B(a)P. It is also refered to as the B(a)P Toxic Equivalence Quotient (TEQ).
- Statistical calculations are undertaken using ProUCL (USEPA). Statistical calculation is usually undertaken using data from fill samples.

EIL/ESL Table:

- ABC Values for selected metals have been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with high traffic have been quoted).

Waste Classification and TCLP Table:

- Data assessed using the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014).
- The assessment of Total Moderately Harmful pesticides includes: Dichlorovos, Dimethoate, Fenitrothion, Ethion, Malathion and Parathion.
- Assessment of Total Scheduled pesticides include: HBC, alpha-BHC, gamma-BHC, beta-BHC, Heptachlor, Aldrin, Heptachlor Epoxide, gamma-Chlordane, alpha-chlordane, pp-DDE, Dieldrin, Endrin, pp-DDD, pp-DDT, Endrin Aldehyde.

QA/QC Table:

- Field blank, Inter and Intra laboratory duplicate results are reported in mg/kg.
- Trip spike results are reported as percentage recovery.
- Field rinsate results are reported in µg/L.

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TABLE S1
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.
HIL-D: 'Commercial/Industrial'

All data in mg/kg unless stated otherwise			HEAVY METALS								PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	Carcinogenic PAHs	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos		
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC)			3000	900	3600	240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																				
BH101	0.5-0.8	Fill: Silty clay	<4	<0.4	**8**	**10**	**10**	<0.1	**4**	**22**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	Not Detected
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	<4	<0.4	**8**	**7**	**7**	<0.1	**3**	**10**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	NA
BH102	0-0.2	Fill: Silty sand	<4	<0.4	**12**	**25**	**97**	**0.2**	**7**	**100**	**7.4**	**1.1**	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH102	0.5-0.95	Fill: Gravel	<4	<0.4	**9**	**9**	**10**	<0.1	**6**	**34**	**1.3**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH102	1.5-1.95	Fill: Silty clay	<4	<0.4	**10**	**7**	**8**	<0.1	**6**	**29**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH103	0-0.2	Fill: Silty clay	<4	<0.4	**12**	**16**	**20**	<0.1	**8**	**55**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH104	0-0.2	Fill: Silty clay	<4	<0.4	**19**	**17**	**21**	<0.1	**12**	**42**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH104	1.5-1.95	Fill: Silty clay	<4	<0.4	**4**	**22**	**7**	<0.1	**31**	**95**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH105	0-0.2	Fill: Silty clay	<4	<0.4	**16**	**27**	**16**	<0.1	**13**	**34**	**0.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH105	1.5-1.95	Fill: Silty clay	<4	<0.4	**8**	**15**	**8**	<0.1	**4**	**24**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH106	0.03-0.2	Fill: Silty clay	<4	<0.4	**22**	**26**	**7**	<0.1	**19**	**35**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH106	0.5-0.95	Fill: Silty clay	<4	<0.4	**14**	**37**	**12**	<0.1	**22**	**65**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	<4	<0.4	**13**	**35**	**14**	<0.1	**20**	**60**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP1	0-0.2	Fill: Silty clay	**6**	<0.4	**23**	**29**	**14**	<0.1	**20**	**43**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP1 - [LAB_DUP]	0-0.2	Fill: Silty clay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA
SDUP1	0-0.2	Fill: Silty clay	**6**	<0.4	**23**	**29**	**14**	<0.1	**20**	**43**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP1 - [LAB_DUP]	0-0.2	Fill: Silty clay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA
SDUP3	0-0.2	Fill: Silty clay	<4	<0.4	**17**	**37**	**11**	<0.1	**19**	**51**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP4	0-0.2	Fill: Silty clay	**4**	<0.4	**19**	**17**	**22**	<0.1	**11**	**52**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Number of Samples			16	16	16	16	16	16	16	16	16	16	15	15	15	15	15	2	15	16	15	11
Maximum Value			6	<PQL	23	37	97	0.2	31	100	7.4	1.1	<PQL	<PQL	<PQL	<PQL	<PQL	0.2	<PQL	<PQL	<PQL	Not Detected

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**

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TABLE S2
SOIL LABORATORY RESULTS COMPARED TO HSLs
All data in mg/kg unless stated otherwise

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Field PID Measurement
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1	ppm
NEPM 2013 HSL Land Use Category					HSL-D: COMMERCIAL/INDUSTRIAL							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
BH101	0.5-0.8	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH102	0-0.2	Fill: Silty sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH102	0.5-0.95	Fill: Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH102	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH103	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	**91**	<0.2	<0.5	<1	<3	<1	0
BH104	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0
BH104	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH105	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0
BH105	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0
BH106	0.03-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0.1
BH106	0.5-0.95	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	0
SDUP1	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	-
SDUP3	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	-
SDUP4	0-0.2	Fill: Silty clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<3	<1	-
Total Number of Samples					16	16	16	16	16	16	16	13
Maximum Value					<PQL	91	<PQL	<PQL	<PQL	<PQL	<PQL	0.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the concentration above the SAC is highlighted in grey in the Site Assessment Criteria Table below

HSL SOIL ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
BH101	0.5-0.8	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH102	0-0.2	Fill: Silty sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH102	0.5-0.95	Fill: Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH102	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH103	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH104	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH104	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH105	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH105	1.5-1.95	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH106	0.03-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH106	0.5-0.95	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP1	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP3	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP4	0-0.2	Fill: Silty clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL

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TABLE S3
SOIL LABORATORY RESULTS COMPARED TO MANAGEMENT LIMITS
All data in mg/kg unless stated otherwise

			C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
PQL - Envirolab Services			25	50	100	100
NEPM 2013 Land Use Category			**COMMERCIAL/INDUSTRIAL**			
Sample Reference	**Sample Depth**	**Soil Texture**				
BH101	0.5-0.8	Fine	<25	<50	<100	<100
BH101 - [LAB_DUP]	0.5-0.8	Fine	<25	<50	<100	<100
BH102	0-0.2	Coarse	<25	<50	<100	<100
BH102	0.5-0.95	Coarse	<25	<50	<100	<100
BH102	1.5-1.95	Fine	<25	<50	<100	<100
BH103	0-0.2	Fine	<25	**91**	**560**	**220**
BH104	0-0.2	Fine	<25	<50	<100	<100
BH104	1.5-1.95	Fine	<25	<50	<100	<100
BH105	0-0.2	Fine	<25	<50	<100	<100
BH105	1.5-1.95	Fine	<25	<50	<100	<100
BH106	0.03-0.2	Fine	<25	<50	<100	<100
BH106	0.5-0.95	Fine	<25	<50	<100	<100
BH106 - [LAB_DUP]	0.5-0.95	Fine	<25	<50	<100	<100
SDUP1	0-0.2	Fine	<25	<50	<100	<100
SDUP3	0-0.2	Fine	<25	<50	<100	<100
SDUP4	0-0.2	Fine	<25	<50	<100	<100
Total Number of Samples			16	16	16	16
Maximum Value			<PQL	91	560	220

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**

MANAGEMENT LIMIT ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Soil Texture**	C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
BH101	0.5-0.8	Fine	800	1000	5000	10000
BH101 - [LAB_DUP]	0.5-0.8	Fine	800	1000	5000	10000
BH102	0-0.2	Coarse	700	1000	3500	10000
BH102	0.5-0.95	Coarse	700	1000	3500	10000
BH102	1.5-1.95	Fine	800	1000	5000	10000
BH103	0-0.2	Fine	800	1000	5000	10000
BH104	0-0.2	Fine	800	1000	5000	10000
BH104	1.5-1.95	Fine	800	1000	5000	10000
BH105	0-0.2	Fine	800	1000	5000	10000
BH105	1.5-1.95	Fine	800	1000	5000	10000
BH106	0.03-0.2	Fine	800	1000	5000	10000
BH106	0.5-0.95	Fine	800	1000	5000	10000
BH106 - [LAB_DUP]	0.5-0.95	Fine	800	1000	5000	10000
SDUP1	0-0.2	Fine	800	1000	5000	10000
SDUP3	0-0.2	Fine	800	1000	5000	10000
SDUP4	0-0.2	Fine	800	1000	5000	10000

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TABLE S4
SOIL LABORATORY RESULTS COMPARED T0 DIRECT CONTACT CRITERIA
All data in mg/kg unless stated otherwise

Analyte		C_6-C_{10}	>C_{10}-C_{16}	>C_{16}-C_{34}	>C_{34}-C_{40}	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID
PQL - Envirolab Services		25	50	100	100	0.2	0.5	1	1	1	
CRC 2011 -Direct contact Criteria		26,000	20,000	27,000	38,000	430	99,000	27,000	81,000	11,000	
Site Use		**COMMERCIAL/INDUSTRIAL - DIRECT SOIL CONTACT**									
Sample Reference	**Sample Depth**										
BH101	0.5-0.8	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH101 - [LAB_DUP]	0.5-0.8	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH102	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH102	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH102	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH103	0-0.2	<25	**91**	**560**	**220**	<0.2	<0.5	<1	<3	<1	0
BH104	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH104	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH105	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH105	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH106	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	**0.1**
BH106	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
BH106 - [LAB_DUP]	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	0
SDUP1	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	-
SDUP3	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	-
SDUP4	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<1	-
Total Number of Samples		16	16	16	16	16	16	16	16	16	13
Maximum Value		<PQL	91	560	220	<PQL	<PQL	<PQL	<PQL	<PQL	0.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**

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TABLE S6
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 EILs AND ESLs
All data in mg/kg unless stated otherwise

Land Use Category				COMMERCIAL/INDUSTRIAL																	
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	1	0.1	25	50	100	100	0.2	0.5	1	1	0.05
Ambient Background Concentration (ABC)				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																				
BH101	0.5-0.8	Fill: Silty clay	Fine	NA	NA	NA	<4	**8**	**10**	**10**	**4**	**22**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	Fine	NA	NA	NA	<4	**8**	**7**	**7**	**3**	**10**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH102	0-0.2	Fill: Silty sand	Coarse	NA	NA	NA	<4	**12**	**25**	**97**	**7**	**100**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	**0.73**
BH102	0.5-0.95	Fill: Gravel	Coarse	NA	NA	NA	<4	**9**	**9**	**10**	**6**	**34**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	**0.2**
BH102	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	<4	**10**	**7**	**8**	**6**	**29**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH103	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	<4	**12**	**16**	**20**	**8**	**55**	<1	<0.1	<25	**91**	**560**	**220**	<0.2	<0.5	<1	<3	<0.05
BH104	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	<4	**19**	**17**	**21**	**12**	**42**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH104	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	<4	**4**	**22**	**7**	**31**	**95**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH105	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	<4	**16**	**27**	**16**	**13**	**34**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH105	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	<4	**8**	**15**	**8**	**4**	**24**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH106	0.03-0.2	Fill: Silty clay	Fine	NA	NA	NA	<4	**22**	**26**	**7**	**19**	**35**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH106	0.5-0.95	Fill: Silty clay	Fine	NA	NA	NA	<4	**14**	**37**	**12**	**22**	**65**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	Fine	NA	NA	NA	<4	**13**	**35**	**14**	**20**	**60**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP1	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	**6**	**23**	**29**	**14**	**20**	**43**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP3	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	<4	**17**	**37**	**11**	**19**	**51**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP4	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	**4**	**19**	**17**	**22**	**11**	**52**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
Total Number of Samples				0	0	0	16	16	16	16	16	16	16	15	16	16	16	16	16	16	16	16	16
Maximum Value				NA	NA	NA	6	23	37	97	31	100	<PQL	<PQL	<PQL	91	560	220	<PQL	<PQL	<PQL	<PQL	0.73

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

EIL AND ESL ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**	pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
BH101	0.5-0.8	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH102	0-0.2	Fill: Silty sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH102	0.5-0.95	Fill: Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH102	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH103	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH104	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH104	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH105	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH105	1.5-1.95	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH106	0.03-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH106	0.5-0.95	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
SDUP1	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
SDUP3	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
SDUP4	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72

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TABLE S7
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled	PCBs	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	50	0.2	0.5	1	1	100
General Solid Waste CT1			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	50	50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	50	50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	50	50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	50	50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
BH101	0.5-0.8	Fill: Silty clay	<4	<0.4	**8**	**10**	**10**	<0.1	**4**	**22**	<0.05	<0.05	<0.1	<0.1	<0.1	**0.1**	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH101 - [LAB_DUP]	0.5-0.8	Fill: Silty clay	<4	<0.4	**8**	**7**	**7**	<0.1	**3**	**10**	<0.05	<0.05	<0.1	<0.1	<0.1	**0.2**	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	NA
BH102	0-0.2	Fill: Silty sand	<4	<0.4	**12**	**25**	**97**	**0.2**	**7**	**100**	**7.4**	**0.73**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH102	0.5-0.95	Fill: Gravel	<4	<0.4	**9**	**9**	**10**	<0.1	**6**	**34**	**1.3**	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH102	1.5-1.95	Fill: Silty clay	<4	<0.4	**10**	**7**	**8**	<0.1	**6**	**29**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH103	0-0.2	Fill: Silty clay	<4	<0.4	**12**	**16**	**20**	<0.1	**8**	**55**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	**290**	**460**	**750**	<0.2	<0.5	<1	<3	Not Detected
BH104	0-0.2	Fill: Silty clay	<4	<0.4	**19**	**17**	**21**	<0.1	**12**	**42**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH104	1.5-1.95	Fill: Silty clay	<4	<0.4	**4**	**22**	**7**	<0.1	**31**	**95**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH105	0-0.2	Fill: Silty clay	<4	<0.4	**16**	**27**	**16**	<0.1	**13**	**34**	**0.2**	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH105	1.5-1.95	Fill: Silty clay	<4	<0.4	**8**	**15**	**8**	<0.1	**4**	**24**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH106	0.03-0.2	Fill: Silty clay	<4	<0.4	**22**	**26**	**7**	<0.1	**19**	**35**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH106	0.5-0.95	Fill: Silty clay	<4	<0.4	**14**	**37**	**12**	<0.1	**22**	**65**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	Not Detected
BH106 - [LAB_DUP]	0.5-0.95	Fill: Silty clay	<4	<0.4	**13**	**35**	**14**	<0.1	**20**	**60**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	NA
SDUP1	0-0.2	Fill: Silty clay	**6**	<0.4	**23**	**29**	**14**	<0.1	**20**	**43**	**0.4**	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	NA
SDUP1 - [LAB_DUP]	0-0.2	Fill: Silty clay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP3	0-0.2	Fill: Silty clay	<4	<0.4	**17**	**37**	**11**	<0.1	**19**	**51**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	NA
SDUP4	0-0.2	Fill: Silty clay	**4**	<0.4	**19**	**17**	**22**	<0.1	**11**	**52**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<3	NA
Total Number of Samples			16	16	16	16	16	16	16	16	16	16	15	16	16	16	15	16	16	16	16	16	16	16	16	16	11
Maximum Value			6	<PQL	23	37	97	0.2	31	100	7.4	0.73	<PQL	<PQL	<PQL	0.2	<PQL	<PQL	<PQL	290	460	750	<PQL	<PQL	<PQL	<PQL	Not Detected

Concentration above the CT1 — **VALUE**
Concentration above SCC1 — **VALUE**
Concentration above the SCC2 — **VALUE**
Concentration above PQL — **Bold**

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Preliminary (Stage 1) Site Investigation/Limited Detailed (Stage 2) Site Investigation
65 Huntingwood Drive, Huntingwood, NSW
E34067P

TABLE Q1
SOIL QA/QC SUMMARY

Group	Sample	Depth	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-Xylene
	PQL Envirolab SYD (soi		*25*	*50*	*100*	*100*	*0.2*	*0.5*	*1*	*2*	*1*
	PQL Envirolab VIC		*25*	*50*	*100*	*100*	*0.2*	*0.5*	*1.0*	*2.0*	*1.0*
Inter laboratory duplicate	BH105	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	SDUP1	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH106	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	SDUP3	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH104	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	SDUP4	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Trip Blank	TB-S1 14.5.21	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
Trip Spike	TS-S1 14.5.21		-	-	-	-	95%	95%	94%	96%	96%
Field Rinsate	FR-SPT1 14.5.21	µg/L	<10	97	<100	<100	<1	<1	<1	<1	<1

Group	Sample	Depth	Naphthalene	Acenaphthylene	Acenaph-thene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,j+k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthra-cene	Benzo(g,h,i)perylene
	PQL Envirolab SYD (soi		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.05*	*0.1*	*0.1*	*0.1*
	PQL Envirolab VIC		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*
Inter laboratory duplicate	BH105	0-0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	SDUP1	0-0.2	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	0.2	nc	nc	nc	nc	0.1	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	100%	nc	nc	nc	nc	0%	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH106	0.03-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	SDUP3	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH104	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	SDUP4	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Trip Blank	TB-S1 14.5.21	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
Trip Spike	TS-S1 14.5.21		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Rinsate	FR-SPT1 14.5.21	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Group	Sample	Depth	HCB	alpha- BHC	gamma- BHC	beta- BHC	Heptachlor	delta- BHC	Aldrin	Heptachlor Epoxide	Gamma- Chlordane	alpha- chlordane	Endosulfan I	pp- DDE	Dieldrin	Endrin	pp- DDD	Endosulfan II	pp- DDT	Endrin Aldehyde	Endosulfan Sulphate	Methoxychlor
	PQL Envirolab SYD (soi		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
	PQL Envirolab VIC		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Inter laboratory duplicate	BH105	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP1	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH106	0.03-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP3	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH104	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP4	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Trip Blank	TB-S1 14.5.21	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Spike	TS-S1 14.5.21		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Rinsate	FR-SPT1 14.5.21	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Group	Sample	Depth	Azinphos-methyl (Guthion	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Total PCBS
	PQL Envirolab SYD (soi		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
	PQL Envirolab VIC		*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Inter laboratory duplicate	BH105	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP1	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH106	0.03-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP3	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra laboratory duplicate	BH104	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SDUP4	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Trip Blank	TB-S1 14.5.21	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Spike	TS-S1 14.5.21		-	-	-	-	-	-	-	-	-	-	-	-	-
Field Rinsate	FR-SPT1 14.5.21	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Group	Sample	Depth	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
	PQL Envirolab SYD (soi		*4*	*0.4*	*1*	*1*	*1*	*0.1*	*1*	*1*
	PQL Envirolab VIC		*4.0*	*0.4*	*1.0*	*1.0*	*1.0*	*0.1*	*1.0*	*1.0*
Inter laboratory duplicate	BH105	0-0.2	<4	<0.4	16	27	16	<0.1	13	34
	SDUP1	0-0.2	6	<0.4	23	29	14	<0.1	20	43
	MEAN		4	nc	19.5	28	15	nc	16.5	38.5
	RPD %		100%	nc	36%	7%	13%	nc	42%	23%
Intra laboratory duplicate	BH106	0.03-0.2	<4	<0.4	22	26	7	<0.1	19	35
	SDUP3	0-0.2	<4	<0.4	17	37	11	<0.1	19	51
	MEAN		nc	nc	19.5	31.5	9	nc	19	43
	RPD %		nc	nc	26%	35%	44%	nc	0%	37%
Intra laboratory duplicate	BH104	0-0.2	<4	<0.4	19	17	21	<0.1	12	42
	SDUP4	0-0.2	4	<0.4	19	17	22	<0.1	11	52
	MEAN		3	nc	19	17	21.5	nc	11.5	47
	RPD %		67%	nc	0%	0%	5%	nc	9%	21%
Trip Blank	TB-S1 14.5.21	0-0.2	<4	<0.4	3	<1	3	<0.1	<1	3
Trip Spike	TS-S1 14.5.21		-	-	-	-	-	-	-	-
Field Rinsate	FR-SPT1 14.5.21	µg/L	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02

Result outside of QA/QC acceptance criteria (highlighted)

Appendix D: Borehole Logs

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BOREHOLE LOG

Borehole No. **101** 1/1

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.3m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, dark grey brown, trace of fine to medium grained sandstone gravel.	w<PL		>600	APPEARS WELL COMPACTED
					N = 16 4,9,7	1		CH	Silty CLAY: high plasticity, light grey and orange brown, trace of fine to medium grained ironstone gravel.	w>PL	Hd	425 420 465	RESIDUAL
					N = 14 5,6,8	2							
						3		-	SILTSTONE: dark grey brown, with iron indurated seams and clay seams.	DW	VL-L		BRINGELLY SHALE VERY LOW TO LOW 'TC' BIT RESISTANCE
						4			SILTSTONE: dark grey.		L		LOW TO MODERATE RESISTANCE
						5				SW	M-H		MODERATE TO HIGH RESISTANCE
						6			END OF BOREHOLE AT 6.0m				
						7							

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BOREHOLE LOG

Borehole No. 102 1/1

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 59.3m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty sand, fine to medium grained, dark brown.	M			GRASS COVER
					N = 9 4,4,5				FILL: Gravel, medium grained igneous, with clay fines and nodules.				APPEARS MODERATELY COMPACTED
						1			FILL: Silty clay, medium to high plasticity, grey brown mottled various colours, trace of fine to medium grained ironstone gravel.	w>PL			
					N = 10 4,4,6								
						2							
								CH	Silty CLAY: high plasticity, light grey, trace of fine to medium grained ironstone gravel.	w<PL	Hd		RESIDUAL
					N = 22 5,8,14	3						410 580 570	
						4		-	SILTSTONE: dark grey brown.	DW	L		BRINGELLY SHALE
									SILTSTONE: dark grey, with very low strength seams.		M		LOW 'TC' BIT RESISTANCE
						5							MODERATE RESISTANCE WITH LOW BANDS
						6			END OF BOREHOLE AT 6.0m				
						7							

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BOREHOLE LOG

Borehole No. 103 1/1

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.4m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION AND AFTER 6 DAYS					N = 16 8,8,8	0			FILL: Silty clay, medium plasticity, dark grey brown, trace of fine to medium grained ironstone gravel and igneous gravel and root fibres.	w<PL			GRASS COVER APPEARS WELL COMPACTED
					N > 14 9,14/ 150mm REFUSAL	1		CH	Silty CLAY: high plasticity, light grey mottled orange brown and red brown, trace of fine grained sand and fine to medium grained ironstone gravel.	w<PL	Hd	>600	RESIDUAL
						2		-	SILTSTONE: dark grey brown, with iron indurated seams and clay bands.	DW	VL-L		BRINGELLY SHALE LOW 'TC' BIT RESISTANCE WITH VERY LOW BANDS Groundwater monitoring well installed to 6.0m. Class 18 machine slotted 50mm dia. PVC standpipe 3.2m to 6.0m. Casing 0.0m to 3.2m. 2mm sand filter pack 3.0m to 6.0m. Bentonite seal 2.2m to 3.0m. Backfilled with sand and cuttings to the surface. Completed with a concreted gatic cover
						3							
						4							
						5			SILTSTONE: dark grey, with extremely weathered seams and iron indurated seams.		L-M		LOW TO MODERATE RESISTANCE
									SILTSTONE: dark grey, with iron indurated seams.	SW	H		MODERATE TO HIGH RESISTANCE
						6			END OF BOREHOLE AT 6.0m				
						7							

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BOREHOLE LOG

Borehole No. **104** 1/1

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.5m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, dark grey brown, trace of fine to medium grained ironstone gravel.	w≈PL			GRASS COVER
					N = 11 5,4,7	1						300 530 >600	APPEARS MODERATELY TO WELL COMPACTED
					N = 16 7,8,8	2			FILL: Silty clay, medium plasticity, grey brown, trace of fine to medium grained siltstone gravel.				
					N = 2 2,1,1	3							APPEARS POORLY COMPACTED
						4		CH	Silty CLAY: high plasticity, light grey mottled orange brown, and red brown, trace of fine to medium grained ironstone gravel.	w<PL	Hd		RESIDUAL
					N = 27 4,13,14	5						>600	
						6		-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light grey mottled red brown, with very low strength bands.	XW	Hd		BRINGELLY SHALE
					N = SPT 13/100mm REFUSAL				END OF BOREHOLE AT 6.1m				
						7							

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BOREHOLE LOG

Borehole No. **105** 1/2

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.6m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, dark grey brown, trace of fine to medium grained ironstone gravel and root fibres.	w<PL			GRASS COVER
					N = 9 5,5,4	1			FILL: Silty clay, high plasticity, light grey brown mottled various colours, trace of fine to medium grained igneous gravel and ironstone gravel.			310 400 360	APPEARS MODERATELY TO WELL COMPACTED
					N = 12 5,5,7	2		CH	Silty CLAY: high plasticity, light grey mottled orange brown and red brown, trace of fine to medium grained ironstone gravel.	w≈PL	VSt-Hd	430 350 580	RESIDUAL
					N = 11 3,5,6	3						430 270 340	
					N = 27 4,8,19	4				w<PL	Hd	>600 >600 >600	
						5		-	SILTSTONE: grey brown, with iron indurated seams and extremely weathered seams.	DW	VL		BRINGELLY SHALE
						6			as above, but dark grey.		L		VERY LOW TO LOW 'TC' BIT RESISTANCE
											L-M		LOW RESISTANCE WITH VERY LOW BANDS
						7							MODERATE RESISTANCE WITH LOW BANDS

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BOREHOLE LOG

Borehole No. 105 2/2

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.6m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	■								SILTSTONE: dark grey, with iron indurated seams and extremely weathered seams.	DW	L-M		
									END OF BOREHOLE AT 7.5m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **106** 1/2

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.4m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0		-	ASPHALTIC CONCRETE: 30mm.t	w≈PL			
									FILL: Silty clay, medium plasticity, dark grey brown, trace of fine to medium grained ironstone and sandstone gravel.	w>PL			
					N = 5 3,2,3	1			FILL: Silty clay, low to medium plasticity, light grey brown mottled various colours, trace of fine to medium grained igneous and ironstone gravel.	w<PL			
					N = 15 5,6,9	2						480 320 >600	APPEARS WELL COMPACTED
					N = 25 6,8,17	3						425 580 600	
						4		CH	Silty CLAY: high plasticity, light grey and mottled orange brown and red brown, trace of fine to medium grained ironstone gravel.	w≈PL	VSt- Hd		RESIDUAL
					N = 14 3,5,9	5				w<PL	Hd	420 420 345	
					N > 24 16,8/50mm	6						>600 >600	
					REFUSAL	7		-	SILTSTONE: grey brown, with iron indurated seams.	DW	L-M		BRINGELLY SHALE

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JKGeotechnics

BOREHOLE LOG

Borehole No. **106** 2/2

Client: FDC CONSTRUCTION (NSW) PTY LTD

Project: PROPOSED ADDITIONS

Location: 65 HUNTINGWOOD DRIVE, HUNTINGWOOD, NSW

Job No.: 34067BC **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.4m

Date: 14/05/2021 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** A.C.K./T.C.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
						8			SILTSTONE: grey brown, with iron indurated seams.	DW	L-M		LOW 'TC' BIT RESISTANCE LOW RESISTANCE WITH MODERATE BANDS
						9			END OF BOREHOLE AT 9.0m				
						10							
						11							
						12							
						13							
						14							

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ENVIRONMENTAL LOGS EXPLANATION NOTES

INTRODUCTION

These notes have been provided to amplify the environmental report in regard to classification methods, field procedures and certain matters relating to the logging of soil and rock. Not all notes are necessarily relevant to all reports.

Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and man-made processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies include gathering and assimilating limited facts about these characteristics and properties in order to understand or predict the behaviour of the ground on a particular site under certain conditions. This report may contain such facts obtained by inspection, excavation, probing, sampling, testing or other means of investigation. If so, they are directly relevant only to the ground at the place where and time when the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726:2017 *'Geotechnical Site Investigations'*. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geoenvironmental practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached soil classification table qualified by the grading of other particles present (eg. sandy clay) as set out below:

Soil Classification	Particle Size
Clay	< 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2.36mm
Gravel	2.36 to 63mm
Cobbles	63 to 200mm
Boulders	> 200mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose (VL)	< 4
Loose (L)	4 to 10
Medium dense (MD)	10 to 30
Dense (D)	30 to 50
Very Dense (VD)	> 50

Cohesive soils are classified on the basis of strength (consistency) either by use of a hand penetrometer, vane shear, laboratory testing and/or tactile engineering examination. The strength terms are defined as follows.

Classification	Unconfined Compressive Strength (kPa)	Indicative Undrained Shear Strength (kPa)
Very Soft (VS)	≤ 25	≤ 12
Soft (S)	> 25 and ≤ 50	> 12 and ≤ 25
Firm (F)	> 50 and ≤ 100	> 25 and ≤ 50
Stiff (St)	> 100 and ≤ 200	> 50 and ≤ 100
Very Stiff (VSt)	> 200 and ≤ 400	> 100 and ≤ 200
Hard (Hd)	> 400	> 200
Friable (Fr)	Strength not attainable – soil crumbles	

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'shale' is used to describe fissile mudstone, with a weakness parallel to bedding. Rocks with alternating inter-laminations of different grain size (eg. siltstone/claystone and siltstone/fine grained sandstone) are referred to as 'laminite'.

INVESTIGATION METHODS

The following is a brief summary of investigation methods currently adopted by the Company and some comments on their use and application. All methods except test pits, hand auger drilling and portable Dynamic Cone Penetrometers require the use of a mechanical rig which is commonly mounted on a truck chassis or track base.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the insitu soils and 'weaker' bedrock if it is safe to descend into the pit. The depth of penetration is limited to about 3m for a backhoe and up to 6m for a large excavator. Limitations of test pits are the problems associated with disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the

structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Refusal of the hand auger can occur on a variety of materials such as obstructions within any fill, tree roots, hard clay, gravel or ironstone, cobbles and boulders, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of limited reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock cuttings. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be assessed from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (eg. from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, NMLC or HQ triple tube core barrels, which give a core of about 50mm and 61mm diameter, respectively, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as NO CORE. The location of NO CORE recovery is determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the bottom of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils, as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289.6.3.1–2004 (R2016) *'Methods of Testing Soils for Engineering Purposes, Soil Strength and Consolidation Tests – Determination of the Penetration Resistance of a Soil – Standard Penetration Test (SPT)'*.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63.5kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

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

  N = 13
  4, 6, 7

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

  N > 30
  15, 30/40mm

The results of the test can be related empirically to the engineering properties of the soil.

A modification to the SPT is where the same driving system is used with a solid 60° tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as 'N_c' on the borehole logs, together with the number of blows per 150mm penetration.

LOGS

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

The terms and symbols used in preparation of the logs are defined in the following pages.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than 'straight line' variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

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

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

More reliable measurements can be made by installing standpipes which are read after the groundwater level has stabilised at intervals ranging from several days to perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (eg. bricks, steel, etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably assess the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density and material type is much greater than with natural soil deposits. Consequently, there is an increased risk of adverse environmental characteristics or behaviour. If the volume and nature of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes.

LABORATORY TESTING

Laboratory testing has not been undertaken to confirm the soil classification and rock strengths indicated on the environmental logs unless noted in the report.

SYMBOL LEGENDS

SOIL


FILL


TOPSOIL


CLAY (CL, CI, CH)


SILT (ML, MH)


SAND (SP, SW)


GRAVEL (GP, GW)


SANDY CLAY (CL, CI, CH)


SILTY CLAY (CL, CI, CH)


CLAYEY SAND (SC)


SILTY SAND (SM)


GRAVELLY CLAY (CL, CI, CH)


CLAYEY GRAVEL (GC)


SANDY SILT (ML, MH)


PEAT AND HIGHLY ORGANIC SOILS (Pt)

ROCK


CONGLOMERATE


SANDSTONE


SHALE/MUDSTONE


SILTSTONE


CLAYSTONE


COAL


LAMINITE


LIMESTONE


PHYLLITE, SCHIST


TUFF


GRANITE, GABBRO


DOLERITE, DIORITE


BASALT, ANDESITE


QUARTZITE

OTHER MATERIALS


BRICKS OR PAVERS


CONCRETE


ASPHALTIC CONCRETE

CLASSIFICATION OF COARSE AND FINE GRAINED SOILS

Major Divisions		Group Symbol	Typical Names	Field Classification of Sand and Gravel	Laboratory Classification	
Coarse grained soil (more than 65% of soil excluding oversize fraction is greater than 0.075mm)	GRAVEL (more than half of coarse fraction is larger than 2.36mm	GW	Gravel and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 4$ $1 < C_c < 3$
		GP	Gravel and gravel-sand mixtures, little or no fines, uniform gravels	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		GM	Gravel-silt mixtures and gravel-sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	Fines behave as silt
		GC	Gravel-clay mixtures and gravel-sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	Fines behave as clay
	SAND (more than half of coarse fraction is smaller than 2.36mm)	SW	Sand and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 6$ $1 < C_c < 3$
		SP	Sand and gravel-sand mixtures, little or no fines	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		SM	Sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	N/A
		SC	Sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	

Major Divisions		Group Symbol	Typical Names	Field Classification of Silt and Clay			Laboratory Classification
				Dry Strength	Dilatancy	Toughness	% < 0.075mm
ine grained soils (more than 35% of soil excluding oversize fraction is less than 0.075mm)	SILT and CLAY (low to medium plasticity)	ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or silt with low plasticity	None to low	Slow to rapid	Low	Below A line
		CL, CI	Inorganic clay of low to medium plasticity, gravelly clay, sandy clay	Medium to high	None to slow	Medium	Above A line
		OL	Organic silt	Low to medium	Slow	Low	Below A line
	SILT and CLAY (high plasticity)	MH	Inorganic silt	Low to medium	None to slow	Low to medium	Below A line
		CH	Inorganic clay of high plasticity	High to very high	None	High	Above A line
		OH	Organic clay of medium to high plasticity, organic silt	Medium to high	None to very slow	Low to medium	Below A line
	Highly organic soil	Pt	Peat, highly organic soil	–	–	–	–

Laboratory Classification Criteria

A well graded coarse grained soil is one for which the coefficient of uniformity $Cu > 4$ and the coefficient of curvature $1 < C_c < 3$. Otherwise, the soil is poorly graded. These coefficients are given by:

$$C_U = \frac{D_{60}}{D_{10}} \qquad and \qquad C_C = \frac{(D_{30})^2}{D_{10}\, D_{60}}$$

Where D_{10}, D_{30} and D_{60} are those grain sizes for which 10%, 30% and 60% of the soil grains, respectively, are smaller.

NOTES:

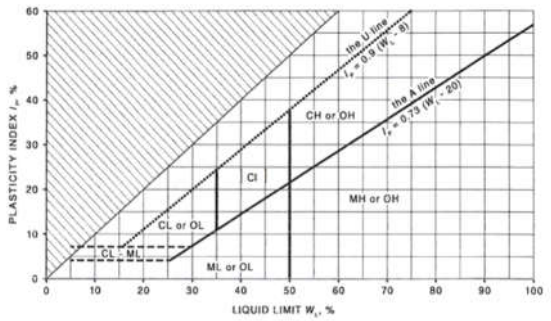
1 For a coarse grained soil with a fines content between 5% and 12%, the soil is given a dual classification comprising the two group symbols separated by a dash; for example, for a poorly graded gravel with between 5% and 12% silt fines, the classification is GP-GM.

2 Where the grading is determined from laboratory tests, it is defined by coefficients of curvature (C_c) and uniformity (C_u) derived from the particle size distribution curve.

3 Clay soils with liquid limits > 35% and ≤ 50% may be classified as being of medium plasticity.

4 The U line on the Modified Casagrande Chart is an approximate upper bound for most natural soils.

Modified Casagrande Chart for Classifying Silts and Clays according to their Behaviour



LOG SYMBOLS

Log Column	Symbol	Definition
Groundwater Record		Standing water level. Time delay following completion of drilling/excavation may be shown.
		Extent of borehole/test pit collapse shortly after drilling/excavation.
		Groundwater seepage into borehole or test pit noted during drilling or excavation.
Samples	ES	Sample taken over depth indicated, for environmental analysis.
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.
	DB	Bulk disturbed sample taken over depth indicated.
	DS	Small disturbed bag sample taken over depth indicated.
	ASB	Soil sample taken over depth indicated, for asbestos analysis.
	ASS	Soil sample taken over depth indicated, for acid sulfate soil analysis.
	SAL	Soil sample taken over depth indicated, for salinity analysis.
	PFAS	Soil sample taken over depth indicated, for analysis of Per- and Polyfluoroalkyl Substances.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration. 'Refusal' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	N_c = 5 7 3R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60° solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25	Vane shear reading in kPa of undrained shear strength.
	PID = 100	Photoionisation detector reading in ppm (soil sample headspace test).
Moisture Condition (Fine Grained Soils)	w > PL	Moisture content estimated to be greater than plastic limit.
	$w \approx$ PL	Moisture content estimated to be approximately equal to plastic limit.
	w < PL	Moisture content estimated to be less than plastic limit.
	$w \approx$ LL	Moisture content estimated to be near liquid limit.
	w > LL	Moisture content estimated to be wet of liquid limit.
(Coarse Grained Soils)	D	DRY – runs freely through fingers.
	M	MOIST – does not run freely but no free water visible on soil surface.
	W	WET – free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS	VERY SOFT – unconfined compressive strength ≤ 25kPa.
	S	SOFT – unconfined compressive strength > 25kPa and ≤ 50kPa.
	F	FIRM – unconfined compressive strength > 50kPa and ≤ 100kPa.
	St	STIFF – unconfined compressive strength > 100kPa and ≤ 200kPa.
	VSt	VERY STIFF – unconfined compressive strength > 200kPa and ≤ 400kPa.
	Hd	HARD – unconfined compressive strength > 400kPa.
	Fr	FRIABLE – strength not attainable, soil crumbles.
	( )	Bracketed symbol indicates estimated consistency based on tactile examination or other assessment.
Density Index/ Relative Density (Cohesionless Soils)	VL	VERY LOOSE – Density Index (I_D) Range (%) ≤ 15 – SPT 'N' Value Range (Blows/300mm) 0 – 4
	L	LOOSE – > 15 and ≤ 35 – 4 – 10
	MD	MEDIUM DENSE – > 35 and ≤ 65 – 10 – 30
	D	DENSE – > 65 and ≤ 85 – 30 – 50
	VD	VERY DENSE – > 85 – > 50
	( )	Bracketed symbol indicates estimated density based on ease of drilling or other assessment.

Log Column	Symbol	Definition
Hand Penetrometer Readings	300 250	Measures reading in kPa of unconfined compressive strength. Numbers indicate individual test results on representative undisturbed material unless noted otherwise.
Remarks	'V' bit	Hardened steel 'V' shaped bit.
	'TC' bit	Twin pronged tungsten carbide bit.
	T_{60}	Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.
	Soil Origin	The geological origin of the soil can generally be described as: RESIDUAL – soil formed directly from insitu weathering of the underlying rock. No visible structure or fabric of the parent rock. EXTREMELY WEATHERED – soil formed directly from insitu weathering of the underlying rock. Material is of soil strength but retains the structure and/or fabric of the parent rock. ALLUVIAL – soil deposited by creeks and rivers. ESTUARINE – soil deposited in coastal estuaries, including sediments caused by inflowing creeks and rivers, and tidal currents. MARINE – soil deposited in a marine environment. AEOLIAN – soil carried and deposited by wind. COLLUVIAL – soil and rock debris transported downslope by gravity, with or without the assistance of flowing water. Colluvium is usually a thick deposit formed from a landslide. The description 'slopewash' is used for thinner surficial deposits. LITTORAL – beach deposited soil.

Classification of Material Weathering

Term		Abbreviation		Definition
Residual Soil		RS		Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are no longer visible, but the soil has not been significantly transported.
Extremely Weathered		XW		Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible.
Highly Weathered	Distinctly Weathered (Note 1)	HW	DW	The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is significantly changed by weathering. Some primary minerals have weathered to clay minerals. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores.
Moderately Weathered		MW		The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable, but shows little or no change of strength from fresh rock.
Slightly Weathered		SW		Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock.
Fresh		FR		Rock shows no sign of decomposition of individual minerals or colour changes.

NOTE 1: The term 'Distinctly Weathered' is used where it is not practicable to distinguish between 'Highly Weathered' and 'Moderately Weathered' rock. 'Distinctly Weathered' is defined as follows: *'Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores'*. There is some change in rock strength.

Rock Material Strength Classification

Term	Abbreviation	Uniaxial Compressive Strength (MPa)	Guide to Strength	
			Point Load Strength Index $Is_{(50)}$ (MPa)	Field Assessment
Very Low Strength	VL	0.6 to 2	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30mm thick can be broken by finger pressure.
Low Strength	L	2 to 6	0.1 to 0.3	Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium Strength	M	6 to 20	0.3 to 1	Scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High Strength	H	20 to 60	1 to 3	A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High Strength	VH	60 to 200	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
Extremely High Strength	EH	> 200	> 10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

Appendix E: Laboratory Report(s) & COC Documents

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CERTIFICATE OF ANALYSIS 269253

Client Details

Client	JK Environments
Attention	Brendan Page
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E34067P, Huntingwood**
Number of Samples	35 Soil, 2 Water
Date samples received	17/05/2021
Date completed instructions received	17/05/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	24/05/2021
Date of Issue	24/05/2021

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Nyovan Moonean
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Dragana Tomas, Senior Chemist
Hannah Nguyen, Senior Chemist
Lucy Zhu, Asbestos Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	114	110	110	112	105

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	105	116	108	111	107

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		269253-25	269253-31	269253-32	269253-34	269253-35
Your Reference	UNITS	BH106	SDUP3	SDUP4	TB-S1	TS-S1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2	-
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	95%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	95%
Ethylbenzene	mg/kg	<1	<1	<1	<1	94%
m+p-xylene	mg/kg	<2	<2	<2	<2	96%
o-Xylene	mg/kg	<1	<1	<1	<1	96%
naphthalene	mg/kg	<1	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	109	102	114	105	91

svTRH (C10-C40) in Soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	22/05/2021	22/05/2021	22/05/2021	22/05/2021	22/05/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	290
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	460
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	91
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	91
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	560
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	220
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	880
Surrogate o-Terphenyl	%	77	87	85	83	88

svTRH (C10-C40) in Soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	22/05/2021	22/05/2021	22/05/2021	22/05/2021	22/05/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	80	77	80	77	77

svTRH (C10-C40) in Soil					
Our Reference		269253-25	269253-31	269253-32	269253-34
Your Reference	UNITS	BH106	SDUP3	SDUP4	TB-S1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	22/05/2021	22/05/2021	22/05/2021	22/05/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	77	84	84	78

PAHs in Soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.6	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	1.1	0.2	<0.1	<0.1
Pyrene	mg/kg	<0.1	1.2	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.8	0.2	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.6	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	1	0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.73	0.2	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.6	0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	7.4	1.3	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	1.1	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	1.1	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	1.1	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	94	102	102	93	106

PAHs in Soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.2	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	102	94	106	108	115

PAHs in Soil					
Our Reference		269253-25	269253-31	269253-32	269253-34
Your Reference	UNITS	BH106	SDUP3	SDUP4	TB-S1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	101	107	116	102

Organochlorine Pesticides in soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	86	94	89	94

Organochlorine Pesticides in soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	117	87	115	118

Organochlorine Pesticides in soil			
Our Reference		269253-25	269253-31
Your Reference	UNITS	BH106	SDUP3
Depth		0.5-0.95	0-0.2
Date Sampled		14/05/2021	14/05/2021
Type of sample		Soil	Soil
Date extracted	-	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	91	130

Organophosphorus Pesticides in Soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	86	94	89	94

Organophosphorus Pesticides in Soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	117	87	115	118

Organophosphorus Pesticides in Soil			
Our Reference		269253-25	269253-31
Your Reference	UNITS	BH106	SDUP3
Depth		0.5-0.95	0-0.2
Date Sampled		14/05/2021	14/05/2021
Type of sample		Soil	Soil
Date extracted	-	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	91	130

PCBs in Soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	86	94	89	94

PCBs in Soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	117	87	115	118

PCBs in Soil			
Our Reference		269253-25	269253-31
Your Reference	UNITS	BH106	SDUP3
Depth		0.5-0.95	0-0.2
Date Sampled		14/05/2021	14/05/2021
Type of sample		Soil	Soil
Date extracted	-	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	91	130

Acid Extractable metals in soil						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	21/05/2021	21/05/2021	21/05/2021	21/05/2021	21/05/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	12	9	10	12
Copper	mg/kg	10	25	9	7	16
Lead	mg/kg	10	97	10	8	20
Mercury	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Nickel	mg/kg	4	7	6	6	8
Zinc	mg/kg	22	100	34	29	55

Acid Extractable metals in soil						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	21/05/2021	21/05/2021	21/05/2021	21/05/2021	21/05/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	4	16	8	22
Copper	mg/kg	17	22	27	15	26
Lead	mg/kg	21	7	16	8	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	31	13	4	19
Zinc	mg/kg	42	95	34	24	35

Acid Extractable metals in soil						
Our Reference		269253-25	269253-31	269253-32	269253-34	269253-38
Your Reference	UNITS	BH106	SDUP3	SDUP4	TB-S1	BH101 - [TRIPLICATE]
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2	0.5-0.8
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	21/05/2021	21/05/2021	21/05/2021	21/05/2021	21/05/2021
Arsenic	mg/kg	<4	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	17	19	3	14
Copper	mg/kg	37	37	17	<1	20
Lead	mg/kg	12	11	22	3	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	22	19	11	<1	4
Zinc	mg/kg	65	51	52	3	40

Moisture						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Moisture	%	11	3.9	2.6	2.7	14

Moisture						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Moisture	%	9.3	14	15	13	18

Moisture					
Our Reference		269253-25	269253-31	269253-32	269253-34
Your Reference	UNITS	BH106	SDUP3	SDUP4	TB-S1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	19/05/2021	19/05/2021	19/05/2021	19/05/2021
Date analysed	-	20/05/2021	20/05/2021	20/05/2021	20/05/2021
Moisture	%	15	19	9.9	1.1

Asbestos ID - soils NEPM - ASB-001						
Our Reference		269253-2	269253-5	269253-6	269253-7	269253-9
Your Reference	UNITS	BH101	BH102	BH102	BH102	BH103
Depth		0.5-0.8	0-0.2	0.5-0.95	1.5-1.95	0-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/05/2021	24/05/2021	24/05/2021	24/05/2021	24/05/2021
Sample mass tested	g	656.18	843.15	1,070.5	652	586.29
Sample Description	-	Brown clayey soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		269253-13	269253-15	269253-19	269253-21	269253-24
Your Reference	UNITS	BH104	BH104	BH105	BH105	BH106
Depth		0-0.2	1.5-1.95	0-0.2	1.5-1.95	0.03-0.2
Date Sampled		14/05/2021	14/05/2021	14/05/2021	14/05/2021	14/05/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/05/2021	24/05/2021	24/05/2021	24/05/2021	24/05/2021
Sample mass tested	g	863.7	760.27	721.95	706.19	530.18
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001		
Our Reference		269253-25
Your Reference	UNITS	BH106
Depth		0.5-0.95
Date Sampled		14/05/2021
Type of sample		Soil
Date analysed	-	24/05/2021
Sample mass tested	g	730.99
Sample Description	-	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos#1	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

vTRH(C6-C10)/BTEXN in Water			
Our Reference		269253-36	269253-37
Your Reference	UNITS	FR1-SPT	TS
Depth		-	-
Date Sampled		14/05/2021	14/05/2021
Type of sample		Water	Water
Date extracted	-	18/05/2021	18/05/2021
Date analysed	-	18/05/2021	18/05/2021
TRH C_6 - C_9	µg/L	<10	[NA]
TRH C_6 - C_{10}	µg/L	<10	[NA]
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	[NA]
Benzene	µg/L	<1	101%
Toluene	µg/L	<1	100%
Ethylbenzene	µg/L	<1	102%
m+p-xylene	µg/L	<2	98%
o-xylene	µg/L	<1	102%
Naphthalene	µg/L	<1	[NA]
Surrogate Dibromofluoromethane	%	96	91
Surrogate toluene-d8	%	105	95
Surrogate 4-BFB	%	111	106

svTRH (C10-C40) in Water		
Our Reference		269253-36
Your Reference	UNITS	FR1-SPT
Depth		-
Date Sampled		14/05/2021
Type of sample		Water
Date extracted	-	19/05/2021
Date analysed	-	19/05/2021
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
TRH >C_{10} - C_{16}	µg/L	97
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	97
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Surrogate o-Terphenyl	%	93

PAHs in Water		
Our Reference		269253-36
Your Reference	UNITS	FR1-SPT
Depth		-
Date Sampled		14/05/2021
Type of sample		Water
Date extracted	-	19/05/2021
Date analysed	-	19/05/2021
Naphthalene	µg/L	<1
Acenaphthylene	µg/L	<1
Acenaphthene	µg/L	<1
Fluorene	µg/L	<1
Phenanthrene	µg/L	<1
Anthracene	µg/L	<1
Fluoranthene	µg/L	<1
Pyrene	µg/L	<1
Benzo(a)anthracene	µg/L	<1
Chrysene	µg/L	<1
Benzo(b,j+k)fluoranthene	µg/L	<2
Benzo(a)pyrene	µg/L	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1
Dibenzo(a,h)anthracene	µg/L	<1
Benzo(g,h,i)perylene	µg/L	<1
Benzo(a)pyrene TEQ	µg/L	<5
Total +ve PAH's	µg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	127

Metals in Water - Dissolved		
Our Reference		269253-36
Your Reference	UNITS	FR1-SPT
Depth		-
Date Sampled		14/05/2021
Type of sample		Water
Date digested	-	24/05/2021
Date analysed	-	24/05/2021
Arsenic - Dissolved	mg/L	<0.05
Cadmium - Dissolved	mg/L	<0.01
Chromium - Dissolved	mg/L	<0.01
Copper - Dissolved	mg/L	<0.01
Lead - Dissolved	mg/L	<0.03
Mercury - Dissolved	mg/L	<0.0005
Nickel - Dissolved	mg/L	<0.02
Zinc - Dissolved	mg/L	<0.02

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.

Method ID	Methodology Summary
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			20/05/2021	2	20/05/2021	20/05/2021		20/05/2021	20/05/2021
TRH C_6 - C_9	mg/kg	25	Org-023	<25	2	<25	<25	0	98	92
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	2	<25	<25	0	98	92
Benzene	mg/kg	0.2	Org-023	<0.2	2	<0.2	<0.2	0	122	113
Toluene	mg/kg	0.5	Org-023	<0.5	2	<0.5	<0.5	0	112	104
Ethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	101	97
m+p-xylene	mg/kg	2	Org-023	<2	2	<2	<2	0	78	74
o-Xylene	mg/kg	1	Org-023	<1	2	<1	<1	0	85	81
naphthalene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	108	2	114	100	13	115	108

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	20/05/2021	20/05/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	25	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	25	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	25	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	25	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	25	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	25	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	25	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	25	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	25	109	107	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			22/05/2021	2	22/05/2021	22/05/2021		22/05/2021	22/05/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	2	<50	<50	0	104	104
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	2	<100	<100	0	87	92
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	2	<100	<100	0	108	126
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	2	<50	<50	0	104	104
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	2	<100	<100	0	87	92
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	2	<100	<100	0	108	126
Surrogate o-Terphenyl	%		Org-020	78	2	77	78	1	99	87

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	22/05/2021	22/05/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	25	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	25	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	25	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	25	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	25	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	25	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	25	77	77	0	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			20/05/2021	2	20/05/2021	20/05/2021		20/05/2021	20/05/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	108	112
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	82	79
Fluorene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	95	93
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	115	98
Anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	98	81
Pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	107	98
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	78	116
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	2	<0.05	<0.05	0	98	83
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	98	2	94	100	6	117	108

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	20/05/2021	20/05/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	25	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	25	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	25	101	94	7	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			20/05/2021	2	20/05/2021	20/05/2021		20/05/2021	20/05/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	92	89
HCB	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	85	89
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	75	73
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	112	101
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	103	95
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	2	0.1	0.2	67	101	97
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	97	99
Endrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	71	79
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	99	95
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	70	76
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	93	2	91	90	1	92	85

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	20/05/2021	20/05/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	25	91	90	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			20/05/2021	2	20/05/2021	20/05/2021		20/05/2021	20/05/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	71	73
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	96	86
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	73	73
Malathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	70	78
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	103	101
Parathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	76	76
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	89	93
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	93	2	91	90	1	92	85

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	20/05/2021	20/05/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	25	91	90	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	269253-5
Date extracted	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			20/05/2021	2	20/05/2021	20/05/2021		20/05/2021	20/05/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	100	120
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	93	2	91	90	1	92	85

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	20/05/2021	20/05/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	25	91	90	1	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	269253-5
Date prepared	-			19/05/2021	2	19/05/2021	19/05/2021		19/05/2021	19/05/2021
Date analysed	-			21/05/2021	2	21/05/2021	21/05/2021		21/05/2021	21/05/2021
Arsenic	mg/kg	4	Metals-020	<4	2	<4	<4	0	103	105
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	98	90
Chromium	mg/kg	1	Metals-020	<1	2	8	8	0	104	92
Copper	mg/kg	1	Metals-020	<1	2	10	7	35	104	107
Lead	mg/kg	1	Metals-020	<1	2	10	7	35	101	#
Mercury	mg/kg	0.1	Metals-021	<0.1	2	<0.1	<0.1	0	109	88
Nickel	mg/kg	1	Metals-020	<1	2	4	3	29	102	92
Zinc	mg/kg	1	Metals-020	<1	2	22	10	75	102	75

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	25	19/05/2021	19/05/2021		[NT]	[NT]
Date analysed	-			[NT]	25	21/05/2021	21/05/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	25	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	25	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	25	14	13	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	25	37	35	6	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	25	12	14	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	25	22	20	10	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	25	65	60	8	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			18/05/2021	[NT]	[NT]	[NT]	[NT]	18/05/2021	[NT]
Date analysed	-			18/05/2021	[NT]	[NT]	[NT]	[NT]	18/05/2021	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	97	[NT]
Surrogate toluene-d8	%		Org-023	109	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-023	111	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			19/05/2021	[NT]	[NT]	[NT]	[NT]	19/05/2021	[NT]
Date analysed	-			19/05/2021	[NT]	[NT]	[NT]	[NT]	19/05/2021	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate o-Terphenyl	%		Org-020	119	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			19/05/2021	[NT]	[NT]	[NT]	[NT]	19/05/2021	[NT]
Date analysed	-			19/05/2021	[NT]	[NT]	[NT]	[NT]	19/05/2021	[NT]
Naphthalene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Acenaphthylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	63	[NT]
Fluorene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	71	[NT]
Phenanthrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	75	[NT]
Benzo(a)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Benzo(b,j+k)fluoranthene	µg/L	2	Org-022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	80	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: Metals in Water - Dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date digested	-			24/05/2021	36	24/05/2021	24/05/2021		24/05/2021	[NT]
Date analysed	-			24/05/2021	36	24/05/2021	24/05/2021		24/05/2021	[NT]
Arsenic - Dissolved	mg/L	0.05	Metals-020	<0.05	36	<0.05	<0.05	0	103	[NT]
Cadmium - Dissolved	mg/L	0.01	Metals-020	<0.01	36	<0.01	<0.01	0	98	[NT]
Chromium - Dissolved	mg/L	0.01	Metals-020	<0.01	36	<0.01	<0.01	0	102	[NT]
Copper - Dissolved	mg/L	0.01	Metals-020	<0.01	36	<0.01	<0.01	0	101	[NT]
Lead - Dissolved	mg/L	0.03	Metals-020	<0.03	36	<0.03	<0.03	0	97	[NT]
Mercury - Dissolved	mg/L	0.0005	Metals-021	<0.0005	36	<0.0005	[NT]		103	[NT]
Nickel - Dissolved	mg/L	0.02	Metals-020	<0.02	36	<0.02	<0.02	0	106	[NT]
Zinc - Dissolved	mg/L	0.02	Metals-020	<0.02	36	<0.02	<0.02	0	103	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 269253-2 for Zn. Therefore a triplicate result has been issued as laboratory sample number 269253-38.
- # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, sample 269253-24 is below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Brendan Page

Sample Login Details

Your reference	E34067P, Huntingwood
Envirolab Reference	269253
Date Sample Received	17/05/2021
Date Instructions Received	17/05/2021
Date Results Expected to be Reported	24/05/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	35 Soil, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	7.0
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHsin Water	Metals in Water - Dissolved	On Hold
BH101-0-0.2													✓
BH101-0.5-0.8	✓	✓	✓	✓	✓	✓	✓	✓					
BH101-1.0-1.2													✓
BH101-1.5-1.95													✓
BH102-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH102-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓					
BH102-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓					
BH102-3.0-3.45													✓
BH103-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH103-0.5-0.95													✓
BH103-1.5-1.8													✓
BH103-2.8-3.0													✓
BH104-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH104-0.5-0.95													✓
BH104-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓					
BH104-3.0-3.45													✓
BH104-4.5-4.95													✓
BH104-6.0-6.1													✓
BH105-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH105-0.5-0.95													✓
BH105-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓					
BH105-2.0-2.2													✓
BH105-3.0-3.45													✓
BH106-0.03-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH106-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓					
BH106-1.5-1.95													✓
BH106-3.0-3.45													✓
BH106-4.0-4.2													✓
BH106-5.4-4.95													✓
SDUP2-0-0.2													✓
SDUP3-0-0.2	✓	✓	✓	✓	✓	✓	✓						
SDUP4-0-0.2	✓	✓	✓				✓						

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils NEPM - ASB-001	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHsin Water	Metals in Water - Dissolved	On Hold
SDUP5-0-0.2													✓
TB-S1-0-0.2	✓	✓	✓				✓						
TS-S1	✓												
FR1-SPT									✓	✓	✓	✓	
TS									✓				

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E34067P Date Results Required: STANDARD Page: 1 of 2	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Brendan Page

Location:	Huntingwood						Sample Preserved in Esky on Ice													
Sampler:	HW/NM						Tests Required													
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description			Combo 6	NEPM 2013 Asbestos										
14/05/2021	1	BH101	0-0.2	G, A	0	Soil														
14/05/2021	2	BH101	0.5-0.8	G, A	0.1	Soil			X	X										
14/05/2021	3	BH101	1.0-1.2	G, A	0.1	Soil														
14/05/2021	4	BH101	1.5-1.95	G, A	0.1	Soil														
14/05/2021	5	BH102	0-0.2	G, A	0.1	Soil			X	X										
14/05/2021	6	BH102	0.5-0.95	G, A	0.1	Soil			X	X										
14/05/2021	7	BH102	1.5-1.95	G, A	0.1	Soil			X	X										
14/05/2021	8	BH102	3.0-3.45	G, A	0	Soil														
14/05/2021	9	BH103	0-0.2	G, A	0	Soil			X	X										
14/05/2021	10	BH103	0.5-0.95	G, A	0	Soil														
14/05/2021	11	BH103	1.5-1.8	G, A	0	Soil														
14/05/2021	12	BH103	2.8-3.0	G, A	0.1	Soil														
14/05/2021	13	BH104	0-0.2	G, A	0	Soil			X	X										
14/05/2021	14	BH104	0.5-0.95	G, A	0	Soil														
14/05/2021	15	BH104	1.5-1.95	G, A	0.1	Soil			X	X										
14/05/2021	16	BH104	3.0-3.45	G, A	0.2	Soil														
14/05/2021	17	BH104	4.5-4.95	G, A	0.1	Soil														
14/05/2021	18	BH104	6.0-6.1	G	0.1	Soil														
14/05/2021	19	BH105	0-0.2	G, A	0	Soil			X	X										
14/05/2021	20	BH105	0.5-0.95	G, A	0	Soil														
14/05/2021	21	BH105	1.5-1.95	G, A	0	Soil			X	X										
14/05/2021	22	BH105	2.0-2.2	G, A	0	Soil														
14/05/2021	23	BH105	3.0-3.45	G, A	0.1	Soil														
14/05/2021	24	BH106	0.03-0.2	G, A	0.1	Soil			X	X										
14/05/2021	25	BH106	0.5-0.95	G, A	0	Soil			X	X										
14/05/2021	26	BH106	1.5-1.95	G, A	0.1	Soil														
14/05/2021	27	BH106	3.0-3.45	G, A	0.1	Soil														
14/05/2021	28	BH106	4.0-4.2	G, A	0.1	Soil														
14/05/2021	29	BH106	5.4-4.95	G, A	0.1	Soil														

ENVIROLAB GROUP

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 204253

Date Received: 17/5/21

Time Received: 1440

Received By: CM

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: BP	Date: 17.5.21	Time: 240pm 1440	Received By: C.Mallem	Date: 17/5/21

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E34067P Date Results Required: STANDARD Page: 2 of 2	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Brendan Page

Location:	Huntingwood						Sample Preserved in Esky on Ice										
Sampler:	HW/NM						Tests Required										
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description		Combo 3	Combo 6				BTEX				
14/05/2021	###	SDUP1	0-0.2	G	0.1	Soil			X								
14/05/2021	30	SDUP2	0-0.2	G	0	Soil											
14/05/2021	31	SDUP3	0-0.2	G	0	Soil			X								
14/05/2021	32	SDUP4	0-0.2	G	0	Soil		X									
14/05/2021	33	SDUP5	0-0.2	G	0	Soil											
14/05/2021	34	TB-S1	-	G	0	Blank sand		X									
14/05/2021	35	TS-S1	-	V	-	Trip Spike							X				
14/05/2021	36	FR1-SPT	-	V x2, HNO2, AM x 2		Rinsate water		X									
	37	TS				water		—	Extra								

Remarks (comments/detection limits required):
###Send to Envirolab VIC as inter-lab dup

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag v-glass vial, HNO2 - Plastic HNO2 pres, AM - amber

Relinquished By: BP	Date: 17.5.21	Time: 240pm	Received By:	Date:

264253

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 25961

Client Details

Client	JK Environments
Attention	Brendan Page
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E34067P**
Number of Samples	1 Soil
Date samples received	19/05/2021
Date completed instructions received	19/05/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	25/05/2021
Date of Issue	25/05/2021

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	21/05/2021
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	94

TRH Soil C10-C40 NEPM		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	21/05/2021
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	97

PAHs in Soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	23/05/2021
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.3
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	0.4
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d_{14}	%	116

OCP in Soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	23/05/2021
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	98

OP in Soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	23/05/2021
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	98

PCBs in Soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date extracted	-	21/05/2021
Date analysed	-	23/05/2021
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-fluorobiphenyl	%	114

Acid Extractable metals in soil		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date digested	-	21/05/2021
Date analysed	-	24/05/2021
Arsenic	mg/kg	6
Cadmium	mg/kg	<0.4
Chromium	mg/kg	23
Copper	mg/kg	29
Lead	mg/kg	14
Mercury	mg/kg	<0.1
Nickel	mg/kg	20
Zinc	mg/kg	43

Moisture		
Our Reference		25961-1
Your Reference	UNITS	SDUP1
Depth		0-0.2
Date Sampled		14/05/2021
Type of sample		Soil
Date prepared	-	21/05/2021
Date analysed	-	22/05/2021
Moisture	%	17

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	98	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	98	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	105	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate o-Terphenyl	%		Org-020	88	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			23/05/2021	[NT]	[NT]	[NT]	[NT]	23/05/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Acenaphthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Phenanthrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	[NT]	[NT]	[NT]	[NT]	100	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	118	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OCP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			23/05/2021	[NT]	[NT]	[NT]	[NT]	23/05/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
gamma-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
delta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Dieldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Endrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Methoxychlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	82	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	1	21/05/2021	21/05/2021		21/05/2021	[NT]
Date analysed	-			23/05/2021	1	23/05/2021	23/05/2021		23/05/2021	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	92	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	120	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	114	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	82	1	98	90	9	90	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			23/05/2021	[NT]	[NT]	[NT]	[NT]	23/05/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Aroclor 1260	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	100	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			21/05/2021	[NT]	[NT]	[NT]	[NT]	21/05/2021	[NT]
Date analysed	-			24/05/2021	[NT]	[NT]	[NT]	[NT]	24/05/2021	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	95	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Brendan Page

Sample Login Details

Your reference	E34067P
Envirolab Reference	25961
Date Sample Received	19/05/2021
Date Instructions Received	19/05/2021
Date Results Expected to be Reported	25/05/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.7
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil
SDUP1-0-0.2	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E34067P Date Results Required: STANDARD Page: 2 of 2	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Brendan Page

Location: Huntingwood
Sampler: HW/NM
Sample Preserved in Esky on Ice
Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 6	BTEX
14/05/2021	[redacted]	SDUP1	0-0.2	G	0.1	Soil		X	
14/05/2021	30	SDUP2	0-0.2	G	0	Soil			
14/05/2021	31	SDUP3	0-0.2	G	0	Soil		X	
14/05/2021	32	SDUP4	0-0.2	G	0	Soil	X		
14/05/2021	33	SDUP5	0-0.2	G	0	Soil			
14/05/2021	34	TB-S1	-	G	0	Blank sand	X		
14/05/2021	35	TS-S1	-	V	-	Trip Spike			X
14/05/2021	36	FR1-SPT	-	V x2, HNO2, AM x 2		Rinsate water	X		
	37	TS				Water	—	Extra	

ENVIROLAB
Job No: 259161
Date Received: 19/5/21
Time Received: 12-10 pm
Received By: KS
Temp: Cool/Ambient 6.7°C
Cooling: Ice/Ice pack
Security: Intact/Broken/None

Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph: (03) 9763 2500

264253

Remarks (comments/detection limits required):
Send to Envirolab VIC as Inter-Lab
Rpm

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag v-glass vial, HNO2 - Plastic HNO2 pres, AM - amber

Relinquished By: BP	Date: 17.5.21	Time: 240pm	Received By: ELS-KS Melb	Date: 19/5/21

Relinquished by: A. BUI
ELS MD
18/5/21 1220

Appendix F: Report Explanatory Notes

QA/QC Definitions

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994)[13] methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (1991)[14]. The NEPM (2013) is consistent with these documents.

A. Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection Limit for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations: *"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit*" (Keith, 1991).

B. Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD).

C. Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured (i.e. the proximity of an averaged result to the true value, where all random errors have been statistically removed). The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes. Accuracy is typically reported as percent recovery.

D. Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

E. Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms;
- Sample receipt form;
- All sample results reported;
- All blank data reported;

[13] US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[14] Keith., H, (1991). *Environmental Sampling and Analysis, A Practical Guide*

- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

F. Comparability

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

G. Blanks

The purpose of laboratory and field blanks is to check for artefacts and interferences that may arise during sampling, transport and analysis.

H. Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

I. Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

J. Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$

Appendix G: Data (QA/QC) Evaluation

Data (QA/QC) Evaluation

A. INTRODUCTION

This Data (QA/QC) Evaluation forms part of the validation process for the DQOs documented in Section 6.1 of this report. Checks were made to assess the data in terms of precision, accuracy, representativeness, comparability and completeness. These 'PARCC' parameters are referred to collectively as DQIs and are defined in the Report Explanatory Notes attached in the report appendices.

1. Field and Laboratory Considerations

The quality of the analytical data produced for this project has been considered in relation to the following:

- Sample collection, storage, transport and analysis;
- Laboratory PQLs;
- Field QA/QC results; and
- Laboratory QA/QC results.

2. Field QA/QC Samples and Analysis

The field QA/QC samples are listed in Table Q1 and are discussed in the subsequent sections of this Data (QA/QC) Evaluation report. The duplicate sampling/analysis frequency exceeded 10% of primary samples. A trip spike, trip blank and rinsate sample were also analysed.

3. Data Assessment Criteria

JKE adopted the following criteria for assessing the field and laboratory QA/QC analytical results:

Field Duplicates

Acceptable targets for precision of field duplicates in this report will be 30% or less, consistent with NEPM (2013). RPD failures will be considered qualitatively on a case-by-case basis taking into account factors such as the concentrations used to calculate the RPD (i.e. RPD exceedance where concentrations are close to the PQL are typically not as significant as those where concentrations are reported at least five or 10 times the PQL), sample type, collection methods and the specific analyte where the RPD exceedance was reported.

Trip Blanks and Rinsates

Acceptable targets for field blank and rinsate samples in this report will be less than the PQL for organic analytes. Metals will be considered on a case-by-case basis with regards to typical background concentrations in soils.

Trip Spikes

Acceptable targets for trip spike samples in this report will be 70% to 130%.

Laboratory QA/QC

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the laboratory reports. These criteria were developed and implemented in accordance with the laboratory's NATA accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

A summary of the acceptable limits adopted by the primary laboratory (Envirolab) is provided below:

RPDs

- Results that are <5 times the PQL, any RPD is acceptable; and
- Results >5 times the PQL, RPDs between 0-50% are acceptable.

Laboratory Control Samples (LCS) and Matrix Spikes

- 70-130% recovery acceptable for metals and inorganics;
- 60-140% recovery acceptable for organics; and
- 10-140% recovery acceptable for VOCs.

Surrogate Spikes

- 60-140% recovery acceptable for general organics; and
- 10-140% recovery acceptable for VOCs.

Method Blanks

- All results less than PQL.

B. DATA EVALUATION

1. Sample Collection, Storage, Transport and Analysis

Samples were collected by trained field staff in accordance. Field sampling procedures were designed to be consistent with relevant guidelines, including NEPM (2013) and other guidelines made under the CLM Act 1997.

Appropriate sample preservation, handling and storage procedures were adopted. Laboratory analysis was undertaken within specified holding times in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies.

Envirolab noted that the asbestos results were reported to be consistent with the recommendations in NEPM (2013), however this level of reporting is outside the scope of their NATA accreditation. In the absence of other available analytical methods for asbestos, this was found to be acceptable for the purpose of this investigation.

Review of the project data also indicated that:

- COC documentation was adequately maintained;
- Sample receipt advice documentation was provided for all sample batches;
- All analytical results were reported; and
- Consistent units were used to report the analysis results.

2. Laboratory PQLs

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC.

3. Field QA/QC Sample Results

Field Duplicates

The results indicated that field precision was acceptable. RPD non-conformances were reported for some analytes as discussed below:

- Elevated RPDs were reported for one PAH compound and for arsenic, chromium and nickel in the SDUP1 sample;
- Elevated RPDs were reported for copper, lead and zinc in the SDUP3 sample; and
- An elevated RPD was reported for arsenic in the SDUP4 sample.

Values outside the acceptable limits have been attributed to minor sample heterogeneity or results that were close to the PQLs. As all sample results were less than the SAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

Trip Blanks

During the investigation, one soil trip blank was placed in the esky during sampling and transported back to the laboratory. Only minor detections of chromium, lead and zinc were reported. In JKE's experience, the concentrations reported were consistent with background concentrations in a sand matrix and were not indicative of cross-contamination. On this basis, cross contamination between samples that may have significance for data validity did not occur.

Rinsates

TRH >C10-C16 was detected in the rinsate sample at a concentration of 97µg/L. All other rinsate concentrations were below the PQLs. The source of the TRHs in the rinsate is unknown, however, it is noted that TRHs were not widespread through the soil samples therefore cross contamination did not occur.

Trip Spikes

The soil trip spike results ranged from 94% to 96% and indicated that field preservation methods were appropriate. It is noted that the laboratory also analysed a water spike in error. These results have not been tabulated or factored into this assessment, although it is noted that the spike recoveries were acceptable.

4. Laboratory QA/QC

The analytical methods implemented by the laboratory were performed in accordance with their NATA accreditation and were consistent with Schedule B(3) of NEPM (2013). The frequency of data reported for the laboratory QA/QC (i.e. duplicates, spikes, blanks, LCS) was considered to be acceptable for the purpose of this investigation. A review of the laboratory QA/QC data identified minor non-conformances, including one elevated RPD for zinc and one matrix spike recovery for lead which was not reported. These results did not impact the data quality.

C. DATA QUALITY SUMMARY

JKE are of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

Appendix H: Field Work Documents

JKEnvironments

Client:	FDC	Job No.:	E34067P
Project:	Proposed Additions to Arnotts Facility	Well No.:	MW103
Location:	65 Huntingwood Drive, Huntingwood, NSW	Depth (m):	6.0

WELL FINISH DETAILS

	Gatic Cover ☑	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development pump	SWL – Before (m):	Dry
Date:	14/5/21	Time – Before:	4:00pm
Undertaken By:	HW	SWL – After (m):	Dry
Total Vol. Removed:	–	Time – After:	4:05pm
PID Reading (ppm):	0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
well dry					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 5

Tested By:	HW
Date Tested:	14/5/21
Checked By:	BP
Date:	17/6/21

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	FDC	Job No.:	E34067P
Project:	Proposed Additions to Arnotts Facility	Well No.:	MW103
Location:	65 Huntingwood Drive, Huntingwood, NSW	Depth (m):	6.0

WELL FINISH

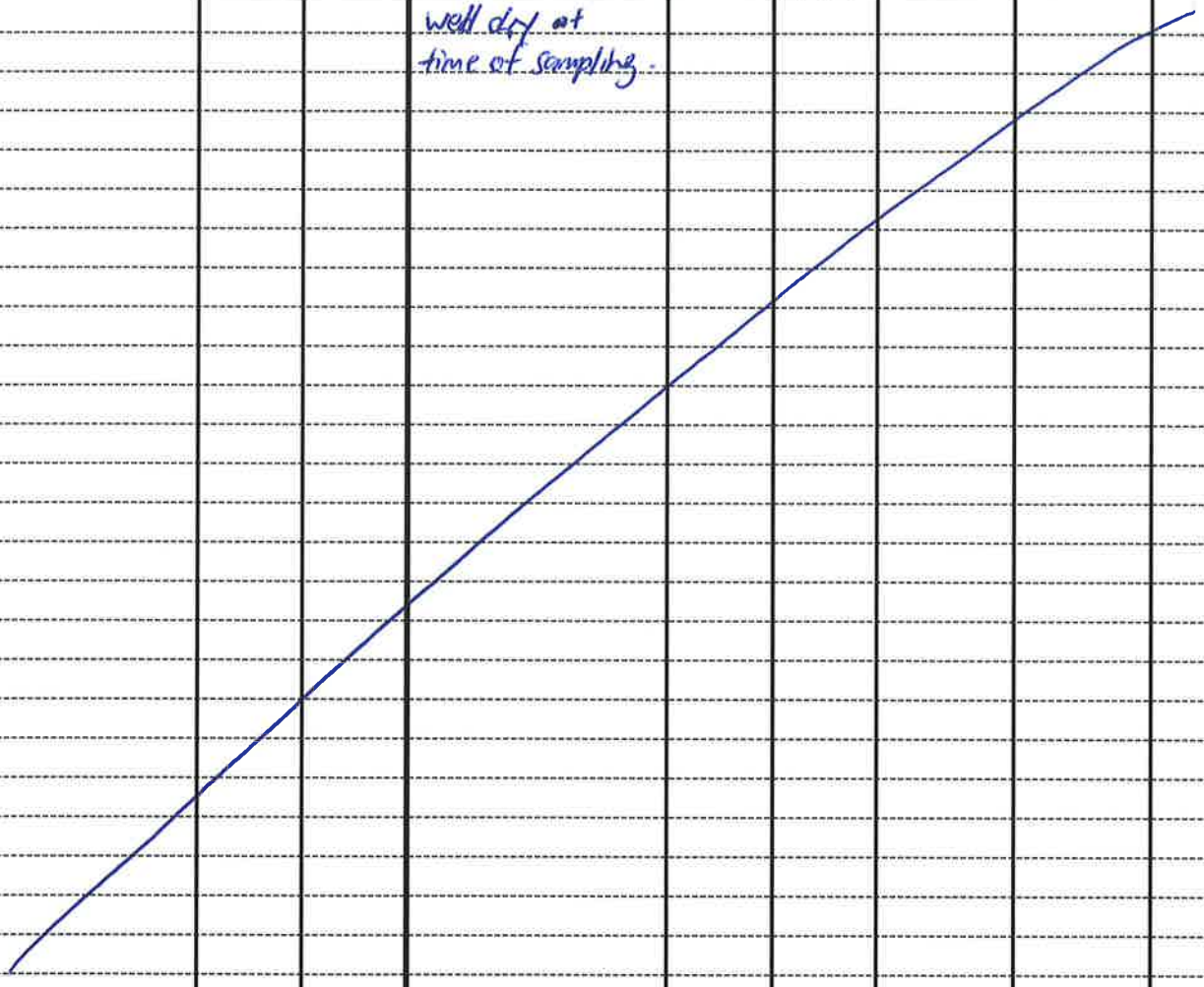
	Gatic Cover ✓		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Low flow Peristaltic pump	SWL – Before:	DRY
Date:	20/5/21	Time – Before:	8:00am
Undertaken By:	HW	Total Vol Removed:	—
Pump Program No:	—	PID (ppm):	1.4

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
			well dry at time of sampling.					



Comments: ~~Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)~~

well dry at time of sampling.

Sampling Containers Used: ~~x~~ glass amber, ~~x~~ BTEX vials, ~~x~~ HNO3 plastic, ~~x~~ H2SO4 plastic, ~~x~~ unpreserved plastic

YSI used: —

Tested By: Harley Wang	**Remarks:**
Date Tested: 20/5/21	- Steady state conditions
Checked By: BV	- difference in the pH less than 0.2 units, difference in conductivity less than 10%
Date: 17/6/21	10% and SWL stable/not in drawdown

Appendix I: Guidelines and Reference Documents

Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). Acid Sulfate Soils Manual

Australian and New Zealand Environment Conservation Council (ANZECC), (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality

Canadian Council of Ministers of the Environment, (1999). Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)

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Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map Series

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

National Health and Medical Research Council (NHMRC), (2018). National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011

NSW Department of Environment and Conservation, (2007). Guidelines for the Assessment and Management of Groundwater Contamination

NSW EPA, (1995). Contaminated Sites Sampling Design Guidelines

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NSW EPA, (2020). Consultants Reporting on Contaminated Land, Contaminated Land Guidelines

National Environment Protection Council (NEPC), (2013). National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)

Olszowy, H., Torr, P., and Imray, P., (1995). Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

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World Health Organisation (WHO), (2008). Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality

Western Australia Department of Health, (2009). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia