

# **PRELIMINARY SITE INVESTIGATION (PSI) REPORT**

Client – Jonathan Odisho

Project Title – 1 & 3 Careel Head Road, Avalon Beach

Project Type – Mixed-Use Development

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## List of Abbreviations and Acronyms

AEC	Area of Environmental Concerns
ALS	Australian Laboratory Services
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CND	Central Business District
CEnvP	Certified Environmental Professional
CLM	Contaminated Land Management
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DA	Development Application
DEC	Environment and Conservation
DECCW	Department of Environment, Climate Change and Water
EIL	Ecological Investigation Levels (EIL)
ESL	Ecological Screening Levels
GW	Groundwater
HAZMAT	Hazardous Material
HCB	Hexachlorobenzene
HILs	Health Investigation Levels
HSL	Health Screening Levels
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LCS	Laboratory Control Standard
LOR	Level of Reporting
MW	Monitoring Well
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW LPI	New South Wales Land and Property Information
NSWEPA	New South Wales Environmental Protection Agency
QA/QC	Quality assurance and quality control
PAHs	Poly Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
POEO	Protection of the Environment Operations
PQL	Practical quantitation limits
PSI	Preliminary Site Assessment
TC	Tungsten Carbide
TCA	Trichloroethane
TCE	Trichloroethene
TP	Total phosphorus
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
VENM	Virgin Excavated Natural Material

## Units

ha	Hectare
km	Kilometre
m	Metre
m <sup>2</sup>	Square metres
mm	Millimetre
mg/kg	Milligram per kilogram

## 1. Executive Summary

CEC Geotechnical Pty Ltd has prepared this report on behalf of Jonathan Odisho to provide a Stage 1 Preliminary Site Investigation at 1 & 3 Careel Head Road, Avalon Beach. The works included a desktop study and limited soil sampling with a scope following the request from Jonathan Odisho to support the Development Application (DA) to be lodged with the Northern Beaches Council.

It is understood that the proposed development will comprise the demolition of existing structures and the construction of a two-storey mixed-use development including a childcare centre and a 1-Level basement parking area.

The aerial photographs indicated that the site and immediate surroundings showed no visible signs of market/agriculture gardening. During the site visit on the 19<sup>th</sup> of June 2024, no-tilled soils were observed. Therefore, the risk of contamination associated with market gardening on the site was assessed to be negligible. Additionally, aerial photographs indicated that the existing residential dwelling at 3 Careel Head Rd appeared to have been built before 1955. Therefore, the risk of contamination associated with asbestos on the site may present.

Furthermore, the aerial photographs showed a suspected service station and fuel canopy in 1982 at 1 Careel Head Rd. Additionally, the historical title research showed Mobil Oil Australia Limited as the owner of 1 Careel Head Road from 1969 to 1985. Therefore, the site may have been used for petrol station during this period. Therefore, the risk of contamination associated with a hydrocarbon on the site was assessed and may present.

Considering the identified COPCs. Five (5) discrete soil samples systematically across the Areas of Environmental Concerns (AECs) were collected and analysed for heavy metals, Total Petroleum/Recoverable Hydrocarbons (TPHs/TRHs), Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene (BTEXN), Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOCs), Phenols, and Asbestos. The laboratory results of all 5 collected soil samples indicated levels of heavy metals, TRH, BTEX, PAHs, VOCs, Phenols and asbestos, were below the adopted assessment criteria therefore the soil located in the tested areas showed no signs of contamination.

Therefore, we, CEC Geotechnical, conclude that the site is suitable for the proposed work and can be used for Mixed-use development.

However, the following recommendations are put forward:

- Prior to demolishing the properties, the client must carry out a HAZMAT assessment by a licensed assessor.
- Where hazardous building materials are identified and subsequently removed, an inspection of surface soils and clearance should be completed following demolition by a suitably qualified consultant.
- Should evidence of site contamination be identified at any stage during the development process, such as staining, odorous soils, or suspect asbestos, then an experienced site contamination consultant should be contacted immediately for advice.
- Any material to be removed off-site, ENM, MUST be classified for off-site disposal in accordance with the NSW EPA (2014) Waste Classification Guidelines.
- Any material being imported to the site for backfilling purposes should be assessed for potential contamination in accordance with the EPA guidelines.

## 2. Introduction

### 2.1 Background

CEC Geotechnical Pty Ltd (CEC Geotechnical) has prepared this report on behalf of Jonathan Odisho to provide a Stage 1 Preliminary Site Investigation (PSI) or Contamination Assessment at 1 & 3 Careel Head Road, Avalon Beach (herein referred to as “the site”). CEC Geotechnical understood that the development comprises the construction of mixed-use development, including a 1-level basement (**Appendix A**). Therefore, the purpose of this Preliminary Site Investigation (PSI) is to provide a preliminary assessment of the environmental conditions at the work zone of the site and to support a development application (DA) for a proposed development to be lodged with Northern Beaches Council. The location and features of the site are presented in **Figure 1 in Appendix B**. The PSI was prepared in accordance with contaminated land guidelines State Environmental Planning Policy (Resilience and Hazards, 2021-Chapter 4 Remediation of Land) under the Environmental Planning and Assessment Act 1979) and the National Environment Protection (Assessment of Site Contamination) Measure (NEPM 1999, as amended April 2013), managing land contamination planning guidelines SEPP55-remediation of land (1998).

### 2.2 Purpose and Objectives

The purpose of this PSI is to provide the client with preliminary advice on the contamination status of the site, based on the review of current and historically available information and advice on any consequent implications for its intended use. The objectives of the PSI are to:

- Identify the potential for past or present site activities or activities within the vicinity that may result in surface and subsurface impacts;
- Identify potential areas and contaminants of concern at the site if present;
- Identify potential receptors of concern and assess the potential for the protected beneficial uses of the land and groundwater to be impacted by site activities; and
- Assess the requirement, if any, for further environmental investigation to assess or make the site suitable with respect to the site contamination in relation to the proposed redevelopment.

### 2.3 Scope

CEC Geotechnical completed the following scope of work to meet the objectives of the PSI in accordance with the requirements of SEPP (Resilience and Hazards) 2021:

- A detailed site walkover inspection for potential contamination sources;
- Review of geological and soil profile maps;
- Review of land titles;
- Review of available hydrogeological information including nearby registered bores;
- Search for PFAS contamination using NSW EPA Government PFAS investigation Programme;
- A search through the NSW EPA/DECCW Land Information records to confirm that there are no statutory notices current on the site under the Unhealthy Building Land Act (1990) or the Contaminated Land Management Act (1997);
- Review of historical aerial photographs;
- Development of a preliminary conceptual site model (CSM);
- Soil boring and sampling – approximately five (5) soil samples were collected systematically across the work zone area of the site (including 1 soil sample for intra-lab duplicate, 1 for QA/QC and 1 for natural soil). One (1) borehole was drilled initially to depths of approximately a maximum depth of 0.5m. 1 BH was drilled to a maximum depth of 1.5 m.
- The recovered soil samples will be tested including the heavy metals, Total Recoverable Hydrocarbons (TRHs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOCs), Phenol and Asbestos;

- Data interpretation and reporting.

### 3. Status of Site and Environment

#### 3.1 Site Details

The Site is located within SP32656 and Lot B DP385973, with approximately 50 m frontage along Careel Head Road and 40m along Barrenjoey Road, Avalon Beach, NSW. Approximately 29.4km Northeast of Sydney CBD, NSW. The site location is presented in **Figure 1** in **Appendix B** with site details presented in **Table 1**. The Planning Certificate (**Appendix C**) shows that the site is a E1 - Local Centre.

**Table 1:** Summary of site details

Items	Details
Site Address	1 & 3 Careel Head Road, Avalon Beach
Approximate Site Area	1,806 m <sup>2</sup>
Title Details	SP32656, Lot B DP385973
Council Area	Northern Beaches Council

#### 3.2 Site Description

Using Six Maps, it was excerpted that the subject site is irregular in shape measuring approximately 50 m wide frontage along Careel Head Road and 40m along the Barrenjoey Road. It covers a total area of approximately 1,806 m<sup>2</sup>. A site visit was conducted on the 19<sup>th</sup> of June 2024 with photographs from the site contained in **Appendix D**. The field observations are summarised in **Table 2**.

**Table 2:** Subsurface conditions

Parameters	Details
Visible observations of soil contamination	No staining of the soil or odours was documented on the site. No visible evidence of contamination was observed ( <b>Photographs 1 - 10 in Appendix D</b> ).
Signs of plant stress	None observed.
Signs of Agriculture	Grass and natural vegetation surround the majority of 3 Careel Head Road ( <b>Photographs 1-8 in Appendix D</b> ).
Presence of drums, gas bottles, fill or waste materials	None observed.
Presence of Fill	None observed.
Presence of Building Equipment and Structures	None observed.
Existing Building Structure	None observed.
Evidence of groundwater contamination	This assessment did not include boreholes or intrusive investigations that may encounter groundwater. As such, no groundwater was observed.

At the time of the inspection, the site consisted of a single-storey shopping centre located at 1 Careel Head Rd, stretching from north to south, The site also consisted of a front parking area. The shopping centre consisted of several commercial shops such as a cafe, restaurants and a gym. At 3 Careel Head Rd, it comprises a fibro-residential dwelling, which is the lot immediately next to 1 Careel Head

Rd. It also included 3 metal sheds and a fibro garage in the backyard. A driveway access was located at the north end of the Careel Head Rd. (**Photographs 1-10 in Appendix D**).

### 3.3 Proposed Development

It is understood that the proposed development comprises the demolition of existing structures and the construction of a two-storey mixed-use development including a childcare centre and a 1-Level basement parking area.

### 3.4 Regional Geology

The 1:100,000 scale Geological Series Map of the Sydney Region indicates that the subject site is underlain by Newport Formation and Garie Formation (Rnn) of the Middle Triassic which belongs to the Narrabeen group comprising of interbedded shale, laminite and medium-grained quartz sandstone, as shown in **Figure 2 in Appendix B**.

### 3.5 Soil Types

Soil profile and soil map information were collected from the NSW Department of Planning, Industry and Environment. As shown in **Figure 3 in Appendix B**. The subject site belongs to the Erina Group: –moderately deep to deep (100–>200 cm) Yellow Podzolic Soils (Dy3.21) on sandstone crests and slopes; moderately deep (100–150 cm) Red Podzolic Soils (Dr2.21) on shale crests and steeper slopes; deep (>200 cm) Yellow Podzolic Soils (Dy3.21) on shale lower slopes; some deep (>200 cm) Yellow Earth (Gn2.21) on colluvial foot slopes.

### 3.6 Regional Hydrogeology

CEC Geotechnical did not observe or assess groundwater during the preparation of this PSI. A search was performed through the Groundwater Database on WaterNSW to identify wells in the vicinity of the site. No registered groundwater bore was located in the immediate surroundings; however, 2 registered groundwater bores were detected within 500 m of the site, records of the search are summarised in **Table 3**. The groundwater (GW) search map and bores information are given in **Figures 4-5 in Appendix B**. The depth of the groundwater is expected to be below 6.6 m from ground level, which may impact the level of excavation for development purposes.

**Table 3:** Regional Hydrogeology

Bore Identification	Bore Location (approximate distance in m)	Standing Water Level (m bgl)	Intended Purpose
GW106665	Southwest (349.2 m)	6.6	Domestic
GW102685	South (417.8 m)	1.0	Monitoring Bore

### 3.7 Acid Sulphate Soils

The NSW Planning Portal Spatial Viewer Acid Sulphate Soils Map indicates that the site is in an area of known acid sulphate soils, the plan indicated the site is within Class 2 and Class 5 ASS, as shown in **Figure 6 in Appendix B**.

### 3.8 EPA Records Search

#### 3.8.1 Contaminated Land Management Register (NSW EPA)

A search of the publicly available online NSW EPA CLM Act Record of Notices was completed on 8<sup>th</sup> July 2024. The results indicated that the site nor the suburb Avalon Beach were not subject to any

notifications under Section 58 of the Contaminated Land Management Act 1997, as shown in **Appendix E**. A search of the publicly available online was also completed on 8<sup>th</sup> July 2024 for EPA under Section 60 CLM Act 1997. The updated data up to 11<sup>th</sup> June 2024 of EPA database of properties that have been notified to the EPA under Section 60 CLM Act 1997 was searched. No record for 'regulation under CLM Act not required' was observed in Avalon Beach.

### 3.8.2 Search of the Protection of the Environment Operations Public Register (POEO) of Licensed and Delicensed Premises

A search of the publicly available online NSW EPA Record of Notices was completed on 8<sup>th</sup> July 2024. The results indicated that no records were retrieved for licensed, delicensed, penalty notices, and compliance premises located within the suburb of Avalon Beach, as shown in **Appendix F**.

### 3.8.3 PFAS

A search of the NSW EPA for PFAS investigation program provided the details of fifty (50) sites in NSW. Out of fifty (50) sites, no site was located in Bargo, as shown in **Appendix G**.

## 4. Site History

### 4.1 Historical Information Services

The historical information sources are listed in **Table 4** were obtained and reviewed.

**Table 4:** Historical and background information sources

Information	Source	Details
Title Search	Info Track	Title Search for the site
Aerial Photographs	NSW Land and Property Information (LPI) and Nearmaps	Aerial Photographs were obtained in 1955, 1965, 1982, 1994, 2009, 2019 and 2024.

### 4.2 Certificates of Title Review

The historical title (1924 to recent) search was undertaken for the site. The results of the search are provided in **Appendix H**. The historical research showed that 1 Careel Head Road was owned by Falkner Hope Bartlett from 1954 to 1969. This owner was identified as a Motor Garage Proprietor. Additionally, the summary also identified Mobil Oil Australia Limited as the owner of 1 Careel Head Road from 1969 to 1985.

### 4.3 Council Planning Certificates Review

A review of the Council Planning Certificates indicates that;

- The site is not affected by Mine Subsidence.
- The site is affected by Acid Sulphate Soil.
- The site is not significantly affected by Contaminated Land as part of the Contaminated Land Management Act (1997).
- The land is not identified on the Council's Bush Fire Prone Land Map.
- The land is not affected by Loose-Fill Asbestos Insulation.

Full planning certificates can be found in **Appendix C**.



#### 4.4 Review of Historical Council Records

CEC Geotechnical contacted the City of Liverpool Council for the requirement of Government Information Public Access (GIPA). The outcome of GIPA is awaited. Once the records of GIPA will be provided, it will be shared in updated report and will be presented in **Appendix I**.

#### 4.5 Historical Aerial Photographs Records

Four (4) historical aerial photographs dating back to 1955 were sourced from New South Wales Land and Property Information (LPI) and three (3) satellite image was sourced from Nearmaps and are presented in **Appendix J**. Summary of historical land uses and potential activities noticed at the site are summarised in **Table 5**.

**Table 5:** Summary of land use history and activities

Year	Information Source	Details
1955	Historical Aerial Photograph from NSW LPI	The site showed a dwelling and a garage suspected to be the existing residential dwelling at 3 Careel Head Rd. Additionally, at 1 Careel Head Road, it was observed that 2 dwellings or structures were present. No market gardening/agriculture operations were observed within the site or the surroundings. Finally, low residential development was observed in the surroundings of the site. The approximate location of the subject site is highlighted in <b>Figure 1 in Appendix J</b> .
1965	Historical Aerial Photograph from NSW LPI	No changes were observed to the site from the year 1969. Several number of cars were observed at 1 Careel Head Rd. The approximate location of the subject site is highlighted in <b>Figure 2 in Appendix J</b> .
1982	Historical Aerial Photograph from NSW LPI	At 1 Careel Head Rd, construction of 2 different structures were suspected to be a service station and a fuel canopy. Therefore, the 2 structures observed since 1955 may have been demolished between 1965 and 1982. No changes were observed in 3 Careel Head Rd. Additional residential developments were observed in the surroundings of the site. The approximate location of the subject site is highlighted in <b>Figure 3 in Appendix J</b> .
1994	Historical Aerial Photograph from NSW LPI	At 1 Careel Head Rd, construction of the existing commercial dwelling was observed. Therefore, the suspected petrol station observed in 1982 may have been demolished. No changes were observed in 3 Careel Head Rd. The approximate location of the subject site is highlighted in <b>Figure 4 in Appendix J</b> .
2009	Historical Aerial Photograph from Nearmaps	No changes were observed to the site from the year 1994. The approximate location of the subject site is highlighted in <b>Figure 6 in Appendix J</b> .
2019	Historical Aerial Photograph from Nearmaps	No changes were observed to the site from the year 2009. The approximate location of the subject site is highlighted in <b>Figure 6 in Appendix J</b> .
2024	Historical Aerial Photograph from Nearmaps	No changes were observed to the site from the year 2024. The approximate location of the subject site is highlighted in <b>Figure 6 in Appendix J</b> .



## 5. Preliminary Conceptual Site Model

This conceptual site model (CSM) has been developed to determine the presence of potential complete exposure pathways from potential contamination sources to susceptible receptors such as humans and/or the environment. It also assesses the potential migration of the contaminants of potential concern (COPC) relative to site-specific subsurface conditions with regard to their potential risk to human health and the environment. A CSM provides an assessment for identifying the following:

- Sources of contamination,
- COPC according to the site history and present site conditions,
- Potential pathways,
- Potential receptors and
- Potential exposure pathways.

**Table 6:** Preliminary conceptual site model

Potential Sources	Potential Exposure Pathways	Description
Site History/ Contaminant Source	Direct Contact Dermal Inhalation Ingestion	The aerial photographs indicated that the site and immediate surroundings showed no visible signs of market/agriculture gardening. During the site visit on the 19 <sup>th</sup> of June 2024, no tilled soils were observed ( <b>Photographs 1-10</b> in <b>Appendix D</b> ). Therefore, the risk of contamination associated with market gardening on the site was assessed to be negligible.  No heavy industrial operations were identified within the site. Therefore, the risk of contamination associated with industrial operations on the site was assessed to be negligible.
	Direct Contact Inhalation Dermal	The aerial photographs indicated that the existing residential dwelling at 3 Careel Head Rd appeared to have been built before 1955. Therefore, the risk of contamination associated with asbestos on the site may present ( <b>Photographs 1-7</b> in <b>Appendix J</b> ).
	Direct Contact Inhalation Dermal	Additionally, the aerial photographs showed a suspected service station and fuel canopy in 1982 at 1 Careel Head Rd ( <b>Photograph 3</b> in <b>Appendix J</b> ). Additionally, the historical title research showed Mobil Oil Australia Limited as the owner of 1 Careel Head Road from 1969 to 1985. In conclusion, the site may have been used as a petrol station during this period. Therefore, the risk of contamination associated with a hydrocarbon on the site was assessed and may present.
Current and Future Use of the Site		The site comprises a single-storey shopping centre located at 1 Careel Head Rd, stretching from north to south. Additionally, the site also comprises a fibro-residential dwelling at 3 Careel Head Rd, which is the lot immediately next to 1 Careel Head Rd. It is understood that the proposed development will comprise the demolition of existing structures and the construction of a two-storey mixed-use development including a childcare centre and a 1-Level basement parking area.
Site Geology		According to the interpretation of the sub-surface soil profile comprises podzolic soils. This material would provide a relatively low permeable layer and limit the migration of contamination into deeper soils or groundwater.
Site Hydrogeology		CEC Geotechnical did not assess groundwater during the preparation of this PSI. A search was performed through the Groundwater Database on WaterNSW to identify wells in the vicinity of the site. During the groundwater bore search, 2 bores were identified within a 500 m radius of the site. The depth of the groundwater is expected to be below 6.6 m, and it may not affect the excavation level.
COPCs within the Site		COPCs (asbestos, Heavy metals, PAH, BTEX, TRH, VOCs and Phenols)
COPCs from Neighboring sites		There was no visible evidence of potential contamination as no leachate or waste was entering the site during the site inspections.
Potential Human Receptors- Onsite	Direct Contact Dermal Inhalation Ingestion	Onsite potential human receptors include: <ul style="list-style-type: none"> <li>• Future construction workers, maintenance workers including builders, council workers etc.</li> <li>• Future staff, children and visitors</li> </ul>
Potential Environmental Receptors		Potential environmental receptors include: <ul style="list-style-type: none"> <li>• Groundwater</li> <li>• Ecology</li> </ul>

## 6. Results

### 6.1 Desktop Study

Considering the results shown in **Table 6**, Five (5) soil samples were collected systematically across the work zone area of the site (including 1 soil sample for intra-lab duplicate, 1 for QA/QC and 1 for natural soil). One (1) borehole was drilled initially to depths of approximately a maximum depth of 0.5m. 1 BH was drilled to a maximum depth of 1.5 m. The samples were analysed for heavy metals, BTEX, PAH, TRH, VOCs, Phenols and asbestos.

### 6.2 Soil Sampling Rationale

Sampling and analysis were undertaken in order to assess the nature, location, and likely distribution of contamination present at the subject site, and also the potential risk posed to human health or the environment. Sampling locations were adopted using a combined judgemental, systematic sampling strategy, areas of access and the presence of in-ground obstructions to cover the area of the site. COCPs were adopted using the site history information and the CSM with the rationale provided in **Table 6**. Two (2) sampling locations (BH1-BH2) were selected within the site as shown in **Figure 7 in Appendix B**. Soil sampling was carried out using a solid flight spiral hand auger. Soil samples were collected from the augers using a stainless-steel trowel. The trowel and auger were decontaminated between sampling events using the following procedure:

- Soil was removed from the trowel by scrubbing with a brush.
- The trowel was washed with phosphate free detergent in a bucket.
- The trowel was then rinsed in distilled water in another bucket.
- Steps 2 and 3 were repeated.
- The trowel was dried with a clean disposable towel.

Details of all collected soil samples are detailed in **Table 7**. All the soil samples were placed in 250g laboratory-prepared glass jars which were capped using Teflon-sealed screw caps and then placed in a chilled container. Soil samples were also collected for asbestos identification from each borehole. The samples were then forwarded to Eurofins Environmental Testing for analysis along with a chain of custody which was subsequently returned to confirm the receipt of all samples. Eurofins is accredited by the National Association of Testing Authorities (NATA) for the analyses carried out and is also accredited for compliance with ISO/IEC 17025. A summary of the subsurface conditions encountered is shown in **Table 7**.

**Table 7:** Depth of Sample Collection and Potential Source of Contamination

Unit	Soil Type	Intercept Depths (mm)
A	Concrete Slab	0-300
B	Clayey SAND SC: brown red dark grey	300-1,500
Sample	Depth of Sample Collection (mm)	Unit
BH1-0.5	500	B
BH2-0.5	500	B
BH2-1.5	1,500	B

### 6.3 Soil Sample Results

Test results of soil samples obtained from Eurofins Environmental Testing, Report Reference number 1110582-S, 1110582-W, 1110582-AID (**Table 8**). The detailed results are presented in **Appendix K**.

The contaminant threshold values used in this investigation have been obtained from the National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013), Health

Investigation Levels (HIL) and Health Screening Levels (HSLs) for the exposure setting; 'standard residential(A)'; 'standard residential with garden/accessible soil' ('A') also includes childcare centres, preschools and primary. This was selected considering that the proposed mixed-use development will comprise a childcare on the first floor as seen in **Appendix C**.

The laboratory results detailed in **Table 8**, indicated levels of heavy metals (arsenic, cadmium, chromium, copper, lead, mercury nickel and zinc), TRH, BTEX, PAHs, VOCs, Phenols and Asbestos all of which were below the adopted assessment criteria.

Based on the results of the field QA and field and laboratory QC, it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment. CEC (Geotechnical) acknowledges that the field QA and field and laboratory QC comply with best practice, and the data set is compliant with NATA laboratory methodologies as required under ASC NEPM 2013, Schedule B3. The results of intra-lab duplicate samples (BH2-0.5-2) performed by Eurofins were comparable.

**Table 8:** Laboratory Test Results and Site Assessment Criteria (mg/kg)

Location/SAC	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAH	Carcinogenic PAH	Benzo(a)pyrene	Benzene	Toluene	Ethyl-Benzene	Xylenes	TRH – C6-C10	TRH >C10-C16	TRH > C16-C34	TRH > C34-C40	Phenol	Pentachlorophenol	Cresol	TCE	1,1,1-TCA	Cis-1,2-dichlorethene	Vinyl chloride	Asbestos
BH1-0.5	5.9	< 0.4	< 5	5.2	17	< 0.1	< 5	28	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3	<20	<50	<100	<100	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	No
BH2-0.5-1	2.8	< 0.4	7.3	< 5	15	< 0.1	< 5	< 5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3	<20	<50	<100	<100	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	No
BH2-1.5	3.9	< 0.4	8.3	< 5	9.9	< 0.1	< 5	< 5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3	<20	<50	<100	<100	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	No
HIL A	100	20	100	7,000	300	200	400	8,000	300	3	-	-	-	-	-	-	-	-	-	3,000	100	400	2	260	2	0.3	-
HSL	-	-	-	-	-	-	-	-	-	-	-	0.7	460	NL	110	50	270	-	-	-	-	-	-	-	-	-	-
EIL	100	-	410	210	1,100	-	170	480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESL	-	-	-	-	-	-	-	-	105	125	1.4	65	105	125	45	180	120	1,300	5,600	-	-	-	-	-	-	-	-
BH2-0.5-2	13	< 0.4	28	5	16	< 0.1	6.2	13	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3	<20	<50	<100	<100	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	No
RPD %	129.1	-	117	-	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RBW	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## 7. Conclusions and Recommendations

CEC Geotechnical Pty Ltd has prepared this report on behalf of Jonathan Odisho to provide a Stage 1 Preliminary Site Investigation at 1 & 3 Careel Head Road, Avalon Beach. The works included a desktop study and limited soil sampling with a scope following the request from Jonathan Odisho to support the Development Application (DA) to be lodged with the Northern Beaches Council.

It is understood that the proposed development will comprise the demolition of existing structures and the construction of a two-storey mixed-use development including a childcare centre and a 1-Level basement parking area.

The aerial photographs indicated that the site and immediate surroundings showed no visible signs of market/agriculture gardening. During the site visit on the 19<sup>th</sup> of June 2024, no-tilled soils were observed. Therefore, the risk of contamination associated with market gardening on the site was assessed to be negligible. Additionally, aerial photographs indicated that the existing residential dwelling at 3 Careel Head Rd appeared to have been built before 1955. Therefore, the risk of contamination associated with asbestos on the site may present.

Furthermore, the aerial photographs showed a suspected service station and fuel canopy in 1982 at 1 Careel Head Rd. Additionally, the historical title research showed Mobil Oil Australia Limited as the owner of 1 Careel Head Road from 1969 to 1985. Therefore, the site may have been used for petrol station during this period. Therefore, the risk of contamination associated with a hydrocarbon on the site was assessed and may present.

Considering the identified COPCs. Five (5) discrete soil samples systematically across the Areas of Environmental Concerns (AECs) were collected and analysed for heavy metals, Total Petroleum/Recoverable Hydrocarbons (TPHs/TRHs), Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene (BTEXN), Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOCs), Phenols, and Asbestos. The laboratory results of all 5 collected soil samples indicated levels of heavy metals, TRH, BTEX, PAHs, VOCs, Phenols and asbestos, were below the adopted assessment criteria therefore the soil located in the tested areas showed no signs of contamination.

Therefore, we, CEC Geotechnical, conclude that the site is suitable for the proposed work and can be used for Mixed-use development.

However, the following recommendations are put forward:

- Prior to demolishing the properties, the client must carry out a HAZMAT assessment by a licensed assessor.
- Where hazardous building materials are identified and subsequently removed, an inspection of surface soils and clearance should be completed following demolition by a suitably qualified consultant.
- Should evidence of site contamination be identified at any stage during the development process, such as staining, odorous soils, or suspect asbestos, then an experienced site contamination consultant should be contacted immediately for advice.
- Any material to be removed off-site, ENM, MUST be classified for off-site disposal in accordance with the NSW EPA (2014) Waste Classification Guidelines.
- Any material being imported to the site for backfilling purposes should be assessed for potential contamination in accordance with the EPA guidelines.

## 8. Conditions of the Recommendation

All work conducted, and report produced by CEC Geotechnical is for a particular Client's objective and are based on a specific scope, conditions and limitations were discussed in the proposal prepared by the CEC Geotechnical and agreed by the Client. Information and/or report(s) prepared by CEC Geotechnical may therefore not be suitable for any use other than the intended objective of the project.

The results of this assessment are based on the site conditions identified at the time of the site inspection/ investigation desktop study and validation sampling (if conducted). The assessment may not identify contamination occurring in all areas of the site, or there may be special conditions pertaining to the site which have not been revealed during the investigation and not documented in the report. Subsurface conditions may vary considerably away from the sample locations where information has been obtained. Moreover, CEC Geotechnical 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.

The report and/or any information produced by CEC Geotechnical should not be reproduced and/or presented prior permission from CEC Geotechnical.

It has been assumed that data supplied by the client, or any other external data/reports have been referred by CEC Geotechnical. It is also assumed that referred information is correct unless otherwise stated. CEC Geotechnical has no obligation for incomplete or inaccurate data provided by any external source(s).

For and on behalf of CEC Geotechnical Pty Ltd.

Diego Espinosa Moreno



Environmental Engineer  
B.E (Chemical), M.E. (Environmental)

Zuhaib Siddiqui



Senior Environmental Engineer  
B.E. (Civil), M.E.(Environmental), PhD (Environmental)  
CEnvP Certificate#1574

## References

- Assessment Levels of Soil, Contaminated Sites Management Series, Assessment Levels for Soil, Sediment and Water (2010), Department of Environment and Conservation, Government of Western Australia
- Consultant Reporting on Contaminated Land, Contaminated Land Guidelines (2020), NSW EPA
- Protection of the Environments Operations Act (1997), NSW EPA
- DEC (2006) Guidelines for the NSW Site Auditor Scheme (2nd Edition), NSW Dept. of Environment and Conservation (currently the OEH);
- Department of Urban Affairs and Planning – EPA (1998) “Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land”.
- NEPM (2013) Schedule B(2) Guideline on Site Characterisation, National Environmental Protection (Assessment of Site Contamination) Measure 1999 - Amendment 2013; Contaminated Land Management Act (1997)
- NSW EPA. (2022). Sampling Design Part1-Application: Contaminated Land Guidelines. NSW Environment Protection Authority.
- State Environmental Planning Policy (Resilience and Hazards, 2021-Chapter 4 Remediation of Land), under the Environmental Planning and Assessment Act 1979.
- HAZMAT Report (2023). ECON Environmental Pty Ltd for the work zone area located at 197 Delhi Road, North Ryde, Ref. 23-1501 dated 21/07/2023



## **APPENDIX A – Drawings For The Proposed Work**

DRAWING LIST			
	DRAWING No.	DRAWING NAME	REVISION
DA	1001	DRAWING LIST	P2
DA	1002	COMPLIANCE TABLE	
DA	1005	SITE PLAN	
DA	1006	DEMOLITION PLAN	
DA	1100	BASEMENT 1 FLOOR PLAN	P3
DA	1101	GROUND FLOOR PLAN	P3
DA	1102	LEVEL 01 FLOOR PLAN	P3
DA	1103	ROOF PLAN	P3
DA	2001	BUILDING ELEVATION NORTH, EAST	P1
DA	2002	BUILDING ELEVATION - SOUTH, WEST	P1
DA	2003	BUILDING ELEVATION SOUTH, EAST	P1
DA	3001	SECTION A	P1
DA	3002	SECTION B	P1
DA	4001	RAMP SECTION	
DA	6001	SHADOW DIAGRAMS	
DA	6011	SOLAR ACCESS STUDY	
DA	6028	SOLAR SCHEDULE	
DA	7001	GFA CALCULATION	
DA	7011	SOLAR ACCESS PLAN	
DA	7021	VENTILATION DIAGRAMS	
DA	7031	3D VIEW 1	
DA	7032	3D VIEW 2	
DA	7033	3D VIEW 3 - CAREEL HEAD ROAD	
DA	7041	FINISHES SCHEDULE	
DA	7042	SCHEMATIC	
DA	7043	WINDOW SCHEDULE	
DA	7051	DEEP SOIL ZONE	
DA	7061	COMMUNUAL OPEN SPACE DIAGRAM	
DA	7062	EVACUATION DIAGRAM	P1
DA	7071	INTERNAL UNIT STORAGE	
DA	7081	CUT & FILL DIAGRAM	
DA	7091	LEP HEIGHT BLANKET	
DA	8001	DETAIL SECTION - SETBACK	
DA	8003	DETAIL SECTION - FIRE STAIRS	
DA	x5001	PRE + POST ADAPTABLE UNIT LAYOUT	

# DESIGN INTENT STATEMENT

Situated in the picturesque locale of Avalon Beach, our mixed-use development endeavors to redefine coastal living by seamlessly integrating community-centric amenities with modern design sensibilities. At its heart, the project features a dynamic blend of outdoor and indoor childcare facilities, alongside retail spaces and Dan Murphy’s occupying the ground floor.

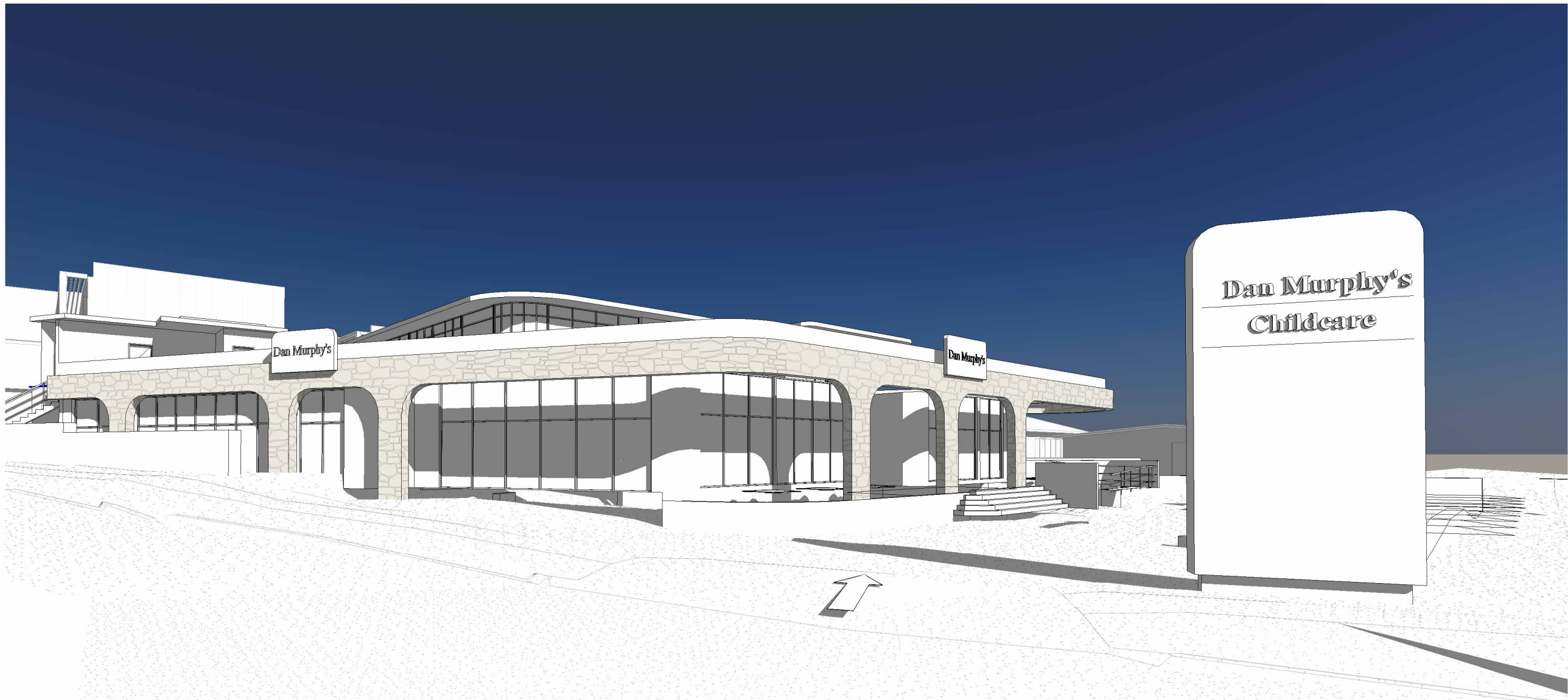
To address parking needs efficiently, the development encompasses both basement and ground-level parking facilities, ensuring convenience for residents and visitors alike.

Architecturally, the project embraces a distinctive aesthetic characterized by a harmonious blend of curved facades, sweeping arches, and angular features. Contemporary tones and carefully curated color palettes imbue the structure with a sense of sophistication, while materials such as white brick and concrete contribute to its timeless appeal.

The design ethos of the development extends beyond mere aesthetics to prioritize functionality and sustainability. Each aspect of the design is meticulously crafted to optimize natural light, ventilation, and spatial efficiency, enhancing the overall living experience for residents.

Landscaping elements play a pivotal role in softening the built environment and fostering a connection with nature. Green spaces are strategically integrated throughout the development, providing residents with serene outdoor retreats and contributing to the overall ecological sensitivity of the project.

Our vision for the Avalon Beach Mixed-Use Development is to create a vibrant and inclusive community hub that not only meets the needs of its residents but also enriches the fabric of the surrounding neighborhood. By blending innovative design with a commitment to sustainability, we aim to set a new benchmark for contemporary coastal living in this idyllic setting.



**References**

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P2 28.06.2024 Revision 3

P1 28.05.2024 Revision 1

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**PROPOSED MIXED USE DEVELOPMENT**

1 & 3 Careel Head Road Avalon Beach

Drawing Title

**DRAWING LIST**

Project Stage

**DA Submission**

Job no.

Drawing no.

Rev.

J23587D

DA1001

P2

Drawn by

Checked by

Approved by

Date

GH

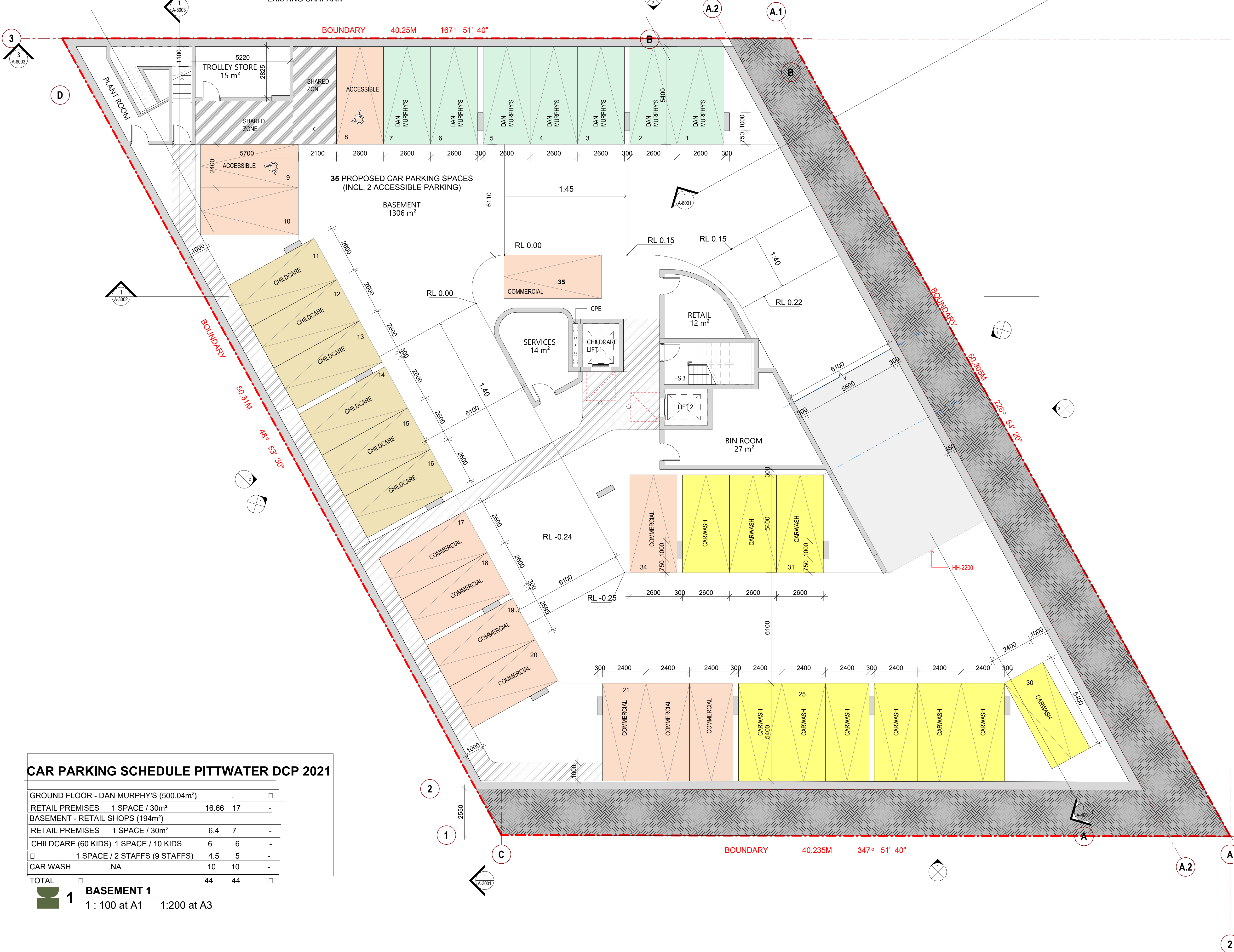
RJ

-

JUN. 2024



NEIGHBOURING PROPERTIES  
5-7 CAREEL HEAD ROAD  
EXISTING CARPARK



CAR PARKING SCHEDULE PITTWATER DCP 2021

GROUND FLOOR - DAN MURPHY'S (500.04m <sup>2</sup> )					
RETAIL PREMISES	1 SPACE / 30m <sup>2</sup>	16.66	17	-	
BASEMENT - RETAIL SHOPS (194m <sup>2</sup> )					
RETAIL PREMISES	1 SPACE / 30m <sup>2</sup>	6.4	7	-	
CHILDCARE (60 KIDS)	1 SPACE / 10 KIDS	6	6	-	
	1 SPACE / 2 STAFFS (9 STAFFS)	4.5	5	-	
CAR WASH	NA	10	10	-	
TOTAL		44	44		

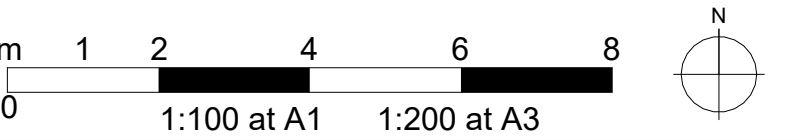
**BASEMENT 1**  
1 : 100 at A1 1 : 200 at A3

**References**  
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PARKING LEGEND

	CHILDCARE
	COMMERCIAL
	DAN MURPHY'S
	CAR WASH

P3	28.06.2024	Revision 3
P2	05.06.2024	Revision 2
P1	28.05.2024	Revision 1



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Project  
**PROPOSED MIXED USE DEVELOPMENT**

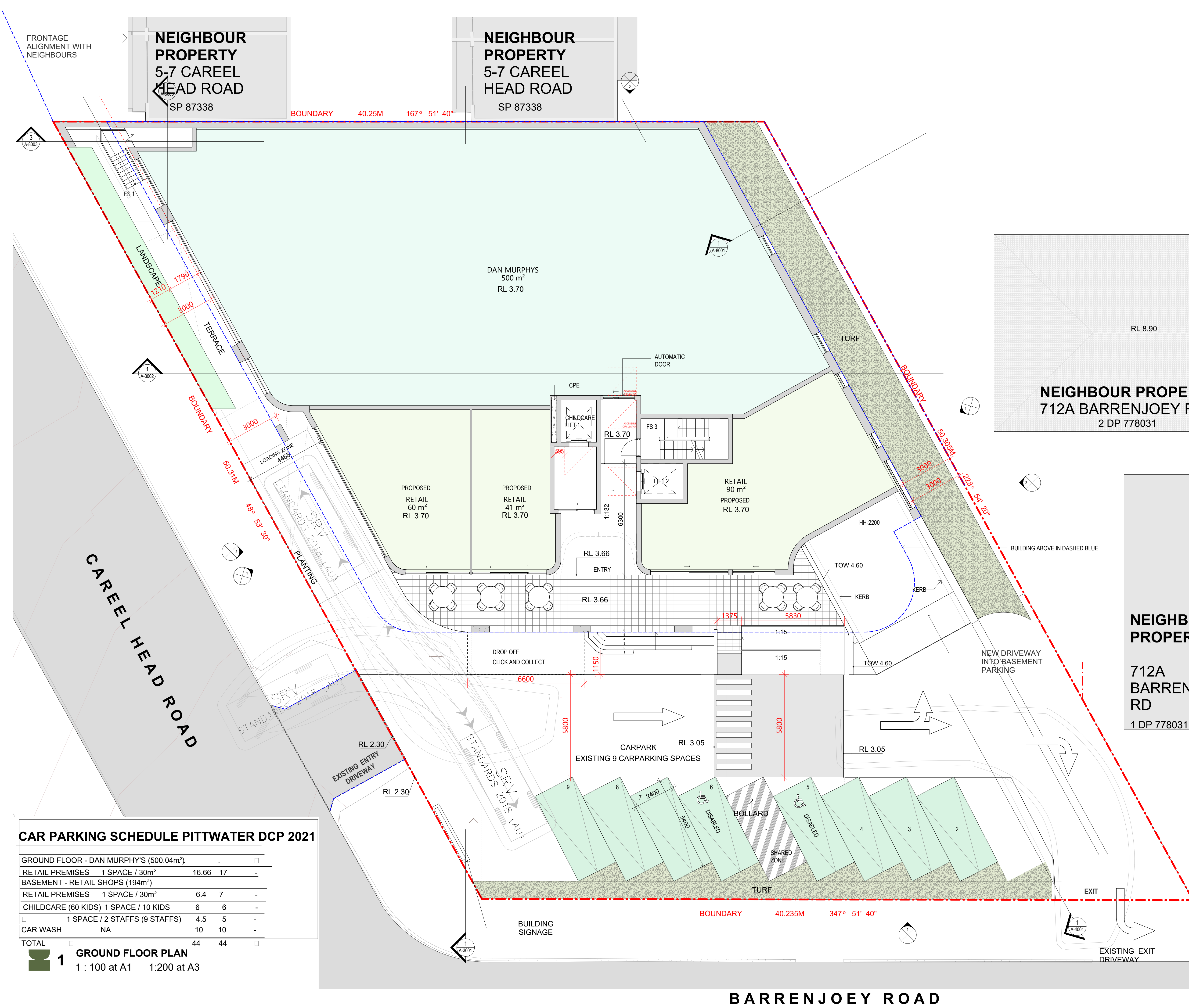
1 & 3 Careel Head Road Avalon Beach

Drawing Title

**BASEMENT 1 FLOOR PLAN**

Project Stage			
<b>DA Submission</b>			
Job no.	Drawing no.	Rev.	
J23587D	DA1100	P3	
Drawn by	Checked by	Approved by	Date
GH	RJ	-	JUN. 2024





CAR PARKING SCHEDULE PITTWATER DCP 2021

GROUND FLOOR - DAN MURPHY'S (500.04m <sup>2</sup> )					
RETAIL PREMISES	1 SPACE / 30m <sup>2</sup>	16.66	17	-	
BASEMENT - RETAIL SHOPS (194m <sup>2</sup> )					
RETAIL PREMISES	1 SPACE / 30m <sup>2</sup>	6.4	7	-	
CHILDCARE (60 KIDS)	1 SPACE / 10 KIDS	6	6	-	
1 SPACE / 2 STAFFS (9 STAFFS)		4.5	5	-	
CAR WASH	NA	10	10	-	
TOTAL		44	44		

**1 GROUND FLOOR PLAN**  
1 : 100 at A1 1:200 at A3

**References**  
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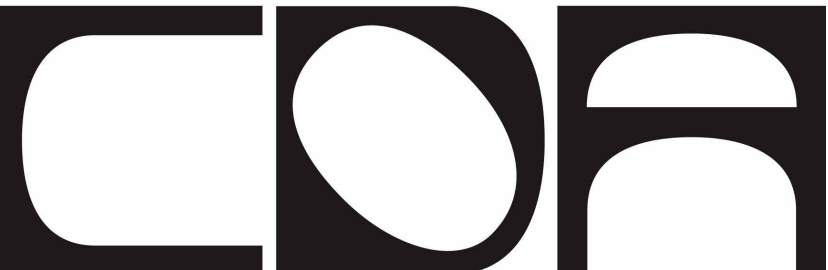
Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327

PARKING LEGEND

	CHILDCARE
	COMMERCIAL
	DAN MURPHY'S
	CAR WASH

P3 28.06.2024 Revision 3  
P2 05.06.2024 Revision 2  
P1 28.05.2024 Revision 1

m 1 2 4 6 8  
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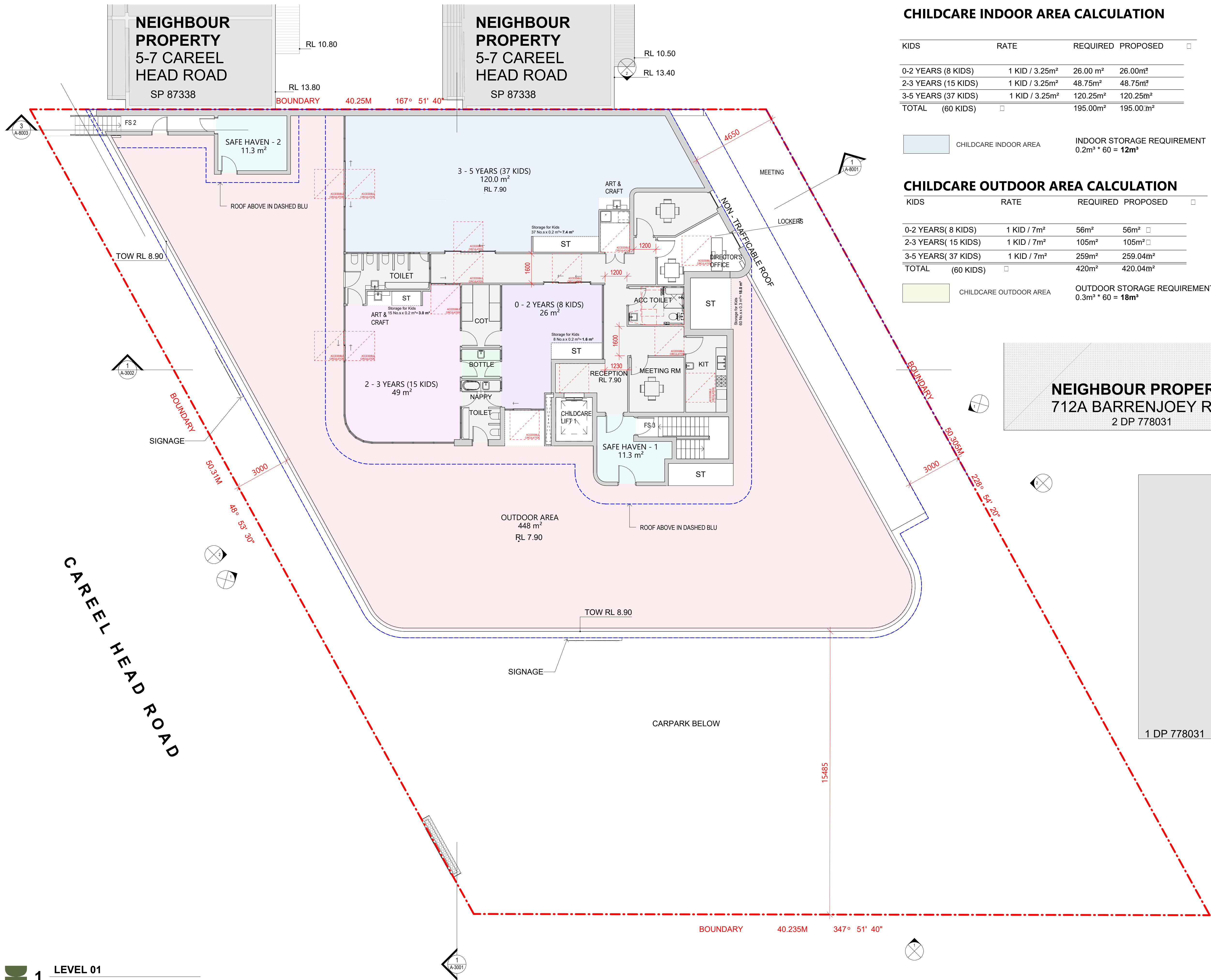
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Project  
**PROPOSED MIXED USE DEVELOPMENT**  
1 & 3 Careel Head Road Avalon Beach  
Drawing Title  
**GROUND FLOOR PLAN**

Project Stage  
**DA Submission**  
Job no. Drawing no. Rev.  
**J23587D DA1101 P3**  
Drawn by Checked by Approved by Date  
GH RJ - JUN. 2024





### CHILDCARE INDOOR AREA CALCULATION

KIDS	RATE	REQUIRED	PROPOSED	
0-2 YEARS (8 KIDS)	1 KID / 3.25m²	26.00 m²	26.00m²	
2-3 YEARS (15 KIDS)	1 KID / 3.25m²	48.75m²	48.75m²	
3-5 YEARS (37 KIDS)	1 KID / 3.25m²	120.25m²	120.25m²	
TOTAL (60 KIDS)		195.00m²	195.00m²	

CHILDCARE INDOOR AREA INDOOR STORAGE REQUIREMENT  
0.2m³ \* 60 = **12m³**

### CHILDCARE OUTDOOR AREA CALCULATION

KIDS	RATE	REQUIRED	PROPOSED	
0-2 YEARS( 8 KIDS)	1 KID / 7m²	56m²	56m²	
2-3 YEARS( 15 KIDS)	1 KID / 7m²	105m²	105m²	
3-5 YEARS( 37 KIDS)	1 KID / 7m²	259m²	259.04m²	
TOTAL (60 KIDS)		420m²	420.04m²	

CHILDCARE OUTDOOR AREA OUTDOOR STORAGE REQUIREMENT  
0.3m³ \* 60 = **18m³**

#### References

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2 DP 778031

P3 28.06.2024 Revision 3  
P2 05.06.2024 Revision 2  
P1 28.05.2024 Revision 1

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### PROPOSED MIXED USE DEVELOPMENT

1 & 3 Careel Head Road Avalon Beach

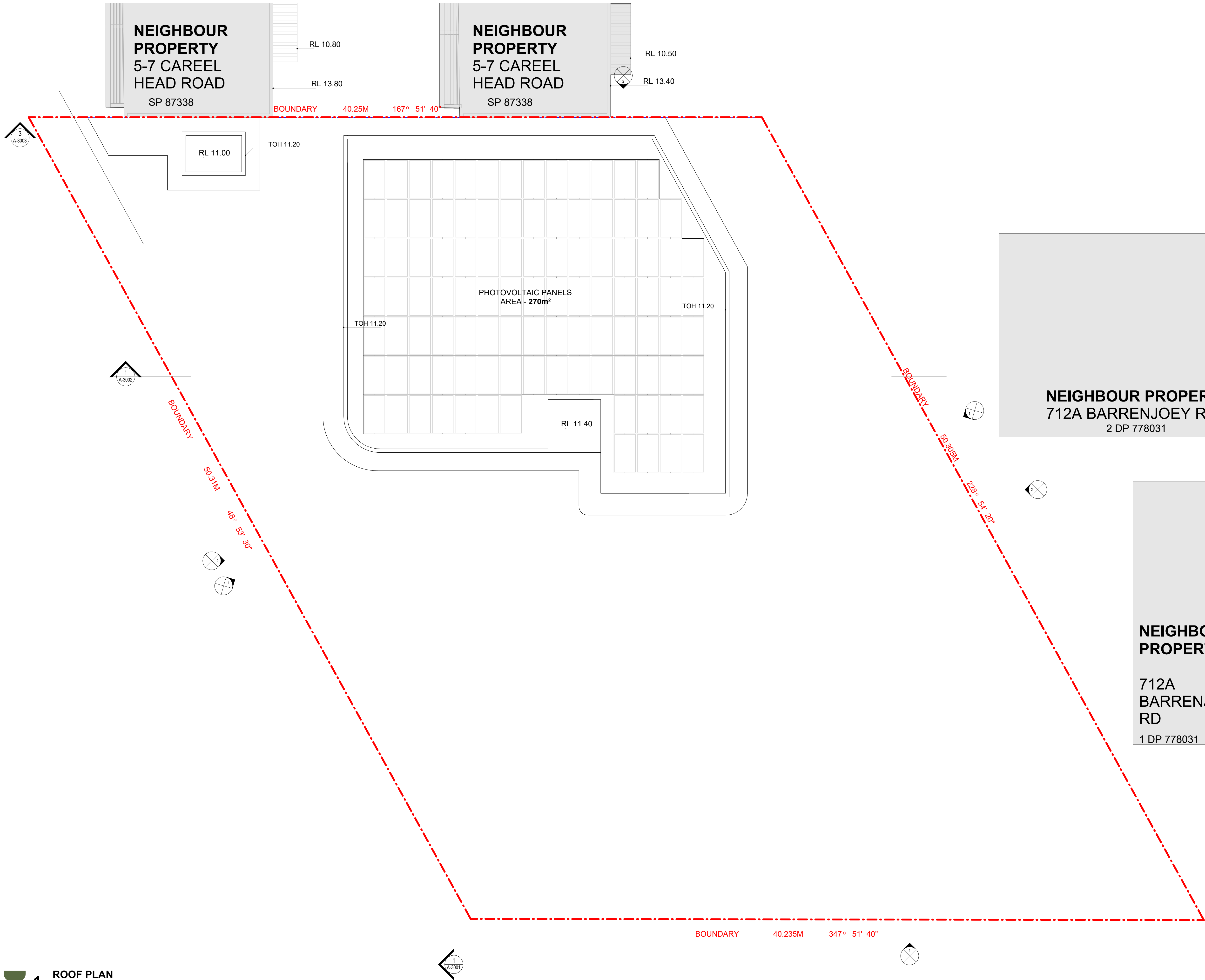
Drawing Title

### LEVEL 01 FLOOR PLAN

Project Stage

### DA Submission

Job no. Drawing no. Rev.  
J23587D DA1102 P3  
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GH RJ - JUN. 2024



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**Notes**

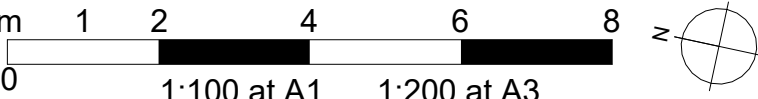
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P3	28.06.2024	Revision 3
P2	05.06.2024	Revision 2
P1	28.05.2024	Revision 1



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**PROPOSED MIXED USE  
DEVELOPMENT**

1 & 3 Careel Head Road Avalon Beach

Drawing Title

**ROOF PLAN**

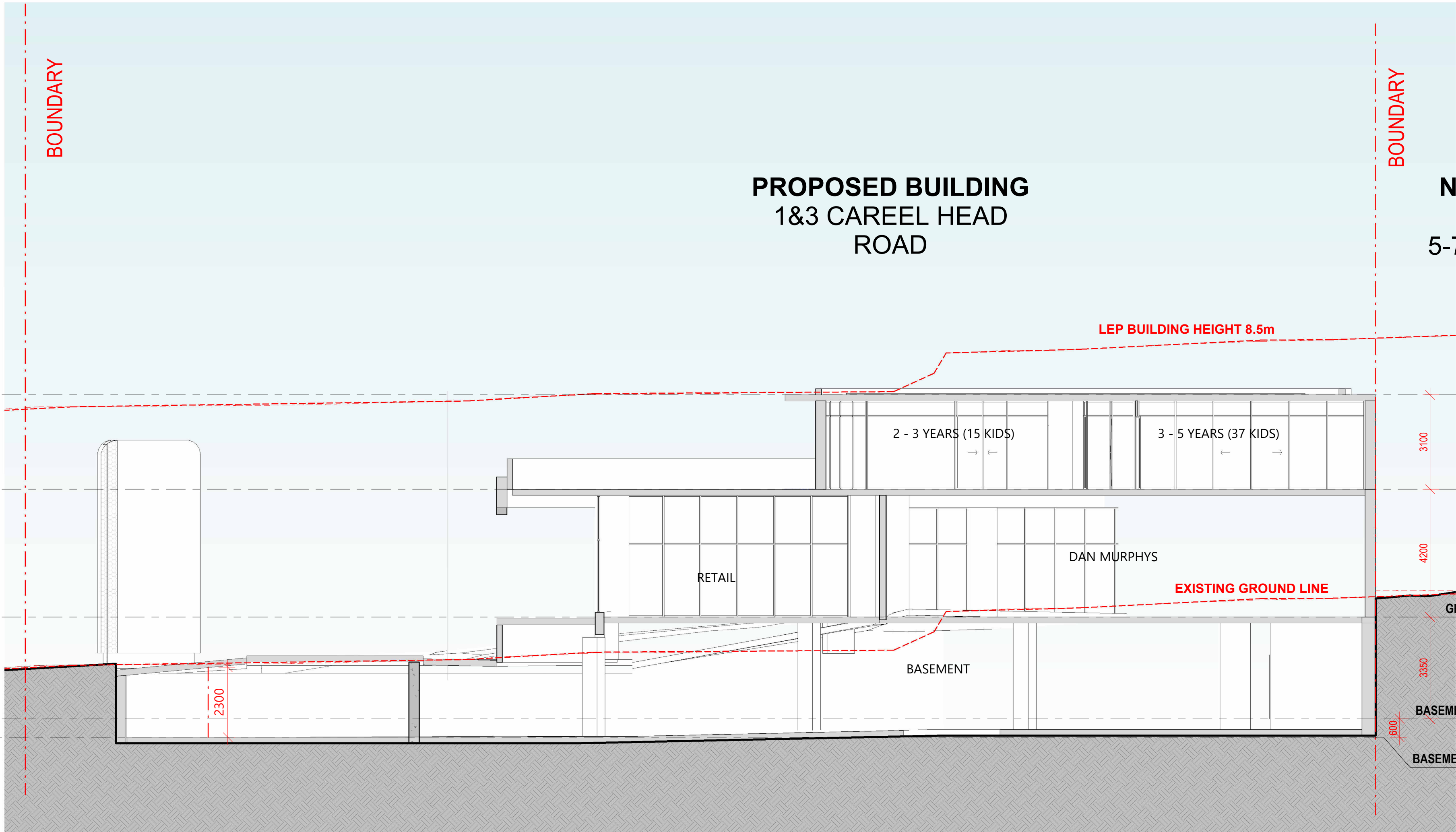
Project Stage

**DA Submission**

Job no.	Drawing no.	Rev.
J23587D	DA1103	P3
Drawn by	Checked by	Approved by Date
GH	RJ	- JUN. 2024



BARRENJOEY ROAD



**1 SECTION A**  
1 : 100 at A1 1:200 at A3

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P1 28.06.2024 Revision 3  
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0 1:100 at A1 1:200 at A3



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Project  
**PROPOSED MIXED USE DEVELOPMENT**  
  
1 & 3 Careel Head Road Avalon Beach  
  
Drawing Title  
**SECTION A**  
  
Project Stage  
**DA Submission**  
  
Job no. Drawing no. Rev.  
**J23587D DA3001 P1**  
  
Drawn by Checked by Approved by Date  
GH RJ - JUN. 2024



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Drawings to be read in conjunction with, but not limited to, all structural engineers, stormwater engineers, landscape architects, fire protection, essential electrical services and mechanical services plans & other associated plans & reports.

Refer to current Basix report for additional requirements to ones noted on plans.

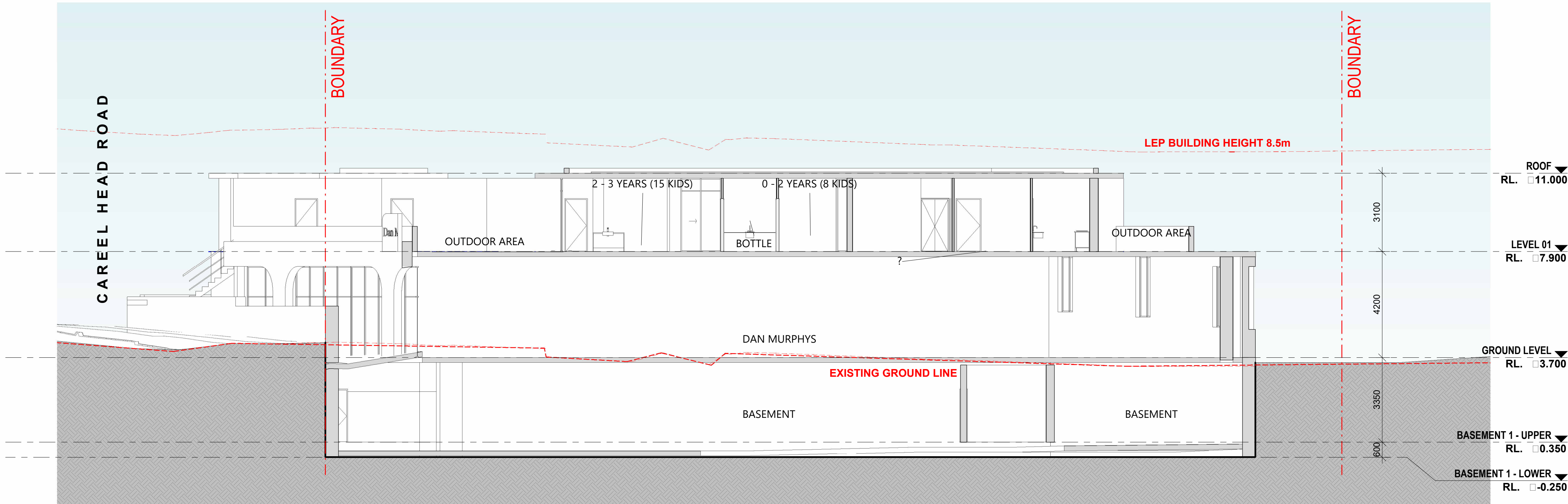
**Notes**

All dimensions and setbacks are to be verified on site and all omissions or any discrepancies to be notified to the architect. Figured dimensions to be used at all times. DO NOT SCALE measurements off drawings.

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Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327



**1 SECTION B**  
1 : 100 at A1 1:200 at A3

P1 28.06.2024 Revision 3

m 1 2 4 6 8

0 1:100 at A1 1:200 at A3



**Sydney**  
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Project  
**PROPOSED MIXED USE  
DEVELOPMENT**

1 & 3 Careel Head Road Avalon Beach

Drawing Title  
**SECTION B**

Project Stage  
**DA Submission**

Job no.	Drawing no.	Rev.
J23587D	DA3002	P1
Drawn by	Checked by	Approved by
GH	RJ	-
Date JUN. 2024		



## APPENDIX B – Figures

**Figure 1:** Site Location, Work Zone Area and Sampling Locations

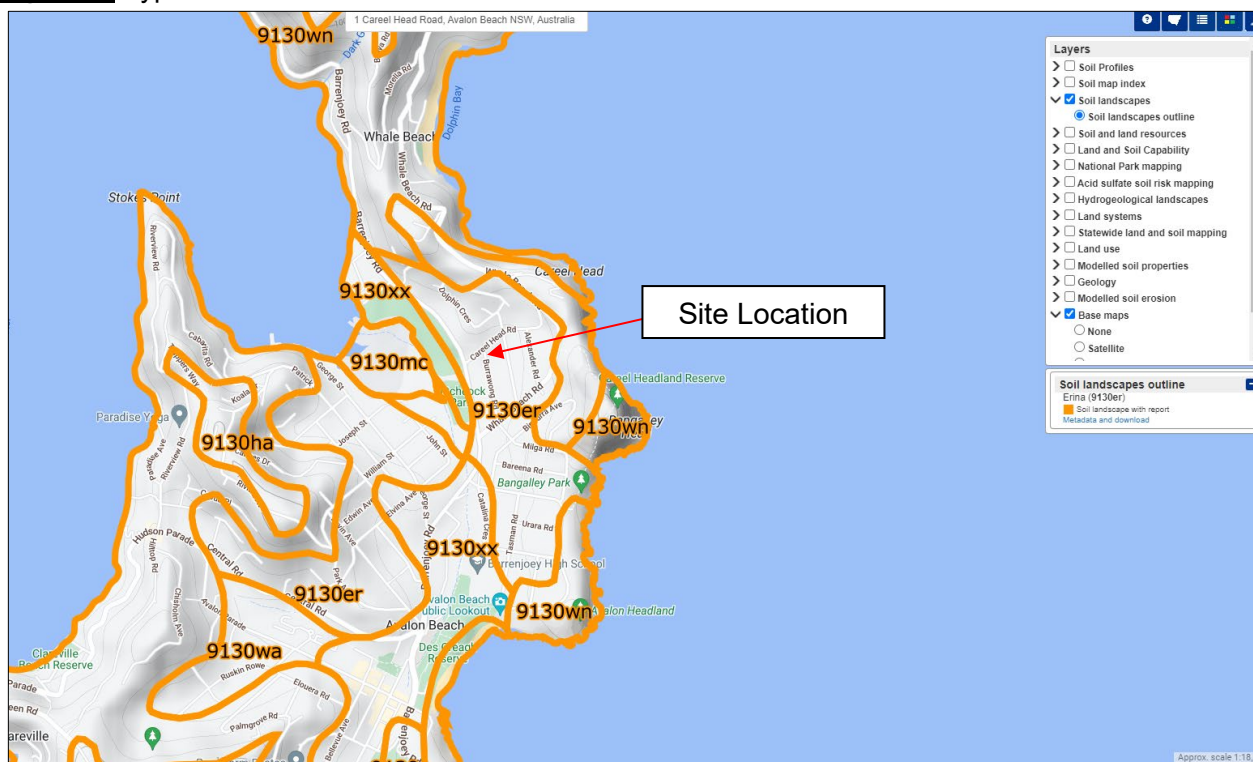


**Figure 2:** Geological Map of Wollongong Region





**Figure 3:** Type of Soil on Site



**Figure 4:** Extract of Groundwater/Bores Information Close to the Site



**Figure 5:** Extract of Groundwater/Bores Information Close to the Site

## WaterNSW

### Work Summary

**GW106665**

---

**Licence:** 10WA107532

**Work Type:** Bore

**Work Status:** Supply Obtained

**Construct.Method:** Down Hole Hamm

**Owner Type:** Private

**Commenced Date:**

**Completion Date:** 24/11/2004

**Contractor Name:** INTERTEC DRILLING SERVICES

**Driller:** Colin Leslie Barden

**Assistant Driller:**

**Licence Status:** CURRENT

**Authorised Purpose(s):** DOMESTIC

**Intended Purpose(s):** DOMESTIC

**Final Depth:** 78.60 m

**Drilled Depth:** 78.60 m

**Property:** DIBO 12 John St AVALON 3212 VIC

**Standing Water Level:** 6.600 (m)

**Salinity Description:**

**Yield (L/s):** 1.100

**GWMA:** -

**GW Zone:** -

---

#### Site Details

**Site Chosen By:**

**Form A:** CUMBERLAND

**Licensed:** CUMBERLAND

**County:** CUMBERLAND

**Parish:** NARRABEEN

**Cadastre:** 1/1101318  
Whole Lot  
3/13/975381

**Region:** 10 - Sydney South Coast

**River Basin:** 212 - HAWKESBURY RIVER

**Area/District:**

**CMA Map:** 9130-1S

**Grid Zone:**

**Scale:**

**Elevation:** 0.00 m (A.H.D.)

**Elevation Source:** Unknown

**Northing:** 6278172.000

**Easting:** 345260.000

**Latitude:** 33°37'30.1"S

**Longitude:** 151°19'54.4"E

**GS Map:** -

**MGA Zone:** 56

**Coordinate Source:** Unknown

---

#### Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	6.80	204			Down Hole Hammer
1		Hole	Hole	6.80	78.60	159			Down Hole Hammer
1	1	Casing	Pvc Class 9	-0.20	47.80	140			Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.20	6.80	168	158		Driven into Hole, Welded

---

#### Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
8.10	8.50	0.40	Unknown			0.30		00:25:00	1850.00
72.10	72.80	0.70	Unknown			0.80		00:25:00	2000.00

---

#### Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.30	2.30	clay, brown sandy	Clay	
2.30	5.70	3.40	shale, red weathered	Shale	



## WaterNSW Work Summary

**GW102685**
**Licence:** 10BL159265

**Licence Status:** ACTIVE

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

**Work Type:** Bore

**Work Status:**
**Construct.Method:** Rotary

**Owner Type:**
**Commenced Date:**
**Completion Date:** 31/05/1999

**Final Depth:** 6.00 m

**Drilled Depth:** 8.00 m

**Contractor Name:** Macquarie Drilling

**Driller:** Steve Robert Howe

**Assistant Driller:**
**Property:** EUROPA TRADING 662-664  
Barrenjoey Rd AVALON NORTH  
2107 NSW

**Standing Water Level**  
(m):

**GWMA:** -  
**GW Zone:** -

**Salinity Description:**  
Yield (L/s):

### Site Details

**Site Chosen By:**
**County**  
**Form A:** CUMBERLAND  
**Licensed:** CUMBERLAND

**Parish**  
NARRABEEN  
NARRABEEN

**Cadastre**  
LOT2 & 3 DP8394  
Whole Lot 3/8394

**Region:** 10 - Sydney South Coast

**CMA Map:**
**River Basin:** - Unknown  
**Area/District:**
**Grid Zone:**
**Scale:**
**Elevation:** 0.00 m (A.H.D.)  
**Elevation Source:** Unknown

**Northing:** 6278076.000  
**Easting:** 345488.000

**Latitude:** 33°37'33.3"S  
**Longitude:** 151°20'03.1"E

**GS Map:** -

**MGA Zone:** 56

**Coordinate Source:** Unknown

### Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	125			Hand Drilled
1		Annulus	(Unknown)	0.70	6.00				Graded, Q:5300.000m3
1	1	Opening	Slots	0.00	0.70	50		0	Slotted In Hole, PVC Class 18
1	1	Opening	Screen	0.70	6.00	50		0	PVC Class 18, Screwed, A: 0.40mm

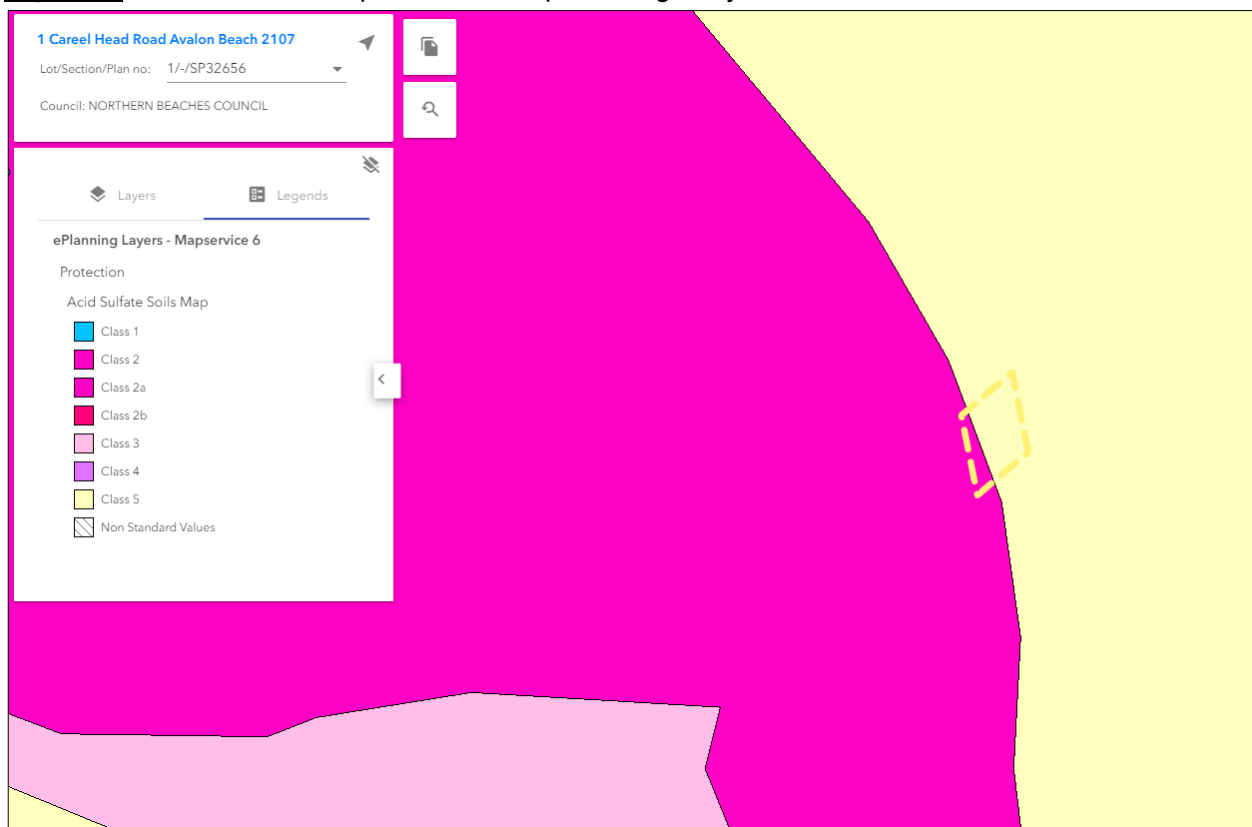
### Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
0.50	4.00	3.50	Unknown	1.00					

### Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.50	0.50	SILTY SAND	Invalid Code	
0.50	1.00	0.50	CLAYEY SAND	Invalid Code	
1.00	7.50	6.50	SANDY CLAY	Invalid Code	

**Figure 6:** Extract of Acid Sulphate Soils Map showing Subject Site



**Figure 7:** Sample Locations



## **APPENDIX C – Council Planning Certificates**

## Northern Beaches Council Planning Certificate – Part 2&5

**Applicant:** Cec Geotechnical Pty Ltd  
8 Buller St  
NORTH PARRAMATTA NSW 2151

**Reference:** ER24020  
**Date:** 08/07/2024  
**Certificate No.** ePLC2024/04891

**Address of Property:** 1 Careel Head Road AVALON BEACH NSW 2107  
**Description of Property:** Lot CP SP 32656

---

### Planning Certificate – Part 2

The following certificate is issued under the provisions of Section 10.7(2) of the *Environmental Planning and Assessment Act 1979* (as amended – formerly Section 149). The information applicable to the land is accurate as at the above date.

#### **1. Relevant planning instruments and Development Control Plans**

##### **(1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land:**

###### **(a) Local Environmental Plan**

Pittwater Local Environmental Plan 2014

###### **(b) State Environmental Planning Policies and Regional Environmental Plans**

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Primary Production) 2021  
Chapters 1,2

State Environmental Planning Policy (Resources and Energy) 2021  
Chapters 1, 2

State Environmental Planning Policy (Resilience and Hazards) 2021  
Chapters 1, 3, 4

State Environmental Planning Policy (Industry and Employment) 2021  
Chapters 1, 3

State Environmental Planning Policy (Transport and Infrastructure) 2021  
Chapters 1, 2, 3

State Environmental Planning Policy (Biodiversity and Conservation) 2021  
Chapters 1, 2, 3, 4, 6

State Environmental Planning Policy (Planning Systems) 2021  
Chapters 1, 2

State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021  
Chapters 1, 2

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008  
SEPP 65 – Design Quality of Residential Apartment Development  
SEPP (Building Sustainability Index: BASIX)

Partly Affected - State Environmental Planning Policy (Resilience and Hazards) 2021  
Chapter 2

### **(c) Development Control Plans**

Pittwater 21 Development Control Plan

## **(2) Draft Environmental Planning Instruments**

The name of each proposed environmental planning instrument and draft development control plan, which is or has been subject to community consultation or public exhibition under the Act, that will apply to the carrying out of development on the land.

### **(a) Draft Local Environmental Plans**

### **(b) Draft State Environmental Planning Policies**

Draft State Environmental Planning Policy (Environment)

Draft Remediation of Land State Environmental Planning Policy (intended to replace State Environmental Planning Policy 55)

### **(c) Draft Development Control Plans**

## **2. Zoning and land use under relevant planning instruments**

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in a zone, however described—

### **(1) Zoning and land use under relevant Local Environmental Plans**

#### **(a), (b)**

The following information identifies the purposes for which development may be carried out with or without development consent and the purposes for which the carrying out of development is prohibited, for all zones (however described) affecting the land to which the relevant Local Environmental Plan applies.

#### **Zone E1 Local Centre**

#### **2 Permitted without consent**

Home-based child care; Home businesses; Home occupations

#### **3 Permitted with consent**



Amusement centres; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Creative industries; Early education and care facilities; Electricity generating works; Entertainment facilities; Environmental protection works; Flood mitigation works; Function centres; Group homes; Home industries; Hostels; Hotel or motel accommodation; Information and education facilities; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Roads; Service stations; Shop top housing; Signage; Tank-based aquaculture; Tourist and visitor accommodation; Veterinary hospitals; Waste or resource transfer stations; Water reticulation systems

#### **4 Prohibited**

Any development not specified in item 2 or 3

#### **(c) Additional permitted uses**

Additional permitted uses, if any, for which development is permissible with development consent pursuant to Clause 2.5 and Schedule 1 of the relevant Local Environmental Plan:

Nil

#### **(d) Minimum land dimensions**

The *Pittwater Local Environmental Plan 2014* contains no development standard that fixes minimum land dimensions for the erection of a dwelling house on the land.

#### **(e) Outstanding biodiversity value**

The land is not in an area of outstanding biodiversity value under the [Biodiversity Conservation Act 2016](#)

#### **(f) Conservation areas**

The land is not in a heritage conservation area.

#### **(g) Item of environmental heritage**

The land does not contain an item of environmental heritage.

### **(2) Zoning and land use under draft Local Environmental Plans**

For any proposed changes to zoning and land use, see Part 1.2 (a)  
Please contact Council's Strategic and Place Planning unit with enquiries on 1300 434 434.

## **3. Contribution plans**

(1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

**Northern Beaches Section 7.12 Contributions Plan 2022 - in force 1 June 2022.**

## **DRAFT Northern Beaches Section 7.12 Contributions Plan 2024 - on exhibition from 5 July 2024 to 18 August 2024.**

This Plan will repeal the current Northern Beaches Section 7.12 Contributions Plan 2022 when adopted. The Plan was updated to incorporate legislative, administrative and Council changes made recently. It also includes updates to the works schedule.

(2) If the land is in a region within the meaning of the Act, Division 7.1, Subdivision 4 - the name of the region, and the name of the Ministerial planning order in which the region is identified.

### **Housing and Productivity Contribution**

The subject land is within the Greater Sydney region to which the Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2024 applies.

(3) If the land is in a special contributions area to which a continued 7.23 determination applies, the name of the area.

Nil

## **4. Complying Development**

If the land is land on which complying development may or may not be carried out under each of the complying development codes under [State Environmental Planning Policy \(Exempt and Complying Development Codes\) 2008](#), because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

### **Part 3 Housing Code**

#### **Acid Sulfate Soils Class 2**

For the purposes of clause 1.19 (1) (c) and (5) (c), complying development may not be carried out on that part of the land identified under *Pittwater Local Environmental Plan 2014* as identified on the Acid Sulfate Soils Map as being Class 2.

#### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

##### **3.1 Land to which code applies**

This code applies to development that is specified in clauses 3.2-3.5 on any lot in Zone R1, R2, R3, R4 or RU5 that:

- (a) has an area of at least 200m<sup>2</sup>, and
- (b) has a width, measured at the building line fronting a primary road, of at least 6m.

### **Part 3A Rural Housing Code**

#### **Acid Sulfate Soils Class 2**

For the purposes of clause 1.19 (1) (c) and (5) (c), complying development may not be carried out on that part of the land identified under *Pittwater Local Environmental Plan 2014* as identified on the Acid Sulfate Soils Map as being Class 2.

#### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

### **3A.1 Land to which code applies**

This code applies to development that is specified in clauses 3A.2-3A.5 on lots in Zone RU1, RU2, RU3, RU4, RU6 and R5.

## **Part 3B Low Rise Housing Diversity Code**

### **Acid Sulfate Soils Class 2**

For the purposes of clause 1.19 (1) (c) and (5) (c), complying development may not be carried out on that part of the land identified under *Pittwater Local Environmental Plan 2014* as identified on the Acid Sulfate Soils Map as being Class 2.

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

## **Part 3C Greenfield Housing Code**

Complying Development under the Greenfield Housing Code may not be carried out on all of the land.

## **Part 3D Inland Code**

Complying Development under the Inland Code does not apply to the land.

**Note:** Pursuant to clause 3D.1 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, the Inland Code only applies to 'inland local government areas'. Northern Beaches local government area is not defined as an 'inland local government area' by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

## **Part 4 Housing Alterations Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

## **Part 4A General Development Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

## **Part 5 Industrial and Business Alterations Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2*.

## **Part 5A Industrial and Business Buildings Code**

### **Acid Sulfate Soils Class 2**

For the purposes of clause 1.19 (1) (c) and (5) (c), complying development may not be carried out on that part of the land identified under *Pittwater Local Environmental Plan 2014* as identified on the Acid Sulfate Soils Map as being Class 2.

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under

*State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

**5A.1 Land to which code applies**

This code applies to development that is specified in clause 5A.2 on any lot in Zone B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3.

## **Part 5B Container Recycling Facilities Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

**5B.2 Development to which code applies**

This code applies to development that is specified in clause 5B.3 on any lot in Zone B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3.

## **Part 6 Subdivisions Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

## **Part 7 Demolition Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

## **Part 8 Fire Safety Code**

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

## **Part 9 Agritourism and Farm Stay Accommodation Code**

### **Acid Sulfate Soils Class 2**

For the purposes of clause 1.19 (1) (c) and (5) (c), complying development may not be carried out on that part of the land identified under *Pittwater Local Environmental Plan 2014* as identified on the Acid Sulfate Soils Map as being Class 2.

### **Proximity Area for Coastal Wetlands**

For the purposes of clause 1.17A (1)(e), complying development may not be carried out as the land is within an environmentally sensitive area being the proximity area for coastal wetlands under *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 2.*

## **(4) Complying Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008***

No complying codes are varied under this clause in relation to the land.

## **5. Exempt Development**

If the land is land on which exempt development may or may not be carried out under each of the exempt development codes under [\*State Environmental Planning Policy \(Exempt and Complying Development Codes\) 2008\*](#), because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

### **Part 2 Exempt Development Codes**

Exempt Development under the Exempt Development Codes may be carried out on all of the land.

#### **(4) Exempt Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008***

No exempt development codes are varied under this clause in relation to the land.

## **6. Affected building notices and building product rectification orders**

- (a) There is not an affected building notice of which the council is aware that is in force in respect of the land.
- (b) There is not a building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with, and
- (c) There is not a notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

In this section—

**affected building notice** has the same meaning the *Building Products (Safety) Act 2017, Part 4*.

**building product rectification order** has the same meaning as in the *Building Products (Safety) Act 2017*.

## **7. Land reserved for acquisition**

Environmental planning instrument referred to in Clause 1 does not make provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

## **8. Road widening and road realignment**

- (a) The land is not affected by a road widening or re-alignment proposal under Division 2 of Part 3 of the *Roads Act 1993*.
- (b) The land is not affected by a road widening or re-alignment proposal under an environmental planning instrument.
- (c) The land is not affected by a road widening or re-alignment proposal under a resolution of Council.

## **9. Flood related development controls**

- (1) The land is within the flood planning area and subject to flood related development controls.

(2) The land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

In this section—

**flood planning area** has the same meaning as in the Flood Risk Management Manual.

**Flood Risk Management Manual** means the Flood Risk Management Manual, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.

**probable maximum flood** has the same meaning as in the Flood Risk Management Manual.

## **10. Council and other public authority policies on hazard risk restriction**

(a) Council has adopted policies that restrict the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding (for flooding – see 9). The identified hazard or risk, if any, are listed below:

### **Estuarine Flood Hazard/Risk**

On the information available to Council, the land in question is affected by estuarine processes. This land has been identified in Council's Estuarine Risk Management Policy for Development in Pittwater and Pittwater 21 Development Control Plan as having a future exposure to tidal inundation and erosion caused by tidal waters. The Estuarine Risk Management Policy for Development in Pittwater is based on a study adopted by Council on 6 October 2015 and reflects information available at the time. Contact Council for more information.

(b) The following information applies to any policy as adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in a planning certificate issued by the Council. The identified hazard or risk and the respective Policy which affect the property, if any, are listed below:

Nil

## **11. Bush fire prone land**

The land is not bush fire prone land.

## **12. Loose-fill asbestos insulation**

The residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

This clause applies to residential premises (within the meaning of Division 1A of part 8 of the Home Building Act 1989) that are listed in the register that is required to be maintained under that Division.

Contact NSW Fair Trading for more information.

### **13. Mine Subsidence**

The land is not declared to be a mine Subsidence (Mine Subsidence) district within the meaning of section 15 of the *Mine Subsidence (Mine Subsidence) Compensation Act, 1961*.

### **14. Paper subdivision information**

There is no current paper subdivision, of which council is aware, in respect of this land according to Part 10 of the *Environmental Planning and Assessment Regulation 2021* and Schedule 7 of the *Environmental Planning & Assessment Act 1997* No 203.

### **15. Property vegetation plans**

The Council has not been notified that the land is land to which a vegetation plan under the *Native Vegetation Act 2003* applies.

### **16. Biodiversity Stewardship Sites**

The Council has not been notified by the Biodiversity Conservation Trust that the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (includes land to which a biobanking agreement under Part 7A of the repealed *Threatened Species Conservation Act 1995* relates).

### **17. Biodiversity certified land**

The land is not biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016* (includes land certified under Part 7AA of the repealed *Threatened Species Conservation Act 1995*).

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

Council has not been notified of the existence of an order made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land.

### **19. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

The owner of the land (or any previous owner) has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

Note—

Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

### **20. Western Sydney Aerotropolis**

Under State Environmental Planning Policy (Precincts – Western Parkland City) 2021, Chapter 4 the land is –

- (a) not in an ANEF or ANEC contour of 20 or greater, as referred to in that Chapter, section 4.17, or
- (b) not shown on the [Lighting Intensity and Wind Shear Map](#), or
- (c) not shown on the [Obstacle Limitation Surface Map](#), or
- (d) not in the “public safety area” on the [Public Safety Area Map](#), or
- (e) not in the “3 kilometre wildlife buffer zone” or the “13 kilometre wildlife buffer zone” on the [Wildlife Buffer Zone Map](#).

## **21. Development consent conditions for seniors housing**

No condition of development consent granted after 11 October 2007 in relation to the land applies to the property that are of the kind set out in that Policy, section 88(2) of [State Environmental Planning Policy \(Housing\) 2021](#).

## **22. Site compatibility certificate and conditions for affordable rental housing**

- (1) There is not a current site compatibility certificate of which the council is aware, in respect of proposed development on the land.
- (2) No condition of development consent in relation to the land applies to the property that are of the kind set out in section 21(1) or 40(1) of [State Environmental Planning Policy \(Housing\) 2021](#).
- (3) No condition of development consent in relation to the land applies to the property that are of the kind set out in clause 17(1) or 38(1) of [State Environmental Planning Policy \(Affordable Rental Housing\) 2009](#).

## **23. Water or sewerage services**

No water or sewerage services are, or are to be, provided to the land under the *Water Industry Competition Act 2006*.

## **Additional matters under the Contaminated Land Management Act 1997**

Note. The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

- (a) the land to which the certificate relates is not significantly contaminated land within the meaning of that Act
- (b) the land to which the certificate relates is not subject to a management order within the meaning of that Act



- (c) the land to which the certificate relates is not the subject of an approved voluntary management proposal within the meaning of that Act
- (d) the land to which the certificate relates is not subject to an ongoing maintenance order within the meaning of that Act
- (e) the land to which the certificate relates is not the subject of a site audit statement

If contamination is identified above please contact the Environmental Protection Authority (EPA) for further information.

## **Planning Certificate – Part 5**

The following is information provided in good faith under the provisions of Section 10.7(5) of the *Environmental Planning and Assessment Act 1979* (as amended – formerly Section 149) and lists relevant matters affecting the land of which Council is aware. The Council shall not incur any liability in respect of any such advice.

Persons relying on this certificate should read the environmental planning instruments referred to in this certificate.

### **Company Title Subdivision**

Clause 4.1 of the *Pittwater Local Environmental Plan 2014*, *Warringah Local Environmental Plan 2011* or *Manly Local Environmental Plan 2013* provides that land may not be subdivided except with the consent of the Council. This includes subdivision by way of company title schemes. Persons considering purchasing property in the Northern Beaches local government area the subject of a company title scheme are advised to check that the land has been subdivided with the consent of the Council.

### **District Planning**

Under the Greater Sydney Regional Plan – A Metropolis of Three Cities 2018, the Greater Sydney Commission sets a planning framework for a metropolis of three cities across Greater Sydney which reach across five Districts. Northern Beaches is located within the 'Eastern Harbour City' area and is in the North District which forms a large part of the Eastern Harbour City. The North District Plan sets out planning priorities and actions for the growth of the North District, including Northern Beaches. Northern Beaches Council's Local Strategic Planning Statement gives effect to the District Plan based on local characteristics and opportunities and Council's own priorities in the community. The Local Strategic Planning Statement came into effect on 26 March 2020.

### **Council Resolution To Amend Environmental Planning Instrument**

The following instrument or resolution of Council proposes to vary the provisions of an environmental planning instrument, other than as referred to in the Planning Certificate – Part 2:

#### **Planning Proposal – new consolidated LEP**

**Applies to land:** All land within the Northern Beaches LGA.

**Outline:** The new LEP will:

- Replace and harmonise planning controls in the four existing LEPs (Pittwater LEP 2014, Manly LEP 2013, Warringah LEP 2011 and Warringah LEP 2000).
- Introduce new controls to better respond to the community's aspirations and strategic priorities for the Northern Beaches.

**Council resolution:** 17 June 2024

Nil

## **Additional Information Applying To The Land**

Additional information, if any, relating to the land the subject of this certificate:

### **Geotechnical Planning Controls**

Council is currently undertaking a study to review geotechnical planning controls across the Local Government Area. Information from a draft study indicates geotechnical considerations may affect a greater number of properties and may present an increased risk to properties than that shown on published hazard maps. Council's Development Engineering & Certification team can be contacted for further information.

## **General Information**

### **Tree Preservation and Management Order**

Tree preservation and Management order applies to the subject land



**Scott Phillips**  
**Chief Executive Officer**  
**08/07/2024**

## Northern Beaches Council Planning Certificate – Part 2

**Applicant:** Cec Geotechnical Pty Ltd  
8 Buller St  
NORTH PARRAMATTA NSW 2151

**Reference:** ER24020A  
**Date:** 08/07/2024  
**Certificate No.** ePLC2024/04892

**Address of Property:** 3 Careel Head Road AVALON BEACH NSW 2107  
**Description of Property:** Lot B DP 385973

---

## Planning Certificate – Part 2

The following certificate is issued under the provisions of Section 10.7(2) of the *Environmental Planning and Assessment Act 1979* (as amended – formerly Section 149). The information applicable to the land is accurate as at the above date.

### **1. Relevant planning instruments and Development Control Plans**

**(1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land:**

**(a) Local Environmental Plan**

Pittwater Local Environmental Plan 2014

**(b) State Environmental Planning Policies and Regional Environmental Plans**

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Primary Production) 2021  
Chapters 1,2

State Environmental Planning Policy (Resources and Energy) 2021  
Chapters 1, 2

State Environmental Planning Policy (Resilience and Hazards) 2021  
Chapters 1, 3, 4

State Environmental Planning Policy (Industry and Employment) 2021  
Chapters 1, 3

State Environmental Planning Policy (Transport and Infrastructure) 2021  
Chapters 1, 2, 3

State Environmental Planning Policy (Biodiversity and Conservation) 2021  
Chapters 1, 2, 3, 4, 6

State Environmental Planning Policy (Planning Systems) 2021  
Chapters 1, 2

State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021  
Chapters 1, 2

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008  
SEPP 65 – Design Quality of Residential Apartment Development  
SEPP (Building Sustainability Index: BASIX)

### **(c) Development Control Plans**

Pittwater 21 Development Control Plan

## **(2) Draft Environmental Planning Instruments**

The name of each proposed environmental planning instrument and draft development control plan, which is or has been subject to community consultation or public exhibition under the Act, that will apply to the carrying out of development on the land.

### **(a) Draft Local Environmental Plans**

### **(b) Draft State Environmental Planning Policies**

Draft State Environmental Planning Policy (Environment)

Draft Remediation of Land State Environmental Planning Policy (intended to replace State Environmental Planning Policy 55)

### **(c) Draft Development Control Plans**

## **2. Zoning and land use under relevant planning instruments**

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in a zone, however described—

### **(1) Zoning and land use under relevant Local Environmental Plans**

#### **(a), (b)**

The following information identifies the purposes for which development may be carried out with or without development consent and the purposes for which the carrying out of development is prohibited, for all zones (however described) affecting the land to which the relevant Local Environmental Plan applies.

#### **Zone E1 Local Centre**

#### **2 Permitted without consent**

Home-based child care; Home businesses; Home occupations

#### **3 Permitted with consent**

Amusement centres; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Creative industries; Early education and care facilities; Electricity generating works; Entertainment facilities; Environmental protection works; Flood mitigation works; Function centres; Group homes; Home industries; Hostels; Hotel or motel accommodation; Information and education facilities; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Roads; Service stations; Shop top housing; Signage; Tank-based aquaculture; Tourist and visitor accommodation; Veterinary hospitals; Waste or resource transfer stations; Water reticulation systems

#### **4 Prohibited**

Any development not specified in item 2 or 3

#### **(c) Additional permitted uses**

Additional permitted uses, if any, for which development is permissible with development consent pursuant to Clause 2.5 and Schedule 1 of the relevant Local Environmental Plan:

Nil

#### **(d) Minimum land dimensions**

The *Pittwater Local Environmental Plan 2014* contains no development standard that fixes minimum land dimensions for the erection of a dwelling house on the land.

#### **(e) Outstanding biodiversity value**

The land is not in an area of outstanding biodiversity value under the [Biodiversity Conservation Act 2016](#)

#### **(f) Conservation areas**

The land is not in a heritage conservation area.

#### **(g) Item of environmental heritage**

The land does not contain an item of environmental heritage.

### **(2) Zoning and land use under draft Local Environmental Plans**

For any proposed changes to zoning and land use, see Part 1.2 (a)  
Please contact Council's Strategic and Place Planning unit with enquiries on 1300 434 434.

## **3. Contribution plans**

(1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

**Northern Beaches Section 7.12 Contributions Plan 2022 - in force 1 June 2022.**

## **DRAFT Northern Beaches Section 7.12 Contributions Plan 2024 - on exhibition from 5 July 2024 to 18 August 2024.**

This Plan will repeal the current Northern Beaches Section 7.12 Contributions Plan 2022 when adopted. The Plan was updated to incorporate legislative, administrative and Council changes made recently. It also includes updates to the works schedule.

(2) If the land is in a region within the meaning of the Act, Division 7.1, Subdivision 4 - the name of the region, and the name of the Ministerial planning order in which the region is identified.

### **Housing and Productivity Contribution**

The subject land is within the Greater Sydney region to which the Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2024 applies.

(3) If the land is in a special contributions area to which a continued 7.23 determination applies, the name of the area.

Nil

## **4. Complying Development**

If the land is land on which complying development may or may not be carried out under each of the complying development codes under [State Environmental Planning Policy \(Exempt and Complying Development Codes\) 2008](#), because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

### **Part 3 Housing Code**

Complying Development under the Housing Code may be carried out on all of the land.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

#### **3.1 Land to which code applies**

This code applies to development that is specified in clauses 3.2-3.5 on any lot in Zone R1, R2, R3, R4 or RU5 that:

- (a) has an area of at least 200m<sup>2</sup>, and
- (b) has a width, measured at the building line fronting a primary road, of at least 6m.

### **Part 3A Rural Housing Code**

Complying Development under the Rural Housing Code may be carried out on all of the land.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

#### **3A.1 Land to which code applies**

This code applies to development that is specified in clauses 3A.2-3A.5 on lots in Zone RU1, RU2, RU3, RU4, RU6 and R5.

### **Part 3B Low Rise Housing Diversity Code**

Complying Development under the Low Rise Housing Diversity Code may be carried out on all of the land.

### **Part 3C Greenfield Housing Code**

Complying Development under the Greenfield Housing Code may not be carried out on all of the land.

### **Part 3D Inland Code**

Complying Development under the Inland Code does not apply to the land.

**Note:** Pursuant to clause 3D.1 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, the Inland Code only applies to 'inland local government areas'. Northern Beaches local government area is not defined as an 'inland local government area' by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

## **Part 4 Housing Alterations Code**

Complying Development under the Housing Alterations Code may be carried out on all of the land.

## **Part 4A General Development Code**

Complying Development under the General Development Code may be carried out on all of the land.

## **Part 5 Industrial and Business Alterations Code**

Complying Development under the Industrial and Business Alterations Code may be carried out on all of the land.

## **Part 5A Industrial and Business Buildings Code**

Complying Development under the Industrial and Business Buildings Code may be carried out on all of the land.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

### **5A.1 Land to which code applies**

This code applies to development that is specified in clause 5A.2 on any lot in Zone B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3.

## **Part 5B Container Recycling Facilities Code**

Complying Development under the Container Recycling Facilities Code may be carried out on all of the land.

**Note:** Further zone based limitations may apply. See *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* clause:

### **5B.2 Development to which code applies**

This code applies to development that is specified in clause 5B.3 on any lot in Zone B1, B2, B3, B4, B5, B6, B7, B8, IN1, IN2, IN3, IN4 or SP3.

## **Part 6 Subdivisions Code**

Complying Development under the Subdivisions Code may be carried out on all of the land.

## **Part 7 Demolition Code**

Complying Development under the Demolition Code may be carried out on all of the land.

## **Part 8 Fire Safety Code**

Complying Development under the Fire Safety Code may be carried out on all of the land.

## **Part 9 Agritourism and Farm Stay Accommodation Code**

Complying Development under the Agritourism and Farm Stay Accommodation Code may be carried out on all of the land.

#### **(4) Complying Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008***

No complying codes are varied under this clause in relation to the land.

### **5. Exempt Development**

If the land is land on which exempt development may or may not be carried out under each of the exempt development codes under [\*State Environmental Planning Policy \(Exempt and Complying Development Codes\) 2008\*](#), because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

#### **Part 2 Exempt Development Codes**

Exempt Development under the Exempt Development Codes may be carried out on all of the land.

#### **(4) Exempt Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008***

No exempt development codes are varied under this clause in relation to the land.

### **6. Affected building notices and building product rectification orders**

(a) There is not an affected building notice of which the council is aware that is in force in respect of the land.

(b) There is not a building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with, and

(c) There is not a notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

In this section—

***affected building notice*** has the same meaning the *Building Products (Safety) Act 2017, Part 4*.

***building product rectification order*** has the same meaning as in the *Building Products (Safety) Act 2017*.

### **7. Land reserved for acquisition**

Environmental planning instrument referred to in Clause 1 does not make provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

### **8. Road widening and road realignment**

(a) The land is not affected by a road widening or re-alignment proposal under Division 2 of Part 3 of the *Roads Act 1993*.

(b) The land is not affected by a road widening or re-alignment proposal under an environmental planning instrument.

(c) The land is not affected by a road widening or re-alignment proposal under a resolution of Council.



## **9. Flood related development controls**

- (1) The land is not within the flood planning area and subject to flood related development controls.
- (2) The land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

In this section—

**flood planning area** has the same meaning as in the Flood Risk Management Manual.

**Flood Risk Management Manual** means the Flood Risk Management Manual, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.

**probable maximum flood** has the same meaning as in the Flood Risk Management Manual.

## **10. Council and other public authority policies on hazard risk restriction**

- (a) Council has adopted policies that restrict the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding (for flooding – see 9). The identified hazard or risk, if any, are listed below:

Nil

- (b) The following information applies to any policy as adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in a planning certificate issued by the Council. The identified hazard or risk and the respective Policy which affect the property, if any, are listed below:

Nil

## **11. Bush fire prone land**

The land is not bush fire prone land.

## **12. Loose-fill asbestos insulation**

The residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

This clause applies to residential premises (within the meaning of Division 1A of part 8 of the Home Building Act 1989) that are listed in the register that is required to be maintained under that Division.

Contact NSW Fair Trading for more information.

## **13. Mine Subsidence**

The land is not declared to be a mine Subsidence (Mine Subsidence) district within the meaning of section 15 of the *Mine Subsidence (Mine Subsidence) Compensation Act, 1961*.

## **14. Paper subdivision information**

There is no current paper subdivision, of which council is aware, in respect of this land according to Part 10 of the *Environmental Planning and Assessment Regulation 2021* and Schedule 7 of the *Environmental Planning & Assessment Act 1997* No 203.

## **15. Property vegetation plans**

The Council has not been notified that the land is land to which a vegetation plan under the *Native Vegetation Act 2003* applies.

## **16. Biodiversity Stewardship Sites**

The Council has not been notified by the Biodiversity Conservation Trust that the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (includes land to which a biobanking agreement under Part 7A of the repealed *Threatened Species Conservation Act 1995* relates).

## **17. Biodiversity certified land**

The land is not biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016* (includes land certified under Part 7AA of the repealed *Threatened Species Conservation Act 1995*).

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

Council has not been notified of the existence of an order made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land.

## **19. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

The owner of the land (or any previous owner) has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

Note—

Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

## **20. Western Sydney Aerotropolis**

Under State Environmental Planning Policy (Precincts – Western Parkland City) 2021, Chapter 4 the land is –

- (a) not in an ANEF or ANEC contour of 20 or greater, as referred to in that Chapter, section 4.17, or
- (b) not shown on the [Lighting Intensity and Wind Shear Map](#), or

- (c) not shown on the [Obstacle Limitation Surface Map](#), or
- (d) not in the “public safety area” on the [Public Safety Area Map](#), or
- (e) not in the “3 kilometre wildlife buffer zone” or the “13 kilometre wildlife buffer zone” on the [Wildlife Buffer Zone Map](#).

## **21. Development consent conditions for seniors housing**

No condition of development consent granted after 11 October 2007 in relation to the land applies to the property that are of the kind set out in that Policy, section 88(2) of [State Environmental Planning Policy \(Housing\) 2021](#).

## **22. Site compatibility certificate and conditions for affordable rental housing**

(1) There is not a current site compatibility certificate of which the council is aware, in respect of proposed development on the land.

(2) No condition of development consent in relation to the land applies to the property that are of the kind set out in section 21(1) or 40(1) of [State Environmental Planning Policy \(Housing\) 2021](#).

(3) No condition of development consent in relation to the land applies to the property that are of the kind set out in clause 17(1) or 38(1) of [State Environmental Planning Policy \(Affordable Rental Housing\) 2009](#).

## **23. Water or sewerage services**

No water or sewerage services are, or are to be, provided to the land under the *Water Industry Competition Act 2006*.

## **Additional matters under the Contaminated Land Management Act 1997**

Note. The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

- (a) the land to which the certificate relates is not significantly contaminated land within the meaning of that Act
- (b) the land to which the certificate relates is not subject to a management order within the meaning of that Act
- (c) the land to which the certificate relates is not the subject of an approved voluntary management proposal within the meaning of that Act

(d) the land to which the certificate relates is not subject to an ongoing maintenance order within the meaning of that Act

(e) the land to which the certificate relates is not the subject of a site audit statement

If contamination is identified above please contact the Environmental Protection Authority (EPA) for further information.

A handwritten signature in black ink, appearing to be 'SP' with a flourish.

**Scott Phillips**  
**Chief Executive Officer**

**08/07/2024**

## APPENDIX D – Site Photographs



Photograph 1 – North View: Showing the Front Elevation of 1 Careel Head Rd



Photograph 2 – North View: Showing the Front Elevation of 1 Careel Head Rd



Photograph 3 – North View: Showing the Western End of 1 Careel Head Rd



Photograph 4 – North View: Showing the Front Elevation of 3 Careel Head Rd





Photograph 5 – North View: Showing the Driveway Access for 3 Careel Head Rd



Photograph 6 – South View: Showing the Rear Elevation of 3 Careel Head Rd



Photograph 7 – Southeast View: Showing the Western End of 3 Careel Head Rd



Photograph 8 – Rear View: Showing the Rear of 3 Careel Head Rd





Photograph 9 – Rear View: Showing the South End of 3 Careel Head Rd



Photograph 10 – West View: Showing the East End of 3 Careel Head Rd

## APPENDIX E – Search of the NSW EPA Contaminated Land Management Record

[Your environment](#)
[Reporting, incidents and recovery programs](#)
[Licensing and Regulation](#)
[Working together](#)
[About us](#)

Public registers
+ POEO Public Register
Contaminated land record of notices
About the record of notices
List of notified sites
Tips for searching
Disclaimer
Dangerous goods licences
Pesticide licences
Radiation licences

[Home](#)
[Public registers](#)
[Contaminated land record of notices](#)

## Search results

Your search for: Suburb: AVALON BEACH

**did not find any records in our database.**

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

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

More information about particular sites may be available from:

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

See [What's in the record and What's not in the record](#)

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

Search Again
Refine Search

### Search TIP

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

[... more search tips](#)

8 July 2024

## APPENDIX F – Search of the Protection of the Environment Operations Public Register (POEO) of Licensed and Delicensed Premises

[🔍 Legislation and compliance](#)
[📰 News and media](#)

Your environment
Reporting, incidents and recovery programs
Licensing and Regulation
Working together
About us

**Public registers**

- POEO Public Register
  - [Licences, applications and notices search](#)
  - [Penalty notices search](#)
  - [Enforceable undertakings search](#)
  - [Enforceable undertakings media releases](#)
  - [Exemptions and approvals search](#)
  - [Prosecutions or civil proceedings search](#)
  - [Terms of use: POEO public register](#)
  - [Licensing FAQs](#)
  - [List of licences](#)
  - [Unlicensed premises regulated by the EPA](#)
- + Contaminated land record of notices
- Dangerous goods licences
- Pesticide licences
- Radiation licences

[Home](#)
[Public registers](#)
[POEO Public Register](#)
[Licences, applications and notices search](#)

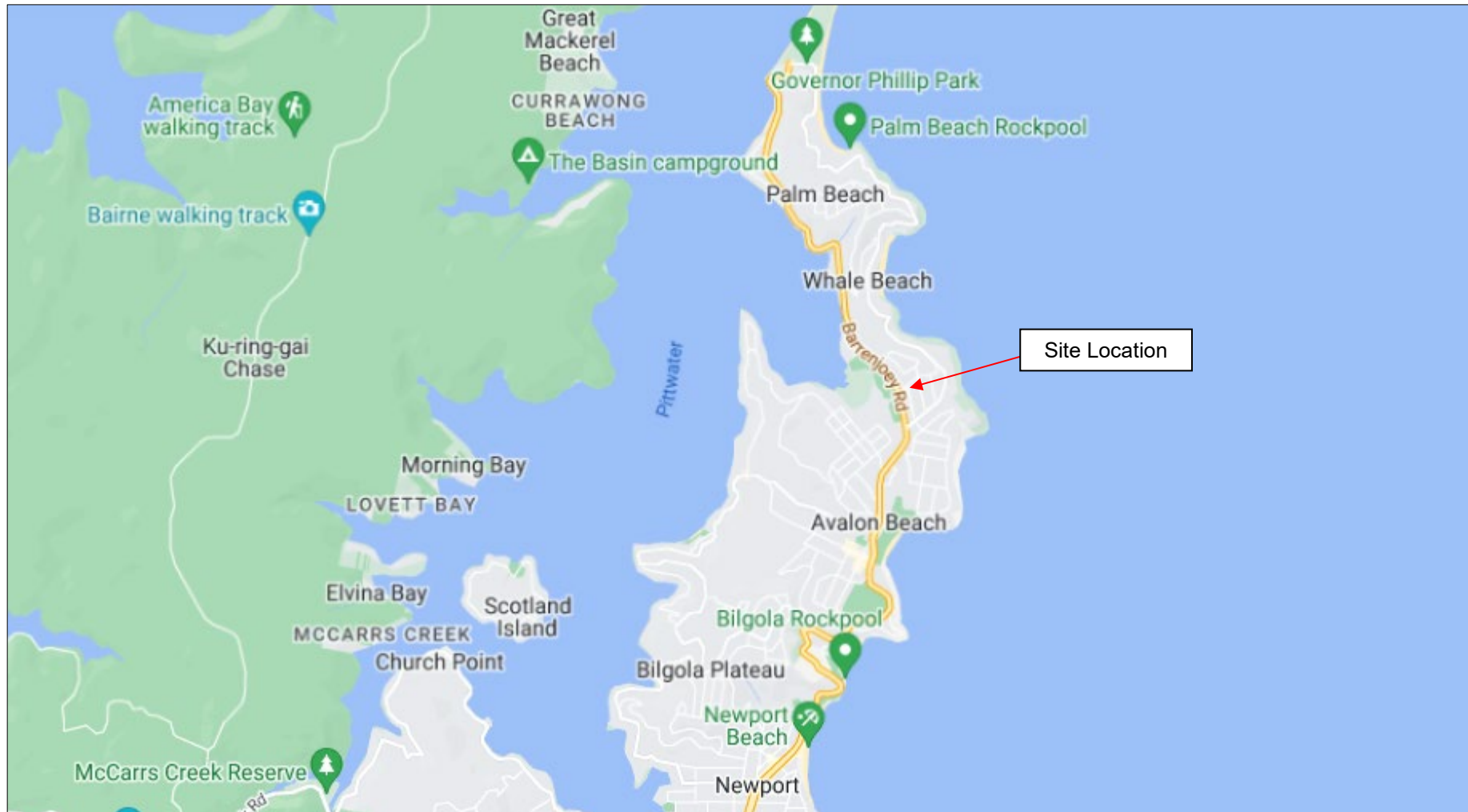
## Search results

Your search for: **General Search** with the following criteria

**Suburb - Avalon Beach**

returned 0 result

## APPENDIX G – Search for NSW Government PFAS Investigation Programme



## **APPENDIX H – Certificates of Title Review**



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

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

**Summary of Owners Report**

**Re: - 1 & 3 Careel Head Road, Avalon Beach**

**Description: - Strata Plan No. 32656 & Lot B D.P. 385973**

**As regards Strata Plan No. 32656 (1 Careel Head Road) – 6802-30**

<b><u>Date of Acquisition and term held</u></b>	<b><u>Registered Proprietor(s) &amp; Occupations where available</u></b>	<b><u>Reference to Title at Acquisition and sale</u></b>
02.01.1924 (1924 to 1925)	Caroline Cecilia May Webb (Widow)	Volume 3545 Folio 130
24.02.1925 (1925 to 1926)	James Young (Barrister-at-Law)	Volume 3545 Folio 130
13.10.1926 (1926 to 1951)	John William Smyth (Solicitor)	Volume 3545 Folio 130 Now Volume 5714 Folio 107
30.05.1951 (1951 to 1954)	Sidney Joseph Rhodes (Gentleman)	Volume 5714 Folio 107
22.04.1954 (1954 to 1969)	Falkner Hope Bartlett (Motor Garage Proprietor)	Volume 5714 Folio 107 Now Volume 6802 Folio 30
01.05.1969 (1969 to 1985)	Mobil Oil Australia Limited	Volume 6802 Folio 30
01.07.1985 (1985 to 1986)	Decon Management Pty Ltd	Volume 6802 Folio 30
24.06.1986 (1986 to 1988)	Camarine Yacht Charters Pty Limited Bruce Frank Sherlock	Volume 6802 Folio 30
28.11.1988	Registration of Strata Plan No. 32656	
	<b><u>Searches continued as regards the Common Property Areas only</u></b>	
28.11.1988 (1988 to date)	# The Owners – Strata Plan No. 32656	Volume 6802 Folio 30 Now CP/SP 32656

**# Denotes current registered proprietor (s)**

**Easements: - NIL**

**Leases: -**

- 12.05.1955 to Frank Gardner (Garage Proprietor of Whale Beach Service Station – expired 25.01.1965.
- 1986, Leases of Shops 3, 5 & 7 – not investigated.







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

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

**As regards Lot B D.P. 385973 (3 Careel Head Road)**

<b><u>Date of Acquisition and term held</u></b>	<b><u>Registered Proprietor(s) &amp; Occupations where available</u></b>	<b><u>Reference to Title at Acquisition and sale</u></b>
02.01.1924 (1924 to 1925)	Caroline Cecilia May Webb (Widow)	Volume 3545 Folio 130
24.02.1925 (1925 to 1926)	James Young (Barrister-at-Law)	Volume 3545 Folio 130
13.10.1926 (1926 to 1951)	John William Smyth (Solicitor)	Volume 3545 Folio 130 Now Volume 5714 Folio 107
30.05.1951 (1951 to 1954)	Sidney Joseph Rhodes (Gentleman)	Volume 5714 Folio 107 Now Volume 6802 Folio 31
04.06.1954 (1954 to 1958)	Donald Harry Dickson (Bech Engineer) Joyce May Dickson (Married Woman)	Volume 6802 Folio 31
10.02.1958 (1958 to 1977)	Brooklyn Troy Webb (Retired Public Servant) Gwenda May Webb (Married Woman)	Volume 6802 Folio 31
27.04.1977 (1977 to 1977)	Gwenda May Webb (Widow)	Volume 6802 Folio 31
08.11.1977 (1977 to 1978)	Jean Wyndham Kemsley (Married Woman) (Transmission Application not investigated)	Volume 6802 Folio 31
25.01.1978 (1978 to 1982)	Joseph Anthony Dawe (Specialist Mechanic) Julie Ann Dawe (Married Woman)	Volume 6802 Folio 31
12.07.1982 (1982 to 2004)	Mabel Winifred Thornton	Volume 6802 Folio 31 Now B/385973
20.10.2004 (2004 to date)	# Lyn Patrica Thornton (Transmission Application not investigated)	B/385973

**# Denotes current registered proprietor (s)**

**Easements & Leases: - NIL**

---

Yours Sincerely  
Mark Groll  
8 July 2024







## THE PRUDENTIAL ASSURANCE COMPANY LIMITED

by its Attorney: BENJAMIN DONALD CLUNY McPHERSON  
 BOOK 3334 NO. 36  
 who states that he has no notice of revocation of the Power  
 of Attorney by virtue of which he has executed the within  
 instrument,

*Benjamin Donaldu Cluny McPherson*  
 Attorney

*John J. P.*  
 Witness

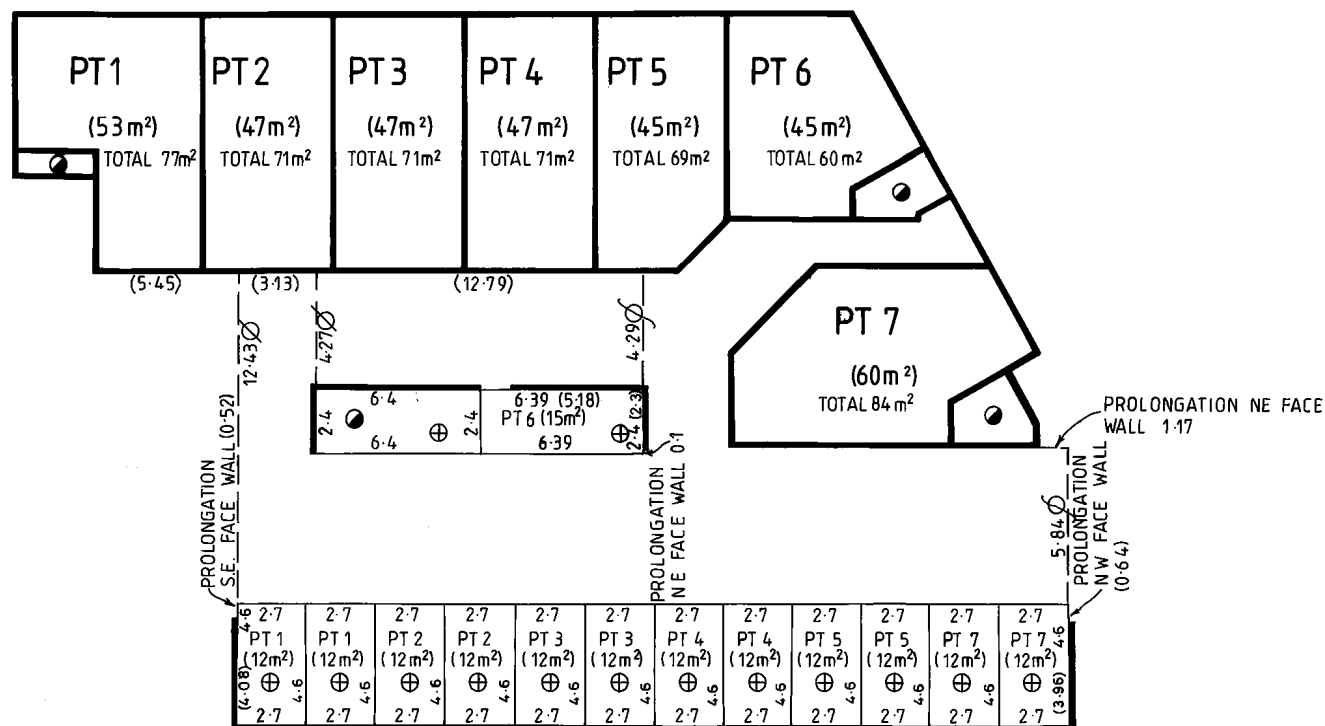
STRATA PLAN 32656

## NOTES: AREAS ARE APPROXIMATE

THE OPEN CAR SPACES ARE LIMITED IN  
 DEPTH TO THE UPPER SURFACE OF THEIR  
 RESPECTIVE BITUMEN PAVED FLOORS AND  
 IN HEIGHT TO 3.0 ABOVE THAT BITUMEN  
 PAVED FLOOR.



SCHEDULE OF UNIT ENTITLEMENT	
LOT	UNIT ENTITLEMENT
1	10
2	10
3	10
4	10
5	10
6	10
7	10
AGGREGATE	70



## GROUND FLOOR PLAN

- COMMON PROPERTY
- ⊕ OPEN CAR SPACE
- ⊖ TO N CNR OPEN CAR SPACE
- ⊙ TO E CNR OPEN CAR SPACE

AMENDMENTS MADE BY ME  
 AT REQUEST OF L.T.O.

*M.J. Morgan.*

REGISTERED SURVEYOR 20-JAN-1988

Reduction Ratio 1:200

Lengths are in metres

*M.J. Morgan.*  
 Registered Surveyor

*John J. P.*  
 Council Clerk

SURVEYOR'S REFERENCE: P 3825

FP 385973

G 14519

<sup>1</sup>M. A. M.

## PLAN

Scale :- 50 Feet to an Inch.

IF ANY MARKING ON THIS DOCUMENT HAS BEEN MADE IT  
HAS NOT BEEN VERIFIED BY THIS DEPARTMENT AND SHOULD NOT  
BE EMPLOYED IN DEPARTMENTAL INVESTIGATION OR USED WITHOUT  
VERIFICATION BY SURVEYORS AS A DEFINITE RELOCATION OF THE  
ORDER WHICH IT PURPORTS TO MARK.

*Signatures of parties to be made in this margin.*

W. Bayers  
29.6.1905.

This is the plan marked "X" referred to in  
Dated 16th January 1954

**Noted**

Misc. Plan of Suburban (R.P.)  
Regd. No. 85973

I certify that this plan has been compiled from the information in  
Deposited Plan No 9519 and  
Certificate of Title Vol. 5714 Fol. 107..... and is correct.  
I have no knowledge of any improvements on or near the Subdivision  
boundaries. K. Surendra has been made

*John H. Aitken*  
Surveyor registered under Surveyors Act, 192

Correct bearing  
159° 50' 20" by D.F.



CONVERSION TABLE ADDED IN  
DEPARTMENT OF LANDS

DP 385973

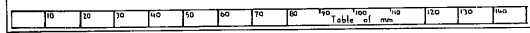
FEET INCHES. METRES

57	-	17.374
66	-	20.117
108	-	32.918
132	-	40.234
1320	-	402.336
5700	-	1737.360
10800	-	3291.840
57000	-	17373.600

AC RD P SQ M

- - 24 607  
- 1 5 3/4 1157

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 13th day of March, 1979



RP 13

STAMP DUTY



B



W384696

**TRANSFER**

REAL PROPERTY ACT, 1900

T

22	of 3	x
\$ 33		

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Volume 6802 Folio 30	WHOLE	Whale Beach
DECON MANAGEMENT PTY. LTD.		

DESCRIPTION  
OF LAND  
Note (a)

TRANSFEROR  
Note (b)

ESTATE  
Note (c)

TRANSFeree  
Note (d)

TENANCY  
Note (e)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of \$ 720,000.00  
and transfers an estate in fee simple  
in the land above described to the TRANSFeree

CAMARINE YACHT CHARTERS PTY. LIMITED and BRUCE FRANK SHERLOCK  
of 18 Bangalla Street, Warrawee as Tenants-in-Common in equal shares.

OFFICE USE ONLY

TC2

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

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

DATE 6th JUNE, 1986

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.  
THE COMMON SEAL OF DECON MANAGEMENT PTY. LIMITED was hereunto

Signed in my presence by the transferor who is personally known to me affixed in accordance  
with its Articles of Association  
in the presence of:

Signature of Witness

R. J. SCOTT

9 WATTLE AVE, FAIRLIGHT

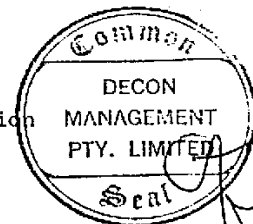
SECRETARY

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness



Signature of Transferor

DIRECTOR

Solicitor for the Transferee

EXECUTION  
Note (g)

Note (g)

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

OFFICE USE ONLY

LODGED BY P. E. Mackenzie.		LOCATION OF DOCUMENTS	
CT	OTHER	Herewith.	
		In L.T.O. with	
		Produced by	
Delivery Box Number 7717	REGISTERED 2A - 6 - 1986	Secondary Directions	
Checked Signed	Passed Extra Fee	Delivery Directions	



FOLIO: CP/SP32656

SEARCH DATE	TIME	EDITION NO	DATE
8/7/2024	7:16 PM	1	1/12/1988

LAND

THE COMMON PROPERTY IN THE STRATA SCHEME BASED ON STRATA PLAN 32656  
WITHIN THE PARCEL SHOWN IN THE TITLE DIAGRAM

AT WHALE BEACH  
LOCAL GOVERNMENT AREA NORTHERN BEACHES  
PARISH OF NARRABEEN COUNTY OF CUMBERLAND  
TITLE DIAGRAM SHEET 1 SP32656

FIRST SCHEDULE

THE OWNERS - STRATA PLAN NO. 32656  
ADDRESS FOR SERVICE OF DOCUMENTS:  
1 CAREEL HEAD RD  
AVALON 2107

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- \* 2 ATTENTION IS DIRECTED TO BY-LAWS SET OUT IN SCHEDULE 2 STRATA  
SCHEMES MANAGEMENT REGULATION 2016

SCHEDULE OF UNIT ENTITLEMENT (AGGREGATE: 70)

STRATA PLAN 32656

LOT	ENT	LOT	ENT	LOT	ENT	LOT	ENT
1	- 10	2	- 10	3	- 10	4	- 10
5	- 10	6	- 10	7	- 10		

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



SEARCH DATE

8/7/2024 7:16PM

FOLIO: B/385973

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 6802 FOL 31

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
1/12/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
30/9/1994		AMENDMENT: LOCAL GOVT AREA	
20/10/2004	AB35165	TRANSMISSION APPLICATION	EDITION 1
10/6/2023	AT164622	CAVEAT	EDITION 2

\*\*\* END OF SEARCH \*\*\*





FOLIO: B/385973

SEARCH DATE	TIME	EDITION NO	DATE
8/7/2024	7:16 PM	2	10/6/2023

LAND

LOT B IN DEPOSITED PLAN 385973  
LOCAL GOVERNMENT AREA NORTHERN BEACHES  
PARISH OF NARRABEEN COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP385973

FIRST SCHEDULE

LYN PATRICIA THORNTON

(TA AB35165)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- \* 2 AT164622 CAVEAT BY GREX HOLDINGS PTY LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

## **APPENDIX I – Government Information Public Access (GIPA)**

## APPENDIX J – Historical Aerial Photographs

**Figure 1:** Aerial Photograph from 1955



**Figure 2:** Aerial Photograph from 1965





**Figure 3:** Aerial Photograph from 1982



**Figure 4:** Aerial Photograph from 1994





**Figure 5:** Aerial Photograph from 2009



**Figure 6:** Aerial Photograph from 2019





**Figure 7:** Aerial Photograph from 2024





## **APPENDIX K – Laboratory Results**

**CEC Geotechnical**  
**Unit 4 83 Grose Street**  
**North Paramatta**  
**NSW 2151**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
NATA is a signatory to the ILAC Mutual Recognition  
Arrangement for the mutual recognition of the  
equivalence of testing, medical testing, calibration,  
inspection, proficiency testing scheme providers and  
reference materials producers reports and certificates.

**Attention:** **Diego**

**Report** **1110582-S**  
Project name **PSI (LIMITED SAMPLING)**  
Project ID **ER24020**  
Received Date **Jun 20, 2024**

Client Sample ID			<b>BH1-0.5</b>	<b>BH2-0.5-1</b>	<b>BH2-0.5-2</b>	<b>BH2-1.5</b>
Sample Matrix			<b>Soil</b>	<b>Soil</b>	<b>Soil</b>	<b>Soil</b>
Eurofins Sample No.			<b>S24-Jn0057483</b>	<b>S24-Jn0057484</b>	<b>S24-Jn0057485</b>	<b>S24-Jn0057486</b>
Date Sampled			<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	28	< 20	< 20	27
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	103	INT	INT
<b>Volatile Organics</b>						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH1-0.5	BH2-0.5-1	BH2-0.5-2	BH2-1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Jn0057483	S24-Jn0057484	S24-Jn0057485	S24-Jn0057486
Date Sampled			Jun 19, 2024	Jun 19, 2024	Jun 19, 2024	Jun 19, 2024
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
1,3,5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	103	103	INT	INT
Toluene-d8 (surr.)	1	%	94	106	INT	INT
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>NO2</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH1-0.5	BH2-0.5-1	BH2-0.5-2	BH2-1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Jn0057483	S24-Jn0057484	S24-Jn0057485	S24-Jn0057486
Date Sampled			Jun 19, 2024	Jun 19, 2024	Jun 19, 2024	Jun 19, 2024
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	INT	85	106	90
p-Terphenyl-d14 (surr.)	1	%	INT	100	113	97
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	INT	53	63	54
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			<b>BH1-0.5</b>	<b>BH2-0.5-1</b>	<b>BH2-0.5-2</b>	<b>BH2-1.5</b>
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			<b>S24-Jn0057483</b>	<b>S24-Jn0057484</b>	<b>S24-Jn0057485</b>	<b>S24-Jn0057486</b>
Date Sampled			<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>	<b>Jun 19, 2024</b>
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	5.9	2.8	13	3.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	7.3	28	8.3
Copper	5	mg/kg	5.2	< 5	5.0	< 5
Lead	5	mg/kg	17	15	16	9.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	6.2	< 5
Zinc	5	mg/kg	28	< 5	13	< 5
<b>Sample Properties</b>						
% Moisture	1	%	15	18	17	16

## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jun 27, 2024	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jun 27, 2024	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jun 27, 2024	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Jun 27, 2024	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Jun 27, 2024	14 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Jun 27, 2024	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Jun 27, 2024	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Jun 27, 2024	28 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Sydney	Jun 27, 2024	7 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Jun 22, 2024	14 Days





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**Company Name:** CEC Geotechnical  
**Address:** Unit 4 83 Grose Street  
North Paramatta  
NSW 2151

**Project Name:** PSI (LIMITED SAMPLING)  
**Project ID:** ER24020

**Order No.:**  
**Report #:** 1110582  
**Phone:** 02 9630 0121  
**Fax:**

**Received:** Jun 20, 2024 12:50 PM  
**Due:** Jun 27, 2024  
**Priority:** 5 Day  
**Contact Name:** Diego

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Metals M8	Volatile Organics	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	BH1-0.5	Jun 19, 2024		Soil	S24-Jn0057483	X		X	X	X
2	BH2-0.5-1	Jun 19, 2024		Soil	S24-Jn0057484	X		X	X	X
3	BH2-0.5-2	Jun 19, 2024		Soil	S24-Jn0057485	X		X	X	X
4	BH2-1.5	Jun 19, 2024		Soil	S24-Jn0057486	X		X	X	X
5	RBW	Jun 19, 2024		Water	S24-Jn0057487		X			
Test Counts						4	1	4	4	4

## Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

### Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>ppm:</b> parts per million
<b>µg/L:</b> micrograms per litre	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres
<b>CFU:</b> Colony Forming Unit	<b>Colour:</b> Pt-Co Units (CU)	

### Terms

<b>APHA</b>	American Public Health Association
<b>CEC</b>	Cation Exchange Capacity
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 6.0
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

### QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

## Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>BTEX</b>							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	%	118			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
TRH C6-C10	%	115			70-130	Pass	
TRH >C10-C16	%	85			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>BTEX</b>							
Benzene	%	100			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	98			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethene	%	95			70-130	Pass	
1.1.1-Trichloroethane	%	97			70-130	Pass	
1.2-Dichlorobenzene	%	118			70-130	Pass	
1.2-Dichloroethane	%	116			70-130	Pass	
Trichloroethene	%	91			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	%	112			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	103			70-130	Pass	
Anthracene	%	110			70-130	Pass	
Benz(a)anthracene	%	104			70-130	Pass	
Benzo(a)pyrene	%	107			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g,h,i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	111			70-130	Pass	
Chrysene	%	104			70-130	Pass	
Dibenz(a,h)anthracene	%	103			70-130	Pass	
Fluoranthene	%	115			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	102			70-130	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene				%	94			70-130	Pass	
Phenanthrene				%	98			70-130	Pass	
Pyrene				%	117			70-130	Pass	
LCS - % Recovery										
Phenols (Halogenated)										
2-Chlorophenol				%	90			25-140	Pass	
2,4-Dichlorophenol				%	100			25-140	Pass	
2,4,5-Trichlorophenol				%	94			25-140	Pass	
2,4,6-Trichlorophenol				%	95			25-140	Pass	
2,6-Dichlorophenol				%	104			25-140	Pass	
4-Chloro-3-methylphenol				%	82			25-140	Pass	
Pentachlorophenol				%	126			25-140	Pass	
Tetrachlorophenols - Total				%	119			25-140	Pass	
LCS - % Recovery										
Phenols (non-Halogenated)										
2-Cyclohexyl-4,6-dinitrophenol				%	115			25-140	Pass	
2-Methyl-4,6-dinitrophenol				%	99			25-140	Pass	
2-Nitrophenol				%	102			25-140	Pass	
2,4-Dimethylphenol				%	93			25-140	Pass	
2,4-Dinitrophenol				%	90			25-140	Pass	
2-Methylphenol (o-Cresol)				%	76			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)				%	83			25-140	Pass	
4-Nitrophenol				%	83			25-140	Pass	
Dinoseb				%	108			25-140	Pass	
Phenol				%	78			25-140	Pass	
LCS - % Recovery										
Heavy Metals										
Arsenic				%	93			80-120	Pass	
Cadmium				%	94			80-120	Pass	
Chromium				%	94			80-120	Pass	
Copper				%	96			80-120	Pass	
Lead				%	92			80-120	Pass	
Mercury				%	99			80-120	Pass	
Nickel				%	96			80-120	Pass	
Zinc				%	91			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Spike - % Recovery										
Total Recoverable Hydrocarbons					Result 1					
TRH C6-C9	S24-Jn0058392	NCP	%	109			70-130	Pass		
TRH C10-C14	S24-Jn0065306	NCP	%	91			70-130	Pass		
TRH C6-C10	S24-Jn0058392	NCP	%	109			70-130	Pass		
TRH >C10-C16	S24-Jn0065306	NCP	%	91			70-130	Pass		
Spike - % Recovery										
BTEX					Result 1					
Benzene	S24-Jn0057483	CP	%	85			70-130	Pass		
Toluene	S24-Jn0057483	CP	%	84			70-130	Pass		
Ethylbenzene	S24-Jn0057483	CP	%	90			70-130	Pass		
m&p-Xylenes	S24-Jn0057483	CP	%	88			70-130	Pass		
o-Xylene	S24-Jn0057483	CP	%	89			70-130	Pass		
Xylenes - Total*	S24-Jn0057483	CP	%	89			70-130	Pass		
Spike - % Recovery										
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1					
Naphthalene	S24-Jn0057483	CP	%	87			70-130	Pass		
Spike - % Recovery										



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>BTEX</b>				Result 1					
Benzene	S24-Jn0057484	CP	%	85			70-130	Pass	
Toluene	S24-Jn0057484	CP	%	84			70-130	Pass	
Ethylbenzene	S24-Jn0057484	CP	%	90			70-130	Pass	
m&p-Xylenes	S24-Jn0057484	CP	%	88			70-130	Pass	
o-Xylene	S24-Jn0057484	CP	%	89			70-130	Pass	
Xylenes - Total*	S24-Jn0057484	CP	%	89			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1					
Naphthalene	S24-Jn0057484	CP	%	87			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic	S24-Jn0057486	CP	%	101			75-125	Pass	
Cadmium	S24-Jn0057486	CP	%	102			75-125	Pass	
Chromium	S24-Jn0057486	CP	%	104			75-125	Pass	
Copper	S24-Jn0057486	CP	%	104			75-125	Pass	
Lead	S24-Jn0057486	CP	%	99			75-125	Pass	
Mercury	S24-Jn0057486	CP	%	109			75-125	Pass	
Nickel	S24-Jn0057486	CP	%	104			75-125	Pass	
Zinc	S24-Jn0057486	CP	%	97			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	S24-Jn0057704	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S24-Jn0057764	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Jn0057764	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Jn0057764	NCP	mg/kg	56	< 50	27	30%	Pass	
TRH C6-C10	S24-Jn0057704	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S24-Jn0057764	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Jn0057764	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Jn0057764	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
<b>BTEX</b>				Result 1	Result 2	RPD			
Benzene	S24-Jn0057704	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-Jn0057704	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-Jn0057704	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-Jn0057704	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-Jn0057704	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-Jn0057704	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.3-Dichloropropane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromobenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.2-Dichloroethene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S24-Jn0057704	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	S24-Jn0057483	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	S24-Jn0057483	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	S24-Jn0057483	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	S24-Jn0057483	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	S24-Jn0057483	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	S24-Jn0057483	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	S24-Jn0057483	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	S24-Jn0057483	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	S24-Jn0057483	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	S24-Jn0057483	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	S24-Jn0057483	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	S24-Jn0057483	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	S24-Jn0057483	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	S24-Jn0057483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	S24-Jn0057441	NCP	%	6.4	6.9	7.3	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S24-Jn0057485	CP	mg/kg	13	8.9	41	30%	Fail Q15
Cadmium	S24-Jn0057485	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S24-Jn0057485	CP	mg/kg	28	20	31	30%	Fail Q15
Copper	S24-Jn0057485	CP	mg/kg	5.0	< 5	40	30%	Fail Q15
Lead	S24-Jn0057485	CP	mg/kg	16	13	20	30%	Pass
Mercury	S24-Jn0057485	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S24-Jn0057485	CP	mg/kg	6.2	< 5	68	30%	Fail Q15
Zinc	S24-Jn0057485	CP	mg/kg	13	11	17	30%	Pass

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

### Authorised by:

Adam Bateup	Analytical Services Manager
Laxman Dias	Senior Analyst-Asbestos
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**CEC Geotechnical**  
**Unit 4 83 Grose Street**  
**North Paramatta**  
**NSW 2151**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** **Diego**

**Report** **1110582-W**  
 Project name **PSI (LIMITED SAMPLING)**  
 Project ID **ER24020**  
 Received Date **Jun 20, 2024**

<b>Client Sample ID</b>			<b>RBW</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>S24-Jn0057487</b>
<b>Date Sampled</b>			<b>Jun 19, 2024</b>
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

**Description**

Metals M8

**Testing Site**

Sydney

**Extracted**

Jun 25, 2024

**Holding Time**

28 Days

- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS





web: www.eurofins.com.au  
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ABN: 50 005 085 521

<b>Melbourne</b> 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	<b>Geelong</b> 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	<b>Sydney</b> 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	<b>Canberra</b> Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	<b>Brisbane</b> 1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	<b>Newcastle</b> 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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ABN: 91 05 0159 898

<b>Perth</b> 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370
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ABN: 47 009 120 549

<b>Perth ProMicro</b> 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2561 Site# 2554
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NZBN: 9429046024954

<b>Auckland</b> 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	<b>Auckland (Focus)</b> Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	<b>Christchurch</b> 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	<b>Tauranga</b> 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
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**Company Name:** CEC Geotechnical  
**Address:** Unit 4 83 Grose Street  
North Paramatta  
NSW 2151  
  
**Project Name:** PSI (LIMITED SAMPLING)  
**Project ID:** ER24020

**Order No.:**  
**Report #:** 1110582  
**Phone:** 02 9630 0121  
**Fax:**

**Received:** Jun 20, 2024 12:50 PM  
**Due:** Jun 27, 2024  
**Priority:** 5 Day  
**Contact Name:** Diego

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Metals M8	Volatile Organics	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	BH1-0.5	Jun 19, 2024		Soil	S24-Jn0057483	X		X	X	X
2	BH2-0.5-1	Jun 19, 2024		Soil	S24-Jn0057484	X		X	X	X
3	BH2-0.5-2	Jun 19, 2024		Soil	S24-Jn0057485	X		X	X	X
4	BH2-1.5	Jun 19, 2024		Soil	S24-Jn0057486	X		X	X	X
5	RBW	Jun 19, 2024		Water	S24-Jn0057487		X			
Test Counts						4	1	4	4	4

## Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

### Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>ppm:</b> parts per million
<b>µg/L:</b> micrograms per litre	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres
<b>CFU:</b> Colony Forming Unit	<b>Colour:</b> Pt-Co Units (CU)	

### Terms

<b>APHA</b>	American Public Health Association
<b>CEC</b>	Cation Exchange Capacity
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 6.0
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

### QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

## Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>									
<b>Heavy Metals</b>									
Arsenic			mg/L	< 0.001			0.001	Pass	
Cadmium			mg/L	< 0.0002			0.0002	Pass	
Chromium			mg/L	< 0.001			0.001	Pass	
Copper			mg/L	< 0.001			0.001	Pass	
Lead			mg/L	< 0.001			0.001	Pass	
Mercury			mg/L	< 0.0001			0.0001	Pass	
Nickel			mg/L	< 0.001			0.001	Pass	
Zinc			mg/L	< 0.005			0.005	Pass	
<b>LCS - % Recovery</b>									
<b>Heavy Metals</b>									
Arsenic			%	95			80-120	Pass	
Cadmium			%	93			80-120	Pass	
Chromium			%	92			80-120	Pass	
Copper			%	91			80-120	Pass	
Lead			%	89			80-120	Pass	
Mercury			%	101			80-120	Pass	
Nickel			%	92			80-120	Pass	
Zinc			%	92			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic	S24-Jn0051808	NCP	%	93			75-125	Pass	
Cadmium	S24-Jn0051808	NCP	%	91			75-125	Pass	
Chromium	S24-Jn0051808	NCP	%	91			75-125	Pass	
Copper	S24-Jn0051808	NCP	%	89			75-125	Pass	
Lead	S24-Jn0051808	NCP	%	86			75-125	Pass	
Mercury	S24-Jn0051808	NCP	%	97			75-125	Pass	
Nickel	S24-Jn0051808	NCP	%	89			75-125	Pass	
Zinc	S24-Jn0051808	NCP	%	87			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Heavy Metals</b>				Result 1	Result 2	RPD			
Arsenic	S24-Jn0057487	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S24-Jn0057487	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S24-Jn0057487	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S24-Jn0057487	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S24-Jn0057487	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S24-Jn0057487	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S24-Jn0057487	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S24-Jn0057487	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Authorised by:

Adam Bateup  
Fang Yee Tan

Analytical Services Manager  
Senior Analyst-Metal



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**CEC Geotechnical**  
**Unit 4 83 Grose Street**  
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**NSW 2151**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025—Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** Diego  
**Report** 1110582-AID  
**Project Name** **PSI (LIMITED SAMPLING)**  
**Project ID** **ER24020**  
**Received Date** Jun 20, 2024  
**Date Reported** Jul 01, 2024

### Methodology:

Asbestos Fibre  
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

*NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*

Unknown Mineral  
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

*NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*

Subsampling Soil  
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

*NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*

Bonded asbestos-  
 containing material  
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

*NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

*NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

**Project Name** PSI (LIMITED SAMPLING)  
**Project ID** ER24020  
**Date Sampled** Jun 19, 2024  
**Report** 1110582-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH1-0.5	24-Jn0057483	Jun 19, 2024	Approximate Sample 436g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH2-0.5-1	24-Jn0057484	Jun 19, 2024	Approximate Sample 216g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH2-0.5-2	24-Jn0057485	Jun 19, 2024	Approximate Sample 282g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH2-1.5	24-Jn0057486	Jun 19, 2024	Approximate Sample 291g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.



**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 22, 2024	Indefinite



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--

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**Company Name:** CEC Geotechnical  
**Address:** Unit 4 83 Grose Street  
North Paramatta  
NSW 2151  
  
**Project Name:** PSI (LIMITED SAMPLING)  
**Project ID:** ER24020

**Order No.:**  
**Report #:** 1110582  
**Phone:** 02 9630 0121  
**Fax:**

**Received:** Jun 20, 2024 12:50 PM  
**Due:** Jun 27, 2024  
**Priority:** 5 Day  
**Contact Name:** Diego

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Metals M8	Volatile Organics	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	BH1-0.5	Jun 19, 2024		Soil	S24-Jn0057483	X		X	X	X
2	BH2-0.5-1	Jun 19, 2024		Soil	S24-Jn0057484	X		X	X	X
3	BH2-0.5-2	Jun 19, 2024		Soil	S24-Jn0057485	X		X	X	X
4	BH2-1.5	Jun 19, 2024		Soil	S24-Jn0057486	X		X	X	X
5	RBW	Jun 19, 2024		Water	S24-Jn0057487		X			
Test Counts						4	1	4	4	4

## Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

## Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

## Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

## Calculations

Airborne Fibre Concentration: 
$$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$$

Asbestos Content (as asbestos): 
$$\% w/w = \frac{(m \times P_A)}{M}$$

Weighted Average (of asbestos): 
$$\%_{WA} = \frac{\sum (m \times P_A) \times x}{x}$$

## Terms

<b>%asbestos</b>	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2</i> (P <sub>A</sub> ). This estimate is not NATA-accredited.
<b>ACM</b>	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
<b>AF</b>	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
<b>AFM</b>	Airborne Fibre Monitoring, e.g., by the MFM.
<b>Amosite</b>	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
<b>AS</b>	Australian Standard.
<b>Asbestos Content (as asbestos)</b>	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
<b>Chrysotile</b>	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
<b>COC</b>	Chain of Custody.
<b>Crocidolite</b>	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
<b>Dry</b>	Sample is dried by heating prior to analysis.
<b>DS</b>	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
<b>FA</b>	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
<b>Fibre Count</b>	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
<b>Fibre ID</b>	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
<b>Friable</b>	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
<b>HSG248</b>	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
<b>HSG264</b>	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
<b>ISO (also ISO/IEC)</b>	International Organization for Standardization / International Electrotechnical Commission.
<b>K Factor</b>	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
<b>LOR</b>	Limit of Reporting.
<b>MFM (also NOHSC:3003)</b>	Membrane Filter Estimating. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
<b>NEPM (also ASC NEPM)</b>	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
<b>Organic</b>	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
<b>PCM</b>	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
<b>PLM</b>	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
<b>Sampling</b>	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
<b>SMF</b>	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
<b>SRA</b>	Sample Receipt Advice.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
<b>UK HSE HSG</b>	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
<b>UMF</b>	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
<b>WA DOH</b>	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
<b>Weighted Average</b>	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% <sub>WA</sub> ).

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Asbestos Counter/Identifier:

Sayeed Abu Senior Analyst-Asbestos

### Authorised by:

Laxman Dias Senior Analyst-Asbestos



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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# CHAIN OF CUSTODY RECORD

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+61 3 8564 5000 EnviroSampleVic@eurofins.com

Company		CEC Geotechnical		Project No		ER24020		Project Manager		Diego E		Sampler(s)		DE					
Address		AVALON BEACH		Project Name		PSI (Limited Sampling)		EDD Format		ESdat, EQUIS etc		Handed over by							
Contact Name		Diego Espinosa		Analyses Where metals are requested, please specify "Total" or "Filterable" SUITE code must be used to attract SUITE pricing		B7A		VOC		ASBESTOS		METALS (As, Cd, Cu, Cr, Ni, Pb, Zn, Hg)		BTEX		Email for Invoice		daniella@cec-au.com, zuhaib@cec-au.com, diego@cec-au.com	
Phone No		432522998														Email for Results		daniella@cec-au.com, zuhaib@cec-au.com, diego@cec-au.com	
Special Directions																Containers		Required Turnaround Time (TAT)	
Purchase Order		ER24020														Change container type & size if necessary		Default will be 5 days if not ticked	
Quote ID No																			
No	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)														Sample Comments / Dangerous Goods Hazard Warning		
1	BH1-0.5	19/06/24	S	X	X	X													
2	BH2-0.5-1	19/6/24	S	X	X	X													
3	BH2-0.5-2	19/6/24	S	X	X	X													
4	BH2-1.5	19/6/24	S	X	X	X													
5	RBW	19/6/24	W				X												
6																			
7																			
8																			
9																			
10																			
Total Counts				4	4	4	1												
Method of Shipment		<input type="checkbox"/> Courier (# ) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name		Signature		Date		Time		Temperature		Report No					
Laboratory Use Only		Received By <i>Ryan Phillips</i>		SYD   BNE   MEL   PER   ADL   NTL   DRW		Signature <i>[Signature]</i>		Date <i>20/6/24</i>		Time <i>12:50pm</i>		Temperature <i>13.8°C</i>		Report No <i>1110582</i>					