GCA

Geotechnical Consultants Australia

Monique Barakat

Preliminary Site Investigation

Proposed Development at:

14 Windermere Avenue

Northmead NSW 2152

Lot 35/-/DP8884

E22129-1

26th July 2022

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Report Distribution

Preliminary Site Investigation

Address: 14 Windermere Avenue Northmead NSW 2152

GCA Report No.: E22129-1

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Executive Summary

Geotechnical Consultants Australia Pty Ltd (GCA) were appointed by Monique Barakat (the client) to undertake a Preliminary Site Investigation (PSI) for the site located at No. 14 Windermere Avenue Northmead NSW 2152 (the site). The site is legally identified as Lot 35/-/DP8884 and has an area of approximately 1,323m^2. The site is currently zoned as R2 - Low Density Residential.

GCA understands that the proposed development for this site includes:

1) Demolition of the existing onsite structures;
2) Excavation and construction of a lower ground floor level; and
3) Construction of a childcare centre facility.

The objective of this PSI was to provide a preliminary assessment of potentially contaminating activities which may have impacted the site. The scope of work undertaken includes:

- A site inspection to identify potential sources of contamination;
- Soil sampling to identify any contaminants (if present);
- Historical investigations relating to the site (if any);
- Local Council records and planning certificates;
- NSW Environment Protection Authority (EPA) environmental contaminated lands register;
- Protection of the Environment Operations (POEO) Act public register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the WaterNSW registered groundwater bore database; and
- Acid Sulphate Soils (ASS) data maps.

A site investigation was undertaken on 13th July 2022 by qualified environmental consultants. During the site inspection, a soil investigation program was undertaken with a judgemental approach in locations associated with the proposed development to identify areas of contamination.

Three (3) soil samples were obtained from three (3) borehole locations (at a depth of 0-0.3m bgl). Additionally, three (3) surface soil (0-0.1m bgl) samples were collected from each location to be assessed for presence of Asbestos. Soil samples were submitted to a National Association of Testing Authorities, Australia (NATA) accredited laboratory for analysis of Chemicals of Potential Concern (CoPC) that may have impacted the site during historical or present activities.

Analytical results indicate no exceedance of the NEPM and CRC Care Health and NEPM Ecological Assessment Criteria for Residential (A) sites. Additionally, No Asbestos was found in all samples. The consent authority may be satisfied that the required considerations of Cl 4.6 of State Environmental Planning Policy (Resilience and Hazards) 2021are satisfied for the following reasons:

1) Site observations did not indicate significant visible indications of contamination or contaminating sources;
2) Analytical results for all analytes were below the Health and Ecological Assessment Criteria for Residential (A) sites.

Therefore, GCA considers that the potential for significant contamination of soil to be low and finds that the site is suitable for the proposed development and land use, provided the recommendations within Section 14 are undertaken.

1. Introduction

Geotechnical Consultants Australia Pty Ltd (GCA) were appointed by Monique Barakat (the client) to undertake a Preliminary Site Investigation (PSI) for the site located at No. 14 Windermere Avenue Northmead NSW 2152 (the site). The site is legally identified as Lot 35/-/DP8884 and has an area of approximately 1,323m^2. The site is currently zoned as R2 - Low Density Residential.

GCA understands that the proposed development for this site includes:

1) Demolition of the existing onsite structures;
2) Excavation and construction of a lower ground floor level; and
3) Construction of a childcare centre facility.

This PSI report was aimed to provide a preliminary assessment of potentially contaminating activities which may have impacted the site.

This report is prepared in accordance with the NSW Government State Environmental Planning Policy (Resilience and Hazard) 2021 and follows the format outlined in NSW EPA *Consultants Reporting on Contaminated Lands: Contaminated Land Guidelines* (2020).

A site inspection was undertaken on 13th July 2022. A soil sampling program, reporting and site photographs were conducted on this day with reference to the relevant regulatory criteria. Further information of the inspection is described in Section 4 of this report.

2. Scope of Work

The PSI has been prepared in general accordance with the following regulatory framework:

- NSW Environmental Protection Authority (EPA) "Consultants Reporting on Contaminated Lands: *Contaminated Land Guidelines*" (2020);
- State Environmental Planning Policy (Resilience and Hazard) 2021; and
- National Environmental Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council 2013.
- WA Department of Water and Environmental Regulation (DWER), *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, 2021*.

The scope of works required to complete the PSI includes:

- A site inspection for evidence of sources of potential contamination onsite and neighbouring properties;
- Soil sampling to identify any contaminants (if present);
- Historical investigations relating to the site (if any);
- Local Council records and planning certificates;
- NSW EPA environmental contaminated lands register;
- Protection of the Environment Operations (POEO) Act public register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the WaterNSW registered groundwater bore database;
- Acid Sulphate Soils (ASS) data maps;
- Establish whether data gaps may exist within the investigation;
- Development of a Conceptual Site Model (CSM) to identify the connections between potential sources of contamination, exposure pathways, and human/ecological receptors; and
- Recommendations for additional investigations (if any), based on the identified data gaps and findings of the PSI.

3. Site Details

Table 1. Site Details

Address	14 Windermere Avenue Northmead NSW 2152
Deposited Plan	Lot 35/-/DP8884
Zoning	R2 – Low Density Residential
Locality Map	Figure 1
Site Plan	Figure 5
Area (approx.)	1,323m^2

Table 2. Adjoining Land Use

Direction from Site	Land Use
North	Windermere Avenue
East	Residential lots
South	Residential lots
West	Residential lots

4. Site Condition

A qualified environmental consultant inspected the site on 13th July 2022. Site photographs are provided in **Appendix A**. Observations noted during the inspection are summarised below:

- The site was a rectangular lot and contained:
  - A brick single storey residential dwelling;
  - A metal canopy to the east of the dwelling for car parking;
  - A fibrocement shed within the eastern portion used as a garage;
  - A weatherboard and a brick shed to rear of the garage used for storage;
  - A front and backyard with lots of mature trees and lawn groundcover;
  - A concrete driveway extended from the canopy to Windermere Avenue along the eastern boundary of the site;
- No evidence of contamination was identified;
- No indications of underground storage of petroleum products were identified;
- The sediment underlying the site consisted of medium clay soil within the fill layer (0-0.5m) and Heavy clay within the natural layer (>0.5m); and
- There was a distinct change in elevation across the site area, sloping from north (front) to south (rear).

5. Site History

5.1 Review of Historical Aerial Photographs

Table 3. Historical Site Details

Year	Site and Surrounding Area
1943	The site was contained residential dwelling within the north-western portion and a shed in the eastern portion. The remainder area of the site was consisted of grass areas and concrete pavements. The surrounding area was comprised low-density residential properties and vegetated landscape.
1965	The site was unchanged from 1943. The surrounding area was increased in low-density residential properties.
1986	A garage shed was built within the eastern portion of the site. The vegetation across the site was improved. The surrounding area was improved in residential, commercial and urban developments.
2022	The site remains unchanged from 1986. The surrounding area is improved in residential, commercial and urban developments.

5.2 Section 10.7 (2) Planning Certificate

A Section 10.7 Planning Certificate describes how a property may be used and the restrictions on development. The Planning Certificate is issued under Section 149 of the Environmental Planning and Assessment Act 1979. At the time of reporting, GCA could not get access to the Planning Certificate.

5.3 NSW EPA Contaminated Land Register

A search within the NSW EPA contaminated land register was undertaken for the subject site. No results were found for this site.

5.4 Protection of the Environment Operations Act (POEO) Public Register

A search within the NSW EPA contaminated land register was undertaken for the subject site. No results were found for this site.

5.5 SafeWork NSW Hazardous Goods

A SafeWork search was not undertaken for the site.

5.6 Product Spill and Loss History

The site inspection carried out found no evidence to suggest chemical contamination impact on the site (i.e., chemical staining).

5.7 Dial Before You Dig

A Dial-Before-You-Dig request suggests the potential for underground services and assets to act as a portal for contamination to migrate offsite.

6. Geology and Hydrology

The Geological Map of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991), published by the Department of Minerals and Energy indicates the site is underlain by the Ashfield Shale, Wianamatta Group (Triassic age). This formation is regionally characterised by laminite and dark grey shale.

A review of the regional maps by the NSW Government Environment and Heritage indicates the site is generally located within the Glenorie landscape group. This landscape group is normally recognised by undulating rises on Wianamatta Group and Hawkesbury Sandstone. Local relief of Glenorie landscape is typically 50-80m, with slopes of usually 5-20%. Soils of Glenorie landscape group is generally consisting of shallow to moderately deep (<100cm) Red Podzolic Soils on crests; moderately deep (70–150cm) Red and Brown Podzolic Soils on upper slopes; deep (>200cm) Yellow Podzolic Soils and Gleyed Podzolic Soils along drainage lines.

Water infiltrates through the steep hills and flows downslope laterally along clay rich layers within the soil material and also vertically through the underlying shales within the matrix and preferentially along fractures and bedding plains. The lateral movement of subsurface waters may be impeded by a soil texture change (lithic gravels and sands to sandy clay) at the change in slope.

A groundwater bore search was conducted on 19th July 2022 and four (4) bores (GW110254, GW110251, GW110253, GW110252) were identified within a 500m radius of the site. The water bearing zone of these wells is around 6m to10m.

It was beyond the scope of works to study the groundwater flow direction. However, based on the regional topography, groundwater is expected to flow south towards Darling Mills Creek.

7. Acid Sulphate Soils

Acid Sulphate Soils (ASS) naturally occur under waterlogged condition and contain iron sulphide minerals. If these soils remain undisturbed, they are considered harmless. However, if disturbed and subsequently oxidised, this reaction can cause damage to the environment and built structures that overlie the ASS.

A search of the DPIE eSpade map viewer was undertaken and indicate that site is located within an area with no known occurrence of ASS.

8. Areas of Environmental Concern

Based on the above information, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Potential Concern (CoPC) for the site were identified and summarised below.

Table 4. AEC and Associated CoPC

AEC	Potentially Contaminating/ Hazardous Activity	CoPC	Likelihood of Site Impact	Comments
Entire site	Importation of fill material from unknown origin. Historical onsite operations.	Metals, TRH, BTEX, PAH, OCPs, OPPs, Asbestos	Moderate	Based on site observations, the presence of imported fill material is possible. Contamination event/s may have occurred historically.
On site structures	Hazardous materials within building structures.	ACM, Lead, SMF	Low	Based on suspected age of construction (1940s), these CoPC are likely to be present within structures.

Abbreviations: Asbestos Containing Materials (ACM), Hazardous Materials Survey (HMS), Benzene Toluene Ethylbenzene and Xylene (BTEX), Ozone Depleting Substances (ODS), Polychlorinated Biphenyls (PCBs), Total Recoverable Hydrocarbons (TRH), Synthetic Mineral Fibres (SMF), Polycyclic Aromatic Hydrocarbons (PAH), Organochlorine Pesticides (OCPs), Organophosphorus Pesticides (OPPs).

9. Conceptual Site Model

A Conceptual Site Model (CSM) has been developed and presented below and provides a representation of the potential risks associated with the connections between the following elements:

- Potential contamination sources and their associated CoPC;
- Potential human receptors that may be impacted by the site contamination are current and future site users including occupants to the dwellings/infrastructures onsite, site workers and the general public within the immediate vicinity of the site;
- Potential environmental receptors to the site including but not limited to: groundwater and surface water bodies, residual soils at and/or nearby the site.
- Potential exposure pathways; and
- Whether source-pathway-receptor connections are complete based on current and future site conditions.

Table 5. Conceptual Site Model

Potential Sources	Potential Receptor	Potential Exposure Pathway	Complete Connection	Risk	Justification/Control Measures
Contaminated soil from importation of uncontrolled fill across the site. Contaminated soil from historical onsite operations. Hazardous materials within on site structures.	Site occupants, workers, general public	Dermal contact, inhalation/ ingestion of particulates	Complete (current)	Moderate	Exposure to potentially contaminated soils is possible due to unsealed surfaces. Historical on and offsite operations may have given rise to contamination event/s on site. Based on age of structures, hazardous materials may be present.
			No (future)	Low	If present, impacted soils are likely to be disposed of offsite.
	Natural soils	Migration of contamination from fill layer/ topsoil to underlying natural soils.	Complete (current)	Moderate	Migration through fill layer to natural soils is possible.
			Limited (future)	Low	If present, impacted soils are likely to be disposed of offsite.
	Darling Mills Creek (~700m S)	Migration of impacted groundwater and surface water run-off.	Limited (current)	Low	It is unlikely contaminated surface waters would reach this waterway.
			No (future)	Low	If present, contaminated soils and groundwater are likely to be remediated.
	Underlying aquifer	Leaching and migration of contaminants through groundwater infiltration.	Limited (current)	Low	Due to existing unsealed surfaces, leachability of CoPC is possible. However natural clays may inhibit migration to aquifer.
			Limited (future)	Low	If present, contaminated soil and/or groundwater is likely to be remediated.

10. Assessment Criteria

The following soil assessment criteria were adopted for the investigation.

10.1 NEPM Health Investigation Level A (HIL-A) – Residential

HILs are scientific, risk-based guidance levels to be used as in the primary stage of assessing soil contamination to evaluate the potential risks to human health from chronic exposure to contaminants. HILs are applicable to a broad range of metals and organic substances, and generally apply to depths up to 3m below the surface for residential use. Tier 1 HILs are divided into sub-criteria. The sub-criteria appropriate to the site is HIL A – residential with garden/accessible soils.

Table 6. HIL-A

Assessment Criteria	NEPM 2013 Residential Soil HIL-A, mg/kg
Pesticides	
HCB	10
Heptachlor	6
Chlordane	50
Aldrin & Dieldrin	6
Endrin	10
DDT+DDE+DDT	240
Endosulfan	270
Methoxychlor	300
Mirex	10
Metals	
Arsenic, As	100
Cadmium, Cd	20
Chromium, Cr	100
Copper, Cu	6,000
Lead, Pb	300
Nickel, Ni	400
Zinc, Zn	7,400
Mercury, Hg	40
Polycyclic Aromatic Hydrocarbons	
Carcinogenic PAH (as BaP TEQ)	3
Total PAH (18)	300

10.2 NEPM Health Screening Level A (HSL-A) – Residential

HSLs have been developed for selected petroleum compounds and fractions and are used for the assessment of potential risks to human health from chronic inhalation and direct contact pathways of petroleum vapour emanating off petroleum contaminated soils (Vapour Risk). HSLs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to depths below surface to >4m. Tier 1 HSLs are divided into sub-criteria. The sub-criteria appropriate to the site is HSL A – residential with garden/accessible soils.

Table 7. HSL-A

Assessment Criteria	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, 0-<1m Depth, Clay, mg/kg	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, >1-2m Depth, Clay, mg/kg
Monocyclic Aromatic Hydrocarbons		
Benzene	0.7	1
Toluene	480	NL
Ethylbenzene	NL	NL
Xylenes	110	310
Polycyclic Aromatic Hydrocarbons		
Naphthalene	5	NL
Total Recoverable Hydrocarbons		
TRH C6-C10 - BTEX (F1)	50	90
TRH >C10-C16 - N (F2)	280	NL

10.3 CRC Care – Residential

In accordance with the CRC for Contamination Assessment and Remediation of the Environment, Technical Report 10, "*Health screening levels for petroleum hydrocarbons in soil and groundwater*", HSLs for direct contact are to be considered with soils and vapour intrusion.

Table 8. HSL-A

Assessment Criteria	CRC Care Residential Soil HSL-A for Direct Contact, mg/kg
Monocyclic Aromatic Hydrocarbons	
Benzene	100
Toluene	14,000
Ethylbenzene	4,500
Xylenes	12,000
Polycyclic Aromatic Hydrocarbons	
Naphthalene	1,400
Total Recoverable Hydrocarbons	
TRH C6-C10	4,400
TRH >C10-C16	3,300
TRH >C16-C34 (F3)	4,500
TRH >C34-C40 (F4)	6,300

10.4 NEPM Ecological Investigation Level (EIL) – Urban Residential and Public Open Space

Ecological investigation levels (EILs) have been developed to assess the risk for the presence of metals and organic substance in a terrestrial ecosystem. EILs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to the top 2m of soil.

EILs can be applied for arsenic (As), copper (Cu), chromium III (Cr III)), dichlorodiphenyltrichloroethane (DDT), naphthalene, nickel (Ni), lead (Pb) and zinc (Zn). The NEPM Soil Quality Guidelines (SQG) for EILs are calculated using the Added Contamination Limit (ACL) to determine the amount of contamination that had to be added to the soil to cause toxicity, including ambient background concentration (ABC).

Table 9. Generic EIL

Assessment Criteria	NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg
Metals	
Arsenic, As	100
Pesticides	
DDT	180
Polycyclic Aromatic Hydrocarbons	
Naphthalene	170

10.5 NEPM Ecological Screening Level (ESL) – Urban Residential and Public Open Space

ESLs have been developed for selected petroleum hydrocarbons (BTEX, benzo(a)pyrene, TRH F1 and F2) in soil, based on fresh contamination. These parameters are applicable to coarse and fine-grained soil and apply from the surface of the soil to 2m below ground level (bgl), which corresponds with the root and habitat zone for many species.

Table 10. ESL

Assessment Criteria	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces, Fine-Grained Soil, mg/kg
Monocyclic Aromatic Hydrocarbons	
Benzene	65
Toluene	105
Ethylbenzene	125
Xylenes	45
Polycyclic Aromatic Hydrocarbons	
BaPyr (BaP)	0.7
Total Recoverable Hydrocarbons	
TRH C6-C10	180
TRH >C10-C16	120
TRH >C16-C34 (F3)	1,300
TRH >C34-C40 (F4)	5,600

10.6 NEPM Management Limits – Residential, Parkland and Public Open Space

Management Limits for petroleum have been developed for prevention of explosive vapour accumulation, prevention of the formation of observable Light Non-Aqueous Phase Liquids (LNAPL) and protection against effects on buried infrastructure. Residential, parkland and public open space limits have been adopted based on the proposed land use.

Table 11. Management Limits

Assessment Criteria	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, Fine-Grained Soil, mg/kg
Total Recoverable Hydrocarbons	
TRH C6-C10	800
TRH >C10-C16	1,000
TRH >C16-C34 (F3)	3,500
TRH >C34-C40 (F4)	10,000

10.7 NEPM Guidelines for Asbestos

The assessed soil must not contain Asbestos Containing Materials (ACM) in the excess of 0.01%w/w and surface soil within the site must be free of visible ACM, Asbestos Fines (AF) and Fibrous Asbestos (FA).

11. Investigation Results

The soil analytical results are summarised below. Soil analytical results are presented in the laboratory reports in **Appendix C.**

Results Indicator	
▲	Exceedance of guideline limit for one or more samples.
▼	No exceedance of guideline limit for all samples.

Table 12. Total Recoverable Hydrocarbons (TRH) and Benzene Toluene Ethylbenzene and Xylene (BTEX) Analytical Results

Analytes	NEPM 2013 HSL-A for Vapour Intrusion, 0-<1m Depth, Clay, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion, 1-<2m Depth, Clay, mg/kg	CRC Care HSL-A for Direct Contact, mg/kg	NEPM 2013 ESL for Urban, Residential and Public Open Spaces, Fine-Grained Soil, mg/kg	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, Fine-Grained Soil, mg/kg
Benzene	▼	Not Analysed	▼	▼	
Toluene	▼	Not Analysed	▼	▼	
Ethylbenzene	▼	Not Analysed	▼	▼	
Xylenes	▼	Not Analysed	▼	▼	
TRH C6-C10			▼	▼	▼
TRH C6-C10 - BTEX (F1)	▼	Not Analysed			
TRH >C10-C16			▼	▼	▼
TRH >C10-C16 - N (F2)	▼	Not Analysed			
TRH >C16-C34 (F3)			▼	▼	▼
TRH >C34-C40 (F4)			▼	▼	▼

Table 13. Analytical Results for Polycyclic Aromatic Hydrocarbons (PAH)

Analytes	NEPM 2013 HSL-A for Vapour Intrusion, 0-<1m Depth, Clay, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion, 1-<2m Depth, Clay, mg/kg	CRC Care HSL-A for Direct Contact, mg/kg	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for Fine-Grained Soil, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Naphthalene	▼	Not Analysed	▼			▼
Benzo[a]pyrene					▼	
Carcinogenic PAH (as BaP TEQ)				▼		
Total PAH (18)				▼		

Table 14. Analytical Results for Pesticides

Analytes	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
HCB	▼	
Heptachlor	▼	
Chlordane	▼	
Aldrin & Dieldrin	▼	
Endrin	▼	
DDT		▼
DDT+DDE+DDT	▼	
Endosulfan	▼	
Methoxychlor	▼	
Mirex	▼	

Table 15. Analytical Results for Heavy Metals

Analytes	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Arsenic, As	▼	▼
Cadmium, Cd	▼	
Chromium, Cr	▼	
Copper, Cu	▼	
Lead, Pb	▼	▼
Nickel, Ni	▼	
Zinc, Zn	▼	
Mercury, Hg	▼	

Table 16. Analytical Results for Asbestos

HSL-A	All Samples
Asbestos	No respirable fibres detected in all soil samples(<0.01%w/w)

12. Data Gaps

The following data gaps have been identified as significant at the site:

- Hazardous materials within on site structures; and
- Groundwater conditions (if present) beneath the site considering excavations are proposed.

13. Conclusion

Based on site investigation and analytical results, GCA considers that the potential for significant contamination of soil to be low. All analytes were below the NEPM and CRC Care Health and NEPM Ecological Assessment Criteria for Residential (A) developments. No Asbestos detected in all soil samples.

Therefore, GCA finds that the site is suitable for the proposed development and land use, providing the recommendations within Section 14 of this report are undertaken.

14. Recommendations

Based on the information collected and available during this investigation, the following recommendations have been made:

- All structures onsite should have a Hazardous Materials Survey (HMS) conducted by a qualified occupational hygienist and/or environmental consultant for the site prior to any demolition or renovation works in accordance with relevant Australian Standards, SafeWork NSW codes of practice and any other applicable requirements;
- An Asbestos Clearance Certificate is required to be completed once all existing buildings and structures have been demolished;
- Any soils requiring excavation, onsite reuse and/or removal must be classified in accordance with "Waste Classification Guidelines Part 1: Classifying Waste" NSW EPA (2014);
- The demolition of structures and excavation activity on site be undertaken in accordance with relevant Australian Standards, SafeWork NSW codes of practice and any other applicable requirements; and
- A site specific 'Unexpected Finds Protocol' is to be made available for reference for all occupants and/or site workers in the event unanticipated contamination is discovered, including asbestos.

References

- NSW Department of Mineral Resources, 1:100,000, Geological Survey of New South Wales. Department of Mineral Resources;
- National Environment Protection Measures (2013), Schedule B1 – *Guideline on Investigation Levels for Soil and Groundwater*;
- National Environment Protection Measures (2013), Schedule B2 – *Guideline on Site Characterisation*;
- NSW EPA- Contaminated land register, https://apps.epa.nsw.gov.au/prclmapp/sitedetails.aspx, accessed on 19th July 2022;
- NSW Environmental Protection Authority, *Waste Classification Guidelines Part 1: Classifying Waste*, 2014;
- NSW Environmental Protection Authority, *Consultants Reporting on Contaminated Lands: Contaminated Land Guidelines,* 2020;
- Protection of the Environment Operations Act (POEO) Public Register, https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers, accessed on 19th July 2022;
- SafeWork NSW, *Site Search for Schedule 11 Hazardous Chemical on Premises*;
- State Environment Protection Policy (Resilience and Hazard) 2021;
- Topography – map.com, https://en-au.topographic-map.com/, accessed on 19th July 2022;
- WaterNSW, https://realtimedata.waternsw.com.au/, accessed on 19th July 2022.
- WA Department of Water and Environmental Regulation (DWER), Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, 2021.

Limitations

The findings of this report are based on the scope of work outlined in Section 2. GCA performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental consulting profession. No warranties, express or implied are made.

The results of this assessment are based upon the information documented and presented in this report. All conclusions and recommendations regarding the site are the professional opinions of GCA personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, GCA assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of GCA, or developments resulting from situations outside the scope of this project.

The results of this assessment are based on the site conditions identified at the time of the site inspection and sampling. GCA will not be liable to revise the report to account for any changes in site characteristics, regulatory requirements, assessment criteria or the availability of additional information, subsequent to the issue date of this report.

GCA is not engaged in environmental consulting and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes.

Geotechnical Consultants Australia Pty Ltd (GCA)

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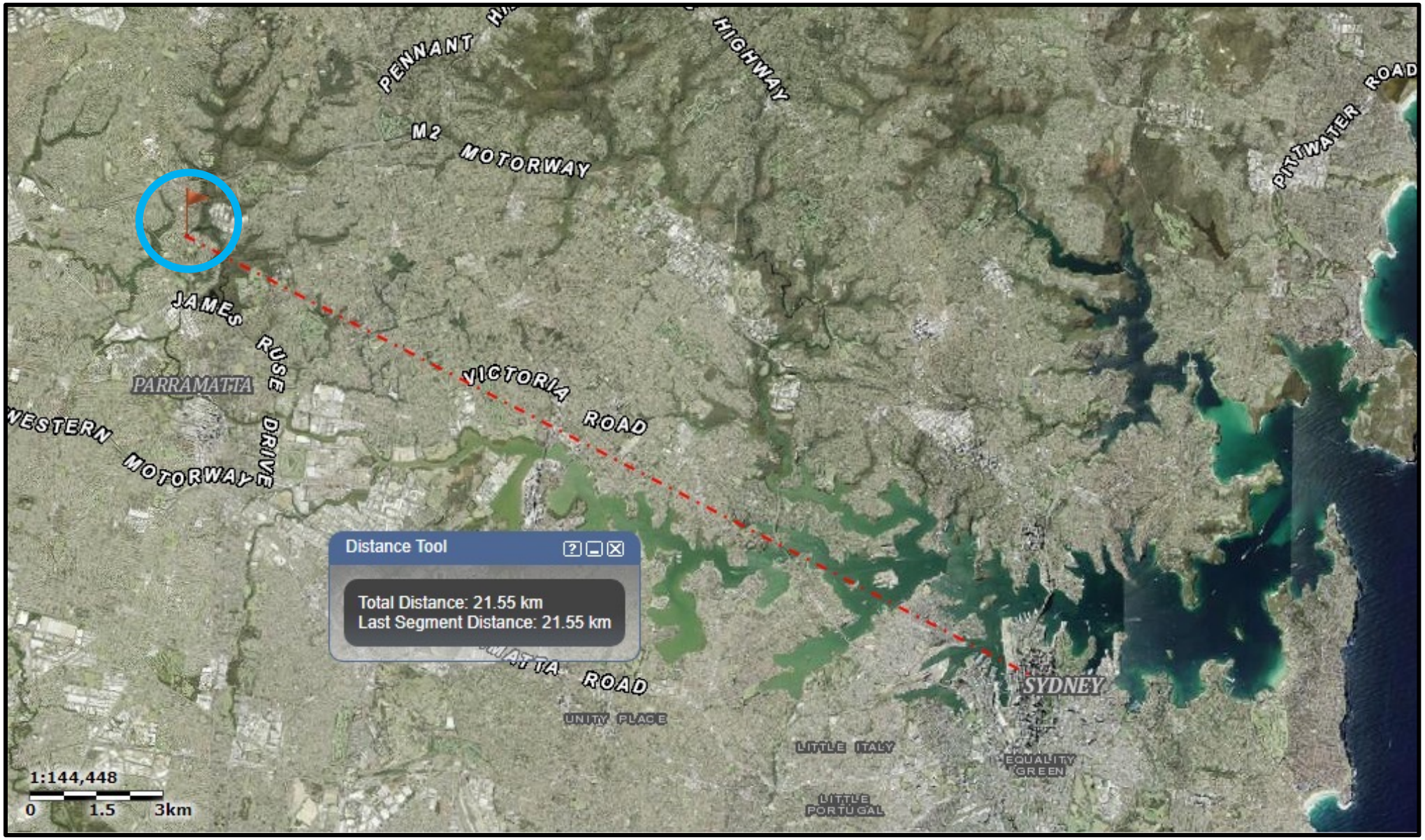
Reviewed by:

Nick Caltabiano
Project Manager

APPENDIX A

Figures and Site Photographic Log

Figure 1. The site is located approximately 22.5km northwest of Sydney CBD.



Site location

Source: Six Maps 2022

Figure 1	Locality Map
Project	14 Windermere Avenue, Northmead NSW 2152

Figure 2. The approximate area of the site is 1,323m^2. Three (3) soil samples were obtained from this site.

Sample ID	Depth (m)	Texture	Matrix
BH1	0.3	Medium Clay	Fill
BH2	0.3	Medium Clay	Fill
BH3	0.3	Medium Clay	Fill

⊗ Soil Sample Location

Source: Nearmap 2022

Figure 2	Site Area
Project	14 Windermere Avenue, Northmead NSW 2152

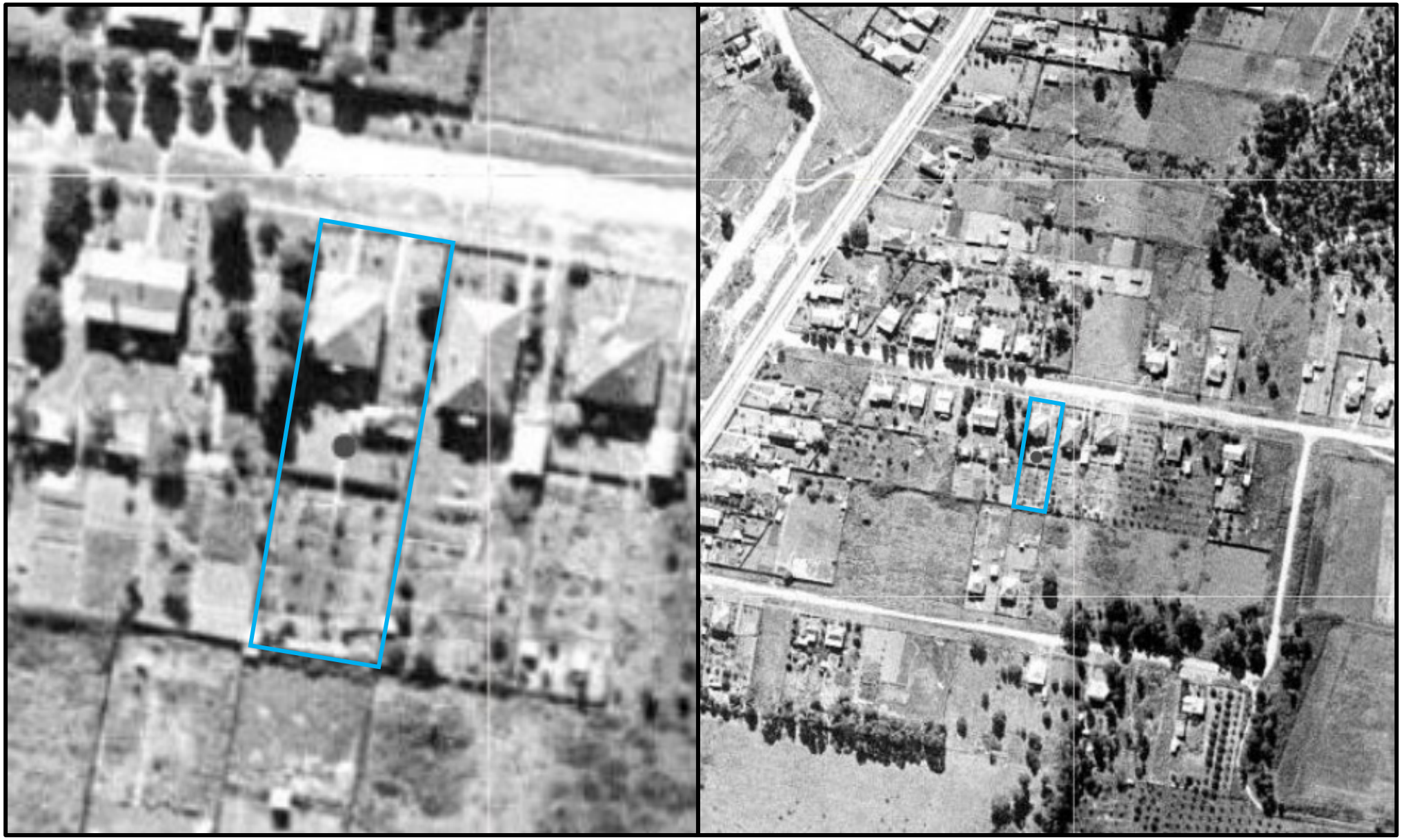


Figure 3. Aerial image of the site and surrounding area 1943. The site was contained residential dwelling within the northwestern portion and a shed in the eastern portion. The remainder area of the site was consisted of grass areas and concrete pavements. The surrounding area was comprised low-density residential properties and vegetated landscape.

Source: NSW Historical Imagery 2022

Figure 3	Aerial Image 1943
Project	14 Windermere Avenue, Northmead NSW 2152

Figure 4. Aerial image of the site and surrounding area 1965. The site was unchanged from 1943. The surrounding area was increased in low-density residential properties.

Figure 4	Aerial Image 1965
Project	14 Windermere Avenue, Northmead NSW 2152

Source: NSW Historical Imagery 2022

Figure 5. Aerial image of the site and surrounding area 1986. A garage shed was built within the eastern portion of the site. The vegetation across the site was improved. The surrounding area was improved in residential, commercial and urban developments.

Source: NSW Historical Imagery 2022

Figure 5	Aerial Image 1986
Project	14 Windermere Avenue, Northmead NSW 2152

Figure 6. Aerial image of the site and surrounding area in 2022. The site remains unchanged from 1986. The surrounding area is improved in residential, commercial and urban developments.

Source: Nearmap 2022

Figure 6	Aerial Images: 2022
Project	14 Windermere Avenue, Northmead NSW 2152

Figure 7. Front view of the brick dwelling, lawn area and concrete driveway.

Figure 8. Garage fibrocement shed and canopy within the eastern portion of the site.

Figure 9. rear view of the garage shed, brick and weatherboard shed within the eastern portion of the site.

Figure 10. Rear view of the dwelling within the site.

Figure 11. Central portion of the site.

Figure 12. Southern portion of the site.

Figure 13. BH1 sample profile consisted of dark brown medium clay within the fill layer.

Figure 14. BH3 sample profile consisted of dark brown medium clay within the fill layer.

APPENDIX B

Data Quality Objectives

Data Quality Objectives (DQOs)

The DQOs have been developed in accordance with the NEPM Appendix B of Schedule B2 and provide the type, quantity and quality of data to support decisions regarding the environmental conditions of this site.

Table 17. DQOs

Step 1: State the problem	The following risks to human and environmental receptors have been identified: - The proposed development includes the construction of a childcare facility. All stages of development may give rise to contamination events. Additionally, the intended future use of the site is considered a sensitive human health risk setting.
Step 2: Identify the decision/goal of the study	The site history, the use of this site, and the applicable guidelines were considered when identifying the decisions required for the site to be suitable for its intended land use. The decisions required to meet these decisions are as follows: - Was the sampling, analysis and quality plan designed appropriate to achieve the aim of the report? - If present, is on-site contamination capable of migrating off-site? - Are there any unacceptable risks to the future on site or off-site receptors in the soil or groundwater? - Is the site suitable for its continued land use?
Step 3: Identify the information inputs	We have identified issues of potential environmental concern; - Appropriate identification of CoPC; - Soil sampling and analysis programs across the site; - Appropriate quality assurance/quality control to enable an evaluation of the reliability of the analytical data; and - Screening sampler analytical results against appropriate assessment criteria for the intended land use.
Step 4: Define the boundaries of the study	The study boundaries are: - Lateral boundary: The legally defined area of the site; - Vertical boundary: The soil interface to the maximum depth reached during soil sampling; and - Temporal boundary: Constrained to a single visit to the site.
Step 5: Develop the analytical approach	The integration of the information from steps 1 – 4 support and justify our proposed analytical approach. Our aim is to confirm if the site is suitable for the proposed development. If the findings of the SAQP identify; - Any exceedance of the adopted assessment criteria for soil; - Professional opinion that further assessment is required; and/or - Adopted RPD for QC data not met.

	Further assessment may be required to confirm suitability of the site in the form of; Data Gap investigation, Remediation Action Plan and Site Validation.
Step 6: Specify performance or acceptance criteria	For judgemental soil sampling the data must meet the following qualifiers; - Acceptable recovery on all surrogate spikes used in laboratory analyses; - Acceptable analytical method to ensure detection limit appropriate for all analytes; If these conditions are not met, then chemical analysis will require re-testing for all samples with fresh aliquot.
Step 7: Optimise the design for obtaining data	Judgemental sampling pattern within the AEC will provide suitable coverage of the site to produce reliable data in alignment with the Data Quality Indicators (DQIs) to cover precision, accuracy, representativeness, completeness and comparability (PARCC). This sampling pattern will ensure that critical locations are assessed and analysed appropriately for COPC.

APPENDIX C

Laboratory Results and Chain of Custody (NATA)

Table 18. Total Recoverable Hydrocarbon (TRH) analytical results. Values are presented as mg/kg. NL = Not Limiting. F1 = subtract the sum of BTEX concentrations from the C_6-C_{10} aliphatic hydrocarbon fraction. F2 = subtract Naphthalene from the> C_{10}-C_{16} aliphatic hydrocarbon fraction.

Assessment Criteria		TRH C_6-C_{10}	TRH C_6-C_{10} - BTEX (F1)	TRH >C_{10}-C_{16}	TRH >C_{10}-C_{16} - N (F2)	TRH >C_{16}-C_{34} (F3)	TRH >C_{34}-C_{40} (F4)
NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, 0-<1m depth, Clay, mg/kg			50		280		
CRC Care Residential Soil HSL-A for Direct Contact, mg/kg		4400		3300		4500	6300
NEPM 2013 Soil Generic ESL for Urban, Residential and Public Open Spaces, fine-grained soil, mg/kg		180		120		1300	5600
NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, fine-grained soil, mg/kg		800		1000		3500	10 000
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.3	<25	<25	<25	<25	<90	<120
BH2	0.3	<25	<25	<25	<25	<90	<120
BH3	0.3	<25	<25	<25	<25	<90	<120

Table 19. Benzene, Toluene, Ethylbenzene and Xylene (BTEX) analytical results. Values are presented as mg/kg. NL = Not Limiting.

Assessment Criteria		Benzene	Toluene	Ethylbenzene	Xylenes
NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, 0-<1m depth, Clay, mg/kg		0.7	480	NL	110
CRC Care Residential Soil HSL-A for Direct Contact, mg/kg		100	14000	4500	12000
NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces, fine-grained soil, mg/kg		65	105	125	45
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.3	<0.1	<0.1	<0.1	<0.3
BH2	0.3	<0.1	<0.1	<0.1	<0.3
BH3	0.3	<0.1	<0.1	<0.1	<0.3

Table 20. Polycyclic Aromatic Hydrocarbon (PAH) analytical results. The carcinogenic PAH (Benzo(a)anthracene (BaAnt); Benzo(a)pyrene (BaPyr or BaP); Benzo(b+j) fluoranthene (BbjFl); Benzo(k)fluoranthene (BkFl); Benzo(g,h,i)perylene (BghiPer); Chrysene (Chr); and Dibenz(a,h)anthracene (DBahAnt)) potency is calculated relative to Benzo(a)pyrene to produce a Toxicity Equivalent Factor (TEF). The Toxicity Equivalent Quotient (TEQ) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its Benzo(a)pyrene (B(a)P) TEF. Total PAH includes Naphthalene (N), 2-methylnaphthalene (2-MN), 1-methylnaphthalene (1-MN), Acenaphthylene (Acy), Acenaphthene (Ace), Fluorene (F), Phenanthrene (P), Anthracene (Ant), Fluoranthene (Fl), Pyrene (Pyr) and the carcinogenic PAHs. Values are presented as mg/kg. NL = Not Limiting.

Assessment Criteria		Naphthalene	Benzo(a)pyrene	Carcinogenic PAH (as BaP TEQ)	Total PAH (18)
NEPM 2013 Residential Soil HSL-A for Vapour Intrusion, 0-<1m depth, Clay, mg/kg		5			
CRC Care Residential Soil HSL-A for Direct Contact, mg/kg		1400			
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg		170			
Soil ESL for Urban, Residential and Public Open Spaces, fine-grained soil, mg/kg			0.7		
NEPM 2013 Residential Soil HIL-A, mg/kg			1.00 TEF	3	300
Sample	Depth (m)	mg/kg	mg/kg	TEQ (mg/kg)	mg/kg
BH1	0.3	<0.1	<0.1	<0.3	<0.8
BH2	0.3	<0.1	<0.1	<0.3	<0.8
BH3	0.3	<0.1	<0.1	<0.3	<0.8

Table 21. Heavy Metal analytical results. Values are presented as mg/kg.

Assessment Criteria		Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg
NEPM 2013 Residential Soil HIL-A, mg/kg		100	20	100	6000	300	400	7400	40
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg		100		580*	220*	1100	220*	570*	
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.3	**15**	**0.6**	**17**	**20**	**140**	**6.0**	**380**	**0.10**
BH2	0.3	**28**	**0.7**	**36**	**55**	**160**	**6.9**	**300**	**0.11**
BH3	0.3	**12**	**1.3**	**15**	**37**	**140**	**11**	**300**	**0.11**

*Calculated based on estimated CEC of 15 cmol(+)/kg, pH of 6.5 and Clay content of 30%.

Table 22. Pesticides analytical results. Values are presented as mg/kg.

Assessment Criteria		HCB	Heptachlor	Chlordane	Aldrin & Dieldrin	Endrin	DDT	DDD+DDE +DDT	Endosulfan	Methoxychlor	Mirex
NEPM 2013 Residential Soil HIL-A, mg/kg		10	6	50	6	10		240	270	300	10
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg							180				
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
S1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
S2	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1
S3	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1

Table 23. Asbestos analytical results. Values are presented as %w/w.

HSL-A	All Samples
Asbestos	No respirable fibres detected in all soil samples
Estimated Fibres	<0.01 %w/w

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 1

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name: NEO Consulting Pty Ltd
Address: 186 Riverstone Parade, Riverstone, NSW, 2765
Contact Name: Nick Caltabiano, Luke Brevu

Project Name/No: N 6289
Purchase Order No: QUOTE: 322722
Results Required By: Next day / 3 days / Standard (Circle one)
Telephone: Nick's mobile: 0416 690 375 Luke's mobile: 0455 485 502
Facsimile:
Email Results: [Read Comment section]

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	NEO1	NEO2	NEO3	NEO4	Asbestos ID
BH1	13/8/22	1		✓		2		✓			✓
BH2	5	2		✓		2		✓			✓
BH3	5	3		✓		2		✓			✓

SGS EHS Sydney COC
SE234260

Relinquished By: EHSANZARE	Date/Time:	Received By:	Date/Time 13/07/22 5:30
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: (Yes)/ No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:

Comments: Email Reports and Invoices to all emails =>
① Nick@neoconsulting.com.au
② Luke@neoconsulting.com.au
③ admin@neoconsulting.com.au
④ Oskar@neoconsulting.com.au
⑤ Sarah@neoconsulting.com.au
⑥ Ehsan@neoconsulting.com.au

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	NEO CONSULTING PTY LTD
Address	PO BOX 279 RIVERSTONE NSW 2765
Telephone	0416 680 375
Facsimile	(Not specified)
Email	admin@neoconsulting.com.au
Project	**N6289**
Order Number	**N6289**
Samples	3

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE234260 R0**
Date Received	13/7/2022
Date Reported	20/7/2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin .

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Kamrul AHSAN
Senior Chemist

VOC's in Soil [AN433] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	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)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1

OP Pesticides in Soil [AN420] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 19/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Arsenic, As	mg/kg	1	**15**	**28**	**12**
Cadmium, Cd	mg/kg	0.3	**0.6**	**0.7**	**1.3**
Chromium, Cr	mg/kg	0.5	**17**	**36**	**15**
Copper, Cu	mg/kg	0.5	**20**	**55**	**37**
Lead, Pb	mg/kg	1	**140**	**160**	**140**
Nickel, Ni	mg/kg	0.5	**6.0**	**6.9**	**11**
Zinc, Zn	mg/kg	2	**380**	**300**	**300**

Mercury in Soil [AN312] Tested: 19/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Mercury	mg/kg	0.05	**0.10**	**0.11**	**0.11**

Moisture Content [AN002] Tested: 15/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
% Moisture	%w/w	1	**20.9**	**28.4**	**25.8**

Fibre Identification in soil [AN602] Tested: 18/7/2022

PARAMETER	UOM	LOR	BH1 SOIL - 13/7/2022 SE234260.001	BH2 SOIL - 13/7/2022 SE234260.002	BH3 SOIL - 13/7/2022 SE234260.003
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	NEO CONSULTING PTY LTD
Address	PO BOX 279 RIVERSTONE NSW 2765
Telephone	0416 680 375
Facsimile	(Not specified)
Email	admin@neoconsulting.com.au
Project	**N6289**
Order Number	**N6289**
Samples	3

LABORATORY DETAILS

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Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
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Email	au.environmental.sydney@sgs.com
SGS Reference	**SE234260 R0**
Date Received	13 Jul 2022
Date Reported	20 Jul 2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin .

SIGNATORIES

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE234260.001	BH1	Soil	251g Clay,Sand,Soil, Rocks	13 Jul 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE234260.002	BH2	Soil	231g Clay,Sand,Soil, Rocks	13 Jul 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE234260.003	BH3	Soil	220g Clay,Sand,Soil, Rocks	13 Jul 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy , including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

STATEMENT OF QA/QC PERFORMANCE

SE234260 R0

CLIENT DETAILS

Contact	Admin
Client	NEO CONSULTING PTY LTD
Address	PO BOX 279 RIVERSTONE NSW 2765
Telephone	0416 680 375
Facsimile	(Not specified)
Email	admin@neoconsulting.com.au
Project	**N6289**
Order Number	**N6289**
Samples	3

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE234260 R0**
Date Received	13 Jul 2022
Date Reported	

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	3 Soil
Date documentation received	13/7/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE234260 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253697	13 Jul 2022	13 Jul 2022	13 Jul 2023	18 Jul 2022	13 Jul 2023	20 Jul 2022
BH2	SE234260.002	LB253697	13 Jul 2022	13 Jul 2022	13 Jul 2023	18 Jul 2022	13 Jul 2023	20 Jul 2022
BH3	SE234260.003	LB253697	13 Jul 2022	13 Jul 2022	13 Jul 2023	18 Jul 2022	13 Jul 2023	20 Jul 2022

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253759	13 Jul 2022	13 Jul 2022	10 Aug 2022	19 Jul 2022	10 Aug 2022	20 Jul 2022
BH2	SE234260.002	LB253759	13 Jul 2022	13 Jul 2022	10 Aug 2022	19 Jul 2022	10 Aug 2022	20 Jul 2022
BH3	SE234260.003	LB253759	13 Jul 2022	13 Jul 2022	10 Aug 2022	19 Jul 2022	10 Aug 2022	20 Jul 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253538	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	20 Jul 2022	18 Jul 2022
BH2	SE234260.002	LB253538	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	20 Jul 2022	18 Jul 2022
BH3	SE234260.003	LB253538	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	20 Jul 2022	18 Jul 2022

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH2	SE234260.002	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH3	SE234260.003	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH2	SE234260.002	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH3	SE234260.003	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH2	SE234260.002	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022
BH3	SE234260.003	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	18 Jul 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253744	13 Jul 2022	13 Jul 2022	09 Jan 2023	19 Jul 2022	09 Jan 2023	20 Jul 2022
BH2	SE234260.002	LB253744	13 Jul 2022	13 Jul 2022	09 Jan 2023	19 Jul 2022	09 Jan 2023	20 Jul 2022
BH3	SE234260.003	LB253744	13 Jul 2022	13 Jul 2022	09 Jan 2023	19 Jul 2022	09 Jan 2023	20 Jul 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	19 Jul 2022
BH2	SE234260.002	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	19 Jul 2022
BH3	SE234260.003	LB253532	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	24 Aug 2022	19 Jul 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022
BH2	SE234260.002	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022
BH3	SE234260.003	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1	SE234260.001	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022
BH2	SE234260.002	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022
BH3	SE234260.003	LB253533	13 Jul 2022	13 Jul 2022	27 Jul 2022	15 Jul 2022	27 Jul 2022	18 Jul 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA
d14-p-terphenyl (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1	SE234260.001	%	70 - 130%	NA
	BH2	SE234260.002	%	70 - 130%	NA
	BH3	SE234260.003	%	70 - 130%	NA
d14-p-terphenyl (Surrogate)	BH1	SE234260.001	%	70 - 130%	NA
	BH2	SE234260.002	%	70 - 130%	NA
	BH3	SE234260.003	%	70 - 130%	NA
d5-nitrobenzene (Surrogate)	BH1	SE234260.001	%	70 - 130%	NA
	BH2	SE234260.002	%	70 - 130%	NA
	BH3	SE234260.003	%	70 - 130%	NA

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA
d4-1,2-dichloroethane (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA
d8-toluene (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA
d4-1,2-dichloroethane (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA
d8-toluene (Surrogate)	BH1	SE234260.001	%	60 - 130%	NA
	BH2	SE234260.002	%	60 - 130%	NA
	BH3	SE234260.003	%	60 - 130%	NA

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB253759.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB253532.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB253532.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	
		d14-p-terphenyl (Surrogate)	%	-	

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB253532.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB253532.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	
		2-fluorobiphenyl (Surrogate)	%	-	
		d14-p-terphenyl (Surrogate)	%	-	

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB253744.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB253532.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB253533.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	
		d8-toluene (Surrogate)	%	-	
		Bromofluorobenzene (Surrogate)	%	-	
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB253533.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %
SE234252.001	LB253759.014	Mercury	mg/kg	0.05	<0.05	0.06	149
SE234261.003	LB253759.024	Mercury	mg/kg	0.05	<0.05	0.06	123

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253538.018	% Moisture	%w/w	1	23.8	23.0	34	
SE234260.001	LB253538.011	% Moisture	%w/w	1	20.9	25.1	34	

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	
			Lindane	mg/kg	0.1	<0.1	<0.1	200	
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	
			Endrin	mg/kg	0.2	<0.2	<0.2	200	
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	
			Mirex	mg/kg	0.1	<0.1	<0.1	200	
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	
			Total OC VIC EPA	mg/kg	1	<1	<1	200	
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	30	
SE234260.002	LB253532.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	
			Lindane	mg/kg	0.1	<0.1	<0.1	200	
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	
			Endrin	mg/kg	0.2	<0.2	<0.2	200	
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234260.002	LB253532.014		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	
			Mirex	mg/kg	0.1	<0.1	<0.1	200	
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	
			Total OC VIC EPA	mg/kg	1	<1	<1	200	
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	
			Malathion	mg/kg	0.2	<0.2	<0.2	200	
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	
			Ethion	mg/kg	0.2	<0.2	<0.2	200	
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	
SE234260.002	LB253532.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	
			Malathion	mg/kg	0.2	<0.2	<0.2	200	
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	
			Ethion	mg/kg	0.2	<0.2	<0.2	200	
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	
SE234260.002	LB253532.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %
SE234252.001	LB253744.014	Arsenic, As	mg/kg	1	5	5	49
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200
		Chromium, Cr	mg/kg	0.5	17	16	33
		Copper, Cu	mg/kg	0.5	30	31	32
		Nickel, Ni	mg/kg	0.5	16	14	33
		Lead, Pb	mg/kg	1	28	33	33
		Zinc, Zn	mg/kg	2	120	180	31
SE234261.003	LB253744.024	Arsenic, As	mg/kg	1	8	9	42
		Cadmium, Cd	mg/kg	0.3	0.3	0.4	114
		Chromium, Cr	mg/kg	0.5	13	13	34
		Copper, Cu	mg/kg	0.5	23	36	32
		Nickel, Ni	mg/kg	0.5	4.8	5.3	40
		Lead, Pb	mg/kg	1	110	110	31
		Zinc, Zn	mg/kg	2	190	180	31

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020		TRH C10-C14	mg/kg	20	<20	<20	200	
			TRH C15-C28	mg/kg	45	<45	<45	200	
			TRH C29-C36	mg/kg	45	<45	<45	200	
			TRH C37-C40	mg/kg	100	<100	<100	200	
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253532.020	TRH F Bands	TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	
SE234260.002	LB253532.014		TRH C10-C14	mg/kg	20	<20	<20	200	
			TRH C15-C28	mg/kg	45	<45	<45	200	
			TRH C29-C36	mg/kg	45	<45	<45	200	
			TRH C37-C40	mg/kg	100	<100	<100	200	
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253533.020	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	11.6	50	
			d8-toluene (Surrogate)	mg/kg	-	9.8	11.1	50	
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	9.4	50	
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	
SE234260.002	LB253533.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.6	10.2	50	
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.8	50	
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.4	50	
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234259.004	LB253533.020		TRH C6-C10	mg/kg	25	<25	<25	200	
			TRH C6-C9	mg/kg	20	<20	<20	200	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	11.6	30	
			d8-toluene (Surrogate)	mg/kg	-	9.8	11.1	30	
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	9.4	30	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	
SE234260.002	LB253533.014		TRH C6-C10	mg/kg	25	<25	<25	200	
			TRH C6-C9	mg/kg	20	<20	<20	200	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.6	10.2	30	
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.8	30	
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.4	30	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253759.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	NA

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253532.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253532.002		Dichlorvos	mg/kg	0.5	1.9	2	60 - 140	
		Diazinon (Dimpylate)	mg/kg	0.5	1.9	2	60 - 140	
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.3	2	60 - 140	
		Ethion	mg/kg	0.2	2.0	2	60 - 140	
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253532.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	
		Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	
		Phenanthrene	mg/kg	0.1	4.7	4	60 - 140	
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	
		Fluoranthene	mg/kg	0.1	5.2	4	60 - 140	
		Pyrene	mg/kg	0.1	5.2	4	60 - 140	
		Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253744.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	NA
	Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	NA
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	NA
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	NA
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	NA
	Lead, Pb	mg/kg	1	87	89.9	80 - 120	NA
	Zinc, Zn	mg/kg	2	280	273	80 - 120	NA

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253532.002		TRH C10-C14	mg/kg	20	51	40	60 - 140	
		TRH C15-C28	mg/kg	45	52	40	60 - 140	
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	
	TRH F Bands	TRH >C10-C16	mg/kg	25	52	40	60 - 140	
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253533.002	Monocyclic	Benzene	mg/kg	0.1	4.5	5	60 - 140	
	Aromatic	Toluene	mg/kg	0.1	4.4	5	60 - 140	
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.8	5	60 - 140	
		m/p-xylene	mg/kg	0.2	9.3	10	60 - 140	
		o-xylene	mg/kg	0.1	5.1	5	60 - 140	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10	70 - 130	

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253533.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	10.7	10	70 - 130	
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.0	10	70 - 130	

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253533.002		TRH C6-C10	mg/kg	25	74	92.5	60 - 140	
		TRH C6-C9	mg/kg	20	65	80	60 - 140	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10	70 - 130	
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.0	10	70 - 130	
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	45	62.5	60 - 140	

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

id samples expressed on a dry weight basis.

criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found he
ps://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service .
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

APPENDIX D

Property Report and Relevant Information

Property Report

14 WINDERMERE AVENUE NORTHMEAD 2152

Property Details

Address:	14 WINDERMERE AVENUE NORTHMEAD 2152
Lot/Section /Plan No:	35/-/DP8884
Council:	CITY OF PARRAMATTA COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Parramatta (former The Hills) Local Environmental Plan 2012 (pub. 6-12-2019)
Land Zoning	R2 - Low Density Residential: (pub. 6-12-2019)
Height Of Building	9 m
Floor Space Ratio	NA
Minimum Lot Size	700 m²
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Local Provisions	30 km

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Excluded (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Local Aboriginal Land Council	DEERUBBIN
Regional Plan Boundary	Greater Sydney

14 Windermere Avenue, Northmead

Proposed Child Care Centre

DRAWING SCHEDULE:

GENERAL NOTES

1. CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS. DO NOT SCALE FROM DRAWINGS.
2. ALL BUILDING WORKS SHALL BE IN ACCORDANCE WITH THE RELEVANT NATIONAL CONSTRUCTION CODE (NCC), BUILDING CODE OF AUSTRALIA (BCA), RELEVANT AUSTRALIAN STANDARDS (AS), INCLUDING AMENDMENTS AND THE REQUIREMENTS OF COUNCIL AND PRIVATE CERTIFIERS (PC) AND OTHER AUTHORITIES HAVING JURISDICTION.
3. THE ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONSULTANT DRAWINGS AND REPORTS FOR COORDINATION AND INFORMATION.
4. THRESHOLDS AND DOORWAYS ARE FLUSH FOR WHEELCHAIR ACCESS IN ACCORDANCE WITH AS1428.1 DESIGN FOR ACCESS AND MOBILITY. REFER TO ACCESS CONSULTANT REPORT FOR DISPENSATIONS AND POTENTIAL PERFORMANCE SOLUTION PROPOSED.
5. DRAWINGS ARE NOT COORDINATED BY JANSSEN DESIGNS. CONDITIONS AND DOCUMENTS NEED TO BE COORDINATED AND CHECKED TO CONFIRM THEY SATISFY THE AUSTRALIAN STANDARDS, SPECIALIST DISABILITY ACCOMMODATION, DESIGN FOR DISABILITY ACCOMMODATION, DEVELOPMENT APPLICATION REQUIREMENTS, THE NCC, BCA CODES AND CONTROLS THAT APPLY TO THIS PROJECT. A COORDINATED CONSTRUCTION SET MAY VARY FROM THE PRODUCED DRAWINGS. JANSSEN DESIGNS DOES NOT ACCEPT ANY LIABILITY, DIRECT OR INDIRECT, FOR ANY LOSS LIABILITY OR LOSS SUFFERED OR INCURRED BY ANY PERSON OR THIRD PARTY PLACING ANY RELIANCE ON THE SERVICES OR DOCUMENTS OR ADVICE ARISING IN CONNECTION WITH THE SERVICE.
6. ALL STRUCTURAL ELEMENTS ARE SHOWN INDICATIVELY AND ARE TO BE CONFIRMED WITH THE DESIGN, DETAIL AND SPECIFICATION OF THE STRUCTURAL ENGINEER.
7. ALL STRUCTURAL FRAMING, LOADING, BEARING, RETAINING AND FIXING OF ELEMENTS ARE TO THE DESIGN, DETAIL AND SPECIFICATION OF THE STRUCTURAL ENGINEER.
8. ALL SERVICES ELEMENTS INCLUDING HYDRAULICS, ELECTRICAL, MECHANICAL, FIRE AND COMMUNICATION SERVICES SHOWN ARE INDICATIVE ONLY. REFER TO SERVICES CONSULTANT SEPARATE DOCUMENTATION AND SPECIFICATION FOR DETAILED DESIGN.
9. ANY DISCREPANCIES BETWEEN ARCHITECTURAL CONSULTANT DOCUMENTATION ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
10. ALL CONCRETE AND METALWORK ITEMS, SUCH AS SHOP DRAWINGS, TO BE ORGANISED AND REVIEWED BY THE CLIENT.
11. ALL SITE AND BUILDING GRID SET-OUT IS TO BE CONDUCTED AND VERIFIED BY A REGISTERED SURVEYOR BEFORE COMMENCEMENT OF CONSTRUCTION WITH ANY DISCREPANCIES NOTIFIED TO THE CLIENT FOR CLARIFICATION.

JANSSEN DESIGNS

info@janssendesigns.com.au | PO Box 41, Kenthurst 2156 | m: 0423 216 636

Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS

ISSUE:	DESCRIPTION	DATE:

Project Title:

Proposed Child Care Centre

DRAWING TITLE:

Cover Page

ADDRESS:

14 Windermere Avenue, Northmead

CLIENT DETAILS:

Barakat

LOCAL GOVERNMENT AREA:

Parramatta Council

Issue For:	Issue:		
DA	A		
Date:	**Scale:**	**Drawing #:**	**Project #:**
15.6.2022	1:100	A000	10176

COMPLIANCE TABLE

TOTAL SITE AREA	1,322.00m2

GROSS FLOOR AREA

LOWER GROUND FLOOR	XXXXm2
GROUND FLOOR	XXXXm2
FIRST FLOOR	XXXXm2
TOTAL GROSS FLOOR AREA	XXXXm2

MAX. REQUIRED FLOOR SPACE RATIO	661.00m2 | 0.5:1 (CHILD CARE DESIGN GUIDELINE)
PROPOSED FLOOR SPACE RATIO	XXXXm2 | XXXX - COMPLIES
MAX BUILDING HEIGHT	9M
PROPOSED BUILDING HEIGHT	XXXXM - COMPLIES
MIN. REQUIRED LANDSCAPED AREA	40% | 528.8m2
PROPOSED LANDSCAPED AREA	XXXXm2 | XX% - COMPLIES
MIN. REQUIRED DEEP SOIL AREA	30% | 396.6m2
PROPOSED DEEP SOIL AREA	XXXXm2 | XX% - REQUIRED

CHILDCARE

NUMBER OF CHILDREN:

0-2 YEARS - XX PLACES
2-3 YEARS - XX PLACES
3-6 YEARS - XX PLACES

TOTAL - XXX PLACES

NUMBER OF TEACHERS:

0-2 YEARS - XX TEACHERS @ 1:4 RATIO
2-3 YEARS - XX TEACHERS @ 1:5 RATIO
3-6 YEARS - XX TEACHERS @ 1:10 RATIO

INDOOR PLAY AREA:

0-2 YEARS - XXXm2 @ 3.25m2 / KID
2-3 YEARS - XXXm2 @ 3.25m2 / KID
3-6 YEARS - XXXm2 @ 3.25m2 / KID

OUTDOOR PLAY AREA:

TOTAL AREA - XXXm2 @ 7m2 / KID

PARKING

MINIMUM REQUIRED	1 CARSPACE TO 4 PLACES - XX.00
TOTAL PARKING SPACES PROPOSED	XX CARSPACES - COMPLIES
VISITOR SPACES	XX CARSPACES
STAFF SPACES	XX CARSPACES

ZONING - R2 LOW DENSITY RESIDENTIAL

FLOOR SPACE RATIO - 0.5:1 (AS PER CHILDCARE DESIGN GUIDELINE)

MAXIMUM BUILDING HEIGHT - 9M

HERITAGE - N/A

BUSHFIRE - N/A

JANSSEN DESIGNS
info@janssendesigns.com.au | PO Box 41, Kenthurst 2156 | m: 0423 216 636
Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS

ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Calculations and LEP Controls

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:	
DA	A	

Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

NOTE: ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH BCA, SAA & COUNCILS CONDITIONS **COPYRIGHT:**, DO NOT SCALE OFF ARCHITECTURAL DRAWINGS. THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOURS SELECTION FOR ADDITIONAL DETAILS ON APPLIANCES, PC ITEMS & SHOWER SIZES SHOWN ON PLAN ARE INSIDE HOB DIMENSIONS SHOWER SCREENS TO BE FITTED ON INSIDE OF HOB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES & STEEL BEAMS POSITION TO BE DETERMINED ON SITE. **USE FIGURED DIMENSIONS ONLY. DO NOT SCALE.** FINISHED GROUND LEVELS ON PLANS ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE DURING CONSTRUCTION & NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING POSITION OF ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURRET POSITION FRONT GARDEN TAP ON METER **ENERGY SMART DESIGN:** AAA RATED WATER CONSERVATION DEVICES INCLUDE RAINWATER TANKS SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS CISTERNS & COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREEN HOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES WITH FRONT LOADING WHERE POSSIBLE. OWNDER/BUILDER MUST READ ALL PLANS IN CONJUNCTION WITH THE ABSA & BASIX REPORT

DO NOT SCALE OFF ARCHITECTURAL DRAWINGS

SITE CONTEXT PLAN -
N.T.S.

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Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS

ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Site Context Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:	
DA	A	

Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

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DO NOT SCALE OFF ARCHITECTURAL DRAWINGS

APPROX. TRUE NORTH
Approx. 9° 30'
M.M (DP 8884)

LOT 472
DP 870423

LOT 36B
DP 103440

LOT 35
DP 8884
1322.0m²
(STATED BY DP 8884)
1324.4m²
(BY CALCULATION)

LOT 48
DP 8884

LOT 49
DP 8884

LOT 34
DP 8884

ADJ SHED 0.04 OVER

METAL SHED

PALING

FENCE

GRASS

CONCRETE

TALL TREES & VEGETATION

BALCONY

STEPS

BRICK BUILDING

PAVING

GARAGE

SHED

METAL

ONE STOREY CLAD HOUSE TILE ROOF No. 12

ONE STOREY BRICK HOUSE TILE ROOF No. 14

ONE STOREY BRICK HOUSE TILE ROOF No. 16

AWNING

PATIO

DIRT

WALL

BRICK

HEDGE

PATH

STREET
WINDERMERE

BM,NAIL IN TOP OF KERB RL:66.60 (AHD)

0°19'
65.835

180°19'
65.835

90°19'
20.115

270°19'
20.115

0°19'
60.19

90°19'
66.00

180°19'
66.00

DEMOLITION PLAN -
1:100 @ A1

JANSSEN DESIGNS
info@janssendesigns.com.au | PO Box 41, Kenthurst 2156 | m: 0423 216 636
Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS

ISSUE:	DESCRIPSION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Demolition Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:	Date:	Scale:	Drawing #:	Project #:
DA	A	15.6.2022	1:100	A000	10176

NOTE: ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH BCA, SAA & COUNCILS CONDITIONS **COPYRIGHT:** DO NOT SCALE OFF ARCHITECTURAL DRAWINGS. THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOURS SELECTION FOR ADDITIONAL DETAILS ON APPLIANCES, PC ITEMS & SHOWER SIZES SHOWN ON PLAN ARE INSIDE HOB DIMENSIONS SHOWER SCREENS TO BE FITTED ON INSIDE OF HOB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES & STEEL BEAMS POSITION TO BE DETERMINED ON SITE. **USE FIGURED DIMENSIONS ONLY. DO NOT SCALE.** FINISHED GROUND LEVELS ON PLANS ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE DURING CONSTRUCTION & NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING POSITION OF ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURRET POSITION FRONT GARDEN TAP ON METER **ENERGY SMART DESIGN:** AAA RATED WATER CONSERVATION DEVICES INCLUDE RAINWATER TANKS SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS CISTERNS & COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREEN HOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES WITH FRONT LOADING WHERE POSSIBLE. OWNER/BUILDER MUST READ ALL PLANS IN CONJUNCTION WITH THE ABSA & BASIX REPORT

DO NOT SCALE OFF ARCHITECTURAL DRAWINGS

LOT 472
DP 870423

LOT 36B
DP 103440

LOT 35
DP 8884
1322.0m²
(STATED)(BY DP 8884)
1324.4m²
(BY CALCULATION)

LOT 48
DP 8884

LOT 49
DP 8884

LOT 34
DP 8884

ADJ SHED 0.00 OVER

METAL SHED

PALING

FENCE

LAPPED

CAPPED

GRASS

PATHWAY
GRADIENT 1:20

AWNING

RECEPTION

ENTRY
FFL 66.000

LIFT

LAUNDRY

DIRECTORS OFFICE

STAFF ROOM

COOL ROOM

ACCESS WC

KITCHEN

CS 09 VISITOR
CS 08 VISITOR
CS 07 VISITOR
CS 06 VISITOR
CS 05 VISITOR
CS 04 VISITOR
CS 03 VISITOR
CS 02 VISITOR
CS 01 VISITOR

CS 11 STAFF
CS 10 VISITOR
CS 13 STAFF
CS 12 STAFF
CS 15 STAFF
CS 14 STAFF
CS 16 STAFF
CS 17 STAFF
CS 19 STAFF

2.5M CLEAR UNOBSTRUCTED HEAD HEIGHT TO THE ACCESSIBLE PARKING SPACE AND SHARED ZONE

PARKING AREA
20 CARSPACE = 80 PLACES

BIN STORE

PATH

RISE

ONE STOREY CLAD HOUSE TILE ROOF No. 12

ONE STOREY BRICK HOUSE TILE ROOF No. 16

SUMMER SET

WINTER SET

desirable summer breezes
cool in summer warm in winter

hot winds in summer cold winds in winter

predominantly strong winds

STREET

WINDERMERE

BM,NAIL IN TOP OF KERB RL:66.60 (AHD)

SITE ANALYSIS PLAN -
1:100 @ A1

KEY:

- CARPORT
- NUMBER OF STOREYS (1/2)
- OVERLOOKING
- PEDESTRAINS & VEHICLE ACCESS POINTS
- VIEWS
- SITE
- CONTOURS
- PRIVATE OPEN SPACE
- EXISTING TREES

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AMENDMENTS		
ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Site Analysis Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:		
DA	A		
Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

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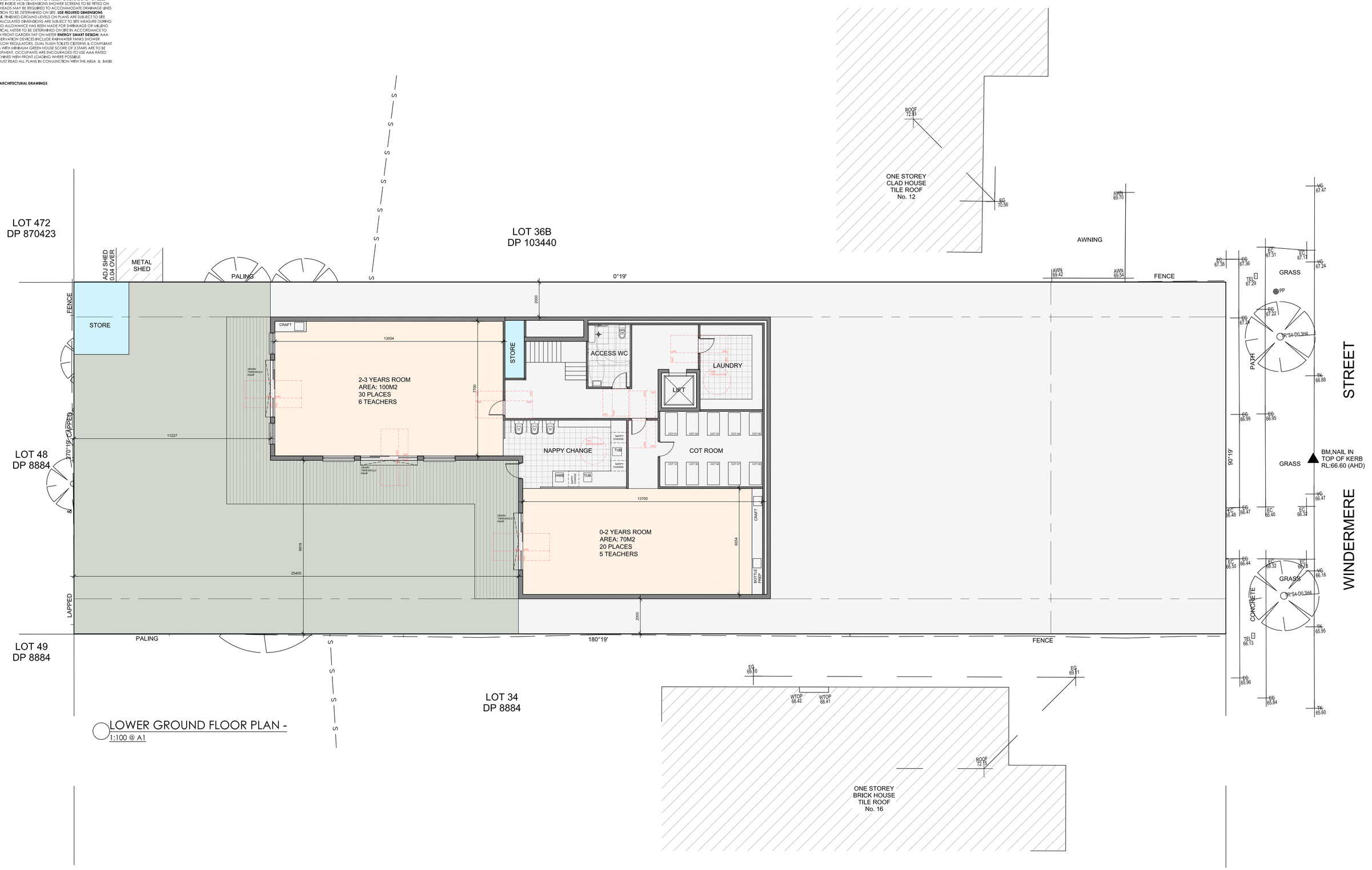

LOWER GROUND FLOOR PLAN -
1:100 @ A1

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Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS		
ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Lower Ground Floor Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:
DA	A

Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

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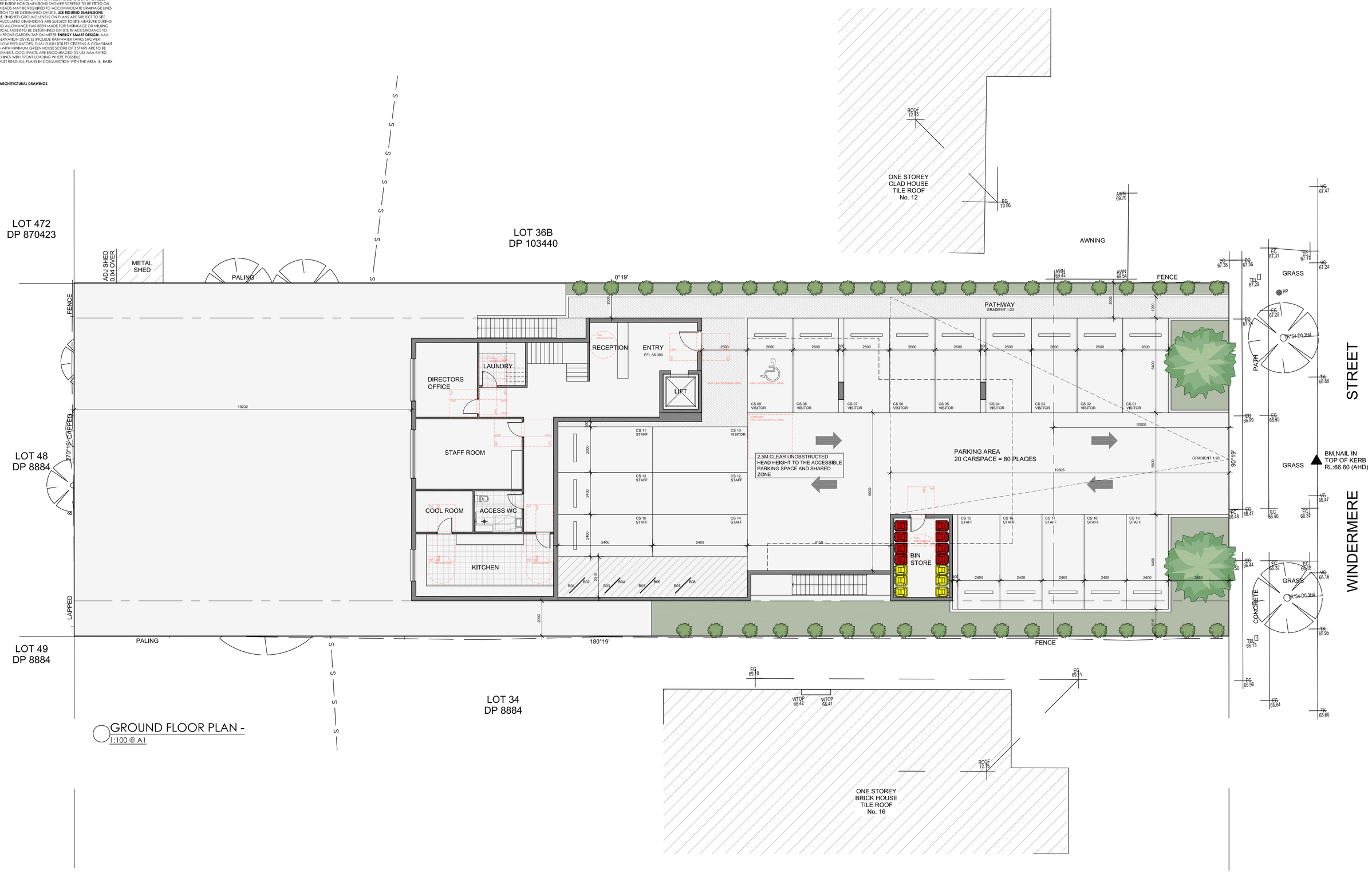

GROUND FLOOR PLAN -
1:100 @ A1

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AMENDMENTS		
ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
Ground Floor Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:		
DA	A		
Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

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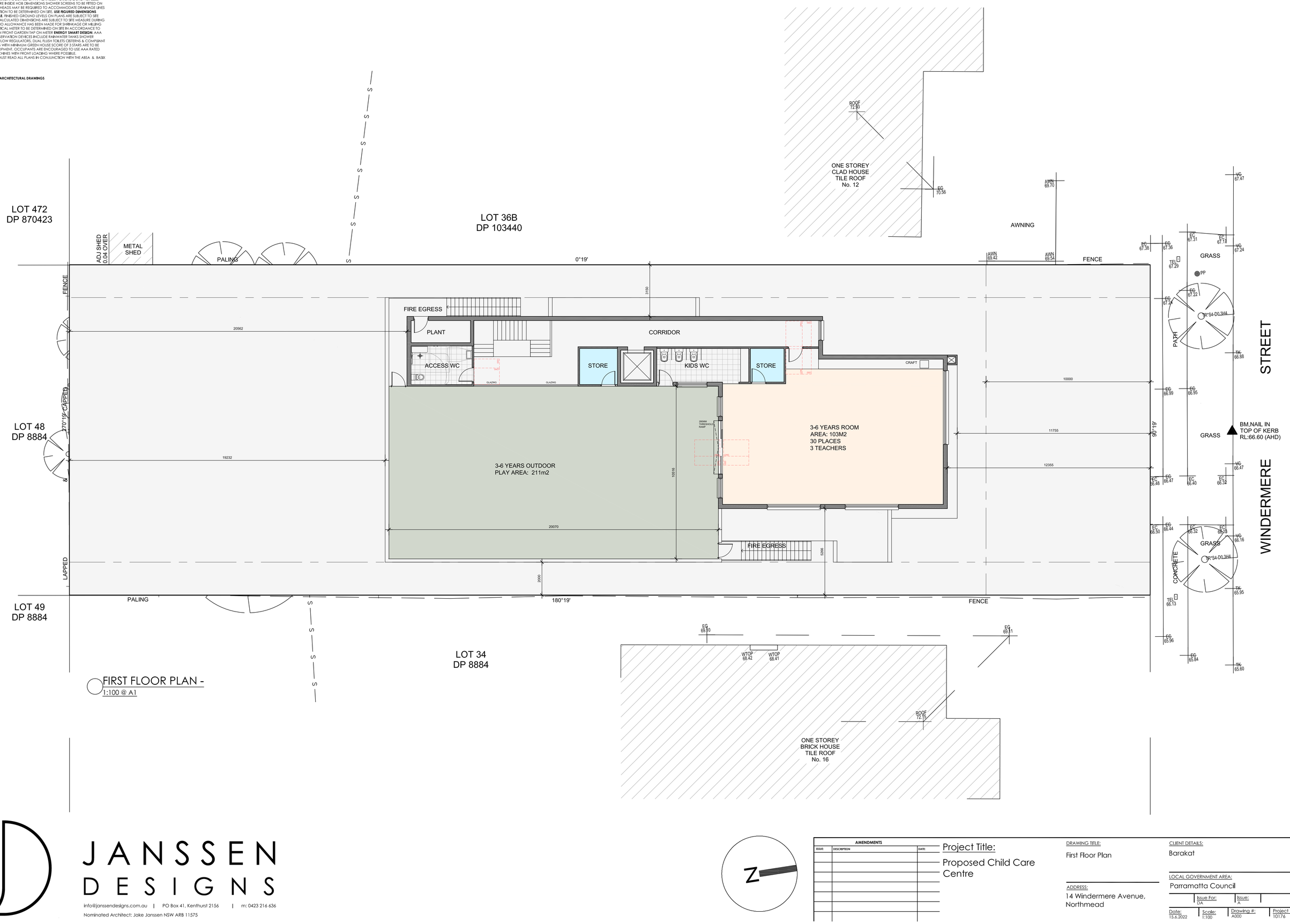

FIRST FLOOR PLAN -
1:100 @ A1

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Nominated Architect: Jake Janssen NSW ARB 11575

AMENDMENTS		
ISSUE:	DESCRIPTION	DATE:

Project Title:
Proposed Child Care Centre

DRAWING TITLE:
First Floor Plan

ADDRESS:
14 Windermere Avenue, Northmead

CLIENT DETAILS:
Barakat

LOCAL GOVERNMENT AREA:
Parramatta Council

Issue For:	Issue:	
DA	A	

Date:	Scale:	Drawing #:	Project #:
15.6.2022	1:100	A000	10176

Job No 32364283

Phone: 1100
www.1100.com.au

Caller Details

Contact:	Ehsan Zare	**Caller Id:**	3021080	**Phone:**	0405 016 670
Company:	Not supplied				
Address:	186 Riverstone Parade Riverstone NSW 2765	**Email:**	ehsan@neoconsulting.com.au		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: 14 Windermere Avenue

Working on Behalf of: Private

Enquiry Date:	**Start Date:**	**End Date:**
20/07/2022	21/07/2022	21/07/2022

Address:

14 Windermere Avenue
Northmead NSW 2152

Job Purpose:	**Onsite Activities:**
Design	Planning & Design

Location of Workplace:	**Location in Road:**
Private	

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:

Not supplied

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
213846181	Endeavour Energy	(02) 9853 4161	NOTIFIED
213846179	Jemena Gas North	1300 880 906	NOTIFIED
213846177	NBN Co NswAct	1800 687 626	NOTIFIED
213846180	Sydney Water	13 20 92	NOTIFIED
213846178	Telstra NSW Central	1800 653 935	NOTIFIED

END OF UTILITIES LIST

Lodge Your Free Enquiry Online – 24 Hours a Day, Seven Days a Week