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**PRELIMINARY SITE
INVESTIGATION**

OPAL BAYVIEW AGED
CARE
DEVELOPMENT, 36 -
42 CABBAGE TREE
ROAD, BAYVIEW

wsp

OCTOBER 2025

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Preliminary Site Investigation

Opal Bayview Aged Care Development, 36 - 42 Cabbage Tree Road, Bayview

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ABBREVIATIONS

ACM	Asbestos containing material
CSM	Conceptual site model
DP	Deposited Plan
DQI	Data quality indicator
DQO	Data quality objective
DSI	Detailed site investigation
HIL	Health investigation level
HSL	Health screening level
LEP	Local environmental plan
LGA	Local government area
mAHD	Metres Australian Height Datum
mBGL	Metres below ground level
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	<i>National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)</i>
NL	Non-limiting
NSW EPA	New South Wales Environment Protection Authority
LOR	Laboratory limit of reporting
PSI	Preliminary site investigation
QA/QC	Quality assurance/quality control
SAQP	Sampling, analysis and quality plan
SOP	Standard operating procedure
SWL	Standing water level

EXECUTIVE SUMMARY

WSP Australia Pty Ltd (WSP) was commissioned by Bloompark Consulting Pty Ltd (Bloompark) to undertake a Preliminary Site Investigation (PSI) at 36-42 Cabbage Tree Road, Bayview (the site). The PSI is required to assess soil conditions to inform the Secretary's Environmental Assessment Requirements (SEAR's) for the Opal Bayview residential aged care facility (RACF) project (State Significant Development Application number SSD-7724066). The site location is identified on Figure 1, Appendix A. The site layout is presented on Figure 2, Appendix A. The site comprises part Lot 121 in Deposit Plan (DP) 789400.

Based on a review of historical information, the site comprised residential or agricultural land until circa 1982. In 1982 construction of the current site structures appears to be occurring. By 1986 the site buildings have been constructed in their current layout. No significant changes to the site have occurred since 1986. The areas surrounding the site have generally comprised agricultural properties or residential properties since circa 1940, with the majority of residential properties constructed circa 1982 to 1991.

The site was inspected on 30th June 2025 by a WSP environmental scientist. The site, approximately 6,000 sqm in area, is located within the Aveo Bayview Gardens Retirement Living precinct and was observed to consist of a vacant nursing home and vacant serviced apartment building. Site buildings (approximately 11) occupy the majority of the site. Buildings are located in three clusters and interconnected by covered or internal walkways. Garden, grass, paved, asphalt or concrete areas are located between the buildings. The north eastern portion of the site is utilised as a driveway and garden area. A driveway or access road is also located in the south western portion of the site.

A limited intrusive investigation including advancement of a total of eight bore holes was undertaken between 30 June – 3 July 2025. Bore holes were advanced to a depth of between 1.3 and 10 metres below ground level (m bgl).

The subsurface conditions encountered beneath the site during the investigation mostly comprised of brown grey sandy silty clay, gravelly sand or gravelly silty sand fill to maximum depths of between 0.3 m bgl – 1.1 m bgl. No potential asbestos containing material was noted. Fill was underlain by pale grey to brown, mottled red-orange clay, silty clay, sandy gravelly clay or silty sandy clay to depths of between 1.7 – 3.0 m bgl and sandstone to the maximum depth of investigation, 10 m bgl.

Concentrations of total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, benzene, toluene, ethylbenzene, xylene and naphthalene, heavy metals, phenols, organochlorine pesticides or polychlorinated biphenyls were reported below the adopted assessment criteria for the protection of human health based on the proposed continued residential use of the site. Asbestos was not reported in soil samples analysed and was not observed during the investigation.

Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces. No vegetation stress was observed on site.

Based on the results of this PSI it is concluded that the contamination risk at the site is low. It should be noted contamination might be present at areas of the site that were not subject to intrusive investigation. The potential for unexpected finds to be encountered during construction earthworks should be managed during the development works under an unexpected finds protocol under the Construction Environmental Management Plan.

1 INTRODUCTION

1.1 BACKGROUND

This Preliminary Site Investigation (PSI) report is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf of Principal Healthcare Finance Pty Limited (Opal Healthcare) in support of a State Significant Development Application (SSDA) (SSD-77240466) for a 177 bed residential aged care facility (RACF) at 36-42 Cabbage Tree Road, Bayview (the site). The proposed development will comprise the following:

- Demolition of the existing aged care building and driveway on the site;
- Construction of a three-storey residential aged care facility, accommodating:
 - 177 beds;
 - Basement parking; and
 - Ground floor ancillary facilities.
- Construction of a community room, to be located on the Aveo Bayview Gardens Retirement Living (Aveo BGRL) site;
- Construction of a new driveway, to be located on the Aveo BGRL site;
- Torrents Title subdivision of the Opal Healthcare Bayview site from Aveo BGRL;
- Associated amenities and landscaping works; and
- Augmentation of, and connection to, existing utilities as required.

For a detailed project description, refer to the Environmental Impact Statement prepared by Beam Planning.

1.2 RELEVANT SEARS

This PSI report addresses the following relevant Secretary's Environmental Assessment Requirements (SEARs) set out in Table 1.1.

Table 1.1 SEARs Compliance Table

ENVIRONMENTAL FACTOR	RESPONSE / LOCATION IN REPORT
No. 13 - Contamination and Remediation <i>In accordance with Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.</i>	Whole report.

1.3 SITE

The Opal HealthCare Bayview site comprises a ~6,000sqm portion of the current Aveo BGRL site at 36-42 Cabbage Tree Road, legally described at Lot 121 in DP 789400. The site is irregular in shape, bound by Annam Road to the east, and the Aveo BGRL site to the north, west, and south.

A site aerial is provided below.



Figure 1 Context of site within the broader Aveo site



Figure 22 Subdivision site

2 SCOPE OF WORKS

2.1 PHASE 1 DESKTOP REVIEW OF EXISTING INFORMATION

A desktop study was undertaken comprising comprehensive research to enable detailed documentation of site history and assessment of potential sources of contamination to prepare a preliminary conceptual site model (CSM). The desktop study included review of current and historical information, encompassing:

- historical aerial photographs
 - existing licences, notices or orders under the Protection of the Environment Operations Act 1997 (NSW) or the Contaminated Land Management Act 1997 (NSW) for the site or surrounding sites
 - the NSW Office of Water databases, for bores located within 1 km radius of the site through the groundwater bore database
 - the physical site setting including topography, geology (including salinity and acid sulfate soil risk), hydrology, hydrogeology and potential sensitive receptors on or in the vicinity of the site.
-

2.2 SOIL CONTAMINATION ASSESSMENT

WSP undertook limited sampling in conjunction with the geotechnical investigation (WSP, 2025, *Geotechnical Interpretive Report, Opal Bayview Aged Care Development*, PS223670-WSP-NSW-SYD-GEO-REP-001 RevA). The intrusive assessment comprised:

- advancement of a total of eight bore holes to a depth of between 1.3 and 10 metres below ground level (m bgl) i.e. into the natural soil underlying the fill. It is noted that due to access constraints investigation location BH04 was not completed.
- inspection of site surface
- visual inspection and logging of the soil profile
- collection of soil samples at 0.1 m bgl, 0.5 m bgl, and the base of the borehole, at a minimum, and at any evidence of contamination or change in soil type or quality
- field screening of each sample for the presence of volatile organic compounds (VOCs) using a photo-ionisation detector (PID)
- One 500ml soil sample per location was collected for asbestos (quantification/7mm sieving national Environmental Protection measure (NEPM) methodology) analysis
- analysis of selected samples for primary contaminants of concern (COPCs):
 - total recoverable hydrocarbons (TRH)
 - benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN)
 - polycyclic aromatic hydrocarbons (PAHs)
 - heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc).
- Analysis of selected samples for the following additional COPCs:
 - organochlorine and organophosphorus pesticides (OCPs, OPPs)

- phenols
 - polychlorinated biphenyls (PCBs).
- preparation of this PSI report documenting the findings of the investigation.
-

2.3 OBJECTIVES

WSP understand that Bloompark require a PSI at the site to meet the SEARs. Limited intrusive site investigation was undertaken to assess the presence of potential contamination and, if needed, determine the options for excavated material management, remedial management during construction and ongoing land use.

The objectives of the PSI are to:

- determine if the site is suitable for the proposed development
- determine if there are risks to site workers, the public and environment from any potential contaminants of concern during or following redevelopment
- determine the suitability (environmental) of the soil to be reused on site
- provide soil waste classification options for off-site soil disposal
- provide recommendations for remediation (if required).

3 SITE LOCATION AND SETTING

3.1 SITE LOCATION AND IDENTIFICATION

The general site identification details are provided in Table 3.1.

Table 3.1 Summary of general site information

Site name	Opal Bayview
Site address	36-42 Cabbage Tree Road
Site identification	Part Lot 121 in DP 789400
Site area	Approximately 6,000 m ²
Current site use	Site is currently in use as a retirement village, Aveo Bayview Gardens Retirement Living (BGRL)
Surrounding land uses	The site is bound by Annam Road to the east, and the Aveo BGRL site to the north, west, and south. Residential premises are located beyond Annam Road and the Aveo BGRL.
Local government area (LGA) and zoning	Pittwater Council Local Government Area, Low Density Residential (R2)
Proposed site use	Continued aged care use

3.2 SITE INSPECTION

The site was inspected on 30th June 2025 by a WSP environmental scientist. The site was observed to comprise the Opal HealthCare Bayview site, a ~6,000sqm portion of the current Aveo BGRL site at 36-42 Cabbage Tree Road, legally described at Lot 121 in DP 789400.

Site buildings (approximately 11) occupy the majority of the site. Buildings are located in three clusters and interconnected by covered or internal walkways. Garden, grass, asphalt or concrete areas are located between the buildings. The north eastern portion of the site is utilised as a driveway and garden area. A driveway or access road is also located in the south western portion of the site.

The site layout is illustrated in Appendix A, Figure 2.

3.3 TOPOGRAPHY AND SURFACE WATER DRAINAGE

The site slopes down to the south west from approximately 30m Australian Height Datum (AHD) in the north east to approximately 20 m AHD in the south west.

Site water is expected to follow topography and flow across the site to the south west.

The closest water body is an unnamed drainage channel located approximately 90m west of the site, which drains to a tributary of Winnererremy Bay 400m south east of the site.

3.4 GEOLOGY

A review of the *Sydney 1:100,000 Geological Map Series Sheet 9130* (Geological Survey of NSW, 1983) indicates that the site is underlain by Middle Triassic (base) to Middle Triassic (top) Siliciclastic sedimentary rock derived from Narrabeen Group, Gosford Subgroup, Newport Formation consisting of interbedded laminite, shale and sandstone; white quartz to quartz-lithic, very fine- to medium-grained sandstone; minor shale breccia and pebble polymictic conglomerate (at base of sandstone units); minor red clays.

The NSW Soil and Land Information System Soil Essentials Report obtained through eSPADE indicated the site is underlain by a brownish-black fine sandy loam and yellowish-brown sandy clay loam.

The subsurface conditions encountered beneath the site during the investigation mostly comprised of brown grey sandy silty clay, gravelly sand or gravelly silty sand fill to maximum depths of between 0.3 m bgl – 1.1 m bgl. No potential asbestos containing material was noted. Fill was underlain by pale grey to brown, mottled red-orange clay, silty clay, sandy gravelly clay or silty sandy clay to depths of between 1.7 – 3.0 m bgl and sandstone to the maximum depth of investigation, 10 m bgl.

3.5 HYDROGEOLOGY

Based on the geological profile of the region and the depths to groundwater recorded in regional monitoring wells, groundwater is present within bedrock beneath the site at depths of greater than 5 m bgl. Based on site topography and the location of surface water features, groundwater flow is inferred to be toward the south.

A search of the WaterNSW online database¹ for registered groundwater bores identified 5 registered bore within a 500 m radius of the site. The bores were registered for the purposes of water supply, irrigation and other purposes. Bore depth ranged from 150 -168m bgl north and east of the site at a high elevation to 1.5, 30 and 60 m bgl south and west of the site at a lower elevation.

3.6 ACID SULFATE SOIL

The CSIRO Atlas of Australian Acid Sulfate Soils indicated that the site is located in an area of “extremely low probability of occurrence” of acid sulfate soils.

The site is Class 5 and not subject to Acid Sulfate Soil development controls under the Pittwater LEP, 2014. The LEP notes works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk.

¹ <https://realtimedata.watarnsw.com.au>

4 SITE HISTORY REVIEW

4.1 HISTORICAL AERIAL PHOTOS

A review of historical aerial photography covering the site and surrounding area was undertaken by WSP. A summary of the features identified is presented in Table 4.1. Copies of the photographs reviewed are provided in the Lotsearch report in Appendix D.

Table 4.1 Historical aerial photograph review

YEAR	SITE	SURROUNDING LAND
1940	The site has been cleared of vegetation and two structures are present in the central portion of the site.	The surrounding land to the north and east comprises predominantly undisturbed bush land. Land to the west and south has been cleared. Structures are present to the southwest.
1951	Vegetation growth has occurred on site, potentially for market gardening purposes.	Development has occurred to the south and west with large sheds noted likely of agricultural purposes.
1955	Ornamental paths have been constructed surrounding the structures. Additional vegetation growth is noted.	Additional structures have been built to the south west of the site.
1961	Additional structures are noted in the north western and south western portion of the site.	Additional structures have been built to the south west of the site. Clearing has occurred to the north east of the site.
1965	No significant changes since previous photograph.	Structures are present to the north east, south and south east of the site.
1970	No significant changes since previous photograph.	No significant changes since previous photograph.
1978	Additional vegetation growth is noted on site. Structures in the north western and south western portion of the site appear to be overgrown with vegetation or removed.	A road is now present to the east of the site. Development has occurred to the south east. Structures formerly located to the south west have been demolished.
1982	Vegetation clearance and development has occurred on site. Buildings are noted in the southern corner of the site. Development appears to be occurring in the northern portion of the site.	Residential development has occurred surrounding the site.
1986	The site appears in its current layout with structures noted across the majority of the site. A vegetated area and driveway are noted in the eastern portion of the site.	Additional residential development is occurring to the north west.
1991	No significant changes since previous photograph.	Additional residential development has occurred surrounding the site.
1994	No significant changes since previous photograph.	No significant changes since previous photograph.
2003	No significant changes since previous photograph.	No significant changes since previous photograph.

YEAR	SITE	SURROUNDING LAND
2014	No significant changes since previous photograph.	No significant changes since previous photograph.
2025	No significant changes since previous photograph.	No significant changes since previous photograph.

4.2 EPA ONLINE NOTICE RECORDS

An online search of the NSW EPA *Protection of the Environment Operations Act 1997* public register found no notices or licenses, either current or former, for the site or properties within 500m of the site.

A search of the NSW EPA online contaminated sites database² did not identify the site or surrounding properties as currently being regulated by the NSW EPA, or as having been notified to NSW EPA as potentially contaminated. No former gas works, waste management facilities, or other sites with contamination issues regulated by the EPA are located on or within 500m of the site.

No properties within a 500m radius of the site are listed under the NSW EPA PFAS investigation program.

4.3 PLANNING INFORMATION

The following was noted regarding the site.

- The site is zoned R2 low Density Residential under the Pittwater Local Environmental Plan 2014.
- The area of the site to be developed is not listed as bushfire prone land defined by the EP&A Act 1979.
- The Sydney Coastal Lilly Pilly-Palm Gallery Rainforest borders the eastern portion of the area of the site to be developed.
- No Environmental Planning Instrument heritage items are located on site or immediately surrounding the site. The site and surrounding properties are not listed on the Commonwealth Heritage List, National Heritage List or State Heritage Register.

4.4 SUMMARY OF SITE HISTORY

Based on a review of historical information, the site comprised residential or agricultural land until circa 1982. In 1982 construction of the current site structures appears to be occurring. By 1986 the site buildings have been constructed in their current layout. There have been no significant changes to the site since 1986.

The areas surrounding the site have generally comprised agricultural properties or residential properties since circa 1940, with the majority of residential properties constructed circa 1982 to 1991.

4.5 PRELIMINARY CONCEPTUAL SITE MODEL

Based on the site inspection and the desktop review of site setting and historical land use information, a preliminary CSM has been prepared. This is summarised in Table 4.2.

² www.epa.nsw.gov.au/prclmapp/searchregister

Table 4.2 Preliminary CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials potentially used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials associated with imported materials or demolished structures — pesticides used historically and recently to maintain the site.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials — surface soil impacts from application of pesticides used on-site. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination is not expected based on the historical land use at the site.
Contaminants of concern	Contaminants of concern at the site comprise: — TRH and BTEXN — PAHs — heavy metals — OCPs and OPPs — PCBs — asbestos.
Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — vertical migration of contaminants in soil from infiltration of rain water — lateral migration of contaminants through underground service trenches and other preferential pathways — run-off via surface contaminants in rain water — volatilisation of hydrocarbons in soil and/or groundwater.
Exposure pathways	Potential exposure pathways include: — inhalation of dust or vapours by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers. Exposure from contaminated groundwater has been discounted as part of the preliminary CSM due to: — the expected absence of gross soil contamination leading to groundwater contamination — the absence of groundwater extraction bores within the site.

Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — underlying soil and groundwater ecosystems — adjacent residential land uses — current and future occupants of the site — on-site and off-site construction or utility workers (those working within service pit trenches).
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5 DATA QUALITY OBJECTIVES

Systematic planning is critical to successful implementation of an environmental assessment and is used to define the type, quantity and quality of data needed to inform decisions. The United States Environmental Protection Agency has defined a process for establishing data quality objectives (DQOs), which has been referenced in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013).

DQOs ensure that:

- the study objectives are set
- appropriate types of data are collected (based on contemporary land use and chemicals of concern)
- the tolerance levels are set for potential decision making errors.

The DQO process is a seven-step iterative planning approach. The outputs of the DQO process are qualitative and quantitative statements which are developed in the first six steps. They define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose and specify the performance requirements for the quality of information to be obtained from the data. The output from the first six steps is then used in the seventh step to develop the data collection design that meets all performance criteria and other design requirements and constraints. The DQO process adopted for the works is outlined in Table 5.1.

Table 5.1 DQO process

STEP	DESCRIPTION	OUTCOMES
1	State the problem	The purpose of this assessment was to determine whether contaminants of concern were present at the site and, if so, assess potential risk to the future site users.
2	Identify the decisions/goal of the investigation	The decisions to be made based on the results of the investigation are as follows: — Has the soil been adequately sampled? — Were all the contaminants of concern analysed? — Is there a risk to future users of the site?
3	Identify the inputs to the decision	The inputs required to make the above decisions are as follows: — geological data — concentrations of contaminants of concern in soil — vertical delineation of chemicals in soil to preclude/include groundwater investigations — site assessment criteria (outlined in Section 7) — observation data including presence of odours or discoloration and presence of potential hazardous materials (including asbestos) — distribution of identified contamination.
4	Define the study boundaries/constraints on data	The boundaries of the investigation have been identified as follows: — Spatial boundaries: site investigation area as identified in Appendix A — Vertical boundaries: 0.5 m into the natural soil underlying the fill, maximum depth of 10 m bgl — Temporal boundaries: the date of the project inception to the completion of the fieldwork under the investigation (July 2025).

STEP	DESCRIPTION	OUTCOMES
5	Develop a decision rule	The purpose of this step is to define the parameters of interest, specify the action levels and combine the outputs of the previous DQO steps into an ‘if...then...’ decision rule that defines the conditions that would cause the decision maker to choose alternative actions. The parameters of interest are concentrations of contaminants of concern in soil and evidence of uncontrolled fill material. An assessment of the concentrations of the contaminants of concern is to be undertaken to assess the suitability for recreational/open space land use. Should chemical or asbestos concentrations exceed the adopted assessment criteria, remedial options will be considered. Should vertical delineation of chemical concentrations in soil exceeding the adopted assessment criteria not be achieved, groundwater investigations will be considered.
6	Specify limits on decision errors	The acceptable limits on decision errors to be applied in the investigation and the manner of addressing possible decision errors have been developed based on the data quality indicators (DQIs) of precision, accuracy, representativeness, comparability and completeness and are presented in Table 5.2 and 5.3.
7	Optimise the design for obtaining data	The purpose of this step is to identify a resource-effective data collection design for generating data that satisfies the DQOs. This assessment has been designed considering the available information regarding the site. The resource effective data collection design that is expected to satisfy the DQOs is described in detail in Section 6. To ensure the design satisfies the DQOs, DQIs have been established to set acceptance limits on field methodologies and laboratory data collected.

DQIs for sampling techniques and laboratory analyses of collected soil samples define the acceptable level of error required for this validation assessment. The adopted field methodologies and data obtained have been assessed by reference to DQIs as follows:

- Precision: a quantitative measure of the variability (or reproducibility) of data
- Accuracy: a quantitative measure of the closeness of reported data to the true value
- Representativeness: the confidence (expressed qualitatively) that data are representative of each media present on the site
- Comparability: a qualitative parameter expressing the confidence with which one data set can be compared with another
- Completeness: a measure of the amount of useable data (expressed as a percentage) from a data collection activity.

A summary of the field and laboratory DQIs for the validation assessment are provided in Tables 5.2 and 5.3.

Table 5.2 DQIs for field techniques

DQI
Precision
Standard operating procedures (SOPs) appropriate and complied with
Collection of inter-laboratory and intra-laboratory duplicates
Accuracy
WSP SOPs appropriate and complied with
Collection of field and trip blanks and trip spikes
Representativeness
Appropriate media sampled
Comparability
Same SOPs used on each occasion
Experienced sampler
Climatic conditions (temperature, rainfall, wind)
Same type of samples collected
Completeness
SOPs appropriate and complied with
All required samples collected

Table 5.3 DQIs for laboratory

DQI	ACCEPTABLE LIMITS
Precision	
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x laboratory limit of reporting (LOR) – no limit 10 to 20 x LOR – 50% relative percentage difference (RPD) >20 x LOR – 30% RPD
NATA certified laboratories	NATA accreditation for analyses performed
Accuracy	
Analysis of laboratory prepared trip blanks (one per batch)	Below LORs for contaminants analysed
Analysis of rinsate blanks (one per day)	Below LORs for contaminants analysed
Analysis of laboratory blanks	Below LORs for contaminants analysed
Analysis of laboratory matrix spikes, laboratory control samples and surrogate recoveries	70-130% inorganics/metals 60-140% organics 10-40% semi-volatile organic compounds
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x LOR – no limit

	10 to 20 x LOR – 50% RPD >20 x LOR – 30% RPD
Representativeness	
All required samples analysed	As per Section 6
Comparability	
Sample analytical methods used (including clean-up)	As per NEPM (2013)
Same units	Justify/quantify if different
Same laboratories	Justify/quantify if different
Sample LORs	Less than nominated criteria
Completeness	
All critical samples analysed	As per Section 6
All required analytes analysed	As per Section 6
Appropriate methods and LORs	As per NEPM (2013)
Sample documentation complete	
Sample holding times complied with	

6 SAMPLING AND ANALYSIS PROGRAM

6.1 SAMPLING RATIONALE

The sampling plan comprised soil sampling of boreholes across the site in conjunction with the geotechnical investigation (WSP, 2025, *Geotechnical Interpretive Report, Opal Bayview Aged Care Development*, PS223670-WSP-NSW-SYD-GEO-REP-001 RevA). Boreholes were advanced using a combination of hand augur and drill rig. The sampling frequency was not compliant with the NSW EPA 2022, Sampling Design Guidelines, however was considered adequate to inform this PSI.

Sample locations were selected based on site access and geotechnical assessment requirements.

6.2 FIELDWORK

6.2.1 PRELIMINARIES – SERVICE LOCATION

A desktop search for underground services using the ‘Dial Before You Dig’ service was undertaken prior to intrusive investigations. Clearance of all underground services within the investigation area was undertaken by an accredited underground service locator and sampling locations were cleared prior to the commencement of intrusive works. The service locator was provided with information/plans from the relevant asset owners.

6.2.2 INTRUSIVE INVESTIGATION WORKS AND SOIL SAMPLING

Intrusive investigation works were conducted between 30 June and 3 July 2025 after all sampling locations were cleared by the service locator. The eight investigation locations were progressed to a maximum depth of between 1.3 m bgl and 10 m bgl. The rationale for the nominated depth was to investigate into the natural soil underlying the fill material.

Soil samples were generally collected from the surface (0.0-0.1 m bgl), 0.5-0.6 m bgl, 0.9-1.0 m bgl and where changes in lithology or evidence of contamination were observed. Duplicate samples were collected and screened with a photo-ionisation detector (PID) to analyse for volatile organic compounds (VOCs). PID readings were used to aid in selection of soil samples for laboratory analysis.

Subsurface materials were logged by an experienced environmental scientist according to AS1725: 2017 *Geotechnical Site Investigations*. Soil samples were placed in 250 mL jars, leaving minimal headspace, and closed using Teflon-coated lids.

Soil samples collected for asbestos analysis followed the sampling methodology outlined in the WA DoH 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western, as referenced by the NEPM (2013). For ACM and friable asbestos (FA), a sample of drill cuttings was collected and screened on-site through a ≤ 7 mm sieve. Any ACM/FA retained on the sieve (i.e. >7 mm in size) was bagged and sent to the primary laboratory for analysis. For analysis of asbestos fines (AF) a separate sample of approximately 500 mL was collected in a bag. This entire sample was sent to the laboratory for sieving and gravimetric determination of asbestos (<7 mm).

Dedicated disposable nitrile gloves were worn for each sample collected to minimise the potential for cross contamination. All soil samples were stored on ice in a cooler and transported to the laboratory under chain of custody documentation.

6.3 LABORATORY ANALYSIS

WSP submitted at least one soil sample from each borehole for laboratory analysis to a NATA accredited laboratory. Samples were selected based on field screening, including PID readings (volatiles) and sample appearance (visual and olfactory). Other samples obtained were retained for further analysis if required.

A suite of contaminants often found in fill material were analysed and included heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRHs, BTEXN, PAHs, phenols, OCPs, OPPs, herbicides, PCBs and asbestos.

7 SOIL ASSESSMENT CRITERIA

The purpose of this assessment is to determine the soil conditions, with respect to current potential soil contamination at the site. It is considered appropriate to assess the site based on the current and future use as an aged care facility. Assessment criteria applicable for assessing laboratory analytical data is provided by the following:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013), specifically Schedule B1, Investigation Levels for Soil and Groundwater.

Schedule B1 provides a framework for the use of investigation and screening levels based on a matrix of human health and ecological risks.

7.1 HEALTH INVESTIGATION LEVELS AND HEALTH SCREENING LEVELS

To assess the presence and extent of soil contamination at a site, the NSW EPA refers to the NEPM (2013) which provides health investigation levels (HILs) and health screening levels (HSLs) for the assessment of impacted soil.

HILs provide an assessment of potential risk to human health from chronic exposure to contaminants and have been developed based on land use setting. As the purpose of this investigation is to assess the site against risk to current and future site users, the 'HIL A' criteria for residential with garden/accessible soil have been adopted; these criteria are considered applicable to aged care land use.

HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the vapour intrusion and inhalation pathway. The HSLs depend on specific soil physicochemical properties and land use scenarios. They apply to different soil types and depths. The 'HSL A' criteria have been adopted, in a subsurface comprising of sand.

HSLs are also provided for asbestos contamination in soil, for bonded ACM, FA and AF. As per the WA DoH (2009) guidelines, a 10 L sample is collected and screened manually on-site through a ≤ 7 mm sieve or spread out for inspection on a contrasting material for visual inspection. Any ACM/FA retained on the sieve (i.e. > 7 mm in size) is then analysed in the laboratory for bonded ACM, with results quantified in per cent weight by weight (%w/w). For FA/AF a separate sample of approximately 500 mL is collected, sieved in the laboratory and gravimetric determination of asbestos (< 7 mm) undertaken. The results are then compared to the NEPM HSLs. If the HSLs are not exceeded then no contamination management options are required provided the surface soil is free of visual asbestos. If results exceed the HSLs, further assessment, management and/or remediation is required.

The HSL for friable asbestos and asbestos fines (FA/AF) provided in the NEPM (2013) is 0.001% for all land use types. Current Australian methodologies for asbestos quantification, as outlined in Australian Standard AS4964 2004, *Method for Qualitative Identification of Asbestos in Bulk Samples*, indicate that the presence or absence of free (i.e. respirable) asbestos fibres can be determined with a LOR of 0.01%, an order of magnitude greater than the HSL. It is noted that laboratories typically report with a LOR of 0.001% for FA/AF, however due to the limitations with the method adopted it is possible that free respirable asbestos fibre contamination exists in samples at concentrations up to an order of magnitude greater than the reported detection limit. In the absence of a methodology with a more appropriate LOR, it is considered appropriate to compare analytical results obtained against the HSL, taking into consideration the limitations inherent in the method.

7.2 ECOLOGICAL SCREENING LEVELS AND ECOLOGICAL INVESTIGATION LEVELS

The NEPM (2013) provides ecological screening levels (ESLs) for TRH and BTEX compounds, and ecological investigation levels (EILs) for selected metals and organic substances, for use as an initial screening risk assessment and are applicable for assessing risk to terrestrial ecosystems. The ESLs apply to different land use scenarios, and to coarse- and fine-grained soils. The EILs depend on specific soil physicochemical properties and land use scenarios. ESLs/EILs generally apply to the top 2 m of soil.

The NEPC, 2013 provides a protocol for deriving site specific Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a range of potential contaminants. The EILs take into consideration the physiochemical properties of soil and contaminants and the capacity of the local ecosystem to accommodate increases in the contaminant levels. Tables 1B(4) and 1B(5) of the NEPM (2013) provide generic EILs for aged arsenic and lead, and fresh DDT and naphthalene in soils (irrespective of their physiochemical properties). Aged values are applicable for contamination present in soil for at least two years which is considered appropriate. Site-specific EILs for chromium (III), copper, nickel and zinc can be calculated using the CSIRO Ecological Investigation Level Calculation Spreadsheet provided online in the ASC NEPM Toolbox (<http://www.scew.gov.au/node/941>). These calculations require an understanding of the cation exchange capacity (CEC), clay content and pH of the residual soil at the site. The following parameters were adopted based on measured or conservative values:

- CEC of 10 cmolc/kg.
- pH of 7.
- clay content of 10%.
- organic carbon content of 1%, as a conservative approach.

Adopted ESLs and EILs are outlined in Table 7.1.

Table 7.1 Soil ecological assessment criteria

ANALYTE	ESLs ¹ (mg/kg)	EILs ² (mg/kg)
TRH/BTEXN compounds		
TRH F1	180	-
TRH >C ₁₀ -C ₁₆	120	-
TRH >C ₁₆ -C ₃₄	1,300	-
TRH >C ₃₄ -C ₄₀	5,600	-
Benzene	65	-
Toluene	105	-
Ethylbenzene	125	-
Xylene (total)	45	-
Naphthalene	-	170
PAHS		
Benzo(a)pyrene	0.7	-
METALS		

ANALYTE	ESLs¹ (mg/kg)	EILs² (mg/kg)
Arsenic	-	100
Chromium	-	410
Copper	-	210
Lead	-	1,100
Nickel	-	170
Zinc	-	480
DDT	-	180

(1) NEPM (2013) Schedule B1 Table 1B(6) ESLs for TPH Fractions F1 to F4, BTEX and benzo(a)pyrene in soil.

(2) NEPM (2013) Schedule B1 EILs for metals, DDT and naphthalene in soils.

8 RESULTS AND DISCUSSION

8.1 SUBSURFACE CONDITIONS

The subsurface conditions encountered beneath the site during the investigation mostly comprised of brown grey sandy silty clay, gravelly sand or gravelly silty sand fill to maximum depths of between 0.3 m bgl – 1.1 m bgl. No potential asbestos containing material was noted.

Fill was underlain by pale grey to brown, mottled red-orange clay, silty clay, sandy gravelly clay or silty sandy clay to depths of between 1.7 – 3.0 m bgl and sandstone to the maximum depth of investigation, 10 m bgl.

Environmental borehole logs are provided in Appendix F, and sampling locations are shown in Appendix A. Photographs of the boreholes are presented in Appendix E.

8.2 SOIL RESULTS SUMMARY

Selected soil samples were analysed for contaminants of concern. Soil samples were selected based on a combination of sample location (to provide coverage) and field observations (to target areas of potential concern).

The following sections provide a summary of the results of the soil investigation. More detailed summary tables of analytical results are provided in Appendix B, and laboratory reports are provided in Appendix C.

8.2.1 HIL/HSL EXCEEDANCES

All results for BTEXN, PAHs, phenols, OCPs, OPPs, herbicides and PCBs in soil were below the laboratory LORs, and therefore were below the adopted human health criteria for the site.

Concentrations of TRH and heavy metals were reported above the LORs but below the adopted human health criteria for the site.

Asbestos was also not observed during the investigation or identified within soil samples analysed.

8.2.2 ESL/EIL EXCEEDANCES

Reported concentrations of heavy metals, TRH, PAHs, BTEXN, Phenols, OPP, OCP and PCBs in soil were below the adopted ecological criteria for the site.

No vegetation stress was observed on site.

8.3 PRELIMINARY WASTE CLASSIFICATION

Material requiring off-site disposal should be assessed in accordance with the NSW EPA waste classification guidelines to determine the appropriate classification. The waste classification and disposal process in NSW involves the following six-step process:

Step 1: Determine whether the waste is special waste? (Note: asbestos is a special waste);

Step 2: Determine whether the waste is liquid waste;

Step 3: Determine whether the waste is pre-classified;

Step 4: Determine whether the waste possesses hazardous characteristics;

Step 5: Determine the waste's classification using chemical assessment; then

Step 6: Determine whether the waste is putrescible.

Waste classification criteria are presented in the NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classifying waste*.

WSP has conducted a preliminary waste classification assessment based on results of the PSI, with the results outlined in the following sections. Waste classification tables are provided in Appendix B.

Concentrations of contaminants of concern were reported below the CT1 general solid waste criteria in all samples analysed. As such, the preliminary waste classification of fill material is general solid waste.

WSP considers additional sampling including toxicity characteristic leaching procedure (TCLP) analysis will be required for any soil which is proposed to be removed from the site. Preparation of a waste classification letter will also be required. The letter shall be used to seek pre-approval for disposal from the selected waste facility.

Sampling may be undertaken in situ, or ex situ via excavation and temporary stockpiling. The sampling density for material to be disposed of off-site will comprise (as a minimum) one sample per 25 m³ for less than or equal to 200 m³ of material. If larger volumes are to be generated for a single batch, then a minimum of ten samples are to be collected for up to 2,000 m³ to facilitate statistical analysis along with relevant quality assurance and quality control (QA/QC) samples. Waste classification samples are to be analysed for asbestos, TRH, BTEX compounds, PAHs, and heavy metals.

8.4 UPDATED CONCEPTUAL SITE MODEL

Table 8.1 provides an updated CSM, which has been revised based on the findings of the limited intrusive assessment.

Table 8.1 Updated CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials from imported materials or demolished structures.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination by chemical contaminants is not apparent based on the analytical results.
Contaminants of concern	Based on the soil laboratory results the revised contaminant of concerns for the site are considered to be: — TRH and heavy metals. All concentrations were below the adopted guideline values.
Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — run-off via surface contaminants in rain water.

Exposure pathways	Potential exposure pathways include: — inhalation of dust by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers. Exposure from contaminated groundwater has been discounted as part of the preliminary CSM due to: — the absence of gross soil contamination identified during this DSI — the absence of groundwater extraction bores within the site.
Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — current and future occupants of the site — members of the public accessing the site, as it is currently publicly accessible — on-site and off-site construction or utility workers (those working within service pit trenches).

9 DATA VALIDATION

The DQIs for sampling techniques and laboratory analyses of collected representative soil samples define the acceptable level of error required for this investigation. The DQOs have been assessed by reference to the attributes presented in Table 9.1.

Table 9.1 Data quality indicators

DQI	DESCRIPTION	APPLICABILITY
Representativeness	The confidence that the data are representative of each media present on the site. Expresses the degree to which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Controlled through selecting sampling locations that exemplify site conditions and obtaining suitable samples.	Consistent and repeatable sampling techniques and methods were utilised. Shallow fill was suitably characterised at each investigation location as part of the sample and analysis program.
Precision	The quantitative measure of the variability (or reproducibility) of data. Expressed as RPDs between the original and duplicate samples tested. Validity of the data is questioned if the RPD limits are exceeded and upon further investigation a reason cannot be determined.	Work was conducted in accordance with WSP standard procedures. The precision of the data was assessed by calculating the RPDs of duplicate samples following AS 4482.1 (2005).
Accuracy	The quantitative measure of the closeness of reported data to the true values. Accuracy can be undermined by such factors as field contamination of samples, poor preservation or preparation techniques.	Accuracy was assessed by using equipment blanks and laboratory quality assurance / quality control (QA/QC) analytical results (including laboratory control samples, spikes, and reference samples).
Completeness	The measure of the amount of usable data from a data collection activity. Valid chemical data are the values that have been identified as acceptable or validated.	The completeness goal was set at there being sufficient valid data generated during the study. Measurements made were judged to be valid measurements.
Comparability	The confidence that data may be considered to be equivalent for each sampling analytical event, i.e. the confidence with which one data set can be compared with another. Achieved through qualitative assessment of QA/QC procedures, using comparable field sampling, laboratory sample preparation and analytical procedures and reporting units.	The sampling was in general accordance with the sampling and analysis procedures and as per standard industry procedures. Each sample was analysed using identical methods for each analyte and laboratory LORs were consistent over each laboratory batch. A check laboratory was used to provide data to make a comparative assessment of variability between laboratories.

Table 9.2 summarises conformance to specific QA/QC procedures.

Table 9.2 Data quality assurance

ITEM	OBJECTIVES MET
Environmental consultant	The environmental consultant maintains quality assurance systems certified to AS/NZS ISO 9001:2000. Qualified and experienced environmental scientists completed field works.
Procedures	All work was conducted in accordance with relevant statutory work health and safety (WHS) and environmental sampling guidelines, as well as standard company WHS and environmental field procedures. Standard field sampling sheets were used. Details recorded included WSP staff and contractors present, time on/off-site, weather conditions, calibration records and comments.
Sampling	Collection of samples was undertaken by appropriately qualified and experienced personnel following WSP standard field procedures which are based on industry accepted standard practice. Chain of custody documentation was used to ensure the integrity of samples from collection to receipt by the laboratory.
Field equipment	Equipment was serviced and calibrated as per the manufacturer requirements.
Equipment decontamination	Undertaken after each sampling episode where equipment used was not dedicated. A rinsate blank was collected by passing deionised water over decontaminated field equipment (trowel) and collecting it for analysis of contaminants of concern. All analytes in the rinsate blank were below LORs. Field sampling procedures conformed to WSP QA/QC protocols to prevent cross-contamination, preserve sample integrity, and allow for collection of a suitable data set from which to make technically sound and justifiable decisions with data of satisfactory usability. QA/QC sample results are presented in in Appendix B and C.
Transportation	Samples were stored in chilled coolers on-site and during transport via courier to the laboratory. A chain of custody form was completed on-site and sent with the samples. The laboratory confirmed receipt of the samples and specified the condition on delivery and the scheduled analyses. All analytes in the trip blank were below LORs. Appropriate holding times were met.
Field QA/QC	QA/QC sampling was undertaken to industry standard procedures including collection and analysis of intra-laboratory. Field and laboratory acceptable limits are as stated by AS 4482.1-1997. Non-compliances have been documented in Section 10 of this report.
Laboratory analysis	Analysis was carried out by laboratories with NATA certification for the required analyses with the exception of asbestos quantification. Detection limits were sufficient to enable comparison against the appropriate guidelines. All LORs were less than the adopted assessment criteria.
Acceptable limits for QA/QC samples	Primary laboratory QA/QC acceptance limits for recovery of surrogates, control samples and matrix spikes to be 70% to 130% for organics and 80% to 120% recovery for inorganics and waters. All method blanks to be less than LORs.
Reporting	Report generally complies with the NEPM (2013).

10 FIELD QA/QC

The following sections discuss the field QA/QC program. Summary tables of QA/QC results are provided in Appendix B, and the results for internal and external QA/QC procedures are provided within the laboratory analysis reports in Appendix C.

10.1 FIELD RESULTS

10.1.1 BLIND DUPLICATES

The field QA/QC soil sampling program for the sample batch comprised collection and analysis of the following for TRH and BTEXN compounds, PAHs and heavy metals:

- intra laboratory duplicate QC01A and inter laboratory duplicate QC01B of primary sample BH7_0.5_0.6
- intra laboratory duplicate QC02A and inter laboratory duplicate QC02B of primary sample BH1_0.1_0.2.

No field duplicate analysis was undertaken for asbestos quantification. The purpose of collecting duplicate samples is to measure the potential for inaccuracy in sample results due to field or laboratory procedures. Analysis of anonymised duplicate samples by the primary and secondary laboratories serves to determine the degree to which sample analyses which should provide identical results do, in fact, provide them. The way this is measured is through the calculation of RPDs.

For contaminants which are discrete within the matrix being sampled, such as asbestos in bonded or fibre form in soil, the duplication of a particular sample does not logically support the objective of duplicate sampling. Chemical contaminants tend, through a variety of processes, to diffuse towards homogeneous concentrations. However, as asbestos contamination represents foreign bodies present in the soil which do not diffuse except through mechanical mixing there is no logical expectation of similar quantities in any two discrete samples, even two samples split from one larger one. Therefore, the results of the analyses of two such samples should not be expected to adhere to the same RPD criteria by which chemical contaminants are measured.

10.1.1.1 RPDs

RPDs were calculated for the primary and duplicate samples for assessment of the data quality, in particular for assessment of the reproducibility of the analytical data measurements or ‘precision’ given the adopted field and laboratory methods.

The RPDs were calculated using the formula below, and the results are presented in Appendix B.

$$RPD\% = \frac{|Ro - Rd|}{|(Ro + Rd) / 2|} \times 100\%$$

Where Ro is the primary sample and Rd is the primary duplicate.

The RPD values were compared to the RPD acceptance criterion outlined in Table 9.2 and in general accordance with Australian Standard AS 4482.1 (for non- and semi-volatiles in soil) and NEPM (2013) Schedule B3. For volatile compounds no published RPD acceptance criteria exists, however RPDs of <100% are considered acceptable where concentrations are at least 10 times the LOR. RPDs for results less than the LOR were not calculated. In instances where results were greater than the LOR for the one sample, but below LOR for the corresponding primary or duplicate sample, a result equal to the LOR was adopted in order to calculate an RPD.

RPD exceedances were reported as follows:

- lead for primary sample BH7_0.5_0.6 and intra-laboratory duplicate (QC01A)
- lead for primary sample BH7_0.5_0.6 and inter-laboratory duplicate (QC01B)
- chromium for primary sample BH1_0.1_0.2 and inter-laboratory duplicate (QC02B)

All other RPDs were considered to be acceptable.

It is considered that the RPD exceedances listed above are attributable to the heterogeneous nature of the fill encountered. Results were all in the same order of magnitude and none of the concentrations detected in either the primary or duplicate samples analysed exceeded the adopted assessment criteria. The degree of variance shown in the duplicate results would not indicate potential exceedances for other samples in the dataset. The elevated RPDs are, therefore, not considered to affect the conclusions of this report.

10.1.2 RINSATE

A rinsate blank was collected and analysed for TRH, metals and PAHs. These analytes were not detected in the sample, suggesting the sampling protocol did not result in cross-contamination of the samples.

Results for the rinsate samples are presented in Appendix B.

10.1.3 TRIP SPIKE AND TRIP BLANK

A trip blank sample accompanied samples to the laboratory and analysed for TRH and BTEXN. These analytes were not detected in the trip blank, suggesting no cross contamination occurred during transportation.

Trip spike recovery indicated loss of volatiles occurred at an acceptably low level.

10.2 SUMMARY OF QA/QC RESULTS

WSP considers that the sample collection, documentation, handling, storage and transportation procedures utilised are of an acceptable standard and the analytical results provided by the laboratories are deemed reliable and complete, therefore the data are considered fit for purpose.

It is considered that the QA/QC procedures and results were acceptable and that the conclusions of the report have not been significantly affected by the sampling or analytical procedures. Based on the results of laboratory QA/QC samples and the sampling and handling procedures used for the collection and analysis of soil, the data were considered representative and appropriate for use in this assessment.

11 CONCLUSIONS

This PSI report has been prepared to assess current and historic land uses at the site to inform the Secretary's Environmental Assessment Requirements (SEAR's) for the Opal Bayview residential aged care facility (RACF) project (State Significant Development Application number SSD-7724066) at 36-42 Cabbage Tree Road, Bayview NSW.

The objectives of the PSI were to assess the presence of potential contamination and, if needed, determine the options for excavated material management, remedial management during construction (if required) and ongoing land use.

The results of the investigation indicated the following:

- Based on a review of historical information, the site comprised residential or agricultural land until circa 1982. In 1982 construction of the current site structures appears to be occurring. By 1986 the site buildings have been constructed in their current layout. No significant changes to the site have occurred since 1986. The areas surrounding the site have generally comprised agricultural properties or residential properties since circa 1940, with the majority of residential properties constructed circa 1982 to 1991
- A limited intrusive investigation including advancement of a total of eight bore holes was undertaken between 30 June – 3 July 2025. Bore holes were advanced to a depth of between 1.3 and 10 m bgl.
- The subsurface conditions encountered beneath the site during the investigation mostly comprised of brown grey sandy silty clay, gravelly sand or gravelly silty sand fill to maximum depths of between 0.3 m bgl – 1.1 m bgl. No potential asbestos containing material was noted. Fill was underlain by pale grey to brown, mottled red-orange clay, silty clay, sandy gravelly clay or silty sandy clay to depths of between 1.7 – 3.0 m bgl and sandstone to the maximum depth of investigation, 10 m bgl.
- Concentrations of total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, benzene, toluene, ethylbenzene, xylene and naphthalene, heavy metals, phenols, organochlorine pesticides or polychlorinated biphenyls were reported below the adopted assessment criteria for the protection of human health based on the proposed continued residential use of the site. Asbestos was not reported in soil samples analysed and was not observed during the investigation.
- Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces. No vegetation stress was observed on site.
- Based on the results from this soil investigation material excavated during development is considered suitable for re-use on site. If off-site disposal of soil is required the preliminary classification of site soil is general solid waste (non-putrescible).

Based on the findings of this PSI, WSP has not identified any soil conditions that would preclude the use of the site for continued residential use. It should be noted contamination might be present at areas of the site that were not subject to intrusive investigation. The potential for unexpected finds to be encountered during construction earthworks should be managed during the development works under an unexpected finds protocol under the Construction Environmental Management Plan.

12 RECOMMENDATIONS

Based on the findings of this assessment WSP recommends the following:

- A Construction Environmental Management Plan (CEMP) including an unexpected finds protocol should be developed and followed during the proposed development works.

12.1 MITIGATION MEASURES

Required mitigation measures are detailed in Table 12.1.

Table 12.1 Mitigation Measures

Mitigation Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
CEMP	During development works	Follow CEMP and unexpected finds protocol	Provide guidance in the event of an unexpected find.

12.2 EVALUATION OF ENVIRONMENTAL IMPACTS

The impacts of the activity can be adequately mitigated or minimised through the required mitigation measures such that the activity will not have a significant effect on the environment.

13 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (WSP) for Bloompark Consulting Pty Ltd (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 30 April 2025 and agreement with the Client dated 15 May 2025 (Agreement).

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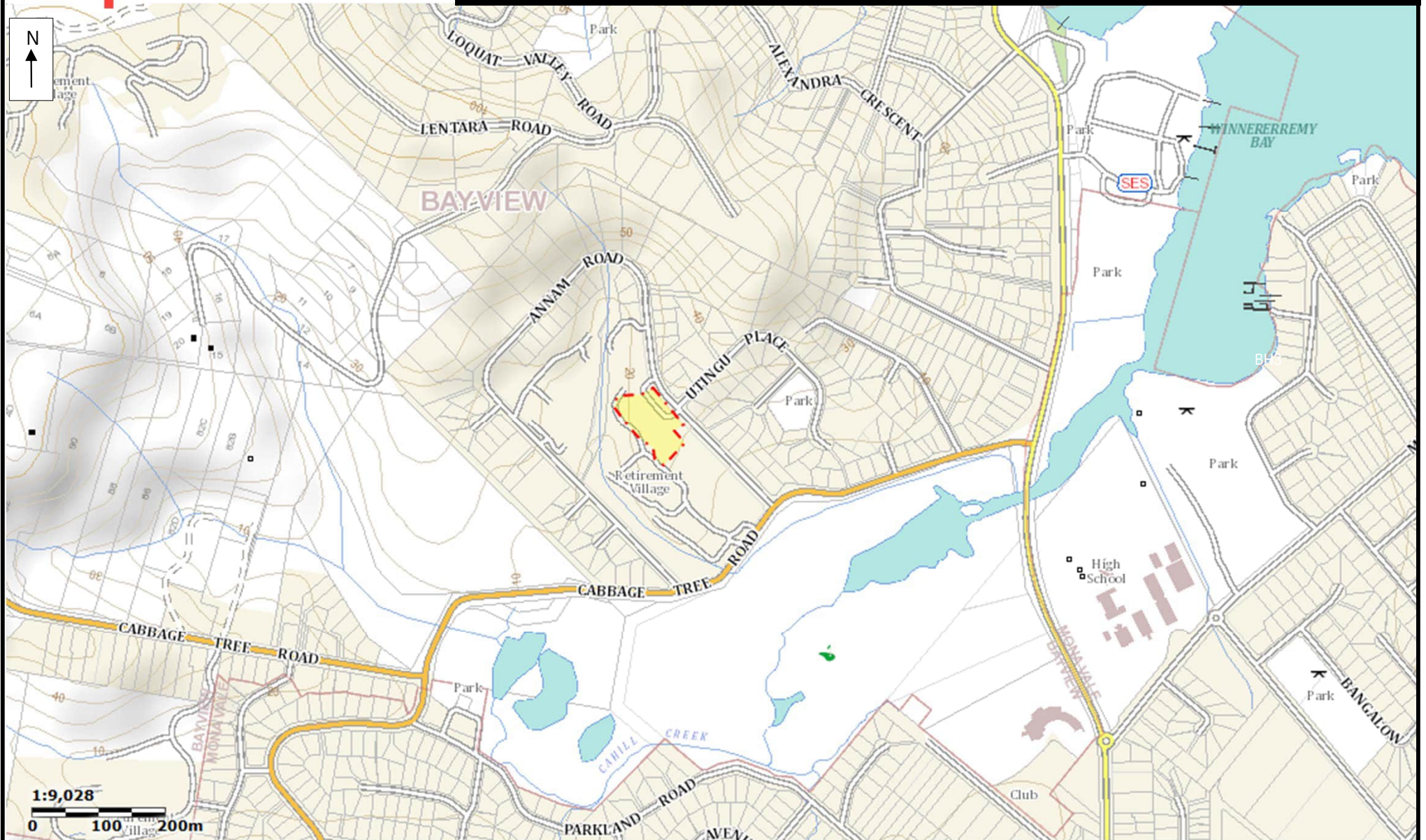
REFERENCES

- Australian Standard AS4964 2004, Method for Qualitative Identification of Asbestos in Bulk Samples.
- Australian Government, Geoscience Australia Portal <https://portal.ga.gov.au/>.
- Beam Planning, 2025, Standard Text, 36-42 Cabbage Tree Road, Bayview (SSD-77240466)
- Friebe & Nadebaum, 2011, *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater*, Part 2: Application Document
- Geological Survey of N.S.W, Department of Minerals and Energy, 1983, *Sydney 1:100,000 Geological Map Series Sheet 9130*
- Lotsearch 2025, Lotsearch Enviro Professional, 36 - 42 Cabbage Tree Road, Bayview, NSW 2104, LS089071 EP, 25 Jul 2025
- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013).
- NSW EPA 2017, Guidelines for the NSW Site Auditor Scheme (3rd Edition).
- NSW EPA 1995, *Sampling Design Guidelines*.
- NSW Office of Environment and Heritage 2011, *Guidelines for Consultants Reporting on Contaminated Sites*.
- NSW EPA 2014, *Waste Classification Guidelines*, Part 1: Classifying Waste.
- NSW EPA Contaminated land record database <<http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>>
- NSW EPA Protection of the Environment Operations Act 1997 public register <<http://www.epa.nsw.gov.au/prpoeoapp/>>
- NSW Government Water Information website, <<http://allwaterdata.water.nsw.gov.au/water.stm>>
- State of New South Wales, MinView V2022.8.3, Mapbox, 2022.<https://minview.geoscience.nsw.gov.au>.
- WSP, 2025, *Geotechnical Interpretive Report, Opal Bayview Aged Care Development*, PS223670-WSP-NSW-SYD-GEO-REP-001 RevA

APPENDIX A

FIGURES





Legend

Site boundary

Image Source – Six Maps 2025

Figure 1
Site location plan

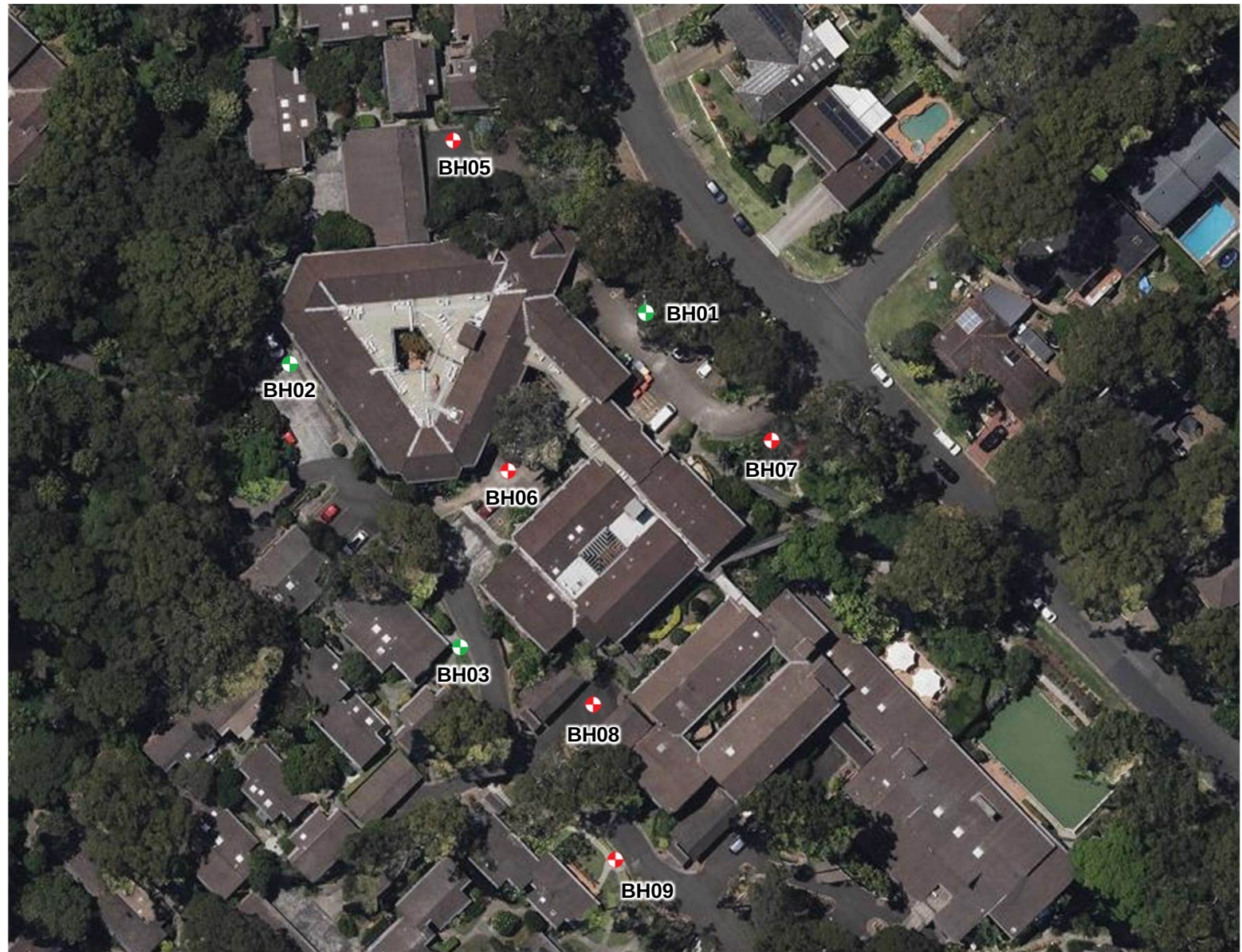
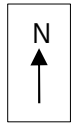
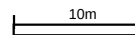


Image Source - NearMaps 2023



SINSW

Legend

-  Geotechnical and Contamination Borehole
-  Geotechnical and Contamination Borehole completed as groundwater monitoring well

Figure 2
Investigation Locations

APPENDIX B

ANALYSIS SUMMARY TABLES



	Asbestos		Total Petroleum Hydrocarbons														BTEXN								Heavy Metals								
	Estimated Fibres	Asbestos Detect	TPH-C37 - C40 Fraction	TPH-C6 - C9 Fraction	TPH-C10 - C14 Fraction	TPH-C15 - C28 Fraction	TPH-C29 - C36 Fraction	TPH+C10 - C36 (Sum of total) (Lab Reported)	TPH+C10 - C40 (Sum of total) (Lab Reported)	TPH-C6 - C10 Fraction F1	TPH-C6 - C10 Fraction Less BTEX F1	TPH>C10 - C16 Fraction F2	TPH>C10 - C16 Fraction Less Naphthalene F2	TPH>C16 - C34 Fraction F3	TPH>C34 - C40 Fraction F4	Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Naphthalene (VOQ)	Total BTEX	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc		
	-	Yes/No	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.01	-	100	20	20	45	45	110	210	25	25	25	25	90	120	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.6	1	0.3	0.5	0.5	1	0.05	0.5	2		
NEPM 2013 Table 1A(1) HILS Res A Soil																								100	20	100	6,000	300	40	400	7,400		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand											45		110			0.5	160	55			40	3											
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						170		100		410	210	1,100		170	480		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																50	85	70			105												
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										700		1,000	120	120	300	2,800																	
Field ID	Date	Lab Report Number																															
BH1 0.1 0.2	30-06-2025	SE285612	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	1	<0.3	3.8	3.3	1	<0.05	4.9	9
BH1 0.5 0.6	30-06-2025	SE285612	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	3	<0.3	7.5	2.6	2	<0.05	0.7	6
BH2 0.5 0.6	02-07-2025	SE285612	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	1	<0.3	4.9	2.0	5	<0.05	1.5	8
BH2 2.0 2.1	02-07-2025	SE285612	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	6	<0.3	8.1	7.0	8	<0.05	2.8	15
BH3 0.2 0.3	03-07-2025	SE285770	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	7	<0.3	35	9.1	10	<0.05	25	39
BH3 1.0 1.1	03-07-2025	SE285770	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	2	<0.3	14	0.8	5	<0.05	3.8	4.3
BH5 0.1 0.2	01-07-2025	SE285612	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	2	<0.3	24	4.6	6	<0.05	17	13
BH5 0.3 0.4	01-07-2025	SE285612	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	2	<0.3	13	1.3	5	<0.05	5.9	5
BH5 1.0-1.1	30-06-2025	SE285612	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	2	<0.3	9.0		6	<0.05	0.9	4
BH6 0.2 0.3	02-07-2025	SE285770	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	5	<0.3	10	2.2	5	<0.05	0.8	5.6
BH6 1.0 1.1	02-07-2025	SE285770	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	6	<0.3	14	5.0	6	<0.05	3.3	18
BH7 0.1 0.2	30-06-2025	SE285612	<0.01	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH7 0.5 0.6	30-06-2025	SE285612	-	-	<100	<20	<20	46	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	3	<0.3	10	1.3	11	<0.05	0.8	11
BH8 0.2 0.3	03-07-2025	SE285770	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	4	<0.3	11	<0.5	3	<0.05	<0.5	2.2
BH9 0.2 0.3	03-07-2025	SE285770	<0.01	No	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	4	<0.3	14	<0.5	5	<0.05	0.8	4.8
QC01A	30-06-2025	SE285612	-	-	<100	<20	<20	47	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	3	<0.3	9.0	3.2	27	<0.05	1.2	17
QC01B	30-06-2025	1240299	-	-	<100	<20	<20	<50	<50	<50	<100	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	2.9	<0.4	8	<5	30	<0.1	<5	20
QC02A	30-06-2025	SE285612	-	-	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	<1	<0.3	3.5	3.4	2	<0.05	3.6	11
QC02B	30-06-2025	1240299	-	-	<100	<20	<20	<50	<50	<50	<100	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.1	<0.6	<2	<0.4	7.3	<5	<5	<0.1	6.4	10

			Polycyclic aromatic hydrocarbons																						
			Total PAH (NEPM/WHO 16)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(b)pyrene	Benzo(b)pyrene TEQ (lower bound)	Benzo(b)pyrene TEQ (median bound)	Benzo(b)pyrene TEQ (upper bound)	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	PAH (Sum of Common 16 PAHs - Lab Reported)	1- Methylnaphthalene	2- Methylnaphthalene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.8	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	0.1	0.1	
NEPM 2013 Table 1A(1) HILs Res A Soil									3	3	3											300			
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																			3						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			170						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil								0.7																	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																									

Field ID	Date	Lab Report Number																								
BH1 0.1 0.2	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH1 0.5 0.6	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH2 0.5 0.6	02-07-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH2 2.0 2.1	02-07-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH3 0.2 0.3	03-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH3 1.0 1.1	03-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH4 0.1 0.2	01-07-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH5 0.3 0.4	01-07-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH5 1.0-1.1	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH6 0.2 0.3	02-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH6 1.0 1.1	02-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH7 0.1 0.2	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH7 0.5 0.6	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH8 0.2 0.3	03-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
BH9 0.2 0.3	03-07-2025	SE285770	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
QC01A	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
QC01B	30-06-2025	1240299	<0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
QC02A	30-06-2025	SE285612	<0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	<0.1	<0.1		
QC02B	30-06-2025	1240299	<0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		

			Organochlorine Pesticides																				Organophosphate Pesticides														
			p,p'-DDE	a-BHC	Aldrin	β-BHC	Chlordane (Sum of total)	cis-Chlordane	gamma-Chlordane	δ-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	β-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Organochlorine Pesticides (NRG Calculated)	Other OCPs (NRWG Lab Reported)	Azinphos-methyl	Bromophos-ethyl	Chlorpyrifos	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Methidathion	Parathion	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.1	0.1	50	0.1	0.1	240	240	0.1	0.1	0.1	0.1	10	0.1	0.1	0.1	6	0.1	300	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.5	0.5	0.2	0.2	0.2	0.5	0.5	0.2
NEPM 2013 Table 1A(1) HILs Res A Soil																												160									
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																																					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space												180																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																					
Field ID	Date	Lab Report Number																																			
BH1_0.1_0.2	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH1_0.5_0.6	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH2_0.5_0.6	02-07-2025	SE285612	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.5	<0.2		
BH2_2.0_2.1	02-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH3_0.2_0.3	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH3_1.0_1.1	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH5_0.1_0.2	01-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH5_0.3_0.4	01-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH5_1.0-1.1	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH6_0.2_0.3	02-07-2025	SE285770	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.5	<0.2		
BH6_1.0_1.1	02-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH7_0.1_0.2	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH7_0.5_0.6	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH8_0.2_0.3	03-07-2025	SE285770	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.5	<0.2		
BH9_0.2_0.3	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
QC01A	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
QC01B	30-06-2025	1240299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
QC02A	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
QC02B	30-06-2025	1240299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

			Polychlorinated Biphenyls		Herbicides																	Phenolics		
			PCE (Sum of Total-Lab Reported)	2,4,5-Trichlorophenoxy Acetic Acid	2,4,6-Trichlorophenoxy-acetic acid	2,4-D	2,4-Dichloroprop	2,6-D	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	4,2,4-Dichlorophenoxy) butyric acid (2,4-DB)	4-Chlorophenoxyacetic acid	Acritl	Bromoxynil	Clpyralid	Dicamba	Dinoseb	Fenoprop	Fluroxypyr	Mecoprop	Pictoram	Triclopyr	Total Phenols	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.01	0.5	0.01	0.01	0.5	0.01	0.01	0.5	0.5	0.5	0.5	0.5	0.01	0.5	0.5	0.5	0.01	0.01	0.01	0.5	
NEPM 2013 Table 1A(1) HILS Res A Soil			1	600		900			600	600										600	4,500			
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																								
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																								

Field ID	Date	Lab Report Number																						
BH1 0.1 0.2	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1 0.5 0.6	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2 0.5 0.6	02-07-2025	SE285612	<0.1	<0.01	<0.5	<0.01	<0.01	<0.5	<0.01	<0.01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.5	-
BH2 2.0 2.1	02-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3 0.2 0.3	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3 1.0 1.1	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5 0.1 0.2	01-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5 0.3 0.4	01-07-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5 1.0-1.1	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6 0.2 0.3	02-07-2025	SE285770	<0.1	<0.01	<0.5	<0.01	<0.01	<0.5	<0.01	<0.01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.5	-
BH6 1.0 1.1	02-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 0.1 0.2	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 0.5 0.6	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8 0.2 0.3	03-07-2025	SE285770	<0.1	<0.01	<0.5	<0.01	<0.01	<0.5	<0.01	<0.01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.5	-
BH9 0.2 0.3	03-07-2025	SE285770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01A	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01B	30-06-2025	1240299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02A	30-06-2025	SE285612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02B	30-06-2025	1240299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			Asbestos	TPH			BTEX				PAH			Metals						OCPs		OPPs		PCBs	Phenols	
			asbestos fibres	C37-C40 Fraction	C6-C9 Fraction	C10-C36 Fraction (Sum)	Benzene	Toluene	Ethylbenzene	Xylene Total	1-Methylnaphthalene	Benzo(a) pyrene	PAHs (Sum of total)	Arsenic	Cadmium	Chromium (III+VI)	Lead	Mercury	Nickel	Sum of Endosulfans	OCPs (Sum of Detects)	Chlorpyrifos	OPPs (Sum of Detects)	PCBs (Sum of total)	Picloram	Phenols
			Yes/ No	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0	100	20	110	0.1	0.1	0.1	0.3	0.1	0.1	0.8	1	0.3	0.5	1	0.05	0.5	-	-	-	-	0.1	0.01	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)					650	10,000	10	288	600	1,000		0.8	200	100	20	100	100	4	40	60 ⁽¹⁾	50 ⁽²⁾	4	250 ⁽³⁾	50	60	
NSW 2014 Restricted Solid Waste CT2 (No Leaching)					2,600	40,000	40	1,152	2,400	4,000		3.2	800	400	80	400	400	16	160	60 ⁽¹⁾	50 ⁽²⁾	16	1000 ⁽³⁾	50	240	
Field ID	Date	Lab Report Number																								
BH1 0.1 0.2	30-06-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	1	<0.3	3.8	1	<0.05	4.9	-	-	-	-	-	-	-
BH1 0.5 0.6	30-06-2025	SE285612	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	7.5	2	<0.05	0.7	-	-	-	-	-	-	-
BH2 0.5 0.6	02-07-2025	SE285612	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	1	<0.3	4.9	5	<0.05	1.5	ND	ND	ND	ND	<0.1	<0.01	<0.5
BH2 2.0 2.1	02-07-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	6	<0.3	8.1	8	<0.05	2.8	-	-	-	-	-	-	-
BH3 0.2 0.3	03-07-2025	SE285770	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	7	<0.3	35	10	<0.05	25	-	-	-	-	-	-	-
BH3 1.0 1.1	03-07-2025	SE285770	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	2	<0.3	14	5	<0.05	3.8	-	-	-	-	-	-	-
BH5 0.1 0.2	01-07-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	2	<0.3	24	6	<0.05	17	-	-	-	-	-	-	-
BH5 0.3 0.4	01-07-2025	SE285612	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	2	<0.3	13	5	<0.05	5.9	-	-	-	-	-	-	-
BH5 1.0-1.1	30-06-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	2	<0.3	9.0	6	<0.05	0.9	-	-	-	-	-	-	-
BH6 0.2 0.3	02-07-2025	SE285770	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	5	<0.3	10	5	<0.05	0.8	ND	ND	ND	ND	<0.1	<0.01	<0.5
BH6 1.0 1.1	02-07-2025	SE285770	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	6	<0.3	14	6	<0.05	3.3	-	-	-	-	-	-	-
BH7 0.1 0.2	30-06-2025	SE285612	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH7 0.5 0.6	30-06-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	10	11	<0.05	0.8	-	-	-	-	-	-	-
BH8 0.2 0.3	03-07-2025	SE285770	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	4	<0.3	11	3	<0.05	<0.5	ND	ND	ND	ND	<0.1	<0.01	<0.5
BH9 0.2 0.3	03-07-2025	SE285770	No	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	4	<0.3	14	5	<0.05	0.8	-	-	-	-	-	-	-
QC01A	30-06-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	9.0	27	<0.05	1.2	-	-	-	-	-	-	-
QC02A	30-06-2025	SE285612	-	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	<1	<0.3	3.5	2	<0.05	3.6	-	-	-	-	-	-	-

ND = Non Detect
(1) Sum of Endosufan = Endosulfan 1 + Endosulfan 2 + Endosulfan Sulfate
(2) Criteria for scheduled chemicals has been adopted. Noting Full analysis of all scheduled chemicals was not conducted.
(3) Criteria for moderately harmful pesticide has been adopted. Noting that full analysis of all moderately harmful pesticides was not conducted.



				TPH			BTEX				PAH			Metals					
				C37-C40 Fraction	C6-C9 Fraction	C10-C36 Fraction (Sum)	Benzene	Toluene	Ethylbenzene	Xylene Total	1-Methylnaphthalene	Benzo(a) pyrene	PAHs (Sum of total)	Arsenic	Cadmium	Chromium (III+VI)	Lead	Mercury	Nickel
EQL				100	20	110	0.1	0.1	0.1	0.3	0.1	0.1	0.8	1	0.3	0.5	1	0.05	0.5
Field ID	Date	Lab Report Number	Matrix Type																
BH7_0.5_0.6	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	10	11	<0.05	0.8
QC01A	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	9.0	27	<0.05	1.2
RPD				0	0	0	0	0	0	0	0	0	0	0	0	11	84	0	40
BH1_0.1_0.2	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	1	<0.3	3.8	1	<0.05	4.9
QC02A	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	<1	<0.3	3.5	2	<0.05	3.6
RPD				0	0	0	0	0	0	0	0	0	0	-	0	8	67	0	31
BH7_0.5_0.6	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	3	<0.3	10	11	<0.05	0.8
QC01B	30-06-2025	1240299	Soil	<50	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	<0.5	<0.5	2.9	<0.4	8	30	<0.1	<5
RPD				0	0	0	0	0	0	0	0	0	0	3.3	0	22	92	0	-
BH1_0.1_0.2	30-06-2025	SE285612	Soil	<100	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.8	1	<0.3	3.8	1	<0.05	4.9
QC02B	30-06-2025	1240299	Soil	<50	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	<0.5	<0.5	<2	<0.4	7.3	<0.5	<0.1	6.4
RPD				0	0	0	0	0	0	0	0	0	0	-	0	63	-	0	26

*RPDs have only been considered where a concentration is greater than 1. times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 50 (10 - 20 x EQL); 30 (20 - 20 x EQL); 30 (> 20 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



				Total Petroleum Hydrocarbons												BTEXN					
				TRH C37 - C40 Fraction	TRH C6 - C9 Fraction	TRH C10 - C14 Fraction	TRH C15 - C28 Fraction	TRH C29 - C36 Fraction	TRH+C10 - C36 (Sum of total) (Lab Reported)	TRH+C10 - C40 (Sum of total) (Lab Reported)	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1	TRH >C10 - C16 Fraction F2	TRH >C10 - C16 Fraction Less Naphthalene F2	TRH >C16 - C34 Fraction F3	TRH >C34 - C40 Fraction F4	Benzene	Toluene	Ethylbenzene	m&p-xylene	o-xylene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				100	20	20	45	45	110	210	25	25	25	25	90	120	0.1	25	25	25	90
Field ID	Date	Lab Report Number	Matrix Type																		
TB1_02/06/2025	02-07-2025	SE285612	Soil	<100	<20	<20	<45	<45	<110	<210	<25	<25	<25	<25	<90	<120	<0.1	-	-	-	-
TS1_02/06/2025	02-07-2025	SE285612	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	102%	105%	103%	98%	98%
TS2_04/06/2025	04-06-2025	SE285770	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	105%	112%	127%	127%	126%



				Total Petroleum Hydrocarbons								BTEXN	Polycyclic aromatic hydrocarbons																							
				TRH-C37 - C40 fraction	TRH-C6 - C9 fraction	TRH-C10 - C14 fraction	TRH-C15 - C28 fraction	TRH-C29 - C36 fraction	TRH-C10 - C40 (Sum of total) (Lab reported)	TRH-C6 - C10 Fraction F1	TRH-C6 - C10 Fraction Less BTEX F1	TRH>C10 - C16 Fraction F2	TRH>C10 - C16 fraction Less Naphthalene F2	TRH>C16 - C34 fraction F3	TRH>C34 - C40 fraction F4	benzene	acenaphthene	acenaphthylene	anthracene	benz(a)anthracene	benzo(a)pyrene	benz(b)fluoranthene	benz(g,h,i)perylene	benz(k)fluoranthene	chrysene	dibenz(a,h)anthracene	fluoranthene	fluorene	indeno(1,2,3-cd)pyrene	naphthalene	phenanthrene	pyrene	PAH (Sum of common 16 PAHs - lab reported)	1-Methylnaphthalene	2-Methylnaphthalene	
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.2	0.04	0.05	0.2	0.2	0.32	0.05	0.05	0.06	0.06	0.5	0.5	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.0001	0.0001
Field ID	Date	Lab Report Number	Matrix Type	<0.2	<0.04	<0.05	<0.2	<0.2	<0.32	<0.05	<0.05	<0.06	<0.06	<0.5	<0.5	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
R61_30	30-06-2025	SE285612	Water																																	

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APPENDIX C

LABORATORY REPORTS



CLIENT DETAILS

Contact Melinda Collier
Client WSP AUSTRALIA PTY LIMITED
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Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 14

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SGS Reference **SE285612 R0**
Date Received 2/7/2025
Date Reported 10/7/2025

COMMENTS

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

Pesticides / Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Number 2562/14420, Report number ME373585.

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

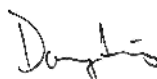
SIGNATORIES



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Asbestos Analyst

VOC's in Soil [AN433] Tested: 7/7/2025

PARAMETER	UOM	LOR	BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 30/6/2025 SE285612.002	- 30/6/2025 SE285612.003	- 30/6/2025 SE285612.004	- 1/7/2025 SE285612.005	- 1/7/2025 SE285612.006
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6

PARAMETER	UOM	LOR	BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	TS1_02/06/2025
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 2/7/2025 SE285612.007	- 2/7/2025 SE285612.008	- 30/6/2025 SE285612.009	- 30/6/2025 SE285612.010	- 2/7/2025 SE285612.013
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[102%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[105%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[103%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[98%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[98%]
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	-

PARAMETER	UOM	LOR	BH5_1.0-1.1
			SOIL
			- 30/6/2025 SE285612.014
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Naphthalene (VOC)*	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 7/7/2025

PARAMETER	UOM	LOR	BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2025 SE285612.002	30/6/2025 SE285612.003	30/6/2025 SE285612.004	1/7/2025 SE285612.005	1/7/2025 SE285612.006
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	TB1_02/06/2025
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285612.007	2/7/2025 SE285612.008	30/6/2025 SE285612.009	30/6/2025 SE285612.010	2/7/2025 SE285612.012
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH5_1.0-1.1
			SOIL
			-
			30/6/2025 SE285612.014
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C9	mg/kg	20	<20
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 7/7/2025

PARAMETER	UOM	LOR	BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 30/6/2025 SE285612.002	- 30/6/2025 SE285612.003	- 30/6/2025 SE285612.004	- 1/7/2025 SE285612.005	- 1/7/2025 SE285612.006
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	46	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	TB1_02/06/2025
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 2/7/2025 SE285612.007	- 2/7/2025 SE285612.008	- 30/6/2025 SE285612.009	- 30/6/2025 SE285612.010	- 2/7/2025 SE285612.012
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	47	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH5_1.0-1.1
			SOIL
			- 30/6/2025 SE285612.014
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 7/7/2025

PARAMETER	UOM	LOR	BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 30/6/2025 SE285612.002	- 30/6/2025 SE285612.003	- 30/6/2025 SE285612.004	- 1/7/2025 SE285612.005	- 1/7/2025 SE285612.006
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	BH5_1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 2/7/2025 SE285612.007	- 2/7/2025 SE285612.008	- 30/6/2025 SE285612.009	- 30/6/2025 SE285612.010	- 30/6/2025 SE285612.014
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 7/7/2025

			BH2_0.5_0.6
			SOIL
			-
			2/7/2025
PARAMETER	UOM	LOR	SE285612.007
Alpha BHC	mg/kg	0.1	<0.1
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.1	<0.1
Endrin	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.1	<0.1
p,p'-DDD	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total OC Pesticides	mg/kg	0.1	<0.1
Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1
Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1



ANALYTICAL RESULTS

SE285612 R0

OP Pesticides in Soil [AN420] Tested: 7/7/2025

			BH2_0.5_0.6
			SOIL
			-
			2/7/2025
PARAMETER	UOM	LOR	SE285612.007
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7



ANALYTICAL RESULTS

SE285612 R0

PCBs in Soil [AN420] Tested: 7/7/2025

			BH2_0.5_0.6
			SOIL
			-
			2/7/2025
PARAMETER	UOM	LOR	SE285612.007
Arochlor 1016	mg/kg	0.1	<0.1
Arochlor 1221	mg/kg	0.1	<0.1
Arochlor 1232	mg/kg	0.1	<0.1
Arochlor 1242	mg/kg	0.1	<0.1
Arochlor 1248	mg/kg	0.1	<0.1
Arochlor 1254	mg/kg	0.1	<0.1
Arochlor 1260	mg/kg	0.1	<0.1
Total PCBs	mg/kg	0.1	<0.1

Pesticides / Herbicides in Soils by LC-MS/MS MA-1569.SL.01 [MA1569] Tested: 10/7/2025

			BH2_0.5_0.6
			SOIL
			-
			2/7/2025
PARAMETER	UOM	LOR	SE285612.007
4-Chlorophenocetic acid (4-CPA)*	mg/kg	0.5	<0.5
2,4-D [(2,4-Dichlorophenoxy) acetic acid]*	mg/kg	0.01	<0.01
2,4-DB*	mg/kg	0.5	<0.5
2,6-D*	mg/kg	0.5	<0.5
Bromoxynil*	mg/kg	0.5	<0.5
Clopyralid*	mg/kg	0.5	<0.5
Dicamba*	mg/kg	0.01	<0.01
Dichloroprop / Dichlorprop-P*	mg/kg	0.01	<0.01
Dinoseb*	mg/kg	0.5	<0.5
Fluroxypyr*	mg/kg	0.5	<0.5
Ioxynil*	mg/kg	0.5	<0.5
MCPP*	mg/kg	0.01	<0.01
MCPA*	mg/kg	0.01	<0.01
MCPB*	mg/kg	0.01	<0.01
Picloram*	mg/kg	0.01	<0.01
Triclopyr*	mg/kg	0.01	<0.01
2,4,5-T*	mg/kg	0.01	<0.01
2,4,5-TP*	mg/kg	0.5	<0.5
2,4,6-T*	mg/kg	0.5	<0.5



ANALYTICAL RESULTS

SE285612 R0

Total Phenolics in Soil [AN295] Tested: 8/7/2025

			BH2_0.5_0.6
			SOIL
			-
			2/7/2025
PARAMETER	UOM	LOR	SE285612.007
Total Phenols	mg/kg	0.5	<0.50

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 7/7/2025

PARAMETER	UOM	LOR	BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2025 SE285612.002	30/6/2025 SE285612.003	30/6/2025 SE285612.004	1/7/2025 SE285612.005	1/7/2025 SE285612.006
Arsenic, As	mg/kg	1	3	1	3	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	3.8	7.5	24	13
Copper, Cu	mg/kg	0.5	1.3	3.3	2.6	4.6	1.3
Lead, Pb	mg/kg	1	11	1	2	6	5
Nickel, Ni	mg/kg	0.5	0.8	4.9	0.7	17	5.9
Zinc, Zn	mg/kg	2	11	9	6	13	5

PARAMETER	UOM	LOR	BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	BH5_1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285612.007	2/7/2025 SE285612.008	30/6/2025 SE285612.009	30/6/2025 SE285612.010	30/6/2025 SE285612.014
Arsenic, As	mg/kg	1	1	6	3	<1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	4.9	8.1	9.0	3.5	9.0
Copper, Cu	mg/kg	0.5	2.0	7.0	3.2	3.4	<0.5
Lead, Pb	mg/kg	1	5	8	27	2	6
Nickel, Ni	mg/kg	0.5	1.5	2.8	1.2	3.6	0.9
Zinc, Zn	mg/kg	2	8	15	17	11	4

Mercury in Soil [AN312] Tested: 7/7/2025

			BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2025	30/6/2025	30/6/2025	1/7/2025	1/7/2025
PARAMETER	UOM	LOR	SE285612.002	SE285612.003	SE285612.004	SE285612.005	SE285612.006
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	BH5_1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025	2/7/2025	30/6/2025	30/6/2025	30/6/2025
PARAMETER	UOM	LOR	SE285612.007	SE285612.008	SE285612.009	SE285612.010	SE285612.014
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 7/7/2025

			BH7_0.5_0.6	BH1_0.1_0.2	BH1_0.5_0.6	BH5_0.1_0.2	BH5_0.3_0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2025	30/6/2025	30/6/2025	1/7/2025	1/7/2025
PARAMETER	UOM	LOR	SE285612.002	SE285612.003	SE285612.004	SE285612.005	SE285612.006
% Moisture	%w/w	1	10.3	17.1	10.7	28.1	35.0

			BH2_0.5_0.6	BH2_2.0_2.1	QC01A	QC02A	TB1_02/06/2025
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025	2/7/2025	30/6/2025	30/6/2025	2/7/2025
PARAMETER	UOM	LOR	SE285612.007	SE285612.008	SE285612.009	SE285612.010	SE285612.012
% Moisture	%w/w	1	13.0	11.6	14.7	16.4	<1.0

			BH5_1.0-1.1
			SOIL
			-
			30/6/2025
PARAMETER	UOM	LOR	SE285612.014
% Moisture	%w/w	1	23.6

Fibre Identification in soil [AS4964/AN602] Tested: 4/7/2025

PARAMETER	UOM	LOR	BH7_0.1_0.2	BH1_0.5_0.6	BH5_0.3_0.4	BH2_0.5_0.6
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			30/6/2025	30/6/2025	1/7/2025	2/7/2025
			SE285612.001	SE285612.004	SE285612.006	SE285612.007
Date Analysed*	No unit	-	08/07/2025 00:00	08/07/2025 00:00	08/07/2025 00:00	08/07/2025 00:00
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01



ANALYTICAL RESULTS

SE285612 R0

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 7/7/2025

			RB1_30/06/2025
			WATER
			-
			30/6/2025
PARAMETER	UOM	LOR	SE285612.011
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C9	µg/L	40	<40
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 7/7/2025

			RB1 _30/06/2025
			WATER
			-
			30/6/2025
PARAMETER	UOM	LOR	SE285612.011
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 7/7/2025

			RB1_30/06/2025
			WATER
			-
			30/6/2025
			SE285612.011
PARAMETER	UOM	LOR	
Naphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1
Fluorene	µg/L	0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Total PAH (18)	µg/L	1	<1



ANALYTICAL RESULTS

SE285612 R0

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 8/7/2025

			RB1_30/06/2025
			WATER
			-
			30/6/2025
			SE285612.011
PARAMETER	UOM	LOR	
Arsenic	µg/L	1	<1
Cadmium	µg/L	0.1	<0.1
Copper	µg/L	1	<1
Chromium	µg/L	1	<1
Nickel	µg/L	1	<1
Lead	µg/L	1	<1
Zinc	µg/L	5	<5



ANALYTICAL RESULTS

SE285612 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 7/7/2025

			RB1_30/06/2025
			WATER
			-
			30/6/2025
PARAMETER	UOM	LOR	SE285612.011
Mercury	mg/L	0.0001	<0.0001

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN295	For Soil, a 1:10 NaOH extraction is made and analysed after 16 hours. The soil extract or water sample is distilled in a phosphoric acid stream. Phenolic compounds in the distillate react with a reagent stream of potassium hexacyanoferrate(III) and 4-Amino-2,3-dimethyl-3-pyrazolin-5-one in an alkaline medium to form a coloured complex which is analysed spectrophotometrically onboard a continuous flow analyser.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

AN602/AS4964

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602/AS4964

The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

MA-1569

This method is intended for the analysis of a diverse range of pesticides and herbicides by Liquid Chromatography using a Tandem Mass Spectrometry detector (LC-MS/MS). Due to the diverse nature of the analytes covered in this method each analyte requires its own analytical acquisition method thus the sample is run multiple times according to the analyte list requested.
Soil and solid samples are extracted with ACN and extracts are filtered then directly injected onto LC-MS/MS using selective ion monitoring.

FOOTNOTES

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

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

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

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

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

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

Note that in terms of units of radioactivity:

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE285612 R0

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Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 14

LABORATORY DETAILS

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SGS Reference **SE285612 R0**
Date Received 02 Jul 2025
Date Reported 10 Jul 2025

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Surrogate	VOC's in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item
Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items

SAMPLE SUMMARY

Sample counts by matrix	13 Soil, 1 Water	Type of documentation received	COC
Date documentation received	3/7/2025@11:51am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	4.8°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

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

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

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

Fibre Identification in soil

Method: ME-(AU)-[ENV]AS4964/AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.1_0.2	SE285612.001	LB353244	30 Jun 2025	02 Jul 2025	30 Jun 2026	04 Jul 2025	30 Jun 2026	10 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353244	30 Jun 2025	02 Jul 2025	30 Jun 2026	04 Jul 2025	30 Jun 2026	10 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353244	01 Jul 2025	02 Jul 2025	01 Jul 2026	04 Jul 2025	01 Jul 2026	10 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353244	02 Jul 2025	02 Jul 2025	02 Jul 2026	04 Jul 2025	02 Jul 2026	10 Jul 2025

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RB1_30/06/2025	SE285612.011	LB353302	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	07 Jul 2025

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353342	01 Jul 2025	02 Jul 2025	29 Jul 2025	07 Jul 2025	29 Jul 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353342	01 Jul 2025	02 Jul 2025	29 Jul 2025	07 Jul 2025	29 Jul 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353342	02 Jul 2025	02 Jul 2025	30 Jul 2025	07 Jul 2025	30 Jul 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353342	02 Jul 2025	02 Jul 2025	30 Jul 2025	07 Jul 2025	30 Jul 2025	08 Jul 2025
QC01A	SE285612.009	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025
QC02A	SE285612.010	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353342	30 Jun 2025	02 Jul 2025	28 Jul 2025	07 Jul 2025	28 Jul 2025	08 Jul 2025

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353340	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353340	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353340	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353340	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
QC01A	SE285612.009	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
QC02A	SE285612.010	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
TB1_02/06/2025	SE285612.012	LB353340	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353340	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	12 Jul 2025	08 Jul 2025

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC01A	SE285612.009	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC02A	SE285612.010	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
TB1_02/06/2025	SE285612.012	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC01A	SE285612.009	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC02A	SE285612.010	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025



HOLDING TIME SUMMARY

SE285612 R0

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

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

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

OP Pesticides in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TB1_02/06/2025	SE285612.012	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
QC01A	SE285612.009	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
QC02A	SE285612.010	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
TB1_02/06/2025	SE285612.012	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RB1_30/06/2025	SE285612.011	LB353304	30 Jun 2025	02 Jul 2025	07 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC01A	SE285612.009	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
QC02A	SE285612.010	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
TB1_02/06/2025	SE285612.012	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	10 Jul 2025

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH2_0.5_0.6	SE285612.007	LB353457	02 Jul 2025	02 Jul 2025	16 Jul 2025	08 Jul 2025	16 Jul 2025	08 Jul 2025

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353341	01 Jul 2025	02 Jul 2025	28 Dec 2025	07 Jul 2025	28 Dec 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353341	01 Jul 2025	02 Jul 2025	28 Dec 2025	07 Jul 2025	28 Dec 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353341	02 Jul 2025	02 Jul 2025	29 Dec 2025	07 Jul 2025	29 Dec 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353341	02 Jul 2025	02 Jul 2025	29 Dec 2025	07 Jul 2025	29 Dec 2025	08 Jul 2025
QC01A	SE285612.009	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025
QC02A	SE285612.010	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353341	30 Jun 2025	02 Jul 2025	27 Dec 2025	07 Jul 2025	27 Dec 2025	08 Jul 2025

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RB1_30/06/2025	SE285612.011	LB353439	30 Jun 2025	02 Jul 2025	27 Dec 2025	08 Jul 2025	27 Dec 2025	08 Jul 2025

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025



HOLDING TIME SUMMARY

SE285612 R0

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1_0.5_0.6	SE285612.004	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353334	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
QC01A	SE285612.009	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
QC02A	SE285612.010	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
TB1_02/06/2025	SE285612.012	LB353334	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353334	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	16 Aug 2025	08 Jul 2025

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RB1_30/06/2025	SE285612.011	LB353304	30 Jun 2025	02 Jul 2025	07 Jul 2025	07 Jul 2025	16 Aug 2025	07 Jul 2025

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353339	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	15 Jul 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353339	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	15 Jul 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
QC01A	SE285612.009	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
QC02A	SE285612.010	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
TB1_02/06/2025	SE285612.012	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	09 Jul 2025
TS1_02/06/2025	SE285612.013	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_0.5_0.6	SE285612.002	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH1_0.1_0.2	SE285612.003	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH1_0.5_0.6	SE285612.004	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
BH5_0.1_0.2	SE285612.005	LB353339	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	15 Jul 2025	08 Jul 2025
BH5_0.3_0.4	SE285612.006	LB353339	01 Jul 2025	02 Jul 2025	15 Jul 2025	07 Jul 2025	15 Jul 2025	08 Jul 2025
BH2_0.5_0.6	SE285612.007	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
BH2_2.0_2.1	SE285612.008	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
QC01A	SE285612.009	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
QC02A	SE285612.010	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025
TB1_02/06/2025	SE285612.012	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	08 Jul 2025
TS1_02/06/2025	SE285612.013	LB353339	02 Jul 2025	02 Jul 2025	16 Jul 2025	07 Jul 2025	16 Jul 2025	10 Jul 2025
BH5_1.0-1.1	SE285612.014	LB353339	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RB1_30/06/2025	SE285612.011	LB353354	30 Jun 2025	02 Jul 2025	14 Jul 2025	07 Jul 2025	14 Jul 2025	08 Jul 2025

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH2_0.5_0.6	SE285612.007	%	60 - 130%	95

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH2_0.5_0.6	SE285612.007	%	60 - 130%	92
d14-p-terphenyl (Surrogate)	BH2_0.5_0.6	SE285612.007	%	60 - 130%	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH7_0.5_0.6	SE285612.002	%	70 - 130%	99
	BH1_0.1_0.2	SE285612.003	%	70 - 130%	96
	BH1_0.5_0.6	SE285612.004	%	70 - 130%	95
	BH5_0.1_0.2	SE285612.005	%	70 - 130%	91
	BH5_0.3_0.4	SE285612.006	%	70 - 130%	98
	BH2_0.5_0.6	SE285612.007	%	70 - 130%	92
	BH2_2.0_2.1	SE285612.008	%	70 - 130%	95
	QC01A	SE285612.009	%	70 - 130%	92
	QC02A	SE285612.010	%	70 - 130%	93
	BH5_1.0-1.1	SE285612.014	%	70 - 130%	94
d14-p-terphenyl (Surrogate)	BH7_0.5_0.6	SE285612.002	%	70 - 130%	96
	BH1_0.1_0.2	SE285612.003	%	70 - 130%	99
	BH1_0.5_0.6	SE285612.004	%	70 - 130%	100
	BH5_0.1_0.2	SE285612.005	%	70 - 130%	86
	BH5_0.3_0.4	SE285612.006	%	70 - 130%	92
	BH2_0.5_0.6	SE285612.007	%	70 - 130%	94
	BH2_2.0_2.1	SE285612.008	%	70 - 130%	95
	QC01A	SE285612.009	%	70 - 130%	93
	QC02A	SE285612.010	%	70 - 130%	97
	BH5_1.0-1.1	SE285612.014	%	70 - 130%	97
d5-nitrobenzene (Surrogate)	BH7_0.5_0.6	SE285612.002	%	70 - 130%	95
	BH1_0.1_0.2	SE285612.003	%	70 - 130%	97
	BH1_0.5_0.6	SE285612.004	%	70 - 130%	92
	BH5_0.1_0.2	SE285612.005	%	70 - 130%	87
	BH5_0.3_0.4	SE285612.006	%	70 - 130%	91
	BH2_0.5_0.6	SE285612.007	%	70 - 130%	91
	BH2_2.0_2.1	SE285612.008	%	70 - 130%	92
	QC01A	SE285612.009	%	70 - 130%	90
	QC02A	SE285612.010	%	70 - 130%	94
	BH5_1.0-1.1	SE285612.014	%	70 - 130%	93

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	RB1_30/06/2025	SE285612.011	%	40 - 130%	80
d14-p-terphenyl (Surrogate)	RB1_30/06/2025	SE285612.011	%	40 - 130%	82
d5-nitrobenzene (Surrogate)	RB1_30/06/2025	SE285612.011	%	40 - 130%	77

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH2_0.5_0.6	SE285612.007	%	60 - 130%	95

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH7_0.5_0.6	SE285612.002	%	60 - 130%	88
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	74
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	74
	BH5_0.1_0.2	SE285612.005	%	60 - 130%	102
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	108
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	116
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	112
	QC01A	SE285612.009	%	60 - 130%	116

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QC02A	SE285612.010	%	60 - 130%	87
	TS1_02/06/2025	SE285612.013	%	60 - 130%	101
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	47 ①
d4-1,2-dichloroethane (Surrogate)	BH7_0.5_0.6	SE285612.002	%	60 - 130%	93
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	77
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	76
	BH5_0.1_0.2	SE285612.005	%	60 - 130%	88
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	85
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	98
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	87
	QC01A	SE285612.009	%	60 - 130%	95
	QC02A	SE285612.010	%	60 - 130%	91
	TS1_02/06/2025	SE285612.013	%	60 - 130%	107
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	103
	BH7_0.5_0.6	SE285612.002	%	60 - 130%	104
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	84
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	82
d8-toluene (Surrogate)	BH5_0.1_0.2	SE285612.005	%	60 - 130%	90
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	85
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	102
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	89
	QC01A	SE285612.009	%	60 - 130%	97
	QC02A	SE285612.010	%	60 - 130%	97
	TS1_02/06/2025	SE285612.013	%	60 - 130%	103
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	103

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH7_0.5_0.6	SE285612.002	%	60 - 130%	88
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	74
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	74
	BH5_0.1_0.2	SE285612.005	%	60 - 130%	102
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	108
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	116
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	112
	QC01A	SE285612.009	%	60 - 130%	116
	QC02A	SE285612.010	%	60 - 130%	87
	TB1_02/06/2025	SE285612.012	%	60 - 130%	92
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	47 ①
d4-1,2-dichloroethane (Surrogate)	BH7_0.5_0.6	SE285612.002	%	60 - 130%	93
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	77
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	76
	BH5_0.1_0.2	SE285612.005	%	60 - 130%	88
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	85
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	98
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	87
	QC01A	SE285612.009	%	60 - 130%	95
	QC02A	SE285612.010	%	60 - 130%	91
	TB1_02/06/2025	SE285612.012	%	60 - 130%	95
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	103
d8-toluene (Surrogate)	BH7_0.5_0.6	SE285612.002	%	60 - 130%	104
	BH1_0.1_0.2	SE285612.003	%	60 - 130%	84
	BH1_0.5_0.6	SE285612.004	%	60 - 130%	82
	BH5_0.1_0.2	SE285612.005	%	60 - 130%	90
	BH5_0.3_0.4	SE285612.006	%	60 - 130%	85
	BH2_0.5_0.6	SE285612.007	%	60 - 130%	102
	BH2_2.0_2.1	SE285612.008	%	60 - 130%	89
	QC01A	SE285612.009	%	60 - 130%	97
	QC02A	SE285612.010	%	60 - 130%	97
	TB1_02/06/2025	SE285612.012	%	60 - 130%	104
	BH5_1.0-1.1	SE285612.014	%	60 - 130%	103

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

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

Volatile Petroleum Hydrocarbons in Water**Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RB1_30/06/2025	SE285612.011	%	40 - 130%	106
d4-1,2-dichloroethane (Surrogate)	RB1_30/06/2025	SE285612.011	%	60 - 130%	89
d8-toluene (Surrogate)	RB1_30/06/2025	SE285612.011	%	40 - 130%	90

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

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB353302.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353342.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	Alpha BHC	mg/kg	0.1	<0.1
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Lindane (gamma BHC)	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.1	<0.1
	Endrin	mg/kg	0.1	<0.1
	Beta Endosulfan	mg/kg	0.1	<0.1
	p,p'-DDD	mg/kg	0.1	<0.1
	Endrin aldehyde	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endrin ketone	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	96

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	97
	d14-p-terphenyl (Surrogate)	%	-	97
Surrogates				

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	92
	2-fluorobiphenyl (Surrogate)	%	-	97
	d14-p-terphenyl (Surrogate)	%	-	97

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB353304.001	Naphthalene	µg/L	0.1	<0.1
	2-methylnaphthalene	µg/L	0.1	<0.1
	1-methylnaphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(ah)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	104
	2-fluorobiphenyl (Surrogate)	%	-	104
	d14-p-terphenyl (Surrogate)	%	-	102

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	Arochlor 1016	mg/kg	0.1	<0.1
	Arochlor 1221	mg/kg	0.1	<0.1
	Arochlor 1232	mg/kg	0.1	<0.1
	Arochlor 1242	mg/kg	0.1	<0.1
	Arochlor 1248	mg/kg	0.1	<0.1
	Arochlor 1254	mg/kg	0.1	<0.1
	Arochlor 1260	mg/kg	0.1	<0.1
	Total PCBs	mg/kg	0.1	<0.1
Surrogates	TCMX (Surrogate)	%	-	96

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result
LB353457.001	Total Phenols	mg/kg	0.5	<0.50

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

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

Sample Number	Parameter	Units	LOR	Result
LB353341.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

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

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

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB353439.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353334.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB353304.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB353339.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	97
		d8-toluene (Surrogate)	%	-	107
		Bromofluorobenzene (Surrogate)	%	-	109
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353339.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR	Result	
LB353354.001	TRH C6-C9	µg/L	40	<40	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	84
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	106

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285728.011	LB353302.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	187	0
SE285729.014	LB353302.018	Mercury	µg/L	0.0001	<0.0001	<0.0001	158	0

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.014	LB353342.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE285717.004	LB353342.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.012	LB353340.011	% Moisture	%w/w	1	<1.0	<1.0	200	0
SE285717.004	LB353340.022	% Moisture	%w/w	1	17.0	18.9	36	10

OC Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285717.001	LB353334.029	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
		Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.50	0.51	30	2

OP Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285717.001	LB353334.029	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Methodathion	mg/kg	0.5	<0.5	<0.5	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.010	LB353334.028	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE285717.001	LB353334.029	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	4
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285720.001	LB353304.024	Naphthalene	µg/L	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
		Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
		Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
		Fluorene	µg/L	0.1	<0.1	<0.1	200	0
		Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
		Anthracene	µg/L	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Water (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285720.001	LB353304.024	Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
		Chrysene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	µg/L	-	0.39	0.34	30	14
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.41	0.35	30	14
		d14-p-terphenyl (Surrogate)	µg/L	-	0.41	0.35	30	17

PCBs in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285717.001	LB353334.029	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1221	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1232	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1242	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1248	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1254	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1260	mg/kg	0.1	<0.1	<0.1	200	0
		Total PCBs	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates						
		TCMX (Surrogate)	mg/kg	-	0.50	0.51	30	2

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.007	LB353457.005	Total Phenols	mg/kg	0.5	<0.50	<0.50	200	0

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.014	LB353341.014	Arsenic, As	mg/kg	1	2	3	73	33
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	9.0	13	35	34
		Copper, Cu	mg/kg	0.5	<0.5	1.5	82	102 ☹
		Nickel, Ni	mg/kg	0.5	0.9	4.5	49	133 ☹
		Lead, Pb	mg/kg	1	6	6	47	6
		Zinc, Zn	mg/kg	2	4	6	72	54

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285630.002	LB353439.014	Copper	µg/L	1	<1	<1	158	0
		Nickel	µg/L	1	1	1	97	4
		Zinc	µg/L	5	<5	<5	200	0
SE285640.002	LB353439.024	Arsenic	µg/L	1	4	4	43	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	2	2	60	1
		Zinc	µg/L	5	<5	<5	130	0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.010	LB353334.028	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285612.010	LB353334.028	TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
SE285717.001	LB353334.029	TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
		TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285720.001	LB353304.024	TRH C10-C14	µg/L	50	<50	<50	200	0
		TRH C15-C28	µg/L	200	<200	<200	200	0
		TRH C29-C36	µg/L	200	<200	<200	200	0
		TRH C37-C40	µg/L	200	<200	<200	200	0
		TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands						
		TRH >C10-C16	µg/L	60	<60	<60	200	0
		TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
		TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
		TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285618.001	LB353354.023	TRH C6-C10	µg/L	50	<50	<50	200	0
		TRH C6-C9	µg/L	40	<40	<40	195	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	8.7	8.6	30	1
		d8-toluene (Surrogate)	µg/L	-	8.5	8.7	30	1
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10.5	30	2
		VPF F Bands						
		Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
SE285720.001	LB353354.022	TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0
		TRH C6-C10	µg/L	50	<50	<50	200	0
		TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	8.6	8.4	30	2
		d8-toluene (Surrogate)	µg/L	-	9.1	8.9	30	2
		Bromofluorobenzene (Surrogate)	µg/L	-	10.9	10.1	30	8
		VPF F Bands						
		Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
		TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353342.002	Mercury	mg/kg	0.05	0.21	0.2	80 - 120	106

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353334.002	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	90
	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	90
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	87
	Dieldrin	mg/kg	0.1	0.2	0.2	60 - 140	111
	Endrin	mg/kg	0.1	0.2	0.2	60 - 140	96
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	88
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.45	0.5	40 - 130	90

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353334.002	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	93
	Diazinon (Dimpylate)	mg/kg	0.5	2.3	2	60 - 140	113
	Dichlorvos	mg/kg	0.5	1.9	2	60 - 140	93
	Ethion	mg/kg	0.2	2.0	2	60 - 140	99
Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	95
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	101

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353334.002	Naphthalene	mg/kg	0.1	4.0	4	60 - 140	100
	Acenaphthylene	mg/kg	0.1	3.9	4	60 - 140	98
	Acenaphthene	mg/kg	0.1	4.0	4	60 - 140	101
	Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	110
	Anthracene	mg/kg	0.1	4.3	4	60 - 140	107
	Fluoranthene	mg/kg	0.1	5.0	4	60 - 140	124
	Pyrene	mg/kg	0.1	5.0	4	60 - 140	124
	Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	103
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	90
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	95
Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	101

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353304.002	Naphthalene	µg/L	0.1	43	40	60 - 140	108
	Acenaphthylene	µg/L	0.1	47	40	60 - 140	117
	Acenaphthene	µg/L	0.1	46	40	60 - 140	115
	Phenanthrene	µg/L	0.1	48	40	60 - 140	121
	Anthracene	µg/L	0.1	45	40	60 - 140	113
	Fluoranthene	µg/L	0.1	48	40	60 - 140	121
	Pyrene	µg/L	0.1	54	40	60 - 140	136
	Benzo(a)pyrene	µg/L	0.1	52	40	60 - 140	131
	d5-nitrobenzene (Surrogate)	µg/L	-	0.4	0.5	40 - 130	80
	2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	82
Surrogates	d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	86

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353334.002	Arochlor 1260	mg/kg	0.1	0.4	0.4	60 - 140	103
	Surrogates	TCMX (Surrogate)	mg/kg	-	0.45	0.5	40 - 130

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353457.002	Total Phenols	mg/kg	0.5	21	20	80 - 120	103

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

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

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353341.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	113
	Cadmium, Cd	mg/kg	0.3	4.7	4.81	70 - 130	98
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	100
	Copper, Cu	mg/kg	0.5	330	290	80 - 120	115
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	103
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	280	273	80 - 120	103

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB3533439.002	Arsenic	µg/L	1	21	20	80 - 120	104
	Cadmium	µg/L	0.1	21	20	80 - 120	107
	Chromium	µg/L	1	21	20	80 - 120	107
	Copper	µg/L	1	21	20	80 - 120	107
	Lead	µg/L	1	21	20	80 - 120	105
	Nickel	µg/L	1	21	20	80 - 120	105
	Zinc	µg/L	5	21	20	80 - 120	103

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353334.002	TRH C10-C14	mg/kg	20	170	200	60 - 140	87
	TRH F Bands TRH >C10-C16	mg/kg	25	170	200	60 - 140	87

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353304.002	TRH C10-C14	µg/L	50	780	1000	60 - 140	78
	TRH F Bands TRH >C10-C16	µg/L	60	790	1000	60 - 140	79

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353339.002	Monocyclic	Benzene	mg/kg	0.1	4.6	2.2	60 - 140	91
	Aromatic	Toluene	mg/kg	0.1	4.9	2.2	60 - 140	98
		Ethylbenzene	mg/kg	0.1	4.9	2.2	60 - 140	98
		m/p-xylene	mg/kg	0.2	10	4.4	60 - 140	104
		o-xylene	mg/kg	0.1	4.7	2.2	60 - 140	95

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353339.002	TRH C6-C10	mg/kg	25	110	35.2	60 - 140	115
	TRH C6-C9	mg/kg	20	88	30.8	60 - 140	110

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353354.002	TRH C6-C10	µg/L	50	330	400	60 - 140	83
	TRH C6-C9	µg/L	40	290	350	60 - 140	83

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

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.011	LB353302.004	Mercury	mg/L	0.0001	0.0018	<0.0001	0.008	92

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.002	LB353342.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	95

OC Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285612.007	LB353334.027	Alpha BHC	mg/kg	0.1	<0.1	-	-
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	-
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	89
		Heptachlor	mg/kg	0.1	<0.1	0.2	89
		Aldrin	mg/kg	0.1	<0.1	0.2	85
		Heptachlor epoxide	mg/kg	0.1	<0.1	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	-	-
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	-	-
		Dieldrin	mg/kg	0.1	<0.1	0.2	106
		Endrin	mg/kg	0.1	<0.1	0.2	98
		Beta Endosulfan	mg/kg	0.1	<0.1	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	-	-
		Endrin aldehyde	mg/kg	0.1	<0.1	-	-
		Endosulfan sulphate	mg/kg	0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	<0.1	0.2	87
		Endrin ketone	mg/kg	0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	-	-
		Total OC Pesticides	mg/kg	0.1	<0.1	-	-
		Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	-	-
		Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.47	-	85

OP Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285612.007	LB353334.027	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	2	90
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	2	108
		Dichlorvos	mg/kg	0.5	<0.5	2	83
		Dimethoate	mg/kg	0.5	<0.5	-	-
		Ethion	mg/kg	0.2	<0.2	2	99
		Fenitrothion	mg/kg	0.2	<0.2	-	-
		Malathion	mg/kg	0.2	<0.2	-	-
		Methidathion	mg/kg	0.5	<0.5	-	-
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	-	-
		Total OP Pesticides*	mg/kg	1.7	<1.7	-	-
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	-	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	91

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285612.007	LB353334.027	Naphthalene	mg/kg	0.1	<0.1	4	98
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285612.007	LB353334.027	Acenaphthylene	mg/kg	0.1	<0.1	4	91
		Acenaphthene	mg/kg	0.1	<0.1	4	96
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	<0.1	4	105
		Anthracene	mg/kg	0.1	<0.1	4	104
		Fluoranthene	mg/kg	0.1	<0.1	4	112
		Pyrene	mg/kg	0.1	<0.1	4	113
		Benzo(a)anthracene	mg/kg	0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	<0.1	4	98
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	-	-
		Total PAH (18)	mg/kg	0.8	<0.8	-	-
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	-	84
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	-	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	91

PCBs in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285612.007	LB353334.027	Arochlor 1016	mg/kg	0.1	<0.1	-	-
		Arochlor 1221	mg/kg	0.1	<0.1	-	-
		Arochlor 1232	mg/kg	0.1	<0.1	-	-
		Arochlor 1242	mg/kg	0.1	<0.1	-	-
		Arochlor 1248	mg/kg	0.1	<0.1	-	-
		Arochlor 1254	mg/kg	0.1	<0.1	-	-
		Arochlor 1260	mg/kg	0.1	<0.1	0.4	103
		Total PCBs	mg/kg	0.1	<0.1	-	-
	Surrogates	TCMX (Surrogate)	mg/kg	-	0.47	-	85

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.002	LB353334.004	Arsenic, As	mg/kg	1	50	3	50	95
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	92
		Chromium, Cr	mg/kg	0.5	56	10	50	92
		Copper, Cu	mg/kg	0.5	49	1.3	50	96
		Nickel, Ni	mg/kg	0.5	47	0.8	50	93
		Lead, Pb	mg/kg	1	56	11	50	90
		Zinc, Zn	mg/kg	2	62	11	50	102

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.011	LB353439.004	Arsenic	µg/L	1	21	<1	20	107
		Cadmium	µg/L	0.1	22	<0.1	20	111
		Chromium	µg/L	1	22	<1	20	111
		Copper	µg/L	1	23	<1	20	111
		Lead	µg/L	1	22	<1	20	112
		Nickel	µg/L	1	22	<1	20	109
		Zinc	µg/L	5	21	<5	20	108

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.007	LB353334.027	TRH C10-C14	mg/kg	20	210	<20	200	101
		TRH C15-C28	mg/kg	45	<45	<45	-	-
		TRH C29-C36	mg/kg	45	<45	<45	-	-
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	210	<110	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.007	LB353334.027	TRH F	TRH >C10-C16	mg/kg	25	210	<25	200	101
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	210	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	-	-
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE285612.002	LB353339.004	Monocyclic	Benzene	mg/kg	0.1	5.2	<0.1	2.2	104	
			Aromatic	Toluene	mg/kg	0.1	5.8	<0.1	2.2	116
			Ethylbenzene	mg/kg	0.1	5.6	<0.1	2.2	111	
			m/p-xylene	mg/kg	0.2	11	<0.2	4.4	112	
			o-xylene	mg/kg	0.1	5.1	<0.1	2.2	102	
			Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
			Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	9.3	-	91
		d8-toluene (Surrogate)		mg/kg	-	10.2	10.4	-	102	
		Bromofluorobenzene (Surrogate)		mg/kg	-	8.7	8.8	-	87	
		Totals	Total BTEX*	mg/kg	0.6	33	<0.6	-	-	
Total Xylenes*	mg/kg		0.3	16	<0.3	-	-			

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285612.002	LB353339.004	TRH C6-C10	mg/kg	25	83	<25	35.2	88
		TRH C6-C9	mg/kg	20	71	<20	30.8	87
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	9.3	-	91
		d8-toluene (Surrogate)	mg/kg	-	10.2	10.4	-	102
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.7	8.8	-	87
		VPH F						
		Benzene (F0)	mg/kg	0.1	5.2	<0.1	-	-
		Bands						
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	50	<25	-	78

Volatile Petroleum Hydrocarbons in Water

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE285576.001	LB353354.025	TRH C6-C10	µg/L	50	<50	400	112
		TRH C6-C9	µg/L	40	<40	350	116
		Surrogates					
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.5	-	100
		d8-toluene (Surrogate)	µg/L	-	9.0	-	106
		Bromofluorobenzene (Surrogate)	µg/L	-	10.4	-	100
		VPH F					
		Benzene (F0)	µg/L	0.5	<0.5	-	-
		Bands					
		TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	-	-

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 4

LABORATORY DETAILS

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SGS Reference **SE285612 R0**
Date Received 02 Jul 2025
Date Reported 10 Jul 2025

COMMENTS

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

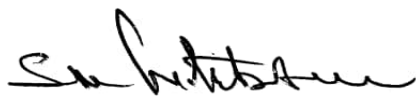
Pesticides / Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Number 2562/14420, Report number ME373585.

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Yusuf KUTHPUDIN
Asbestos Analyst

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Date Analysed	Fibre Identification	Est.%w/w*
SE285612.001	BH7_0.1_0.2	Soil	122g Sand, Rocks	30 Jun 2025	08 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285612.004	BH1_0.5_0.6	Soil	126g Clay, Rocks	30 Jun 2025	08 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285612.006	BH5_0.3_0.4	Soil	130g Clay, Sand, Rocks	01 Jul 2025	08 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285612.007	BH2_0.5_0.6	Soil	129g Clay, Sand, Rocks	02 Jul 2025	08 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD

METHODOLOGY SUMMARY

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

FOOTNOTES

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

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

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

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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

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

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317 @ 11.57 am

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SGS EHS Sydney COC

SE285612



CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 3

Company Name: WSP Australia Pty Ltd

Address: L27, 680 George Street

Address: Sydney 2001 NSW

Contact Name: Chloe Diggins

Quotation No: WSP Quote

Project Name/No: PS223670 - Opal Bayview

Purchase Order No: PS223670

Results Required Date: 0414 129 037

Telephone: Email: chloe.diggins@wsp.com

Email Results to: melinda.collier@wsp.com, chloe.diggins@wsp.com

TAT required: Standard

SGS ID	Client Sample ID	Sampling Date/Time	Matrix (Tick as appropriate)			NO. OF CONTAINERS	ANALYSIS REQUESTED							Soil Type (Fill (F)/ Natural (N))	Additional Report Formats	Notes/Guidelines/LOR/Special instructions
			Soil Sample	Water Sample	Other		TRH	BTEXN	PAHs	Heavy Metals	Asbestos ((NEPM))	OCPs, OPPs, herbicides, phenols, PCBs	Please forward to Eurofins for analysis	HOLD		
1	BH7_0.1_0.2	30/06/2025	X			2					X				F	Hold jars
2	BH7_0.5_0.6	30/06/2025	X			1	X	X	X	X				X	F	
	BH7_1.0_1.1	30/06/2025	X			1									N	
	BH7_2.0_2.1	30/06/2025	X			1								X	N	
3	BH1_0.1_0.2	30/06/2025	X			1	X	X	X	X					F	
4	BH1_0.5_0.6	30/06/2025	X			2	X	X	X	X	X				F	
	BH1_1.0_1.1	30/06/2025	X			1								X	N	
	BH1_2.0_2.1	30/06/2025	X			1								X	N	
5	BH5_0.1_0.2	01/07/2025	X			1	X	X	X	X				X	F	
6	BH5_0.3_0.4	01/07/2025	X			2					X				F	Sample ID incorrectly labelled as 0.5-0.6. Hold jars.
14	BH5_1.0_1.1	01/07/2025	X			1								X	N	
	BH5_2.0_2.1	01/07/2025	X			1	X	X	X	X					N	

Relinquished By: Chloe Diggins

Date/Time: 03/07/2025, 12:00

Received By:

Date/Time: 27/25 2:20

Temperature: 4.8°C

Sample Security Sealed: Yes / No

Hazards e.g. may contain Asbestos



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

Lab ID Number: (please quote on correspondence)

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 2 of 3

Company Name:		WSP Australia Pty Ltd		Project Name/No:		PS223670 – Opal Bayview		Page <u>2</u> of <u>3</u>	
Address:		L27, 680 George Street Sydney 2001 NSW		Purchase Order No:		PS223670		TAT required: Standard	
Contact Name:		Chloe Diggins		Results Required Date:		0414 129 037		Email: chloe.diggins@wsp.com	
Quotation No:		WSP Quote		Email Results to:		melinda.collier@wsp.com , chloe.diggins@wsp.com			

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate)			NO. OF CONTAINERS	ANALYSIS REQUESTED							Additional Report Formats						
			Soil Sample	Water Sample	Other _____		TRH	BTEXN	PAHs	Heavy Metals	Asbestos (Presence/ absence)	OCPs, OPPs, herbicides, phenols, PCBs	Please forward to Eurofins for analysis	HOLD	NEPM	CSV	ESDAT	DOO	GO, Guidelines	Others _____
	BH2_0.1_0.2		X			1														
7	BH2_0.5_0.6		X			2	X	X	X	X	X									F
	BH2_1.0_1.1		X			1														F
8	BH2_2.0_2.1		X			1	X	X	X	X	X									N
9	QC01A	30/06/2025	X			1	X	X	X	X	X									
10	QC02A	30/06/2025	X			1	X	X	X	X	X									
	QC03A	01/07/2025	X			1														
	QC05A	01/07/2025	X			1														
	QC01B	30/06/2025	X			1	X	X	X	X	X									
	QC02B	30/06/2025	X			1	X	X	X	X	X									
	QC03B	01/07/2025	X			1														X
	QC05B	01/07/2025	X			1														X

Retinquished By: Chloe Diggins		Date/Time: 03/07/2025, 12:00		Received By: _____		Date/Time: <u>2.7.25</u> <u>02:00</u>	
Samples Intact: <u>Yes</u> / No		Temperature: <u>4.8</u> °C		Sample Security Sealed: <u>Yes</u> / No		Hazards: e.g. may contain Asbestos	

Comments / Subcontracting details:



Company Name:	WSP Australia Pty Ltd
Address:	L27, 680 George Street
	Sydney 2001 NSW

Contact Name:	Chloe Diggin
---------------	--------------

Quotation No:	WSP Quote
---------------	-----------

Email Results to: melinda.collier@wsp.com, chloe.diggin@wsp.com

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 3 of 3

Company Name:	WSP Australia Pty Ltd
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L27, 680 George Street

Sydney 2001 NSW

Project Name/No:	PS223670 – Opal Bayview
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Purchase Order No:	PS223670
--------------------	----------

Results required		TAT required: Standard
Date:		

Telephone: 0717 127 031
Email: cmcc@bigpond.wsp.com

ANALYSIS REQUESTED

Additional Report Formats

Matrix
(Tick as
appropriate)

Notes/Guidelines/LOR/
Special instructions

☐ NEPM
☐ CSV
☐ ESDAT
☐ DAO
☐ GO, Guidelines -----
☐ Others _____

Soil Sample _____

Water Sample _____

Other _____

NO. OF CONTAINERS

TRH

BTEXN

PAHs

Heavy Metals

Asbestos (Presence/
absence)

OCPs, OPPs, herbicides,
phenols, PCBs

Please forward to
Eurofins for analysis

HOLD

HOLD

Relinquished By: Chloe Diggin

Date/Time: 03/07/2025, 12:00

Received By:

Date/Time:

Samples Intact: Yes / No

Temperature 4.8°C

Sample Security Sealed: Yes / No

Hazards: e.g. may contain Asbestos

Comments / Subcontracting details:

Yin, Emily (Alexandria)

From: Diggin, Chloe <Chloe.Diggin@wsp.com>
Sent: Friday, 4 July 2025 5:59 PM
To: Yin, Emily (Alexandria); Wang, Harry; AU.SampleReceipt.Sydney, AU (Sydney)
Cc: Porter, Julie
Subject: RE: [EXTERNAL] RE: SE285612 - PS223670
Attachments: WSP PS223670 - CoC- 04.07.25-Updated.docx

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi SGS,

Please find attached the COC for the second batch of samples collected via courier today.

Regarding the first batch SE285612, may you please confirm that BH5_1.0-1.1 was scheduled for the same analysis intended for BH5_2.0-2.1? May you also please schedule sample BH5_0.3_0.4 for TRH, BTEXN, PAHs and heavy metals?

Thanks,

Chloe Diggin

Senior Environmental Scientist, Contaminated Land Management
BSc (Environmental)

T +61 2 9272 5578

WSP

Level 27, 680 George St
Sydney NSW 2000
Australia

wsp.com

From: Diggin, Chloe
Sent: Friday, 4 July 2025 3:12 PM
To: Yin, Emily (Alexandria) <Emily.Yin@sgs.com>; Wang, Harry <Harry.Wang@wsp.com>
Cc: Porter, Julie <Julie.Porter@wsp.com>
Subject: RE: [EXTERNAL] RE: SE285612 - PS223670

Hi Emily,

Presence/absence please, we haven't done any sieving for quantification.

Cheers,

Chloe.

Chloe Diggin

Yin, Emily (Alexandria)

From: Diggin, Chloe <Chloe.Diggin@wsp.com>
Sent: Friday, 4 July 2025 2:57 PM
To: Yin, Emily (Alexandria); Wang, Harry
Subject: RE: [EXTERNAL] RE: SE285612 - PS223670

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments ***

Hi Emily,

Total please.

I'll send the COC for the second batch by EOD btw.

Cheers,

Chloe Diggin

Senior Environmental Scientist, Contaminated Land Management
BSc (Environmental)

T +61 2 9272 5578

WSP

Level 27, 680 George St
Sydney NSW 2000
Australia

wsp.com

From: Yin, Emily (Alexandria) <Emily.Yin@sgs.com>
Sent: Friday, 4 July 2025 12:58 PM
To: Diggin, Chloe <Chloe.Diggin@wsp.com>; Wang, Harry <Harry.Wang@wsp.com>
Subject: FW: [EXTERNAL] RE: SE285612 - PS223670
Importance: High

Also do you require Total or Speciated Phenols for this.

Thank You.

Regards,

Emily Yin

Environment, Health & Safety
Sample Receipt



SAMPLE RECEIPT ADVICE

SE285612

CLIENT DETAILS

Contact Melinda Collier
Client WSP AUSTRALIA PTY LIMITED
Address Level 27, 680 George St
NSW 2000

Telephone 02 9272 5100
Facsimile 02 9272 5101
Email Melinda.Collier@wsp.com

Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 14

LABORATORY DETAILS

Manager Shane McDermott
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Wed 2/7/2025
Report Due Thu 10/7/2025
SGS Reference **SE285612**

SUBMISSION DETAILS

This is to confirm that 14 samples were received on Wednesday 2/7/2025. Results are expected to be ready by COB Thursday 10/7/2025. Please quote SGS reference SE285612 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	13 Soil, 1 Water	Type of documentation received	COC
Date documentation received	3/7/2025@11:51am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	4.8°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

9 samples have been placed on hold as no tests have been assigned for it. These samples will not be processed.
Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.
BH1_2.0-2.1 and BH5_2.0-2.1 not received.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.



SAMPLE RECEIPT ADVICE

SE285612

CLIENT DETAILS

Client WSP AUSTRALIA PTY LIMITED

Project PS223670 - Opal Bayview

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Pesticides / Herbicides in Soils by LC-MS/MS	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
002	BH7_0.5_0.6	-	-	26	-	-	10	11	7
003	BH1_0.1_0.2	-	-	26	-	-	10	11	7
004	BH1_0.5_0.6	-	-	26	-	-	10	11	7
005	BH5_0.1_0.2	-	-	26	-	-	10	11	7
006	BH5_0.3_0.4	-	-	26	-	-	10	11	7
007	BH2_0.5_0.6	27	14	26	9	19	10	11	7
008	BH2_2.0_2.1	-	-	26	-	-	10	11	7
009	QC01A	-	-	26	-	-	10	11	7
010	QC02A	-	-	26	-	-	10	11	7
012	TB1_02/06/2025	-	-	-	-	-	10	-	7
013	TS1_02/06/2025	-	-	-	-	-	-	11	-
014	BH5_1.0-1.1	-	-	26	-	-	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE285612

CLIENT DETAILS

Client WSP AUSTRALIA PTY LIMITED

Project PS223670 - Opal Bayview

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	Total Phenolics in Soil	Total Recoverable Elements in Soil/Waste
001	BH7_0.1_0.2	3	-	-	-	-
002	BH7_0.5_0.6	-	1	1	-	7
003	BH1_0.1_0.2	-	1	1	-	7
004	BH1_0.5_0.6	3	1	1	-	7
005	BH5_0.1_0.2	-	1	1	-	7
006	BH5_0.3_0.4	3	1	1	-	7
007	BH2_0.5_0.6	3	1	1	1	7
008	BH2_2.0_2.1	-	1	1	-	7
009	QC01A	-	1	1	-	7
010	QC02A	-	1	1	-	7
012	TB1_02/06/2025	-	-	1	-	-
014	BH5_1.0-1.1	-	1	1	-	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE285612

CLIENT DETAILS

Client WSP AUSTRALIA PTY LIMITED

Project PS223670 - Opal Bayview

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	Volatile Petroleum Hydrocarbons in Water
011	RB1 _30/06/2025	1	22	7	9	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

CLIENT DETAILS

Contact Melinda Collier
 Client WSP AUSTRALIA PTY LIMITED
 Address Level 27, 680 George St
 NSW 2000

Telephone 02 9272 5100
 Facsimile 02 9272 5101
 Email Melinda.Collier@wsp.com
 Project **PS223670 - Opal Bayview**
 Order Number **PS223670**
 Samples 7

LABORATORY DETAILS

Manager Shane McDermott
 Laboratory SGS Alexandria Environmental
 Address Unit 16, 33 Maddox St
 Alexandria NSW 2015

Telephone +61 2 8594 0400
 Facsimile +61 2 8594 0499
 Email au.environmental.sydney@sgs.com
 SGS Reference **SE285770 R0**
 Date Received 4/7/2025
 Date Reported 14/7/2025

COMMENTS

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

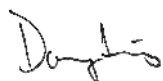
Pesticides / Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Number 2562/14420, Report number ME373471.

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Dong LIANG
 Metals/Inorganics Team Leader



Ly Kim HA
 Organic Section Head



Ravee SIVASUBRAMANIAM
 Hygiene Team Leader



Shane MCDERMOTT
 Laboratory Manager



Ying Ying ZHANG
 Laboratory Technician



ANALYTICAL RESULTS

SE285770 R0

VOC's in Soil [AN433] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285770.001	2/7/2025 SE285770.002	3/7/2025 SE285770.003	3/7/2025 SE285770.004	3/7/2025 SE285770.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH3_1.0_1.1	TS2_04/06/2025
			SOIL	SOIL
			-	-
			3/7/2025 SE285770.006	3/7/2025 SE285770.007
Benzene	mg/kg	0.1	<0.1	[105%]
Toluene	mg/kg	0.1	<0.1	[112%]
Ethylbenzene	mg/kg	0.1	<0.1	[127%]
m/p-xylene	mg/kg	0.2	<0.2	[127%]
o-xylene	mg/kg	0.1	<0.1	[126%]
Total Xylenes*	mg/kg	0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	-



ANALYTICAL RESULTS

SE285770 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285770.001	2/7/2025 SE285770.002	3/7/2025 SE285770.003	3/7/2025 SE285770.004	3/7/2025 SE285770.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH3_1.0_1.1
			SOIL
			-
			3/7/2025 SE285770.006
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285770.001	2/7/2025 SE285770.002	3/7/2025 SE285770.003	3/7/2025 SE285770.004	3/7/2025 SE285770.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH3_1.0_1.1
			SOIL
			-
			3/7/2025 SE285770.006
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			2/7/2025 SE285770.001	2/7/2025 SE285770.002	3/7/2025 SE285770.003	3/7/2025 SE285770.004	3/7/2025 SE285770.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH3_1.0_1.1
			SOIL
			3/7/2025 SE285770.006
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OP Pesticides in Soil [AN420] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH8_0.2_0.3
			SOIL	SOIL
			-	-
			2/7/2025 SE285770.001	3/7/2025 SE285770.004
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

OC Pesticides in Soil [AN420] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH8_0.2_0.3
			SOIL	SOIL
			-	-
			2/7/2025 SE285770.001	3/7/2025 SE285770.004
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.1	<0.1	<0.1
Endrin	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.1	<0.1	<0.1
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total OC Pesticides	mg/kg	0.1	<0.1	<0.1
Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1
Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1



ANALYTICAL RESULTS

SE285770 R0

PCBs in Soil [AN420] Tested: 8/7/2025

			BH6_0.2_0.3	BH8_0.2_0.3
			SOIL	SOIL
			-	-
			2/7/2025	3/7/2025
PARAMETER	UOM	LOR	SE285770.001	SE285770.004
Arochlor 1016	mg/kg	0.1	<0.1	<0.1
Arochlor 1221	mg/kg	0.1	<0.1	<0.1
Arochlor 1232	mg/kg	0.1	<0.1	<0.1
Arochlor 1242	mg/kg	0.1	<0.1	<0.1
Arochlor 1248	mg/kg	0.1	<0.1	<0.1
Arochlor 1254	mg/kg	0.1	<0.1	<0.1
Arochlor 1260	mg/kg	0.1	<0.1	<0.1
Total PCBs	mg/kg	0.1	<0.1	<0.1



ANALYTICAL RESULTS

SE285770 R0

Total Phenolics in Soil [AN295] Tested: 14/7/2025

			BH6_0.2_0.3	BH8_0.2_0.3
			SOIL	SOIL
			-	-
			2/7/2025	3/7/2025
PARAMETER	UOM	LOR	SE285770.001	SE285770.004
Total Phenols	mg/kg	0.5	<0.50	<0.50

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 8/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025 SE285770.001	2/7/2025 SE285770.002	3/7/2025 SE285770.003	3/7/2025 SE285770.004	3/7/2025 SE285770.005
Arsenic, As	mg/kg	1	5	6	4	4	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	14	14	11	35
Copper, Cu	mg/kg	0.5	2.2	5.0	<0.5	<0.5	9.1
Lead, Pb	mg/kg	1	5	6	5	3	10
Nickel, Ni	mg/kg	0.5	0.8	3.3	0.8	<0.5	25
Zinc, Zn	mg/kg	2	5.6	18	4.8	2.2	39

PARAMETER	UOM	LOR	BH3_1.0_1.1
			SOIL
			-
			3/7/2025 SE285770.006
Arsenic, As	mg/kg	1	2
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.5	14
Copper, Cu	mg/kg	0.5	0.8
Lead, Pb	mg/kg	1	5
Nickel, Ni	mg/kg	0.5	3.8
Zinc, Zn	mg/kg	2	4.3



ANALYTICAL RESULTS

SE285770 R0

Mercury in Soil [AN312] Tested: 8/7/2025

			BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025	2/7/2025	3/7/2025	3/7/2025	3/7/2025
PARAMETER	UOM	LOR	SE285770.001	SE285770.002	SE285770.003	SE285770.004	SE285770.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH3_1.0_1.1
			SOIL
			-
			3/7/2025
PARAMETER	UOM	LOR	SE285770.006
Mercury	mg/kg	0.05	<0.05



ANALYTICAL RESULTS

SE285770 R0

Moisture Content [AN002] Tested: 8/7/2025

			BH6_0.2_0.3	BH6_1.0_1.1	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			2/7/2025	2/7/2025	3/7/2025	3/7/2025	3/7/2025
PARAMETER	UOM	LOR	SE285770.001	SE285770.002	SE285770.003	SE285770.004	SE285770.005
% Moisture	%w/w	1	26.9	18.1	11.8	14.5	19.8

			BH3_1.0_1.1
			SOIL
			-
			3/7/2025
PARAMETER	UOM	LOR	SE285770.006
% Moisture	%w/w	1	14.0



ANALYTICAL RESULTS

SE285770 R0

Fibre Identification in soil [AS4964/AN602] Tested: 10/7/2025

			BH6_0.2_0.3	BH9_0.2_0.3	BH8_0.2_0.3	BH3_0.2_0.3
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			2/7/2025	3/7/2025	3/7/2025	3/7/2025
PARAMETER	UOM	LOR	SE285770.001	SE285770.003	SE285770.004	SE285770.005
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Date Analysed*	No unit	-	11/07/2025 00:00	11/07/2025 00:00	11/07/2025 00:00	11/07/2025 00:00

Pesticides / Herbicides in Soils by LC-MS/MS MA-1569.SL.01 [MA1569] Tested: 10/7/2025

PARAMETER	UOM	LOR	BH6_0.2_0.3	BH8_0.2_0.3
			SOIL	SOIL
			-	-
			2/7/2025 SE285770.001	3/7/2025 SE285770.004
2,4-D [(2,4-Dichlorophenoxy) acetic acid]*	mg/kg	0.01	<0.01	<0.01
2,4-DB*	mg/kg	0.5	<0.5	<0.5
2,4,5-T*	mg/kg	0.01	<0.01	<0.01
2,4,5-TP*	mg/kg	0.5	<0.5	<0.5
2,4,6-T*	mg/kg	0.5	<0.5	<0.5
2,6-D*	mg/kg	0.5	<0.5	<0.5
4-Chlorophenoxy acetic acid (4-CPA)*	mg/kg	0.5	<0.5	<0.5
Bromoxynil*	mg/kg	0.5	<0.5	<0.5
Clopyralid*	mg/kg	0.5	<0.5	<0.5
Dicamba*	mg/kg	0.01	<0.01	<0.01
Dichloroprop / Dichlorprop-P*	mg/kg	0.01	<0.01	<0.01
Dinoseb*	mg/kg	0.5	<0.5	<0.5
Fluroxypyr*	mg/kg	0.5	<0.5	<0.5
Ioxynil*	mg/kg	0.5	<0.5	<0.5
MCPA*	mg/kg	0.01	<0.01	<0.01
MCPB*	mg/kg	0.01	<0.01	<0.01
MCPP*	mg/kg	0.01	<0.01	<0.01
Picloram*	mg/kg	0.01	<0.01	<0.01
Triclopyr*	mg/kg	0.01	<0.01	<0.01

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN295	For Soil, a 1:10 NaOH extraction is made and analysed after 16 hours. The soil extract or water sample is distilled in a phosphoric acid stream. Phenolic compounds in the distillate react with a reagent stream of potassium hexacyanoferrate(III) and 4-Amino-2,3-dimethyl-3-pyrazolin-5-one in an alkaline medium to form a coloured complex which is analysed spectrophotometrically onboard a continuous flow analyser.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting.
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602/AS4964

The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

MA-1569

This method is intended for the analysis of a diverse range of pesticides and herbicides by Liquid Chromatography using a Tandem Mass Spectrometry detector (LC-MS/MS). Due to the diverse nature of the analytes covered in this method each analyte requires its own analytical acquisition method thus the sample is run multiple times according to the analyte list requested.

Soil and solid samples are extracted with ACN and extracts are filtered then directly injected onto LC-MS/MS using selective ion monitoring.

FOOTNOTES

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

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

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

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

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

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

Note that in terms of units of radioactivity:

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE285770 R0

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Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 7

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SGS Reference **SE285770 R0**
Date Received 04 Jul 2025
Date Reported 14 Jul 2025

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

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

SAMPLE SUMMARY

Sample counts by matrix	7 Soil	Type of documentation received	COC
Date documentation received	07/07/2025@12:37F	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	15.1°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	



HOLDING TIME SUMMARY

SE285770 R0

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

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

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

Fibre Identification in soil

Method: ME-(AU)-[ENV]AS4964/AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353797	02 Jul 2025	04 Jul 2025	02 Jul 2026	10 Jul 2025	02 Jul 2026	14 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353797	03 Jul 2025	04 Jul 2025	03 Jul 2026	10 Jul 2025	03 Jul 2026	14 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353797	03 Jul 2025	04 Jul 2025	03 Jul 2026	10 Jul 2025	03 Jul 2026	14 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353797	03 Jul 2025	04 Jul 2025	03 Jul 2026	10 Jul 2025	03 Jul 2026	14 Jul 2025

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353568	02 Jul 2025	04 Jul 2025	30 Jul 2025	08 Jul 2025	30 Jul 2025	11 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353568	02 Jul 2025	04 Jul 2025	30 Jul 2025	08 Jul 2025	30 Jul 2025	11 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353568	03 Jul 2025	04 Jul 2025	31 Jul 2025	08 Jul 2025	31 Jul 2025	11 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353568	03 Jul 2025	04 Jul 2025	31 Jul 2025	08 Jul 2025	31 Jul 2025	11 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353568	03 Jul 2025	04 Jul 2025	31 Jul 2025	08 Jul 2025	31 Jul 2025	11 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353568	03 Jul 2025	04 Jul 2025	31 Jul 2025	08 Jul 2025	31 Jul 2025	11 Jul 2025

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353560	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353560	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353560	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353560	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353560	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353560	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	13 Jul 2025	10 Jul 2025

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB354017	02 Jul 2025	04 Jul 2025	16 Jul 2025	14 Jul 2025	16 Jul 2025	14 Jul 2025
BH8_0.2_0.3	SE285770.004	LB354017	03 Jul 2025	04 Jul 2025	17 Jul 2025	14 Jul 2025	17 Jul 2025	14 Jul 2025



HOLDING TIME SUMMARY

SE285770 R0

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

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

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

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353562	02 Jul 2025	04 Jul 2025	29 Dec 2025	08 Jul 2025	29 Dec 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353562	02 Jul 2025	04 Jul 2025	29 Dec 2025	08 Jul 2025	29 Dec 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353562	03 Jul 2025	04 Jul 2025	30 Dec 2025	08 Jul 2025	30 Dec 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353562	03 Jul 2025	04 Jul 2025	30 Dec 2025	08 Jul 2025	30 Dec 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353562	03 Jul 2025	04 Jul 2025	30 Dec 2025	08 Jul 2025	30 Dec 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353562	03 Jul 2025	04 Jul 2025	30 Dec 2025	08 Jul 2025	30 Dec 2025	10 Jul 2025

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353552	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353552	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Aug 2025	10 Jul 2025

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353556	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	16 Jul 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353556	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	16 Jul 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
TS2_04/06/2025	SE285770.007	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH6_0.2_0.3	SE285770.001	LB353556	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	16 Jul 2025	10 Jul 2025
BH6_1.0_1.1	SE285770.002	LB353556	02 Jul 2025	04 Jul 2025	16 Jul 2025	08 Jul 2025	16 Jul 2025	10 Jul 2025
BH9_0.2_0.3	SE285770.003	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH8_0.2_0.3	SE285770.004	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH3_0.2_0.3	SE285770.005	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
BH3_1.0_1.1	SE285770.006	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025
TS2_04/06/2025	SE285770.007	LB353556	03 Jul 2025	04 Jul 2025	17 Jul 2025	08 Jul 2025	17 Jul 2025	10 Jul 2025

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	105
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	99

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	102
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	98
d14-p-terphenyl (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	99
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	99

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH6_0.2_0.3	SE285770.001	%	70 - 130%	102
	BH6_1.0_1.1	SE285770.002	%	70 - 130%	101
	BH9_0.2_0.3	SE285770.003	%	70 - 130%	103
	BH8_0.2_0.3	SE285770.004	%	70 - 130%	98
	BH3_0.2_0.3	SE285770.005	%	70 - 130%	100
	BH3_1.0_1.1	SE285770.006	%	70 - 130%	99
d14-p-terphenyl (Surrogate)	BH6_0.2_0.3	SE285770.001	%	70 - 130%	99
	BH6_1.0_1.1	SE285770.002	%	70 - 130%	100
	BH9_0.2_0.3	SE285770.003	%	70 - 130%	102
	BH8_0.2_0.3	SE285770.004	%	70 - 130%	99
	BH3_0.2_0.3	SE285770.005	%	70 - 130%	98
	BH3_1.0_1.1	SE285770.006	%	70 - 130%	97
d5-nitrobenzene (Surrogate)	BH6_0.2_0.3	SE285770.001	%	70 - 130%	93
	BH6_1.0_1.1	SE285770.002	%	70 - 130%	87
	BH9_0.2_0.3	SE285770.003	%	70 - 130%	88
	BH8_0.2_0.3	SE285770.004	%	70 - 130%	80
	BH3_0.2_0.3	SE285770.005	%	70 - 130%	84
	BH3_1.0_1.1	SE285770.006	%	70 - 130%	84

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	105
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	99

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	99
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	101
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	91
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	93
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	101
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	99
	TS2_04/06/2025	SE285770.007	%	60 - 130%	121
d4-1,2-dichloroethane (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	77
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	76
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	66
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	70
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	70
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	74
	TS2_04/06/2025	SE285770.007	%	60 - 130%	87
d8-toluene (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	119
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	88
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	105
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	83
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	93
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	114
	TS2_04/06/2025	SE285770.007	%	60 - 130%	100

Volatile Petroleum Hydrocarbons in Soil

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

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

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

Volatile Petroleum Hydrocarbons in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	99
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	101
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	91
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	93
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	101
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	99
d4-1,2-dichloroethane (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	77
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	76
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	66
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	70
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	70
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	74
d8-toluene (Surrogate)	BH6_0.2_0.3	SE285770.001	%	60 - 130%	119
	BH6_1.0_1.1	SE285770.002	%	60 - 130%	88
	BH9_0.2_0.3	SE285770.003	%	60 - 130%	105
	BH8_0.2_0.3	SE285770.004	%	60 - 130%	83
	BH3_0.2_0.3	SE285770.005	%	60 - 130%	93
	BH3_1.0_1.1	SE285770.006	%	60 - 130%	114

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353568.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	Alpha BHC	mg/kg	0.1	<0.1
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Lindane (gamma BHC)	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.1	<0.1
	Endrin	mg/kg	0.1	<0.1
	Beta Endosulfan	mg/kg	0.1	<0.1
	p,p'-DDD	mg/kg	0.1	<0.1
	Endrin aldehyde	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endrin ketone	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	99

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	96
	d14-p-terphenyl (Surrogate)	%	-	100

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	97
	2-fluorobiphenyl (Surrogate)	%	-	96
	d14-p-terphenyl (Surrogate)	%	-	100

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	Arochlor 1016	mg/kg	0.1	<0.1
	Arochlor 1221	mg/kg	0.1	<0.1
	Arochlor 1232	mg/kg	0.1	<0.1
	Arochlor 1242	mg/kg	0.1	<0.1
	Arochlor 1248	mg/kg	0.1	<0.1
	Arochlor 1254	mg/kg	0.1	<0.1
	Arochlor 1260	mg/kg	0.1	<0.1
	Total PCBs	mg/kg	0.1	<0.1
	Surrogates			
	TCMX (Surrogate)	%	-	99

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result
LB354017.001	Total Phenols	mg/kg	0.5	<0.50

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

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

Sample Number	Parameter	Units	LOR	Result
LB353562.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353552.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB353556.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	87
		d8-toluene (Surrogate)	%	-	97
		Bromofluorobenzene (Surrogate)	%	-	97
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB353556.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	87

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285838.004	LB353568.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE285838.009	LB353568.016	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285838.001	LB353560.011	% Moisture	%w/w	1	10.5	8.9	40	17
SE285838.010	LB353560.021	% Moisture	%w/w	1	6.1	6.4	46	4

OC Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
		Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	-	0.49	0.50	30	1
SE285838.009	LB353552.028	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

OC Pesticides in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285838.009	LB353552.028	Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	200	0
		Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
		Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.49	0.51	30	4

OP Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Methodathion	mg/kg	0.5	<0.5	<0.5	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE285838.009	LB353552.028	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Methodathion	mg/kg	0.5	<0.5	<0.5	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	7

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	7

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE285838.009	LB353552.028	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	170	0
		Pyrene	mg/kg	0.1	<0.1	0.1	128	11
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	11
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	7

PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1221	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1232	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1242	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1248	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1254	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1260	mg/kg	0.1	<0.1	<0.1	200	0
		Total PCBs	mg/kg	0.1	<0.1	<0.1	200	0
		TCMX (Surrogate)	mg/kg	-	0.49	0.50	30	1
SE285838.009	LB353552.027	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1221	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1232	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1242	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1248	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1254	mg/kg	0.1	<0.1	<0.1	200	0
		Arochlor 1260	mg/kg	0.1	<0.1	<0.1	200	0
		Total PCBs	mg/kg	0.1	<0.1	<0.1	200	0
		TCMX (Surrogate)	mg/kg	-	0.49	0.51	30	4

Total Phenolics in Soil

Method: ME-(AU)-[ENV]JAN295

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB354017.006	Total Phenols	mg/kg	0.5	<0.50	<0.50	200	0

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

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285838.001	LB353562.014	Arsenic, As	mg/kg	1	1	<1	125	14
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.0	4.1	40	39
		Copper, Cu	mg/kg	0.5	7.1	7.0	37	2
		Nickel, Ni	mg/kg	0.5	3.3	2.0	49	46

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285838.001	LB353562.014	Lead, Pb	mg/kg	1	4	3	58	36
		Zinc, Zn	mg/kg	2	44	50	34	12
SE285838.010	LB353562.024	Arsenic, As	mg/kg	1	<1	<1	148	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.0	4.9	41	20
		Copper, Cu	mg/kg	0.5	6.5	7.4	37	13
		Nickel, Ni	mg/kg	0.5	2.9	3.2	46	9
		Lead, Pb	mg/kg	1	7	7	45	5
		Zinc, Zn	mg/kg	2	22	24	39	11

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285770.004	LB353552.026	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE285838.009	LB353552.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285783.041	LB353556.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	8.6	50	9
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.3	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	10.3	50	7
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
Total Xylenes*	mg/kg		0.3	<0.3	<0.3	200	0		
SE285838.009	LB353556.017	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	7.4	50	24
			d8-toluene (Surrogate)	mg/kg	-	11.1	8.8	50	24
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	11.9	50	21
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
Total Xylenes*	mg/kg		0.3	<0.3	<0.3	200	0		

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

Volatile Petroleum Hydrocarbons in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE285783.041	LB353556.014	TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	8.6	50	9
		d8-toluene (Surrogate)	mg/kg	-	9.2	9.3	50	1
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	10.3	50	7
		VPH F Bands						
SE285838.009	LB353556.017	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
		TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	7.4	50	24
		d8-toluene (Surrogate)	mg/kg	-	11.1	8.8	50	24
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	11.9	50	21
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353568.002	Mercury	mg/kg	0.05	0.20	0.2	80 - 120	100

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353552.002	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	82
	Heptachlor	mg/kg	0.1	0.1	0.2	60 - 140	73
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	84
	Dieldrin	mg/kg	0.1	0.2	0.2	60 - 140	104
	Endrin	mg/kg	0.1	0.2	0.2	60 - 140	96
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	92
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.48	0.5	40 - 130	95

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353552.002	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	94
	Diazinon (Dimpylate)	mg/kg	0.5	2.3	2	60 - 140	113
	Dichlorvos	mg/kg	0.5	1.8	2	60 - 140	91
	Ethion	mg/kg	0.2	1.9	2	60 - 140	96
	Surrogates						
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	94
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	105

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353552.002	Naphthalene	mg/kg	0.1	4.1	4	60 - 140	102
	Acenaphthylene	mg/kg	0.1	4.0	4	60 - 140	100
	Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	102
	Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	109
	Anthracene	mg/kg	0.1	4.5	4	60 - 140	112
	Fluoranthene	mg/kg	0.1	4.9	4	60 - 140	123
	Pyrene	mg/kg	0.1	4.9	4	60 - 140	121
	Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates						
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	92
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	94
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	105

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353552.002	Arochlor 1260	mg/kg	0.1	0.4	0.4	60 - 140	92
Surrogates	TCMX (Surrogate)	mg/kg	-	0.48	0.5	40 - 130	95

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB354017.002	Total Phenols	mg/kg	0.5	21	20	80 - 120	104

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353562.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	86
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	106
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353552.002	TRH C10-C14	mg/kg	20	180	200	60 - 140	90
TRH F Bands	TRH >C10-C16	mg/kg	25	180	200	60 - 140	91

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

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

VOC's in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353556.002	Monocyclic	Benzene	mg/kg	0.1	2.1	2.2	60 - 140
	Aromatic	Toluene	mg/kg	0.1	2.1	2.2	60 - 140
		Ethylbenzene	mg/kg	0.1	2.1	2.2	60 - 140
		m/p-xylene	mg/kg	0.2	4.5	4.4	60 - 140
		o-xylene	mg/kg	0.1	2.2	2.2	60 - 140

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB353556.002	TRH C6-C10	mg/kg	25	30	35.2	60 - 140	87
	TRH C6-C9	mg/kg	20	28	30.8	60 - 140	90

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353568.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	93

OC Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	75
		Heptachlor	mg/kg	0.1	0.1	<0.1	0.2	69
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	75
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.1	0.2	<0.1	0.2	96
		Endrin	mg/kg	0.1	0.2	<0.1	0.2	106
		Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	95
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
		Total OC Pesticides	mg/kg	0.1	1.0	<0.1	-	-
		Total OC VIC EPA IWRG621	mg/kg	0.1	1.0	<0.1	-	-
		Total Other OCP VIC EPA IWRG621	mg/kg	0.1	0.5	<0.1	-	-
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.46	0.53	-	92	

OP Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	<0.2	2	85
		Diazinon (Dimpylate)	mg/kg	0.5	2.1	<0.5	2	104
		Dichlorvos	mg/kg	0.5	1.6	<0.5	2	78
		Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
		Ethion	mg/kg	0.2	1.8	<0.2	2	90
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
		Malathion	mg/kg	0.2	<0.2	<0.2	-	-
		Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
		Total OP Pesticides*	mg/kg	1.7	7.1	<1.7	-	-
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	80
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	103

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	Naphthalene	mg/kg	0.1	4.0	<0.1	4	99
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	3.7	<0.1	4	93
		Acenaphthene	mg/kg	0.1	4.0	<0.1	4	99
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.4	<0.1	4	109
		Anthracene	mg/kg	0.1	4.3	<0.1	4	109
		Fluoranthene	mg/kg	0.1	5.0	<0.1	4	124

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	Pyrene	mg/kg	0.1	4.9	<0.1	4	123
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.1	<0.1	4	102
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.1	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.2	<0.3	-	-
		Total PAH (18)	mg/kg	0.8	34	<0.8	-	-
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	-	78
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	80
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	103

PCBs in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1221	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1232	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1242	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1248	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1254	mg/kg	0.1	<0.1	<0.1	-	-
		Arochlor 1260	mg/kg	0.1	0.4	<0.1	0.4	90
		Total PCBs	mg/kg	0.1	0.4	<0.1	-	-
	Surrogates	TCMX (Surrogate)	mg/kg	-	0.46	0.53	-	92

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB354017.004	Total Phenols	mg/kg	0.5	23	<0.50	20	113

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353562.004	Arsenic, As	mg/kg	1	48	5	50	85
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	53	10	50	86
		Copper, Cu	mg/kg	0.5	47	2.2	50	91
		Nickel, Ni	mg/kg	0.5	46	0.8	50	90
		Lead, Pb	mg/kg	1	49	5	50	88
		Zinc, Zn	mg/kg	2	49	5.6	50	87

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285770.001	LB353552.004	TRH C10-C14	mg/kg	20	200	<20	200	98
		TRH C15-C28	mg/kg	45	<45	<45	-	-
		TRH C29-C36	mg/kg	45	<45	<45	-	-
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	200	<110	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
	TRH F Bands	TRH >C10-C16	mg/kg	25	200	<25	200	99
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	200	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	-	-
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----

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

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

VOC's in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE285783.039	LB353556.019	Monocyclic	Benzene	mg/kg	0.1	2.5	0.00983053012	2.2	115
		Aromatic	Toluene	mg/kg	0.1	2.0	0.09513064977	2.2	87
			Ethylbenzene	mg/kg	0.1	2.6	0.04999042158	2.2	118
			m/p-xylene	mg/kg	0.2	5.6	0.17952913462	4.4	123
			o-xylene	mg/kg	0.1	2.7	0.07509047652	2.2	121
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	0.1	0.24049212247	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	12.4527204720€	-	99
			d8-toluene (Surrogate)	mg/kg	-	8.1	10.0881535816€	-	81
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	10.4138136986€	-	92
		Totals	Total BTEX*	mg/kg	0.6	16	0	-	-
			Total Xylenes*	mg/kg	0.3	8.3	0.25461961114	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE285783.039	LB353556.019	TRH C6-C10	mg/kg	25	49	6.20908522804	35.2	120	
		TRH C6-C9	mg/kg	20	41	4.71175322586	30.8	118	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	12.4527204720€	-	99
			d8-toluene (Surrogate)	mg/kg	-	8.1	10.0881535816€	-	81
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	10.4138136986€	-	92
		VPH F	Benzene (F0)	mg/kg	0.1	2.5	0.00983053012	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	33	6.20908522804	-	-

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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CLIENT DETAILS

Contact Melinda Collier
Client WSP AUSTRALIA PTY LIMITED
Address Level 27, 680 George St
NSW 2000

Telephone 02 9272 5100
Facsimile 02 9272 5101
Email Melinda.Collier@wsp.com

Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 4

LABORATORY DETAILS

Manager Shane McDermott
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

SGS Reference **SE285770 R0**
Date Received 04 Jul 2025
Date Reported 14 Jul 2025

COMMENTS

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

Pesticides / Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Number 2562/14420, Report number ME373471.

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

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Date Analysed	Fibre Identification	Est.%w/w*
SE285770.001	BH6_0.2_0.3	Soil	143g Clay, Rocks	02 Jul 2025	11 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285770.003	BH9_0.2_0.3	Soil	144g Clay, Sand, Soil, Rocks	03 Jul 2025	11 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285770.004	BH8_0.2_0.3	Soil	137g Clay, Sand, Rocks	03 Jul 2025	11 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01
SE285770.005	BH3_0.2_0.3	Soil	148g Clay, Sand, Soil, Rocks	03 Jul 2025	11 Jul 2025	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD

METHODOLOGY SUMMARY

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

FOOTNOTES

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

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

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

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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

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

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E-MAILED

7/7 @ 12.37pm

SGS

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

SGS EHS Sydney COC
SE285770

**CHAIN OF CUSTODY & ANALYSIS REQUEST**

Page 1 of 2

Company Name:	WSP Australia Pty Ltd		Project Name/No:	PS223670 – Opal Bayview	
Address:	L27, 680 George Street		Purchase Order No:	PS223670	
	Sydney 2001 NSW		Results Required Date:	TAT required: Standard	
Contact Name:	Chloe Diggin		Telephone:	0414 129 037	Email: chloe.diggin@wsp.com
Quotation No:	WSP Quote		Email Results to:	melinda.collier@wsp.com , chloe.diggin@wsp.com	

Matrix
 (Tick as appropriate)

ANALYSIS REQUESTED**Additional Report Formats**

SGS ID	Client Sample ID	Sampling Date/ Time	Soil Sample	Water Sample	Other	NO. OF CONTAINERS	ANALYSIS REQUESTED										Fill (F)/ Natural (N)	Notes/Guidelines/LOR/ Special instructions
							TRH	BTEXN	PAHs	Heavy Metals	Asbestos (Presence Absence)	OCPs, OPPs, herbicides, phenols, PCBs	Please forward to Eurofins for analysis	HOLD				
1	BH6_0.2_0.3	02/07/2025	X			2	X	X	X	X	X	X					F	Jar labelled as 0.1_0.2. Bag labelled as 0.5_0.6
	BH6_0.5_0.6	02/07/2025	X			1								X			N	
2	BH6_1.0_1.1	02/07/2025	X			1	X	X	X	X							N	
3	BH9_0.2_0.3	03/07/2025	X			2	X	X	X	X	X						F	Jar labelled as 0.1_0.2. Bag labelled as 0.5_0.6
	BH9_0.5_0.6	03/07/2025	X			1								X			N	
	BH9_1.0_1.1	03/07/2025	X			1								X			N	
4	BH8_0.2_0.3	03/07/2025	X			2	X	X	X	X	X	X					F	Jar labelled as 0.1_0.2. Bag labelled as 0.5_0.6
	BH8_0.5_0.6	03/07/2025	X			1								X			N	
	BH8_1.0_1.1	03/07/2025	X			1								X			N	

Relinquished By: Harry Wang

Date/Time: 02/07/2025

Received By:

Date/Time: 04.07.25 @ 10:30

Samples Intact: Yes / No

Temperature: 15.1 °C

Sample Security Sealed: Yes / No

Hazards: e.g. may contain Asbestos

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

Lab ID Number: (please quote on correspondence)

Company Name:	WSP Australia Pty Ltd		Project Name/No:	PS223670 – Opal Bayview	
Address:	L27, 680 George Street		Purchase Order No:	PS223670	
	Sydney 2001 NSW		Results Required Date:	TAT required: Standard	
			Telephone:	0414 129 037	Email: chloe.diggin@wsp.com
Contact Name:	Chloe Diggin		Email Results to:	melinda.collier@wsp.com , chloe.diggin@wsp.com	
Quotation No:	WSP Quote				

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate)			NO. OF CONTAINERS	ANALYSIS REQUESTED												Additional Report Formats		Notes/Guidelines/LOR/ Special instructions
			Soil Sample	Water Sample	Other		TRH	BTEXN	PAHs	Heavy Metals	Asbestos (Presence/absence)	OCs, OPPs, herbicides, phenols, PCBs		Please forward to Eurofins for analysis	HOLD						
5	BH3_0.2_0.3	03/07/2025	X			1	X	X	X	X	X										F
	BH3_0.5_0.6	03/07/2025	X			2									X						N
6	BH3_1.0_1.1	03/07/2025	X			1	X	X	X	X											N
	QC04A		X			1									X						
	QC04B		x			1									X						
	TB2_04/06/2025	-	X			1	X														
7	TS2_04/06/2025	-	X			1	X	X													

Relinquished By: Harry Wang	Date/Time: 02/07/2025	Received By: 	Date/Time: 04.07.25 @ 16:50
Samples Intact: Yes / No	Temperature: 19.1 °C	Sample Security Sealed: Yes / No	Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:			



SAMPLE RECEIPT ADVICE

SE285770

CLIENT DETAILS

Contact Melinda Collier
Client WSP AUSTRALIA PTY LIMITED
Address Level 27, 680 George St
NSW 2000

Telephone 02 9272 5100
Facsimile 02 9272 5101
Email Melinda.Collier@wsp.com

Project **PS223670 - Opal Bayview**
Order Number **PS223670**
Samples 7

LABORATORY DETAILS

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Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Fri 4/7/2025
Report Due Mon 14/7/2025
SGS Reference **SE285770**

SUBMISSION DETAILS

This is to confirm that 7 samples were received on Friday 4/7/2025. Results are expected to be ready by COB Monday 14/7/2025. Please quote SGS reference SE285770 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	7 Soil	Type of documentation received	COC
Date documentation received	07/07/2025@12:37PM	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	15.1°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Number. 2562/14420.
8 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.
TB2; This sample received broken.

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SAMPLE RECEIPT ADVICE

SE285770

CLIENT DETAILS

Client WSP AUSTRALIA PTY LIMITED

Project PS223670 - Opal Bayview

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH6_0.2_0.3	27	14	26	9	1	10	11	7
002	BH6_1.0_1.1	-	-	26	-	-	10	11	7
003	BH9_0.2_0.3	-	-	26	-	-	10	11	7
004	BH8_0.2_0.3	27	14	26	9	1	10	11	7
005	BH3_0.2_0.3	-	-	26	-	-	10	11	7
006	BH3_1.0_1.1	-	-	26	-	-	10	11	7
007	TS2_04/06/2025	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE285770

CLIENT DETAILS

Client WSP AUSTRALIA PTY LIMITED

Project PS223670 - Opal Bayview

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	Pesticides / Herbicides in Soils by LC-MS/MS	Total Recoverable Elements in Soil/Waste
001	BH6_0.2_0.3	3	1	1	19	7
002	BH6_1.0_1.1	-	1	1	-	7
003	BH9_0.2_0.3	3	1	1	-	7
004	BH8_0.2_0.3	3	1	1	19	7
005	BH3_0.2_0.3	3	1	1	-	7
006	BH3_1.0_1.1	-	1	1	-	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001



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: **Chloe Diggin**

Report **1240299-S**
Project name **OPAL BAYVIEW**
Project ID **PS223670**
Received Date **Jul 03, 2025**

Client Sample ID			QC01B	QC02B
Sample Matrix			Soil	Soil
Eurofins Sample No.			S25-JI0010431	S25-JI0010432
Date Sampled			Jul 03, 2025	Jul 03, 2025
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	INT	63
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			QC01B	QC02B
Sample Matrix			Soil	Soil
Eurofins Sample No.			S25-JI0010431	S25-JI0010432
Date Sampled			Jul 03, 2025	Jul 03, 2025
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	71	98
p-Terphenyl-d14 (surr.)	1	%	96	141
Heavy Metals				
Arsenic	2	mg/kg	2.9	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	8.0	7.3
Copper	5	mg/kg	< 5	< 5
Lead	5	mg/kg	30	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	6.4
Zinc	5	mg/kg	20	10
Sample Properties				
% Moisture	1	%	9.0	6.9

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	Jul 04, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jul 04, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jul 04, 2025	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Jul 04, 2025	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Jul 04, 2025	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Jul 04, 2025	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Jul 03, 2025	14 Days



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Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
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Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Project Name: OPAL BAYVIEW
Project ID: PS223670

Order No.:
Report #: 1240299
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Jul 3, 2025 5:50 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: Chloe Diggin

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	QC01B	Jul 03, 2025		Soil	S25-JI0010431	X	X
2	QC02B	Jul 03, 2025		Soil	S25-JI0010432	X	X
Test Counts						2	2

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

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

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	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.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	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.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	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
Method Blank							
Total Recoverable Hydrocarbons							
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	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
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	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
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	
Method Blank							
Heavy Metals							
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	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	74			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
TRH >C10-C16	%	78			70-130	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene				%	71			70-130	Pass	
LCS - % Recovery										
BTEX										
Benzene				%	95			70-130	Pass	
Toluene				%	91			70-130	Pass	
Ethylbenzene				%	89			70-130	Pass	
m&p-Xylenes				%	84			70-130	Pass	
o-Xylene				%	81			70-130	Pass	
Xylenes - Total*				%	83			70-130	Pass	
LCS - % Recovery										
Polycyclic Aromatic Hydrocarbons										
Acenaphthene				%	123			70-130	Pass	
Acenaphthylene				%	124			70-130	Pass	
Anthracene				%	103			70-130	Pass	
Benz(a)anthracene				%	117			70-130	Pass	
Benzo(a)pyrene				%	119			70-130	Pass	
Benzo(b&j)fluoranthene				%	101			70-130	Pass	
Benzo(g,h,i)perylene				%	106			70-130	Pass	
Benzo(k)fluoranthene				%	122			70-130	Pass	
Chrysene				%	115			70-130	Pass	
Dibenz(a,h)anthracene				%	109			70-130	Pass	
Fluoranthene				%	89			70-130	Pass	
Fluorene				%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene				%	110			70-130	Pass	
Naphthalene				%	114			70-130	Pass	
Phenanthrene				%	97			70-130	Pass	
Pyrene				%	87			70-130	Pass	
LCS - % Recovery										
Heavy Metals										
Arsenic				%	96			80-120	Pass	
Cadmium				%	95			80-120	Pass	
Chromium				%	93			80-120	Pass	
Copper				%	94			80-120	Pass	
Lead				%	96			80-120	Pass	
Mercury				%	93			80-120	Pass	
Nickel				%	93			80-120	Pass	
Zinc				%	93			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	R25-JI0004384	NCP	%	84			70-130	Pass		
TRH C10-C14	S25-Jn0072292	NCP	%	100			70-130	Pass		
TRH C6-C10	R25-JI0004384	NCP	%	77			70-130	Pass		
TRH >C10-C16	S25-Jn0072292	NCP	%	91			70-130	Pass		
Naphthalene	R25-JI0004384	NCP	%	85			70-130	Pass		
Spike - % Recovery										
BTEX					Result 1					
Benzene	R25-JI0004384	NCP	%	109			70-130	Pass		
Toluene	R25-JI0004384	NCP	%	102			70-130	Pass		
Ethylbenzene	R25-JI0004384	NCP	%	91			70-130	Pass		
m&p-Xylenes	R25-JI0004384	NCP	%	88			70-130	Pass		
o-Xylene	R25-JI0004384	NCP	%	84			70-130	Pass		
Xylenes - Total*	R25-JI0004384	NCP	%	87			70-130	Pass		
Spike - % Recovery										

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S25-JI0014508	NCP	%	101			70-130	Pass	
Acenaphthylene	S25-JI0014508	NCP	%	85			70-130	Pass	
Anthracene	S25-JI0014508	NCP	%	93			70-130	Pass	
Benz(a)anthracene	S25-JI0014508	NCP	%	103			70-130	Pass	
Benzo(a)pyrene	S25-JI0014508	NCP	%	108			70-130	Pass	
Benzo(b&j)fluoranthene	S25-JI0014508	NCP	%	94			70-130	Pass	
Benzo(g,h,i)perylene	S25-JI0001303	NCP	%	105			70-130	Pass	
Benzo(k)fluoranthene	S25-JI0014508	NCP	%	108			70-130	Pass	
Chrysene	S25-JI0014508	NCP	%	98			70-130	Pass	
Dibenz(a,h)anthracene	S25-JI0014508	NCP	%	97			70-130	Pass	
Fluoranthene	S25-JI0014508	NCP	%	86			70-130	Pass	
Fluorene	S25-JI0014508	NCP	%	93			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S25-JI0014508	NCP	%	97			70-130	Pass	
Naphthalene	S25-JI0014508	NCP	%	94			70-130	Pass	
Phenanthrene	S25-JI0014508	NCP	%	91			70-130	Pass	
Pyrene	S25-JI0014508	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S25-JI0011077	NCP	%	95			75-125	Pass	
Cadmium	S25-JI0011077	NCP	%	93			75-125	Pass	
Chromium	S25-JI0011077	NCP	%	86			75-125	Pass	
Copper	S25-JI0011077	NCP	%	83			75-125	Pass	
Lead	S25-JI0011077	NCP	%	89			75-125	Pass	
Mercury	S25-JI0011077	NCP	%	89			75-125	Pass	
Nickel	S25-JI0011077	NCP	%	80			75-125	Pass	
Zinc	S25-JI0011077	NCP	%	66			75-125	Fail	Q08
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	N25-JI0007891	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S25-Jn0082668	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S25-Jn0082668	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S25-Jn0082668	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	N25-JI0007891	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S25-Jn0082668	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	N25-JI0007891	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH >C16-C34	S25-Jn0082668	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S25-Jn0082668	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N25-JI0007891	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N25-JI0007891	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N25-JI0007891	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N25-JI0007891	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N25-JI0007891	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N25-JI0007891	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(b&j)fluoranthene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S25-JI0014511	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N25-JI0008063	NCP	mg/kg	11	11	1.0	30%	Pass
Cadmium	N25-JI0008063	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N25-JI0008063	NCP	mg/kg	7.0	7.3	4.0	30%	Pass
Copper	N25-JI0008063	NCP	mg/kg	11	11	1.0	30%	Pass
Lead	N25-JI0008063	NCP	mg/kg	24	24	<1	30%	Pass
Mercury	N25-JI0008063	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	N25-JI0008063	NCP	mg/kg	6.2	6.3	2.0	30%	Pass
Zinc	N25-JI0008063	NCP	mg/kg	71	72	2.0	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	S25-JI0011052	NCP	%	6.4	11	56	30%	Fail
								Q02

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
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised by:

Nileshni Goundar	Analytical Services Manager
Maria Tian	Senior Analyst-Organic
Mickael Ros	Senior Analyst-Metal
Raymond Siu	Senior Analyst-Volatile
Roopesh Rangarajan	Senior Analyst-Organic
Ryan Phillips	Senior Analyst-Sample Properties



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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 Alexandria NSW 2015
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Lab ID Number: (please quote on correspondence)

CHAIN OF CUSTODY & ANALYSIS REQUEST

Company Name:			WSP Australia Pty Ltd			Project Name/No:			PS223670 – Opal Bayview		
Address:			L27, 680 George Street Sydney 2001 NSW			Purchase Order No:			PS223670		
Contact Name:			Chloe Diggins			Results Required Date:			TAT required: Standard		
Quotation No:			WSP Quote			Email Results to:			melinda.collier@wsp.com , chloe.diggins@wsp.com		

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate)			NO. OF CONTAINERS	ANALYSIS REQUESTED						Additional Report Formats	Notes/Guidelines/LOR/ Special instructions	
			Soil Sample	Water Sample	Other		TRH	BTEXN	PAHs	Heavy Metals	Asbestos (Presence/ absence)	OCPs, OPPs, herbicides, phenols, PCBs			Please forward to Eurofins for analysis
	BH2_0.1_0.2		X			1									F
	BH2_0.5_0.6		X			2	X	X	X	X	X				F
	BH2_1.0_1.1		X			1									F
	BH2_2.0_2.1		X			1	X	X	X	X					N
	QC01A	30/06/2025	X			1	X	X	X	X					
	QC02A	30/06/2025	X			1	X	X	X	X					
	QC03A	01/07/2025	X			1									
	QC05A	01/07/2025	X			1									
	QC01B	30/06/2025	X			1	X	X	X	X					
	QC02B	30/06/2025	X			1	X	X	X	X					
	QC03B	01/07/2025	X			1									
	QC05B	01/07/2025	X			1									

Relinquished By: Chloe Diggins	Date/Time: 03/07/2025, 12:00	Received By: <i>Melinda Collier</i>	Date/Time: 7/7/25
Samples Intact: Yes / No	Temperature: 8.9°C	Sample Security Sealed: Yes / No	Hazards: e.g. may contain Asbestos

#1240299

#1240299

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402

Sample Receipt Advice

Company name: WSP Australia P/L NSW
Contact name: Chloe Diggin
Project name: OPAL BAYVIEW
Project ID: PS223670
Turnaround time: 5 Day
Date/Time received: Jul 3, 2025 5:50 PM
Eurofins reference: 1240299

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 8.3 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Bonnie Pu on phone : or by email: Bonnie.Pu@eurofinsanz.com

Results will be delivered electronically via email to Chloe Diggin - chloe.diggin@wsp.com.

Note: A copy of these results will also be delivered to the general WSP Australia P/L NSW email address.



Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554
--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
--	--	---	--

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Project Name: OPAL BAYVIEW
Project ID: PS223670

Order No.:
Report #: 1240299
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Jul 3, 2025 5:50 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: Chloe Diggin

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	QC01B	Jul 03, 2025		Soil	S25-JI0010431	X	X
2	QC02B	Jul 03, 2025		Soil	S25-JI0010432	X	X
Test Counts						2	2

APPENDIX D

LOTSEARCH REPORT





LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 25 Jul 2025 16:52:42

Reference: LS089071 EP

Address: 36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Disclaimer:

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

Dataset Listing

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

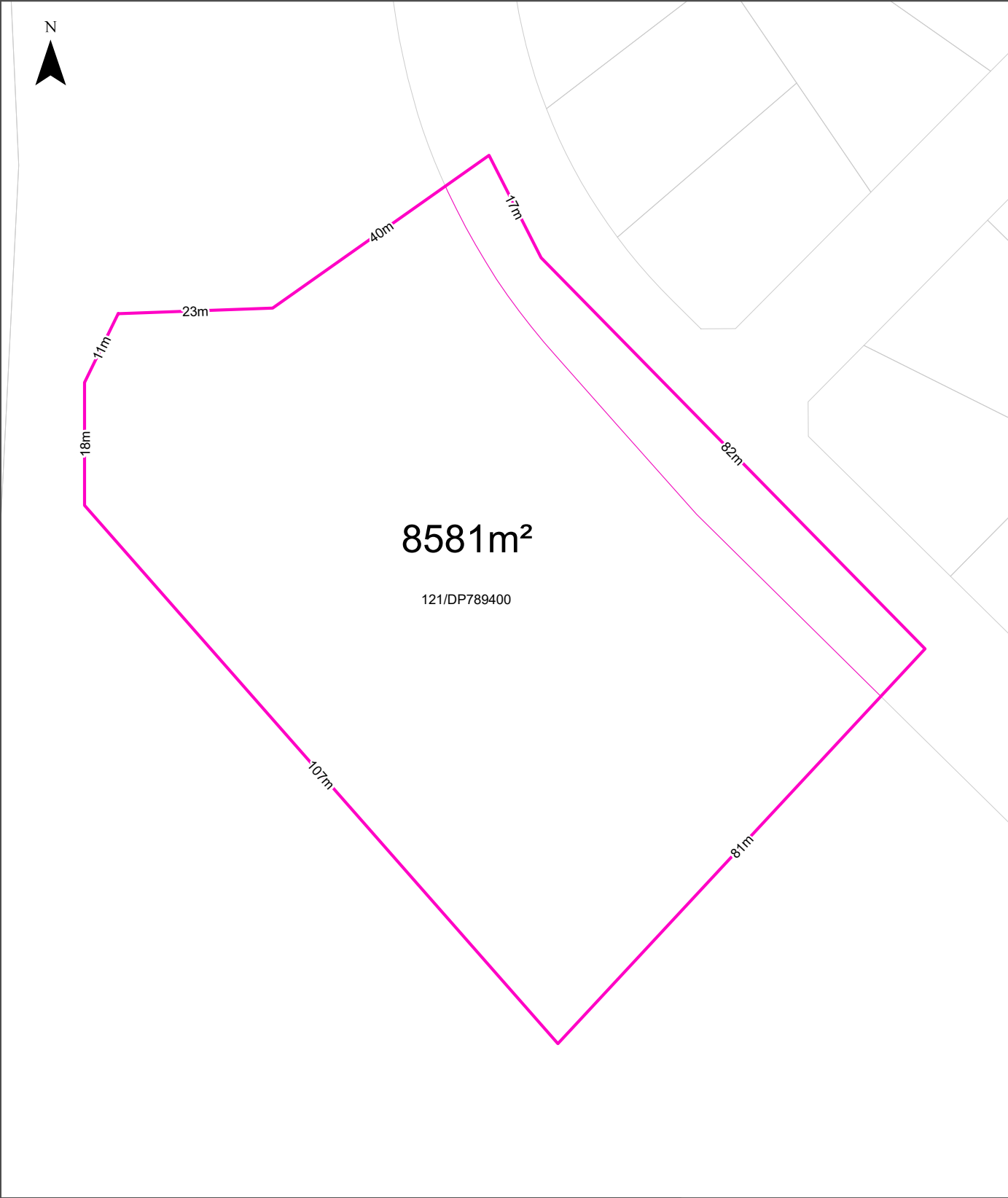
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	24/06/2025	24/06/2025	Monthly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	20/05/2025	20/05/2025	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority NSW	15/07/2025	09/07/2025	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority NSW	15/07/2025	15/07/2025	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority NSW	20/05/2025	15/05/2025	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority NSW	30/06/2025	30/06/2025	Monthly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	30/05/2025	19/01/2023	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	16/10/2024	19/01/2023	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority NSW	30/06/2025	05/02/2025	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Australian Department of Defence	15/07/2025	15/07/2025	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Australian Department of Defence	15/07/2025	15/07/2025	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	15/07/2025	21/05/2025	Monthly	2000m	0	0	0
Defence Controlled Areas	Australian Department of Defence	15/07/2025	15/07/2025	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Australian Department of Defence	11/06/2025	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Australian Department of Defence	15/07/2025	15/07/2025	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority NSW	28/11/2024	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority NSW	24/07/2025	24/07/2025	Monthly	1000m	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority NSW	24/07/2025	24/07/2025	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority NSW	24/07/2025	24/07/2025	Monthly	1000m	0	4	4
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	12
Points of Interest	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	1	2	63
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	20/05/2025	20/05/2025	Quarterly	1000m	0	1	11
State Forest	Forestry Corporation of NSW	18/12/2024	11/11/2024	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Geoscience Australia	22/04/2025	19/08/2019	Annually	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024	NSW Department of Climate Change, Energy, the Environment and Water	13/05/2025	28/06/2024	Quarterly	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	30/05/2025	04/03/2025	Annually	2000m	0	0	41
NSW Seamless Geology Single Layer: Rock Units	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	1	1	10
NSW Seamless Geology Single Layer: Geological Boundaries and Faults	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
NSW Seamless Geology Single Layer: Trendlines	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
NSW Seamless Geology Single Layer: Fold Axes	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Department of Primary Industries and Regional Development	05/05/2025	30/09/2015	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	15/01/2025	17/02/2011	Annually	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Climate Change, Energy, the Environment and Water	18/12/2024	27/07/2020	Annually	1000m	1	3	9
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Housing and Infrastructure	26/06/2025	09/05/2025	Monthly	500m	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	15/01/2025	21/02/2013	Annually	1000m	1	1	3
Dryland Salinity - National Assessment	Australian Bureau of Agricultural and Resource Economics and Sciences	03/06/2025	15/04/2025	Annually	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service	20/05/2025	20/05/2025	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	13	13	14
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Housing and Infrastructure	26/06/2025	08/09/2023	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Housing and Infrastructure	26/06/2025	13/06/2025	Monthly	1000m	1	3	60
Commonwealth Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	23/10/2024	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	23/10/2024	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	20/05/2025	21/03/2025	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Housing and Infrastructure	26/06/2025	13/06/2025	Monthly	1000m	0	0	13
Bush Fire Prone Land	NSW Rural Fire Service	24/06/2025	23/06/2025	Monthly	1000m	0	2	3
NSW Native Vegetation Type Map	NSW Department of Climate Change, Energy, the Environment and Water	28/05/2025	04/10/2024	Quarterly	1000m	3	6	88
Ramsar Wetlands of Australia	Australian Department of Climate Change, Energy, the Environment and Water	19/05/2025	05/03/2025	Annually	1000m	0	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Terrestrial	Australian Department of Climate Change, Energy, The Environment and Water	20/03/2025	19/06/2024	Annually	1000m	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Marine	Australian Department of Climate Change, Energy, The Environment and Water	20/03/2025	30/06/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	30/05/2025	07/05/2020	Annually	1000m	0	0	2
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	30/05/2025	07/05/2020	Annually	1000m	0	0	2
NSW BioNet Species Sightings	NSW Department of Climate Change, Energy, the Environment and Water	10/07/2025	10/07/2025	Monthly	10000m	-	-	-

Site Diagram

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Legend Site Boundary Internal Parcel Boundaries	Total Area: 8581m ² Total Perimeter: 380m	
	Scale: 02040 Meters	
	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025	
Disclaimers: Measurements are approximate only and may have been simplified or smaller lengths removed for readability. Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.	Coordinate System: GDA 1994 MGA Zone 56 Date: 25 July 2025	

Contaminated Land

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
N/A	No records in buffer								

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

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

Contaminated Land Records of Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit

<http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

Former Gasworks

Former Gasworks within the dataset buffer:

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

Former Gasworks Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

Map Id	Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
N/A	No records in buffer											

NSW EPA Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

National Waste Management Facilities Database

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

Map ID	Owner	Name	Address	Management Type	Facility Type	Status	Loc Conf	Dist	Dir
N/A	No records in buffer								

Source: Waste Management Facilities Database

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National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
N/A	No records in buffer										

National Liquid Fuel Facilities Data Source: Geoscience Australia

Creative Commons 4.0 © Commonwealth of Australia

PFAS Investigation & Management Programs

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

EPA PFAS Investigation Program

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

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

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

Defence PFAS Investigation Program

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

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

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

Defence PFAS Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

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

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

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

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

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

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

EPA Other Sites with Contamination Issues

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

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

Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

EPA Activities

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

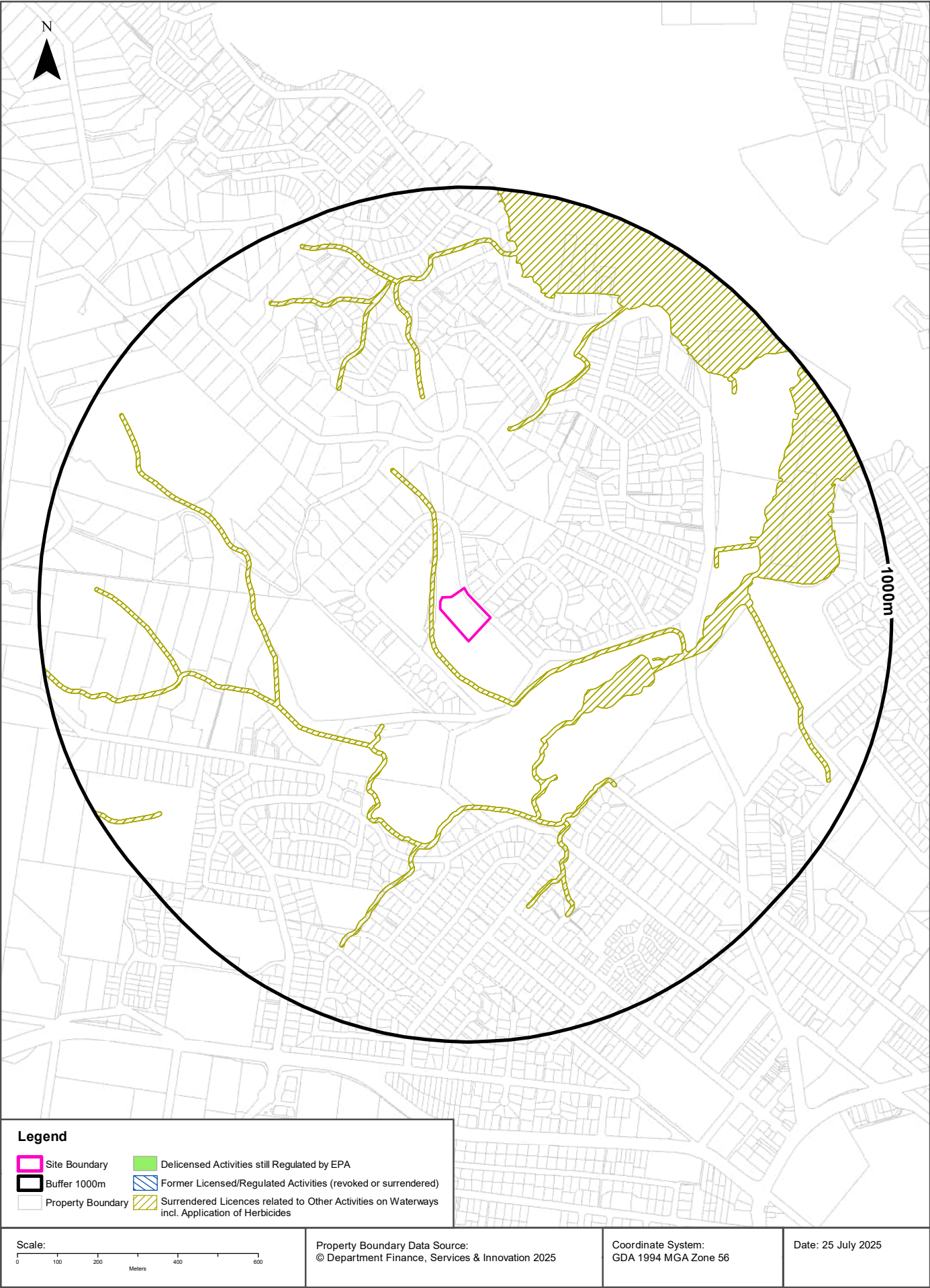
Licensed Activities under the POEO Act 1997

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

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority



EPA Activities

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Delicensed Activities still regulated by the EPA

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

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

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

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

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	16m	North East
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	16m	North East
5462	PITTWATER COUNCIL	WATERWAYS OF THE PITTWATER COUNCIL AREA	Surrendered	17/04/2001	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	16m	North East
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	16m	North East

Former Licensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Historical Business Directories

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Business Directory Records 1950-1991 Premise or Road Intersection Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

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

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Business Directory Records 1950-1991

Road or Area Matches

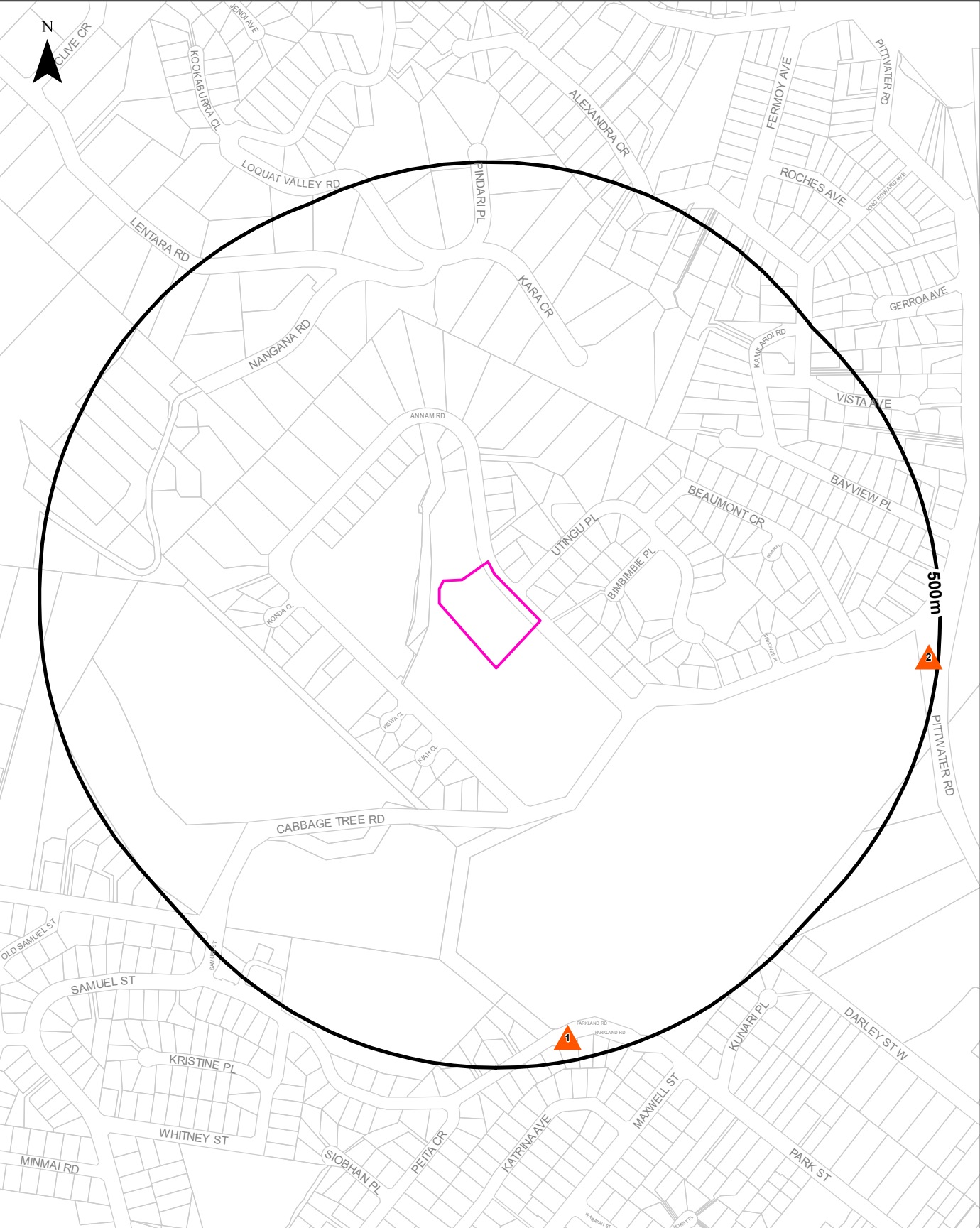
Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found,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

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

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Dry Cleaners, Motor Garages & Service Stations

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Legend		Scale: 0 90 180 270 360 Meters	Coordinate System: GDA 1994 MGA Zone 56
Site Boundary	Business directory records mapped to a specific premise		Date: 25 July 2025
Buffer 500m	Business directory records mapped to a road intersection	Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018 Property Boundaries © NSW Department Finance, Services & Innovation 2025	
Property Boundary	Business directory records mapped to a road corridor		
Business directory records mapped to a general area			

Historical Business Directories

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

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

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

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

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

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

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

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Bayview, Parklands Rd., Bayview Heights. 2104	49501	1978	Road Match	453m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Bayview., Parklands Rd., Bayview Heights 2104	25220	1976	Road Match	453m
2	MOTOR GARAGES &/OR ENGINEERS.	Pittwater Service Centre., Pittwater Rd., Mona Vale. 2103	59398	1975	Road Match	469m
	MOTOR GARAGE/ENGINEERS	Mona Vale Motor & Engineering Co., Pittwater Rd Mona Vale	4606	1958	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS.	Mona Vale Motor & Engineering Co., Pittwater Rd., Mona Vale	61155	1956	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS.	Mona Vale Motors., Pittwater Rd Mona Vale	49715	1954	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS.	Mona Vale Motors., Pittwater Rd Mona Vale	40384	1953	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS.	Skerman M., Pittwater Rd Mona Vale	32244	1952	Road Match	469m
	MOTOR SERVICE STATIONS-PETROL Etc	La Corniche Motor Garage, Pittwater Rd., Mona Vale	86119	1950	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS	Skerman, F. W. and Sons, Pittwater Rd., Mona Vale	84373	1950	Road Match	469m
	MOTOR SERVICE STATIONS-PETROL ETC	La Corniche Motor Garage., Pittwater Rd Mona Vale	23367	1948-49	Road Match	469m
	MOTOR GARAGES &/OR ENGINEERS.	Skerman, F. W. And Sons., Pittwater Rd., Mona Vale	22869	1948-49	Road Match	469m

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Aerial Imagery 2025

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 2014

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Scale: 0 30 60 90 120 Meters	Data Source Aerial Imagery: © 2025 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2025
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Aerial Imagery 2003

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Scale: 0 30 60 90 120 Meters	Data Source Aerial Imagery: © 2025 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2025
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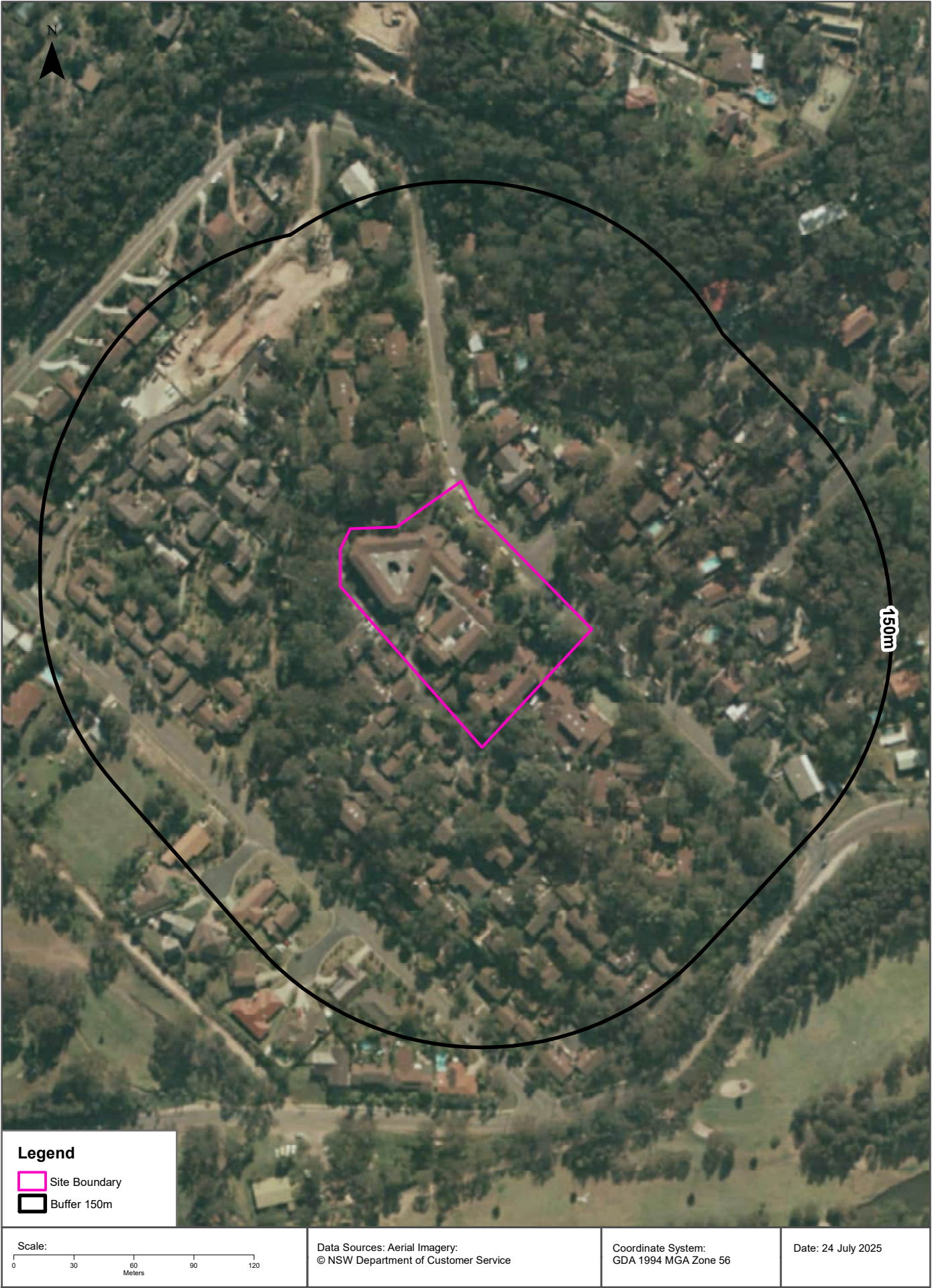
Aerial Imagery 1994

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



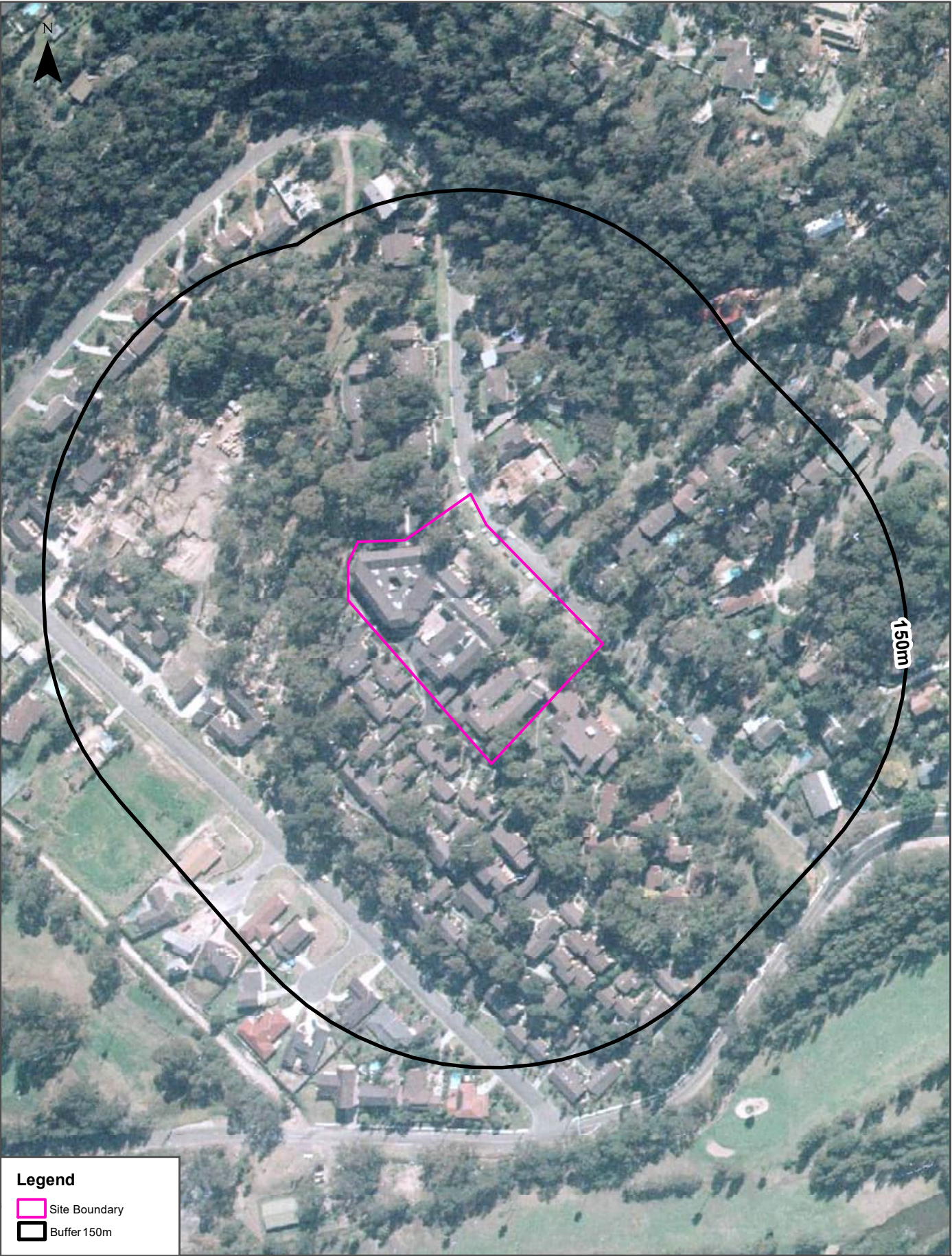
Aerial Imagery 1991

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 1986

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 1982

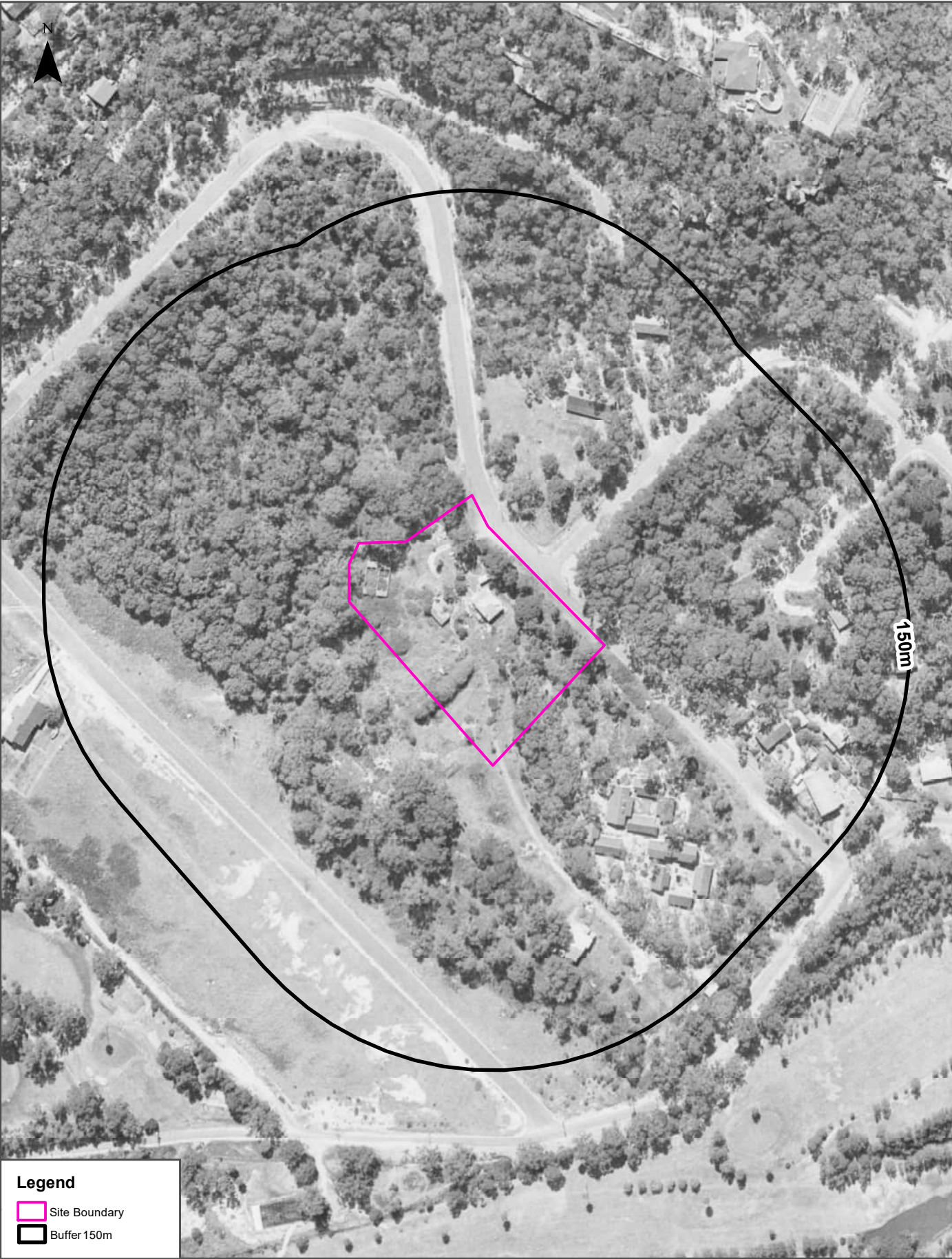
36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Scale: 0 30 60 90 120 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 24 July 2025
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Aerial Imagery 1978

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 1970

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Scale: 0 30 60 90 120 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 24 July 2025
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Aerial Imagery 1965

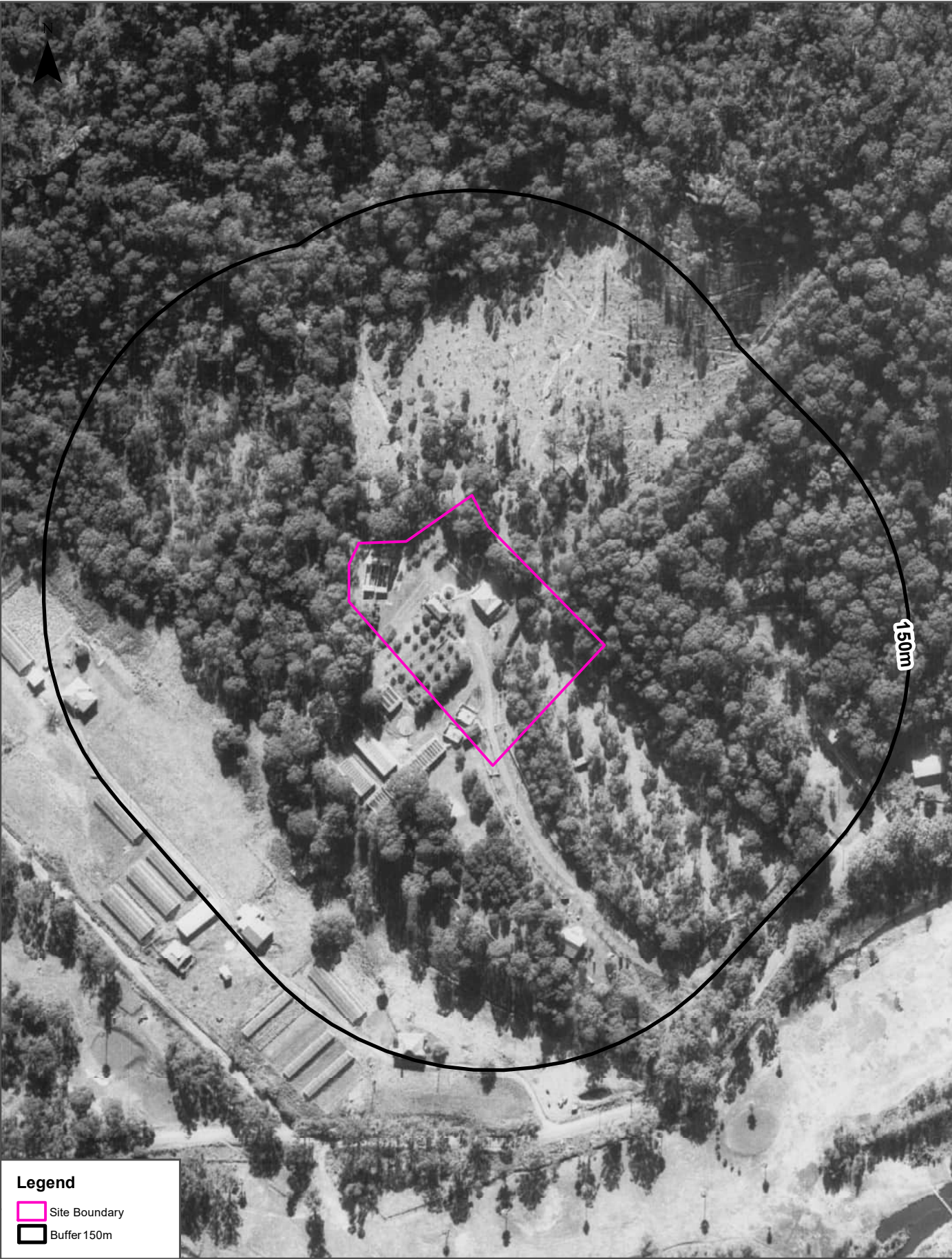
36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2025
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Aerial Imagery 1961

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 1955

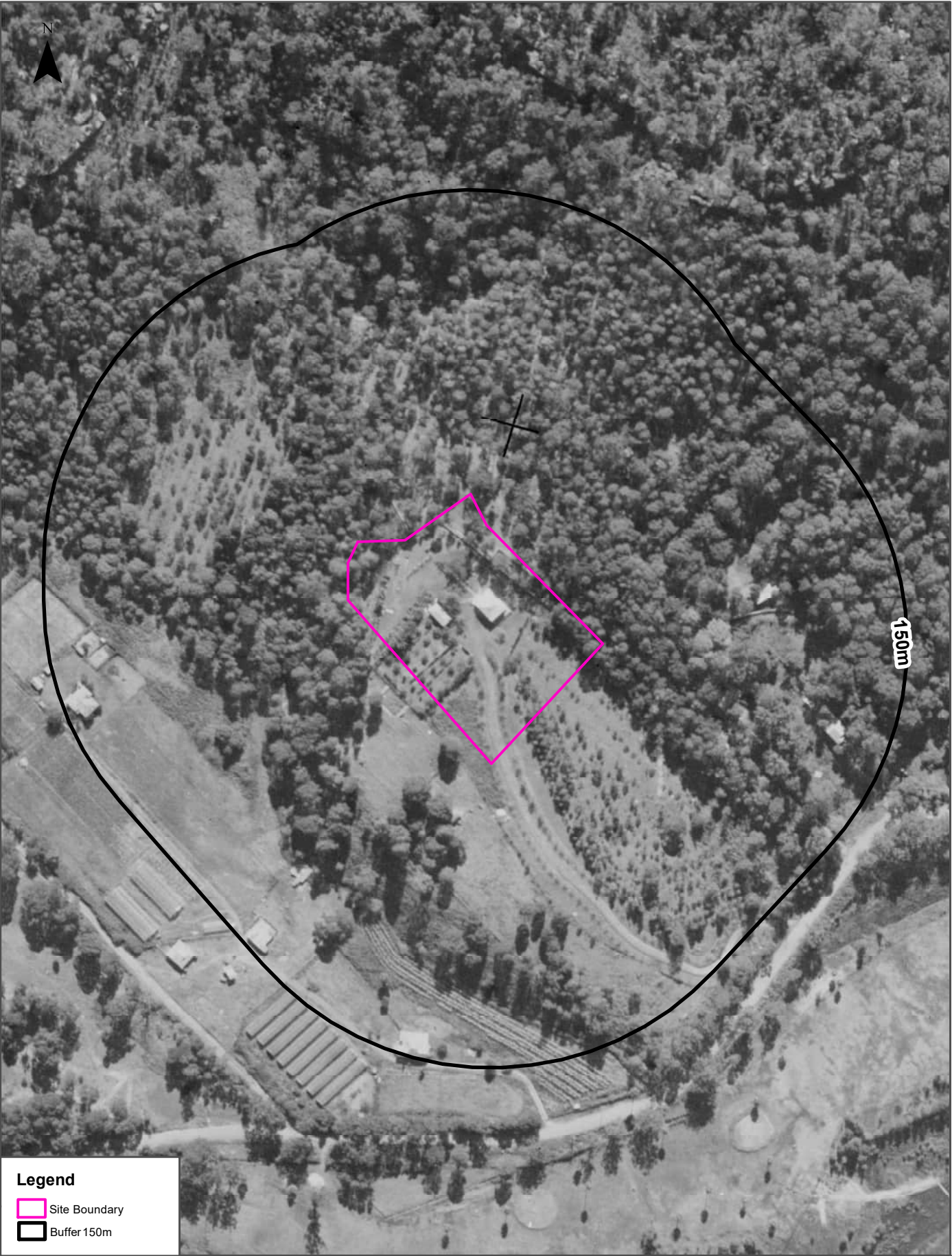
36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 28 July 2025
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Aerial Imagery 1951

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Aerial Imagery 1940

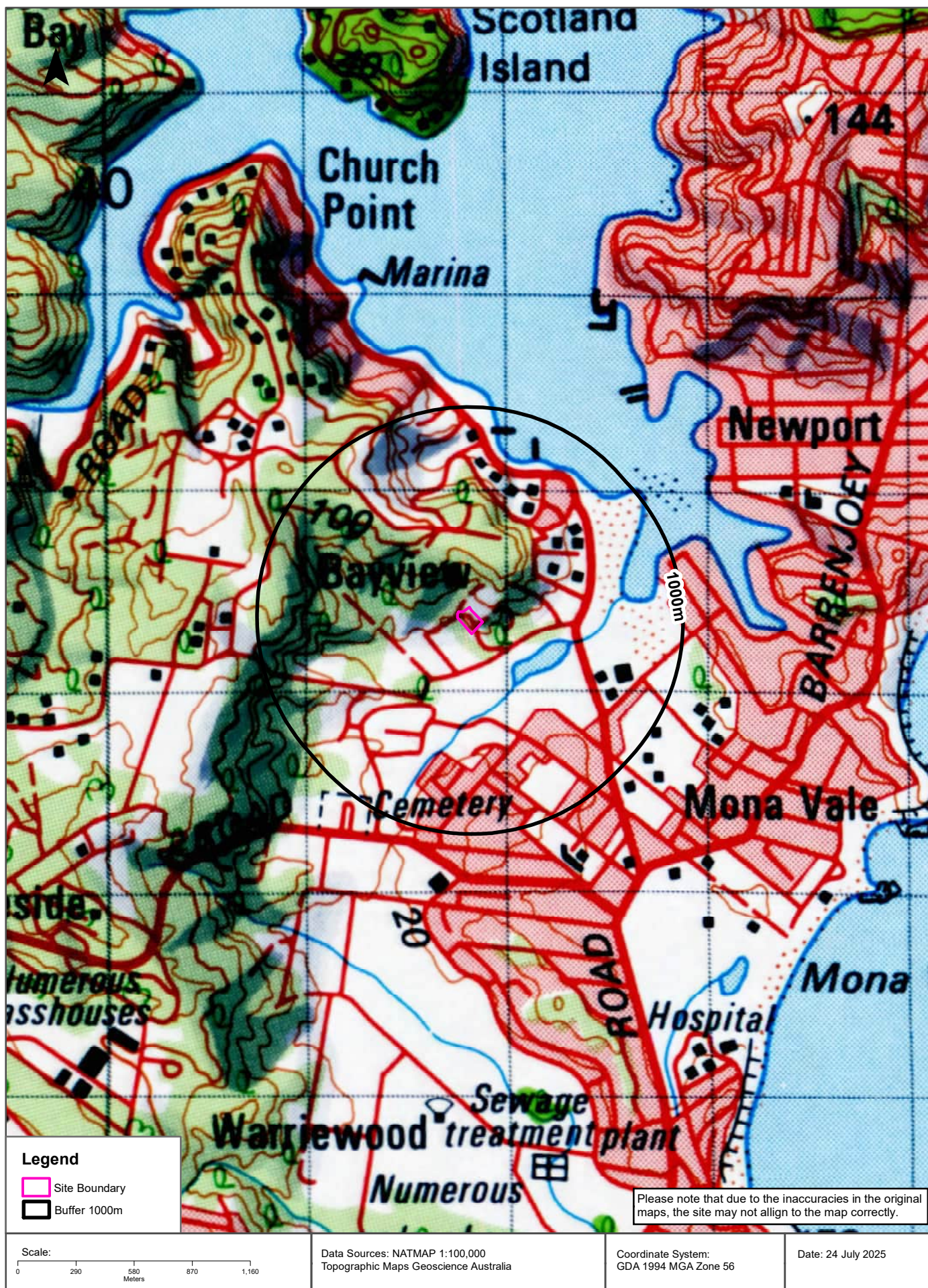
36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Scale: 0 30 60 90 120 Meters	Data Source Aerial Imagery: ©2025 Geoscience Australia.	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2025
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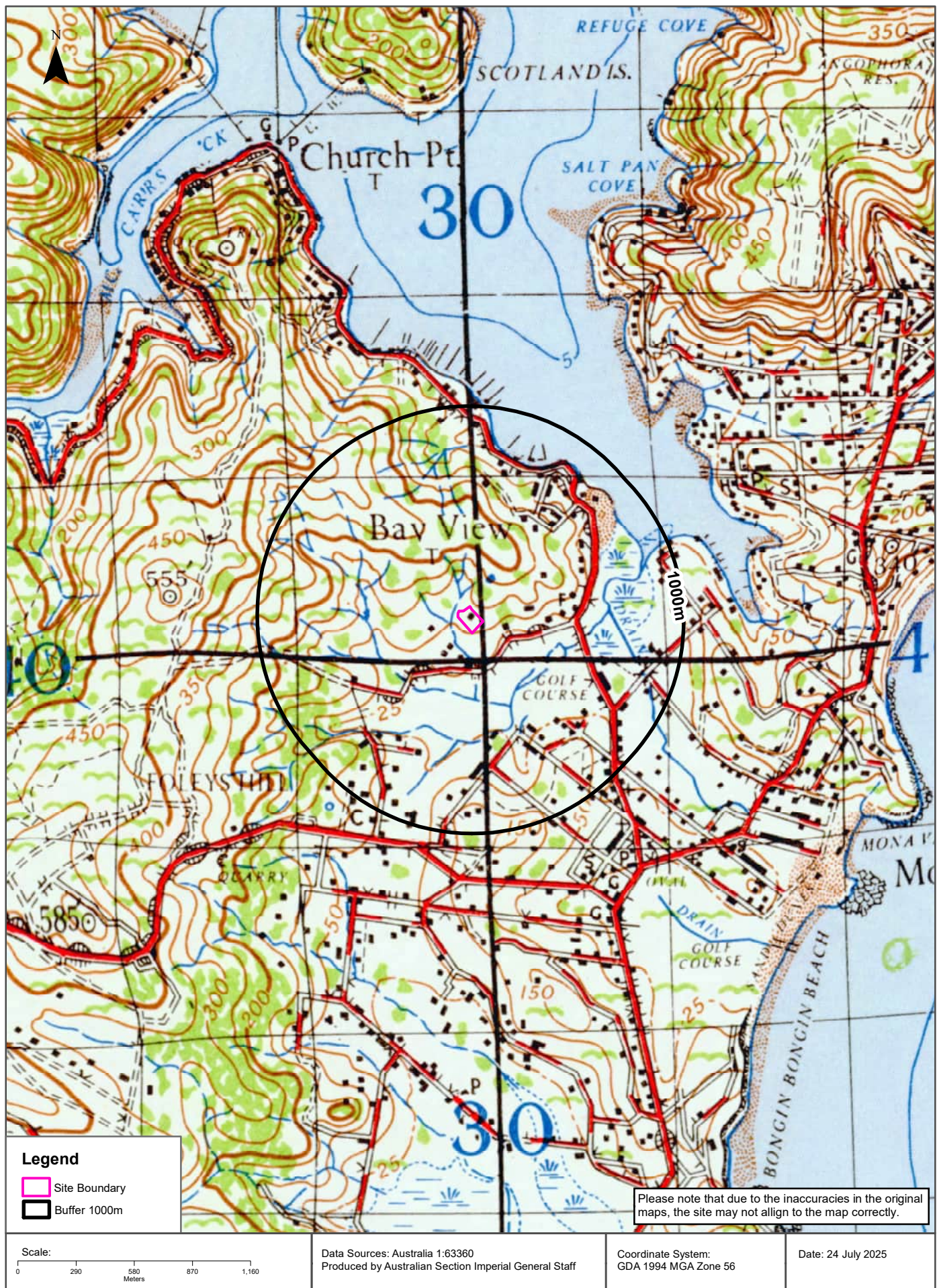
Historical Map 1975

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



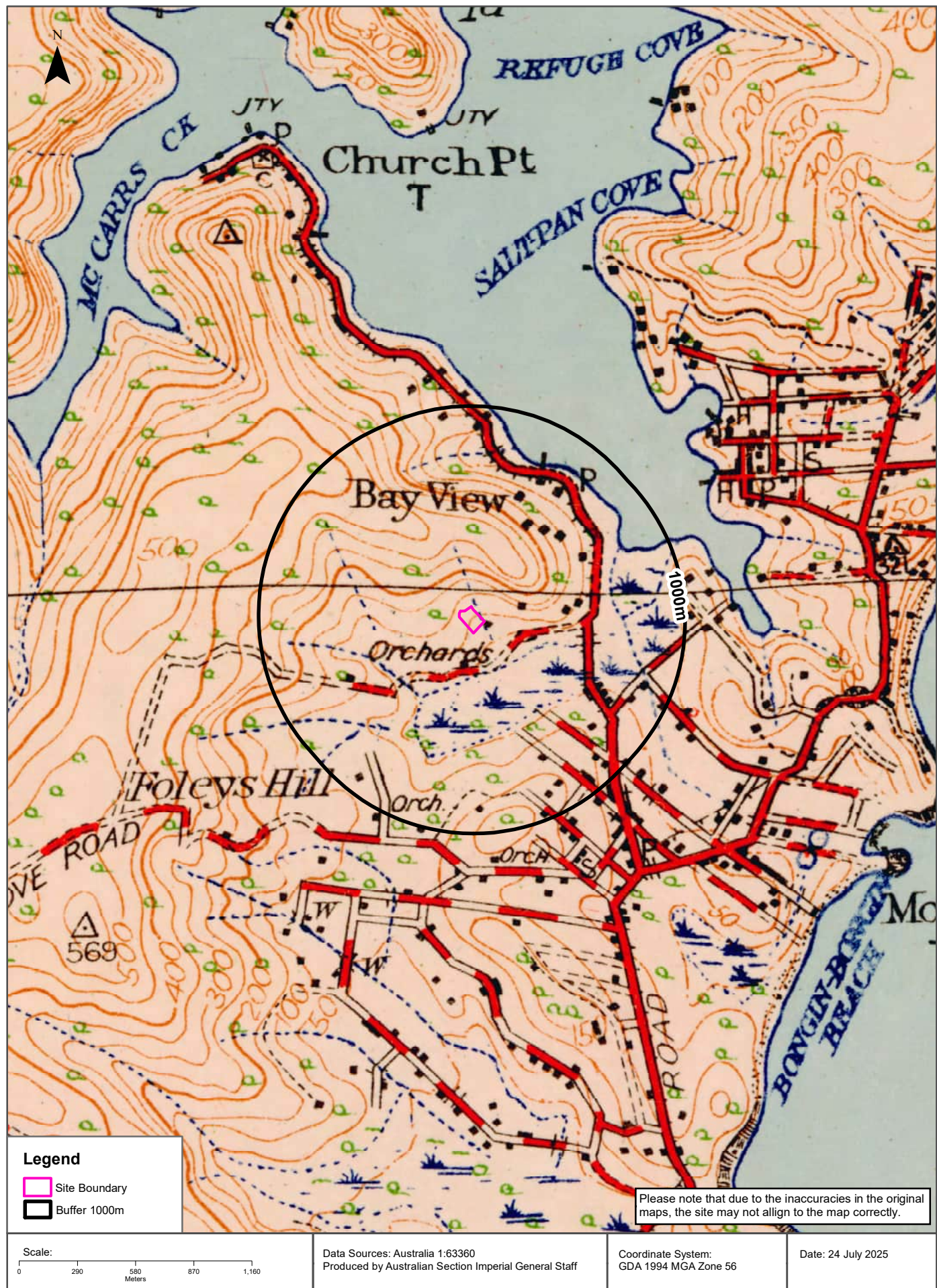
Historical Map c.1942

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

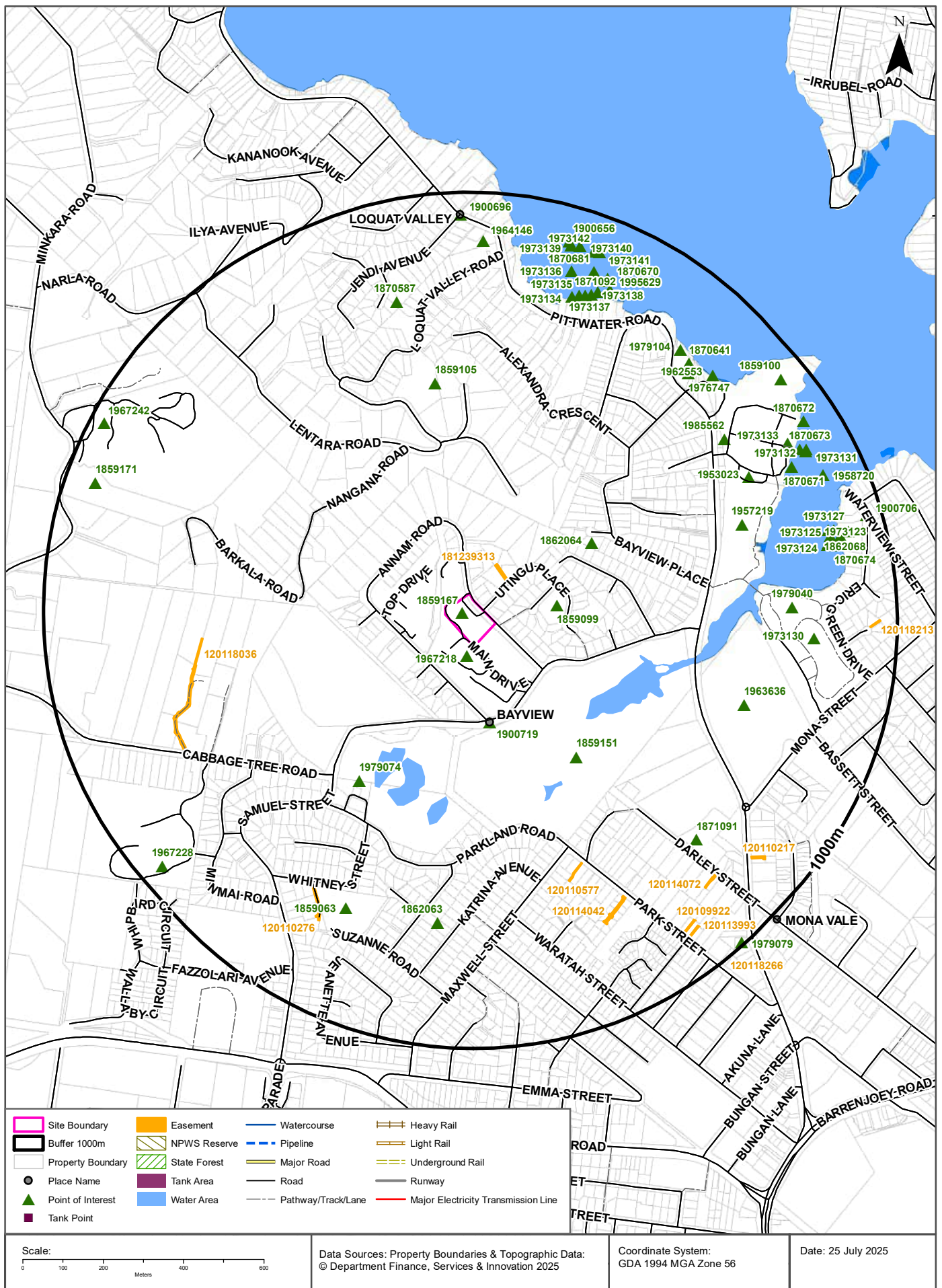


Historical Map c.1920

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Topographic Features

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1859167	Nursing Home	JAPARA BAYVIEW GARDENS	0m	On-site
1967218	Retirement Village	AVEO BAYVIEW GARDENS	27m	South
1859099	Park	BIMBIMBIE PLACE RESERVE	159m	East
1900719	Suburb	BAYVIEW	192m	South
1862064	Park	Park	311m	North East
1859151	Golf Course	BAYVIEW GOLF COURSE	374m	South East
1979074	Park	CABBAGE TREE ROAD RESERVE	439m	South West
1859105	Park	PINDARI PARK	531m	North
1963636	High School	PITTWATER HIGH SCHOOL	651m	East
1957219	Park	KOOROO WALL RESERVE	661m	East
1862063	Park	KATRINA RESERVE	693m	South
1859063	Park	WHITNEY RESERVE	724m	South West
1953023	SES Facility	MARINE RESCUE BROKEN BAY	728m	North East
1985562	Park	ROWLAND RESERVE	731m	North East
1871091	Club	BAYVIEW GOLF CLUB	733m	South East
1979040	Picnic Area	Picnic Area	739m	East
1870587	Park	LOQUAT VALLEY PINDARI RESERVE	749m	North
1976747	Sports Court	TENNIS COURTS	773m	North East
1973134	Wharf	Wharf	783m	North
1870641	Community Facility	BAYVIEW TENNIS CLUB	792m	North East
1973135	Wharf	Wharf	793m	North
1973130	Park	WINNERREMY BAY FORESEHORE RESERVE	793m	East
1871092	Marina	GIBSON MARINA	797m	North
1979104	Community Facility	BAYVIEW SEA SCOUTS	803m	North East
1973138	Wharf	Wharf	804m	North
1962553	Boat Ramp	Boat Ramp	813m	North East
1973137	Wharf	Wharf	816m	North
1870671	Boat Ramp	Boat Ramp	833m	North East
1995629	Swimming Pool Facility	BAYVIEW BATHS	834m	North East
1973136	Wharf	Wharf	842m	North
1973143	Wharf	Wharf	848m	North
1973124	Wharf	Wharf	849m	East

Map Id	Feature Type	Label	Distance	Direction
1973125	Wharf	Wharf	853m	East
1973133	Picnic Area	Picnic Area	854m	North East
1870670	Wharf	Wharf	856m	North
1973128	Wharf	Wharf	859m	East
1870681	Wharf	Wharf	860m	North
1973129	Wharf	Wharf	861m	East
1870674	Wharf	Wharf	865m	East
1870673	Wharf	Wharf	872m	North East
1973127	Wharf	Wharf	873m	East
1973126	Wharf	Wharf	876m	East
1870675	Boat Ramp	Boat Ramp	876m	East
1964146	Primary School	ST LUKE'S GRAMMAR SCHOOL BAYVIEW CAMPUS	879m	North
1973123	Wharf	Wharf	879m	East
1973132	Wharf	Wharf	883m	North East
1970669	Slipway	Slipway	886m	East
1973131	Wharf	Wharf	886m	North East
1958720	Bay / Inlet / Basin	WINNERERREMY BAY	895m	East
1973139	Wharf	Wharf	903m	North
1973142	Wharf	Wharf	906m	North
1862068	Community Facility	PITTWATER AQUATIC CLUB	907m	East
1973140	Wharf	Wharf	907m	North
1973141	Wharf	Wharf	910m	North
1900656	Bay / Inlet / Basin	MAYBANKE COVE	911m	North
1870672	Boat Ramp	Boat Ramp	917m	North East
1859171	Nursing Home	AVEO MINKARA AGED CARE COMMUNITY	925m	West
1859100	Park	BAYVIEW PARK	934m	North East
1967228	Retirement Village	AVEO PENINSULA GARDENS	942m	South West
1900696	Urban Place	LOQUAT VALLEY	944m	North
1900706	Urban Place	WINJI JIMMI	961m	East
1967242	Retirement Village	AVEO MINKARA RESORT	964m	North West
1979079	Place Of Worship	PITTWATER WESLEYAN CHURCH	993m	South East

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

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Tanks (Areas)

What are the Tank Areas located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Tanks (Points)

What are the Tank Points located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

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

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Major Easements

What Major Easements exist within the dataset buffer?

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
181239313	Primary	Right of way	Variable	92m	North East
120110577	Primary	Undefined		600m	South East
120118036	Primary	Undefined		607m	West
120110276	Primary	Undefined		715m	South West
120114042	Primary	Undefined		722m	South East
120114072	Primary	Undefined		825m	South East
120110217	Primary	Undefined		862m	South East
120109922	Primary	Undefined		871m	South East
120113993	Primary	Undefined		890m	South East
120118213	Primary	Undefined		931m	East
120118266	Primary	Undefined		999m	South East

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

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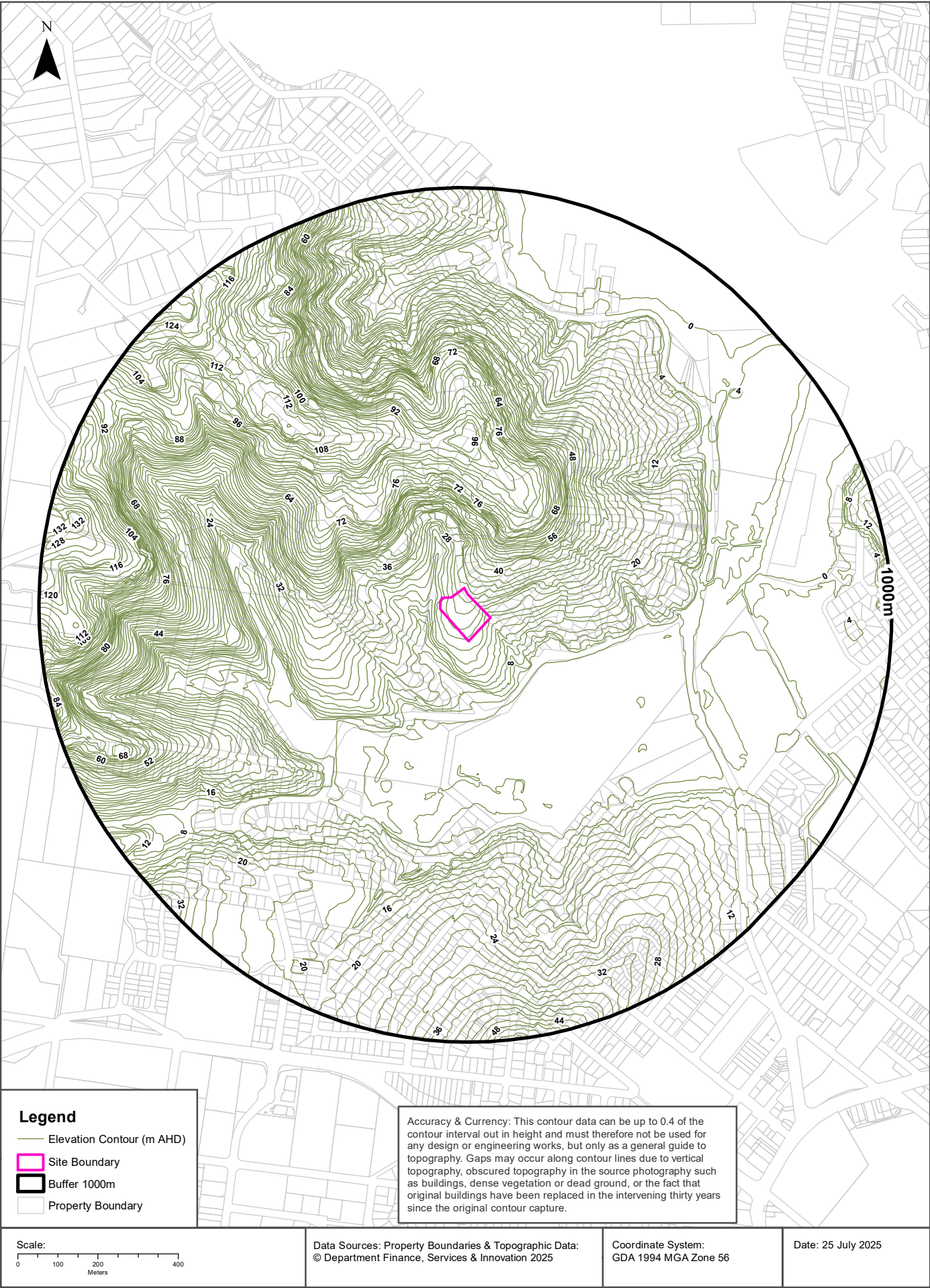
State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)

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Hydrogeology & Groundwater

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Hydrogeology

Description of aquifers within the dataset buffer:

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

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)

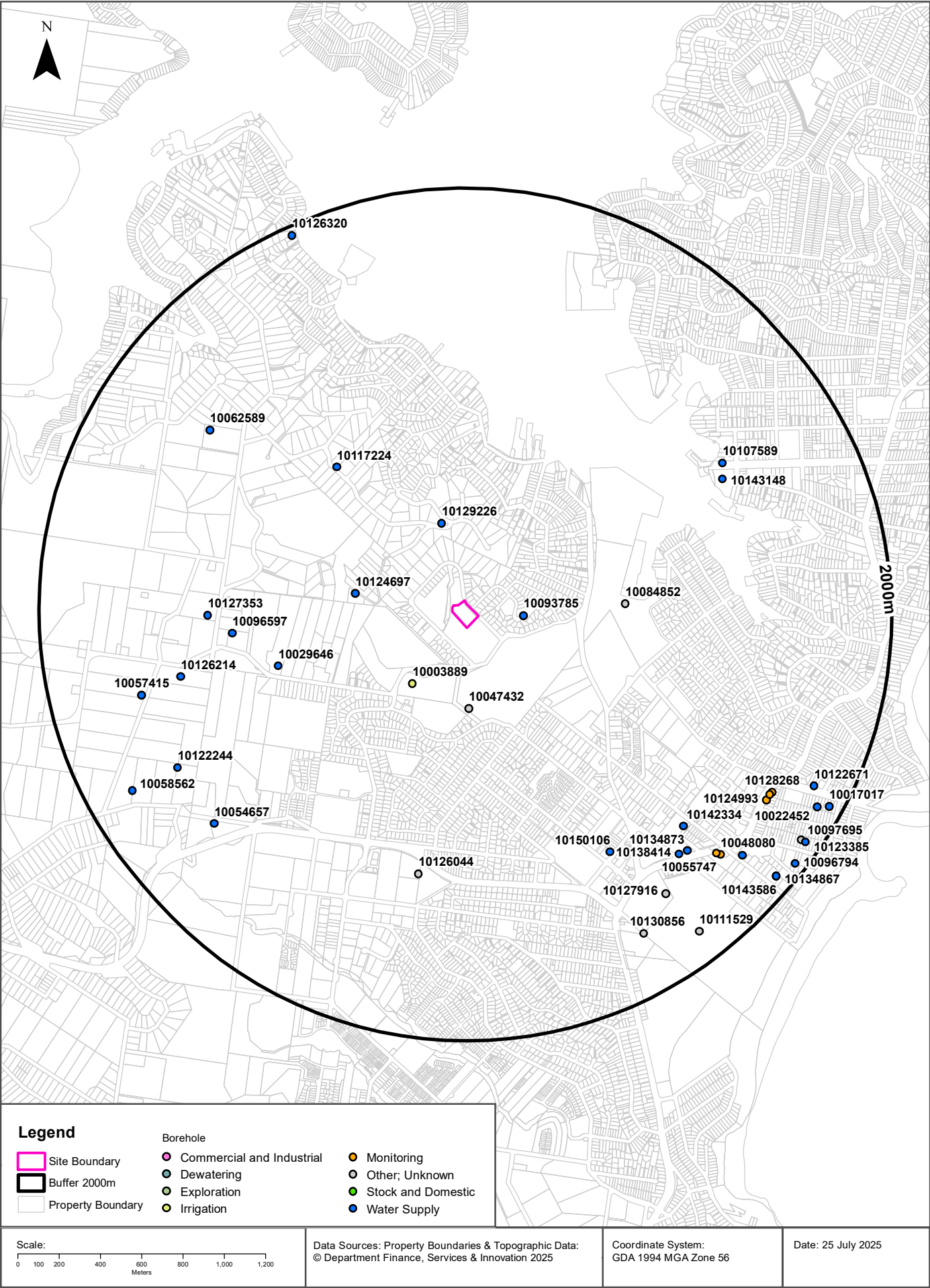
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024

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

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

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024 Data Source : NSW Department of Primary Industries



Hydrogeology & Groundwater

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10093785	GW106813	Water Supply	Functioning	29/11/2004	168.60		AHD	3850	0.200	11.40	220m	East
10003889	GW014463	Irrigation	Functioning	01/12/1957	1.50		AHD	501-1000 ppm			377m	South West
10129226	GW108934	Water Supply	Unknown	19/06/2008	150.00		AHD	8000	0.260	88.50	390m	North
10047432	GW111610	Other	Functioning	16/09/2011	30.50		AHD	206	3.300	1.20	391m	South
10124697	GW108920	Water Supply	Unknown	17/06/2008	60.00		AHD	4250	1.400	13.00	473m	West
10084852	GW108853	Other	Functioning	06/10/2007	5.00		AHD	850	1.500	2.00	716m	East
10117224	GW108778	Water Supply	Functioning	19/04/2007	120.00		AHD	480	0.400	90.00	875m	North West
10029646	GW105256	Water Supply	Functioning	26/05/2003	30.40		AHD	830	4.300	18.00	862m	West
10096597	GW106327	Water Supply	Functioning	07/07/2004	180.00		AHD	198	0.400	49.50	1069m	West
10127353	GW107528	Water Supply	Functioning	28/09/2005	180.30		AHD	390	0.600	83.60	1183m	West
10126044	GW108132	Other	Unknown	26/11/2004	210.00		AHD	348	0.200	17.50	1214m	South
10150106	GW018778	Water Supply	Unknown	01/10/1960	124.90		AHD				1287m	South East
10126214	GW105253	Water Supply	Functioning	16/10/2003	192.50		AHD	206	0.100	87.00	1351m	West
10143148	GW019148	Water Supply	Unknown	01/01/1961	60.90		AHD				1355m	North East
10107589	GW018908	Water Supply	Functioning	01/11/1960	46.00		AHD	Salty			1394m	North East
10142334	GW026581	Water Supply	Unknown	01/01/1967	92.90		AHD				1421m	South East
10062589	GW105671	Water Supply	Functioning	22/10/2003	180.00		AHD	110	105.000	105.00	1452m	North West
10138414	GW026027	Water Supply	Unknown	01/12/1966	61.50		AHD	Fresh			1501m	South East
10134873	GW026026	Water Supply	Unknown	01/11/1966	51.80		AHD	Fresh			1518m	South East
10122244	GW108676	Water Supply	Abandoned	01/03/2007	120.00		AHD				1529m	South West
10054657	GW105648	Water Supply	Functioning	03/02/2004	120.50		AHD	391	0.700	31.00	1545m	South West
10057415	GW063622	Water Supply	Unknown	01/09/1986	46.00		AHD	Fresh			1557m	West
10127916	GW111444	Other	Functioning	25/02/2008	103.00		AHD	3.2	0.870	3.00	1607m	South East
10055747	GW111104	Monitoring	Functional	15/06/2010	4.00		AHD			2.00	1630m	South East
10048080	GW111105	Monitoring	Functional	15/06/2010	5.00		AHD			2.00	1647m	South East
10134150	GW113212	Monitoring	Functional	22/05/2012	2.50		AHD				1656m	South East
10124993	GW113213	Monitoring	Functional	22/05/2012	2.50		AHD				1657m	South East
10128268	GW113211	Monitoring	Functional	22/05/2012	3.00		AHD				1660m	South East
10130856	GW111427	Other	Functioning	25/02/2008	103.00		AHD	3.2	0.870	3.00	1710m	South East
10145060	GW018770	Water Supply	Unknown	01/08/1960	40.20		AHD				1726m	South East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10058562	GW055934	Water Supply	Unknown	01/12/1981	60.00		AHD	Good			1774m	South West
10122671	GW108682	Water Supply	Functioning	23/03/2007	3.50		AHD	600	1.000	2.60	1823m	South East
10111529	GW108888	Other	Functioning	02/06/2008	73.00		AHD	1.58	14.060	7.00	1851m	South East
10022452	GW108558	Water Supply	Functioning	05/02/2007	4.30		AHD		1.000	2.80	1884m	South East
10097695	GW105936	Unknown	Unknown	19/05/2005			AHD				1904m	South East
10134867	GW035791	Water Supply	Functioning	01/12/1960	59.40		AHD				1917m	South East
10143586	GW018771	Water Supply	Functioning	01/11/1960	100.50		AHD				1917m	South East
10123385	GW108158	Water Supply	Functioning	07/05/2006	6.30		AHD		1.000	2.60	1927m	South East
10017017	GW018808	Water Supply	Unknown	01/12/1960	91.40		AHD				1934m	South East
10096794	GW108500	Water Supply	Functioning	10/11/2006	4.00		AHD		1.000	2.00	1948m	South East
10126320	GW106086	Water Supply	Abandoned	14/04/2004	3.50		AHD				1954m	North West

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Driller's Logs

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

NGIS Bore ID	Drillers Log	Distance	Direction
10093785	0.00m-1.10m clay, brown 1.10m-2.70m sandstone, brown weathered 2.70m-7.50m clay, light brown sandy 7.50m-8.20m sandstone, brown 8.20m-9.30m clay, brown sandy 9.30m-11.00m sandstone, brown 11.00m-11.20m clay, white 11.20m-12.30m sandstone, grey 12.30m-12.90m clay, white 12.90m-16.50m sandstone, light brown 16.50m-38.80m shale, red, green grey very soft 38.80m-39.60m shale, fractured, water bearing 39.60m-50.40m shale, red, green, grey 50.40m-52.50m sandstone, grey 52.50m-58.60m clay, light grey shale 58.60m-70.50m sandstone, light grey and soft purple, grey shale bands 70.50m-160.50m sandstone, grey with dark grey 160.50m-168.60m siltstone, red	220m	East
10003889	0.00m-0.60m Soil Sandy 0.60m-1.52m Sand Water Supply	377m	South West
10047432	0.00m-2.00m SILTY SAND BLACK FILL 2.00m-3.00m SILTY SAND BLACK 3.00m-8.00m SANDY CLAY GREY 8.00m-9.00m SILTY CLAY, GREY, WHITE 9.00m-15.00m QUARTZ SAND WITH CLAY BANDS 15.00m-19.00m SANDY CLAY WHITE 19.00m-23.00m QUARTZ SANDY CLAY ORANGE 23.00m-24.00m SANDY CLAY ORANGE 24.00m-30.00m QUARTZ SANDY CLAY 30.00m-30.50m SANDSTONE WEATHERED ORANGE	391m	South
10084852	0.00m-0.50m fill, grass rocks 0.50m-2.50m sand, grey 2.50m-3.50m sand, brown 3.50m-4.00m sand, grey 4.00m-5.00m sand, dark grey	716m	East

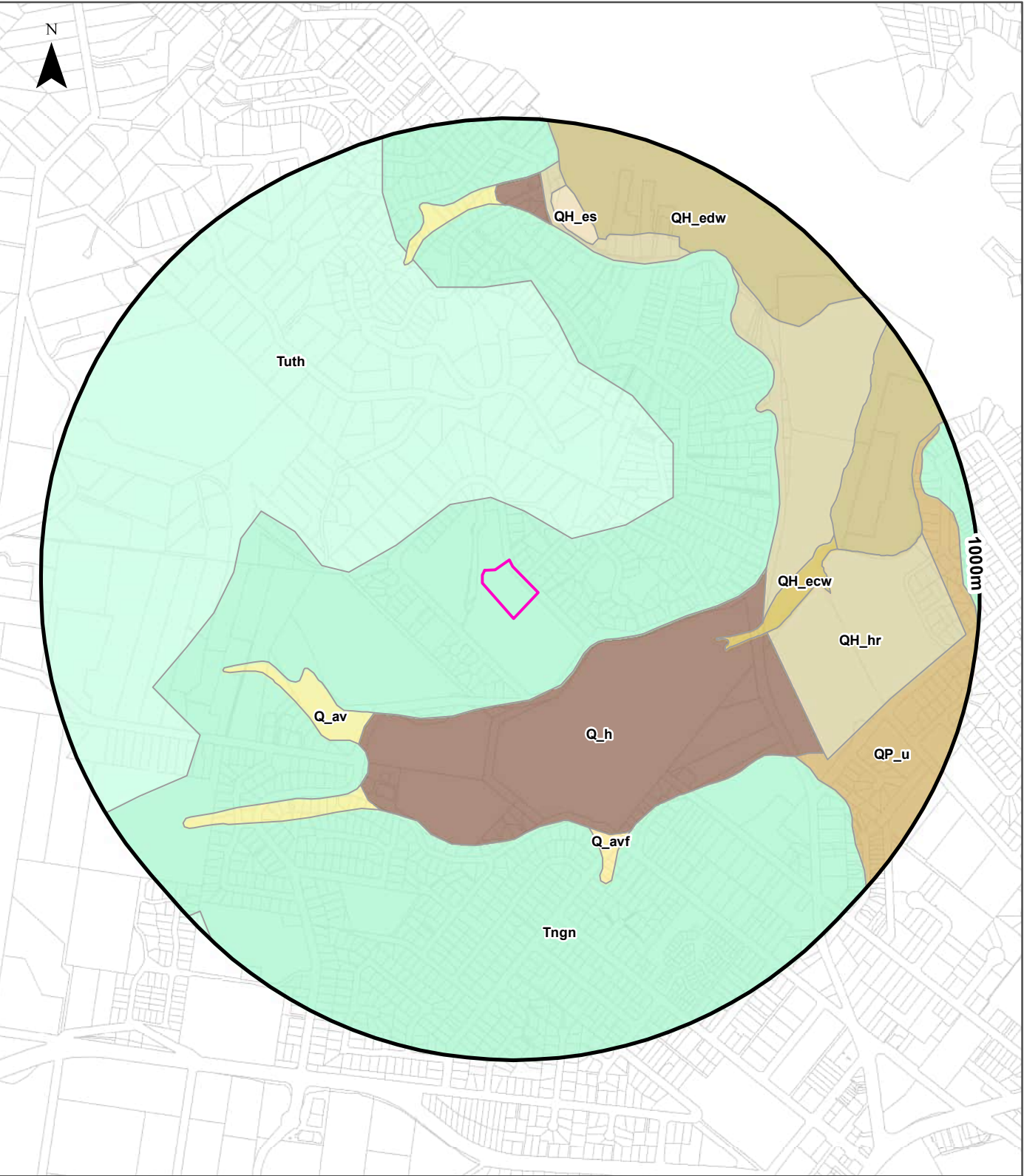
NGIS Bore ID	Drillers Log	Distance	Direction
10117224	0.00m-1.00m clay, sandy 1.00m-2.40m sandstone, weathered 2.40m-10.00m sandstone, yellow 10.00m-10.50m ironstone 10.50m-14.50m sandstone, grey 14.50m-15.00m ironstone 15.00m-16.00m sandstone, yellow 16.00m-16.50m ironstone 16.50m-28.00m sandstone, grey 28.00m-32.00m sandstone, quartz 32.00m-36.00m sandstone, yellow 36.00m-40.00m sandstone, quartz 40.00m-41.00m shale, clay band 41.00m-44.50m sandstone, grey 44.50m-59.00m shale, clay band 59.00m-72.00m sandstone, grey 72.00m-78.00m shale, clay band 78.00m-81.00m siltstone 81.00m-95.50m sandstone, grey 95.50m-97.00m siltstone 97.00m-99.00m sandstone, quartz 99.00m-112.50m sandstone, grey 112.50m-115.00m siltstone 115.00m-120.00m sandstone, grey	875m	North West
10029646	0.00m-0.20m TOPSOIL 0.20m-1.00m SANDSTONE 1.00m-6.10m CLAY GREY 6.10m-15.40m SANDSTONE GREY 15.40m-18.40m SANDSTONE LT GREY 18.40m-21.40m SANDSTONE F.W. GREY BROWN 21.40m-30.40m SANDSTONE DARK GREY	882m	West
10096597	0.00m-3.00m sand, silty 3.00m-11.30m sandstone, light grey 11.30m-11.50m sandstone, fractured 11.50m-15.00m sandstone, light brown 15.00m-15.20m sandstone, fractured 15.20m-17.50m sandstone, light brown 17.50m-18.30m sandstone, very soft 18.30m-21.00m sandstone, quartz 21.00m-21.10m sandstone, fracture 21.10m-21.70m sandstone, grey 21.70m-22.20m clay, white 22.20m-33.00m sandstone, ironstone bands 33.00m-40.00m sandstone, grey 40.00m-40.20m clay, white 40.20m-52.00m sandstone, grey 52.00m-55.00m sandstone, dark grey 55.00m-93.50m sandstone, grey 93.50m-93.70m sandstone, fracture 93.70m-153.50m sandstone, grey 153.50m-159.00m silt, stone 159.00m-164.00m sandstone, grey 164.00m-165.50m silt, stone, grey 165.50m-178.00m silt, stone red 178.00m-180.00m silt stone, grey	1069m	West
10127353	0.00m-1.00m clay, light brown 1.00m-2.00m sandstone, brown weathered 2.00m-2.80m sandstone & ironstone, brown, water bearing 2.80m-13.60m sandstone, brown 13.60m-14.40m shale, grey 14.40m-19.80m sandstone, brown, grey pink 19.80m-20.30m sandstone, pink and quartz, water bearing 20.30m-26.50m sandstone & ironstone, brown 26.50m-26.90m clay, light brown 26.90m-35.70m sandstone, grey, light brown 35.70m-35.80m quartz, water bearing 35.80m-37.00m ironstone 37.00m-37.30m clay, light brown 37.30m-47.70m sandstone, pink, grey, brown 47.70m-47.90m shale, grey 47.90m-50.80m sandstone, grey 50.80m-50.90m sandstone, grey and quartz, water bearing 50.90m-63.50m sandstone, grey 63.50m-67.80m shale, black silty 67.80m-71.70m sandstone, light grey 71.70m-78.60m shale, black silty 78.60m-130.50m sandstone, grey black shale bands 130.50m-131.20m sandstone, grey, fractured, water bearing 131.20m-166.00m sandstone, grey, & grey silty shale, water bearing 166.00m-180.30m shale, grey silty, red silty shale	1183m	West

NGIS Bore ID	Drillers Log	Distance	Direction
10126044	0.00m-7.00m CLAY 7.00m-11.00m IRONSTONE/SANDSTONE/CLAY BANDS 11.00m-12.00m SANDSTONE,CLAY BANDS 12.00m-15.00m CLAYSTONE 15.00m-29.00m SHALE D/ GREY 29.00m-33.50m SANDSTONE BROWN 33.50m-54.50m SANDSTONE D/GREY 54.50m-57.50m SHALE D/ GREY 57.50m-58.00m SHALE RED 58.00m-70.00m SHALE D/ GREY 70.00m-77.00m SHALE RED 77.00m-82.00m SHALE GREY 82.00m-88.00m SHALE L/GREEN 88.00m-93.00m SHALE D/GREEN 93.00m-100.00m SHALE RED 100.00m-115.00m SHALE D/ GREY,RED BANDS 115.00m-121.00m SANDSTONE,F/GRAIN,GREY 121.00m-132.50m SHALE D/ GREY 132.50m-136.00m SANDSTONE,F/GRAIN,GREY 136.00m-141.00m SHALE D/ GREY 141.00m-152.00m SANDSTONE,F/GRAIN,GREY 152.00m-173.00m SHALE D/ GREY 173.00m-175.00m SANDSTONE GREY 175.00m-190.00m SHALE D/ GREY 190.00m-193.50m SANDSTONE GREY 193.50m-210.00m SHALE RED	1214m	South
10150106	0.00m-19.81m Clay Red 19.81m-44.19m Clay Yellow Sandy Water Supply 44.19m-47.24m Sandstone Yellow 47.24m-48.76m Clay Grey 48.76m-54.25m Shale Grey 54.25m-74.67m Shale Red Water Supply 74.67m-124.96m Shale Black	1287m	South East
10126214	0.00m-0.20m TOPSOIL 0.20m-6.20m SANDSTONE LT GREY M/G 6.20m-6.50m CLAY WHITE 6.50m-24.50m SANDSTONE GREY BROWN/IRONSTONE 24.50m-42.50m SANDSTONE F.W.GREY BROWN M/G 42.50m-56.50m SANDSTONE BROWN/IRONSTONE 56.50m-57.50m F. SANDSTONE BROWN/IRONSTONE 57.50m-127.70m SANDSTONE GREY/DARK GREY M.G 127.70m-128.00m F.W. SANDSTONE GREY 128.00m-137.00m SANDSTONE GREY M/G 137.00m-147.50m SANDSTONE DARK GREY 147.50m-175.00m SANDSTONE GREY/DARK GREY M.G 175.00m-186.50m F. SANDSTONE GREY W. 186.50m-188.00m SANDSTONE GREY/DARK GREY 188.00m-190.50m RED SHALE 190.50m-192.50m SANDSTONE GREY	1351m	West
10143148	0.00m-2.74m Soil Made Ground 2.74m-8.53m Sandstone White 8.53m-27.43m Shale Grey 27.43m-35.35m Rock Red 35.35m-48.76m Shale Grey 48.76m-50.29m Basalt 50.29m-53.34m Shale Sandy 50.29m-53.34m Sandstone Water Supply 53.34m-53.94m Shale Black Hard Slatey 53.94m-54.55m Basalt 54.55m-60.96m Shale Sandy Hard Bands	1355m	North East
10107589	0.00m-2.74m Clay 2.74m-8.53m Sandstone Water Supply 8.53m-10.66m Shale Grey 10.66m-24.38m Sandstone White Water Supply 24.38m-43.28m Sandstone White 24.38m-43.28m Shale Grey Streaks 43.28m-43.89m Gravel Water Supply 43.89m-45.72m Sandstone White 45.72m-46.02m Shale	1394m	North East
10142334	0.00m-12.19m Clay Sandy 12.19m-27.12m Shale Red Water Supply 27.12m-28.04m Rock Grey Hard 28.04m-51.81m Shale Black Water Supply 51.81m-56.38m Rock Grey Hard 56.38m-60.96m Sandstone Water Supply 60.96m-71.32m Rock 71.32m-76.80m Shale Hard Water Supply 76.80m-92.96m Rock Black Hard Water Supply	1421m	South East

NGIS Bore ID	Drillers Log	Distance	Direction
10062589	0.00m-1.00m soil, dirt 1.00m-3.00m clay 3.00m-66.00m sandstone, soft yellow 66.00m-150.00m sandstone, shale 150.00m-174.00m shale 174.00m-180.00m shale, red	1452m	North West
10138414	0.00m-9.14m Clay 9.14m-10.36m Sandstone 10.36m-48.76m Sandstone Grey Water Supply 48.76m-56.38m Shale Water Supply 56.38m-59.58m Rock Hard 59.58m-61.72m Shale Grey	1501m	South East
10134873	0.00m-6.09m Clay 6.09m-7.62m Sandstone Hard 7.62m-9.14m Sandstone Weathered 9.14m-17.67m Shale Water Supply 17.67m-33.52m Shale Black 33.52m-35.05m Sandstone Hard Water Supply 35.05m-37.18m Shale 37.18m-37.49m Sandstone 37.49m-51.81m Shale Black Red	1518m	South East
10122244	0.00m-24.00m sandstone, pink orange 24.00m-72.00m sandstone, fine grey 72.00m-84.00m shale 84.00m-114.00m sandstone, fine grey 114.00m-120.00m shale	1529m	South West
10054657	0.00m-15.50m sandstone, brown grey 15.50m-25.80m sandstone, grey & i/s bands 25.80m-26.10m quartz, sandstone, grey 26.10m-34.00m sandstone, grey 34.00m-34.50m clay, dark grey 34.50m-36.50m shale 36.50m-45.20m sandstone, lt brown and quartz 45.20m-47.50m quartz 47.50m-48.30m clay, dark grey 48.30m-69.00m sandstone, grey 69.00m-93.50m sandstone, grey and siltstone 93.50m-101.20m siltstone 101.20m-113.50m sandstone, grey 113.50m-113.60m siltstone 113.60m-120.50m sandstone, grey & siltstone	1545m	South West
10057415	0.00m-0.80m Soil Sandy 0.80m-1.60m Clay Sandy Gravel 1.60m-2.90m Shale 2.90m-46.00m Sandstone Yellow	1557m	West
10127916	0.00m-1.00m SOIL SANDY 1.00m-5.00m CLAY GREY 5.00m-8.00m CLAY RED 8.00m-24.00m SHALE GREY 24.00m-48.00m BAULDHILL CLAYSTONE 48.00m-54.00m SHALE GREY 54.00m-60.00m BAULDHILL CLAYSTONE 60.00m-103.00m SLATE	1607m	South East
10055747	0.00m-1.20m FILL 1.20m-2.00m CLAY YELLOW FIRM 2.00m-4.00m SAND L/BROWN CLAYEY	1630m	South East
10048080	0.00m-1.20m FILL 1.20m-2.00m CLAY FIRM/YELLOW 2.00m-5.00m SAND LIGHT BROWN CLAYEY	1647m	South East
10130856	0.00m-1.00m SANDY SOIL 1.00m-5.00m CLAY GREY 5.00m-8.00m CLAY RED 8.00m-24.00m SHALE GREY 24.00m-48.00m CLAYSTONE 48.00m-54.00m SHALE GREY 54.00m-60.00m CLAYSTONE 60.00m-102.00m SLATE	1710m	South East
10145060	0.00m-2.74m Clay Red 2.74m-9.75m Clay White 9.75m-21.94m Shale Black 21.94m-40.23m Shale Red Sandy Water Supply	1726m	South East
10058562	0.00m-34.00m Sandstone Water Supply 0.00m-34.00m Clay Seams Water Supply 34.00m-60.00m Sandstone White Water Supply	1774m	South West
10122671	0.00m-0.20m dust, fine 0.20m-1.00m topsoil, black 1.00m-2.00m sand, grey 2.60m-3.50m sand, clay	1823m	South East

NGIS Bore ID	Drillers Log	Distance	Direction
10111529	0.00m-1.00m TOPSOIL 1.00m-10.50m CLAY 10.50m-60.00m SANDSTONE 60.00m-73.00m SANDSTONE	1851m	South East
10022452	0.00m-2.30m Sandstone, compacted 2.30m-4.30m Sand, fine 4.30m-4.30m Mud, grey	1884m	South East
10134867	0.00m-1.52m Soil 1.52m-25.90m Clay 25.90m-30.48m Shale 30.48m-45.72m Shale 45.72m-50.29m Shale Sandy Water Supply 50.29m-59.43m Shale	1917m	South East
10143586	0.00m-1.52m Subsoil 1.52m-17.06m Clay 17.06m-36.57m Shale 36.57m-39.62m Shale Clay Seams 39.62m-64.00m Shale 64.00m-68.58m Shale Sandy Water Supply 68.58m-76.50m Shale Hard 76.50m-78.33m Slate 78.33m-92.04m Shale 92.04m-93.87m Shale Sandy Water Supply 93.87m-98.75m Shale 98.75m-99.97m Shale Gravel 99.97m-100.58m Shale	1917m	South East
10123385	0.00m-6.30m sand	1927m	South East
10017017	0.00m-11.88m Sand 11.88m-24.07m Clay 24.07m-31.44m Shale Grey	1934m	South East
10096794	0.00m-0.10m Topsoil 0.10m-4.00m Sand, yellow	1948m	South East
10126320	0.00m-1.50m sandy, loam 1.50m-2.00m clay 2.00m-2.60m sand, tight packed 2.60m-3.50m clay	1954m	North West

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Legend			
Linear Geological Structures and Boundaries			
Site Boundary	Trendline	Marker Bed	Miscellaneous Boundary
Report Buffer	Fold Axis	Faulted Boundary	Water/Coastline Boundary
Property Boundary	Geological Boundary	Shear Zone or Schist Zone Boundary	State/Territory Border

Scale: 	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2025
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Geology

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Geological Units

Geological units within the dataset buffer:

Code	Unit Name	Description	Stratigraphy	Age Range	Dominant Lithology	Dist	Dir
Tngn	Newport Formation	Interbedded laminite, shale and sandstone; white quartz to quartz-lithic, very fine- to medium-grained sandstone; minor shale breccia and pebble polymictic conglomerate (at base of sandstone units); minor red clays.	/Narrabeen Group/Gosford Subgroup/Newport Formation//	Middle Triassic (base) to Middle Triassic (top)	Siliciclastic sedimentary rock	0m	On-site
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone displaying small- to large-scale, high-angle cross-bedding; minor shale and laminite lenses.	/Ungrouped Triassic units//Hawkesbury Sandstone//	Anisian (base) to Anisian (top)	Sandstone	113m	North West
Q_h	Anthropogenic deposits	Anthropocene deposits varying from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand-sized to clay matrix.	/Anthropogenic deposits////	Quaternary (base) to Now (top)	Anthropogenic material	170m	South East
Q_av	Alluvial valley deposits	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel.	/Alluvium//Alluvial valley deposits//	Quaternary (base) to Now (top)	Clastic sediment	378m	South West
QH_ecw	Estuarine channel deposits (subaqueous)	Fine- to medium-grained lithic-carbonate-quartz sand (marine-deposited), silt, clay, shell, gravel.	/Estuarine deposits//Estuarine channel deposits/Estuarine channel deposits (subaqueous)/	Holocene (base) to Now (top)	Clastic sediment	417m	East
Q_avf	Alluvial fan deposits	Fluvially-deposited quartz-lithic sand, silt, gravel, clay.	/Alluvium//Alluvial valley deposits//Alluvial fan deposits/	Quaternary (base) to Now (top)	Clastic sediment	502m	South
QH_hr	Anthropogenic deposits - reclaimed estuarine areas	Natural surface elevation raised by placement of fill over former estuarine swamps and subaqueous estuarine margins (supratidal to subtidal zone); estuarine banks and islands formed from dredge spoil.	/Anthropogenic deposits//Anthropogenic deposits - reclaimed estuarine areas//	Holocene (base) to Now (top)	Anthropogenic material	512m	North East
QH_edw	Estuarine fluvial delta front (subaqueous)	Very fine- to fine-grained (sporadically medium-grained) lithic quartz sand (fluvially-deposited), silt, clay, shell material.	/Estuarine deposits//Estuarine fluvial delta front/Estuarine fluvial delta front (subaqueous)/	Holocene (base) to Now (top)	Clastic sediment	682m	North East
QP_u	Pleistocene undifferentiated regolith	Clay, silt, fluvial and marine sand.	/Pleistocene undifferentiated regolith////	Pleistocene (base) to Now (top)	Clastic sediment	690m	East
QH_es	Estuarine swamp	Organic-rich mud, peat, clay, silt, very fine- to fine-grained sand (marine-deposited), fine- to medium-grained sand (fluvially deposited).	/Estuarine deposits//Estuarine swamp//	Holocene (base) to Now (top)	Organic rich sediment	738m	North

Linear Geological Structures

Fault and shear or schist zone boundaries within the dataset buffer:

Map ID	Boundary Type	Feature Description	Fault Dip Angle	Fault Dip Direction	Dist	Dir
NA	No records in buffer					

Trendlines within the dataset buffer:

Map ID	Feature Description	Observation Method	Structure Name	Dist	Dir
NA	No records in buffer				

Fold axes within the dataset buffer:

Map ID	Feature Description	Observation Method	Structure Name	Dist	Dir
NA	No records in buffer				

Marker beds within the dataset buffer:

Map ID	Feature Description	Rock Unit Description	Dist	Dir
NA	No records in buffer			

Geological Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development
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Naturally Occurring Asbestos Potential

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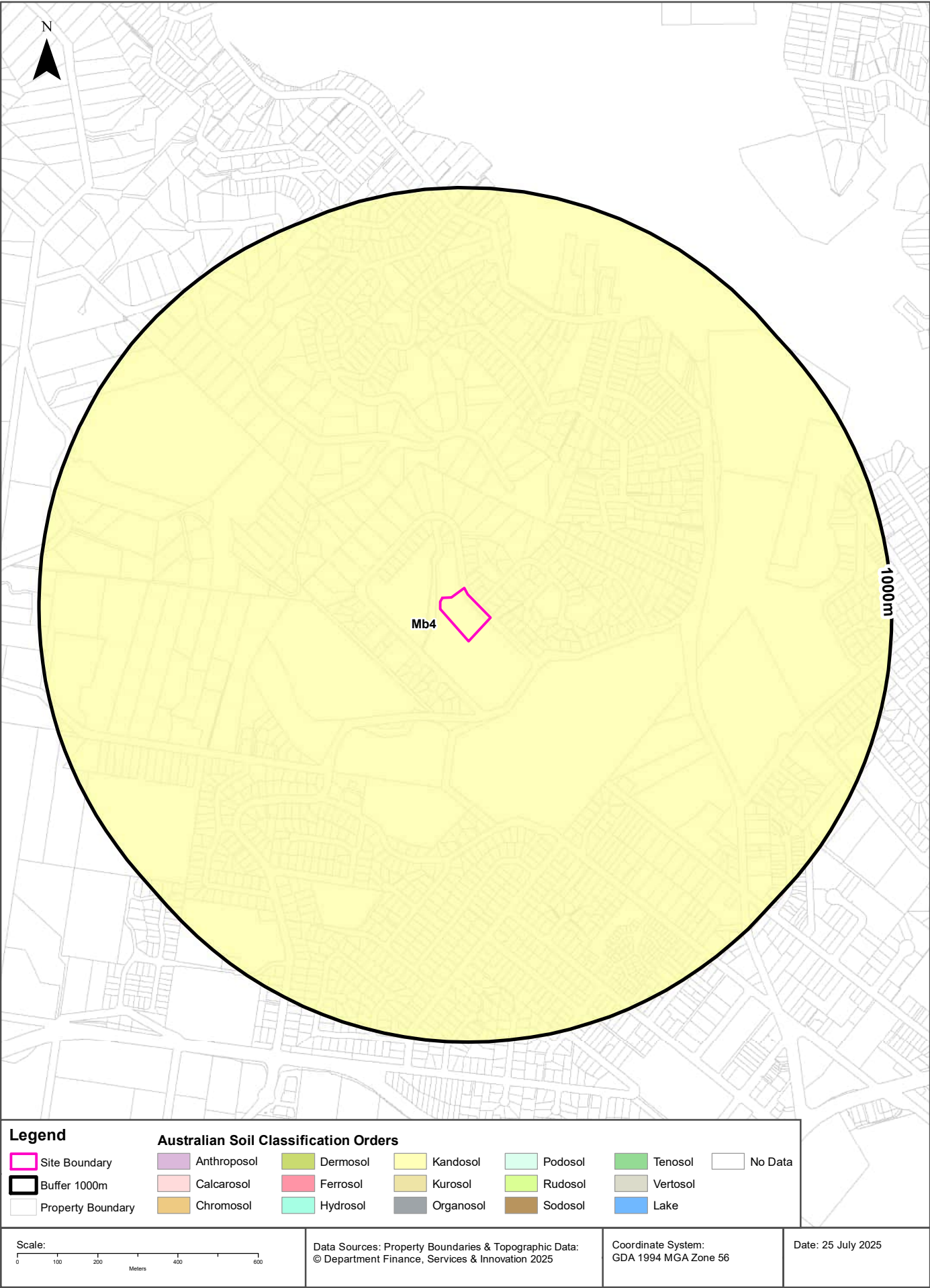
Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

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

Naturally Occurring Asbestos Potential Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Soils

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Atlas of Australian Soils

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

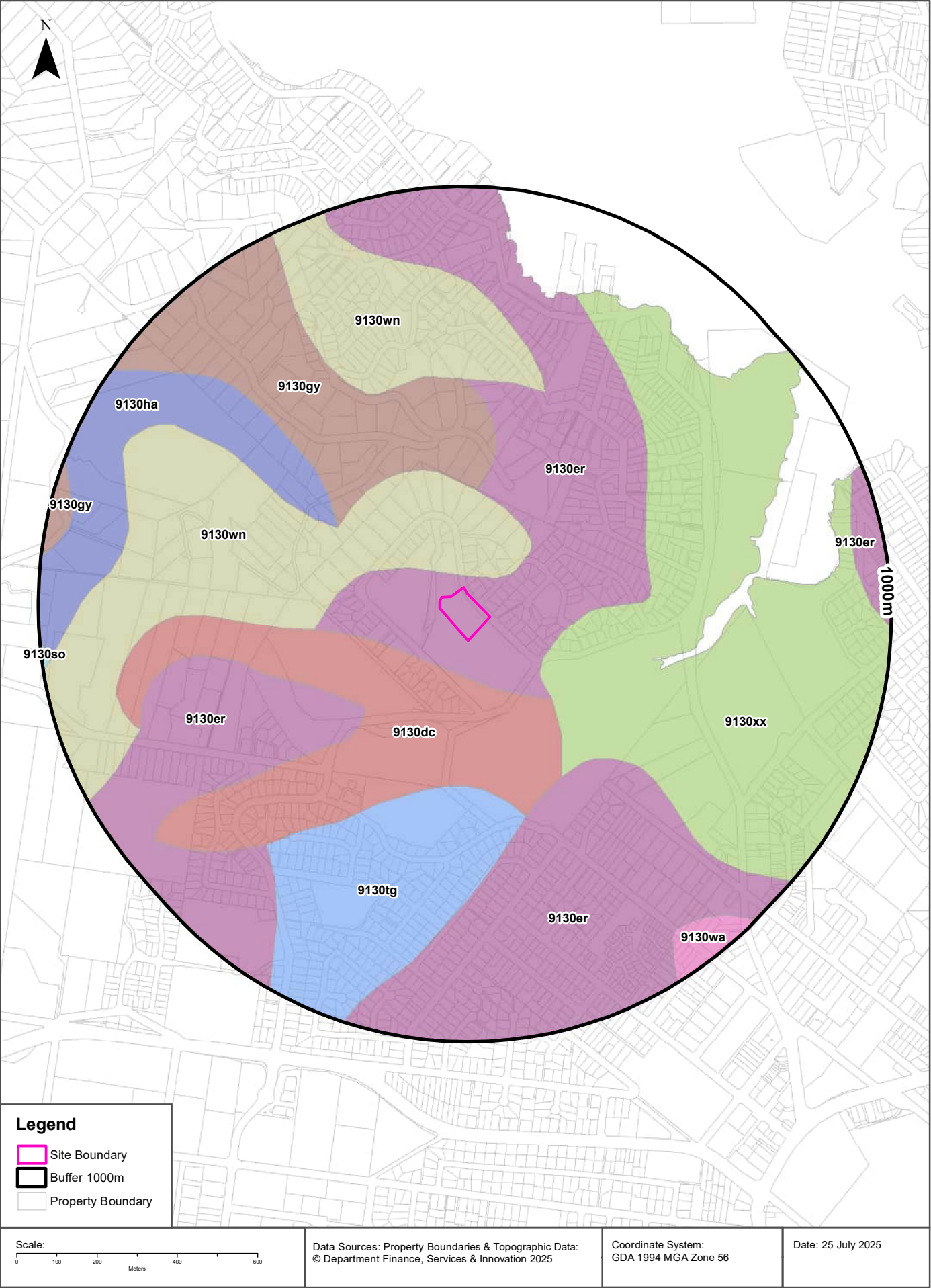
Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Mb4	Kandosol	Coastal complex: chief soils are acid yellow leached earths (Gn2.74) and (Gn2.34), hard acidic yellow mottled soils (Dy3.41), and hard acidic red soils (Dr2.21). This unit includes headlands and rugged coastal areas of unit Mb2; ridges and slopes of unit Tb35; low-lying coastal areas of unit Cb27; and some swampy areas.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO

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Soil Landscapes of Central and Eastern NSW

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Soil Landscapes of Central and Eastern NSW

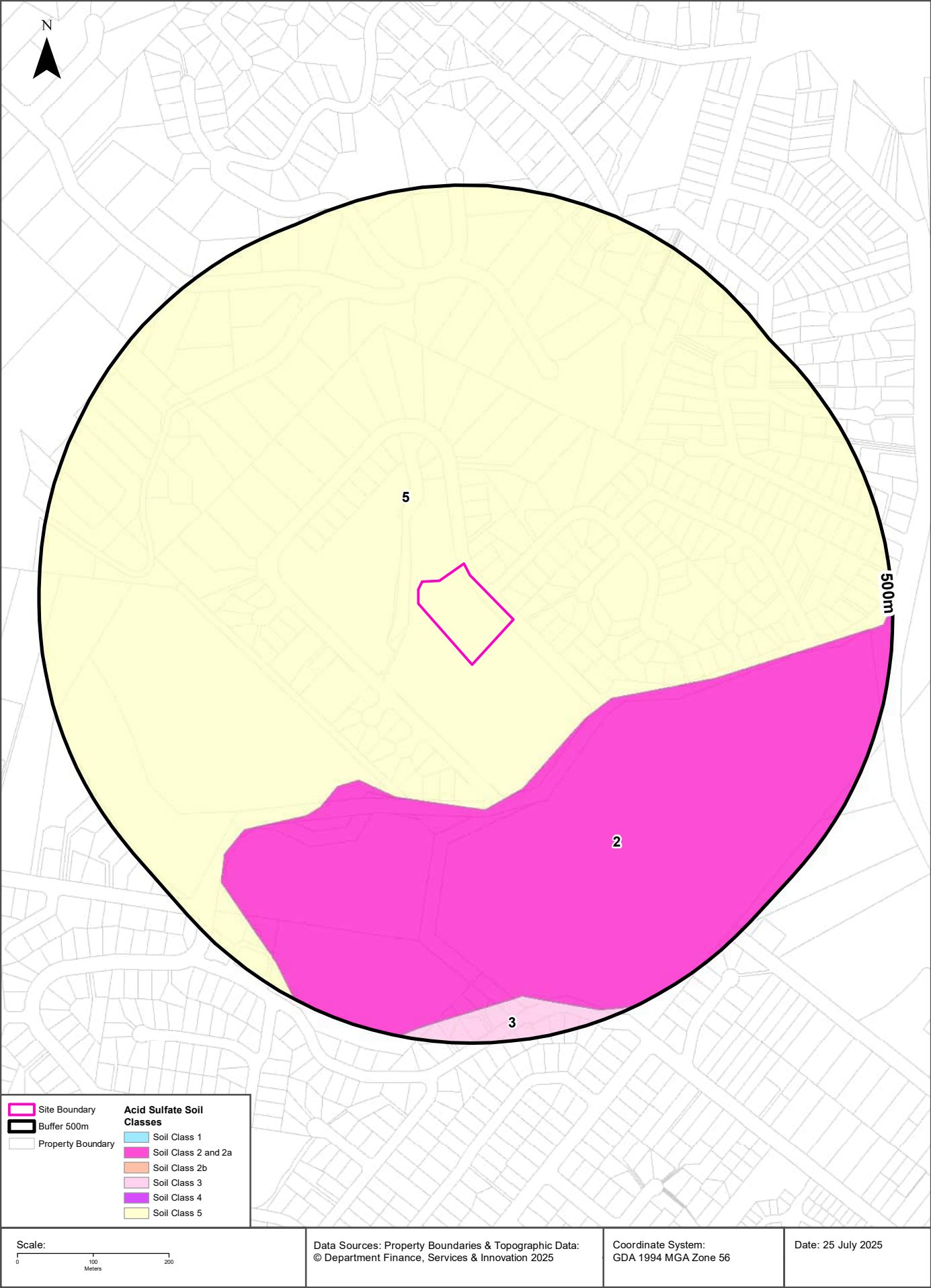
Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9130er	Erina	0m	On-site
9130wn	Watagan	30m	West
9130dc	Deep Creek	85m	South West
9130xx	Disturbed Terrain	165m	East
9130gy	Gymea	247m	North West
9130ha	Hawkesbury	313m	West
9130tg	Tuggerah	361m	South
9130wa	Warriewood	883m	South East
9130so	Somersby	976m	West

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

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Acid Sulfate Soils

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Pittwater Local Environmental Plan 2014

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

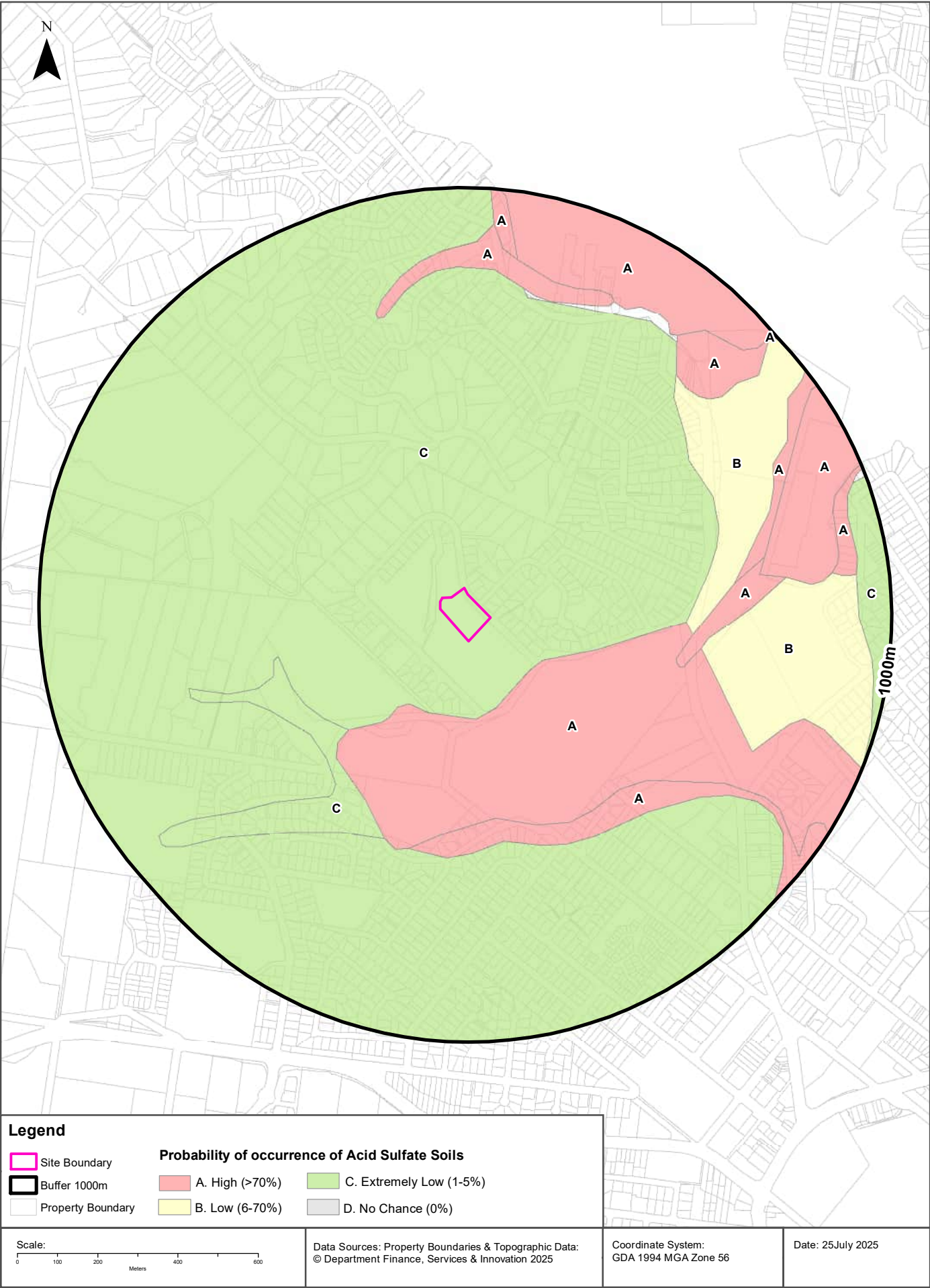
Soil Class	Description	EPI Name	Distance	Direction
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Pittwater Local Environmental Plan 2014	157m	South East
3	Works more than 1 metre below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk	Pittwater Local Environmental Plan 2014	442m	South

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Atlas of Australian Acid Sulfate Soils

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Acid Sulfate Soils

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Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site
A	High Probability of occurrence. >70% chance of occurrence.	158m	South East
B	Low Probability of occurrence. 6-70% chance of occurrence.	486m	North East

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining

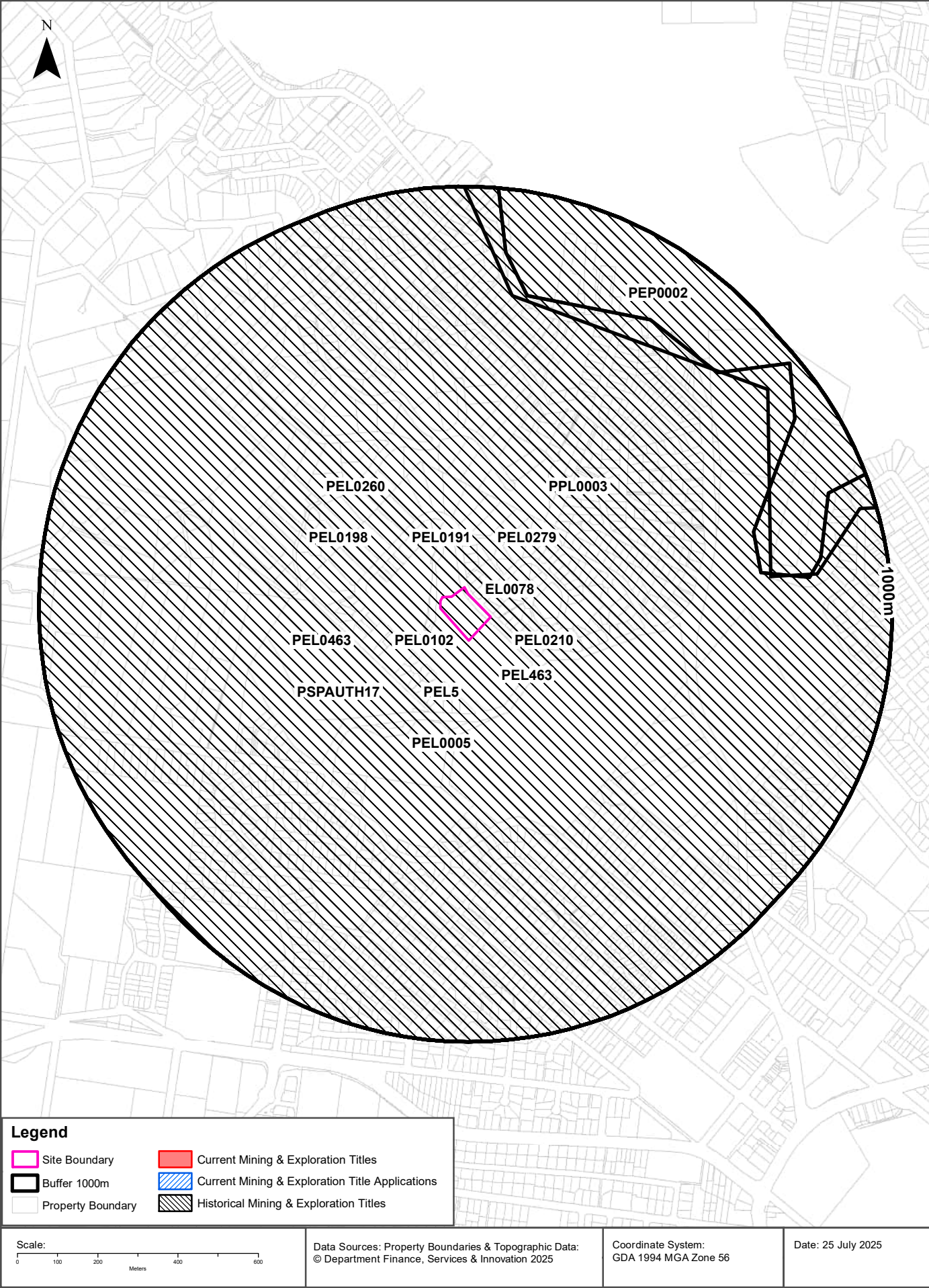
36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

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

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

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

Current Mining & Exploration Titles Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

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

Current Mining & Exploration Title Applications Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
EL0078	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20011210	MINERALS		0m	On-site
PEL0191	NORTHWEST OIL AND MINERALS CO NL			PETROLEUM	Petroleum	0m	On-site
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20150403	PETROLEUM	Petroleum	0m	On-site
PEL0279	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	19910504	19931111	PETROLEUM	Petroleum	0m	On-site
PPL0003	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PEP0002	LASKAN MINERALS LTD			PETROLEUM	Petroleum	705m	North East

Historical Mining & Exploration Titles Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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State Environmental Planning Policy

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

State Significant Precincts

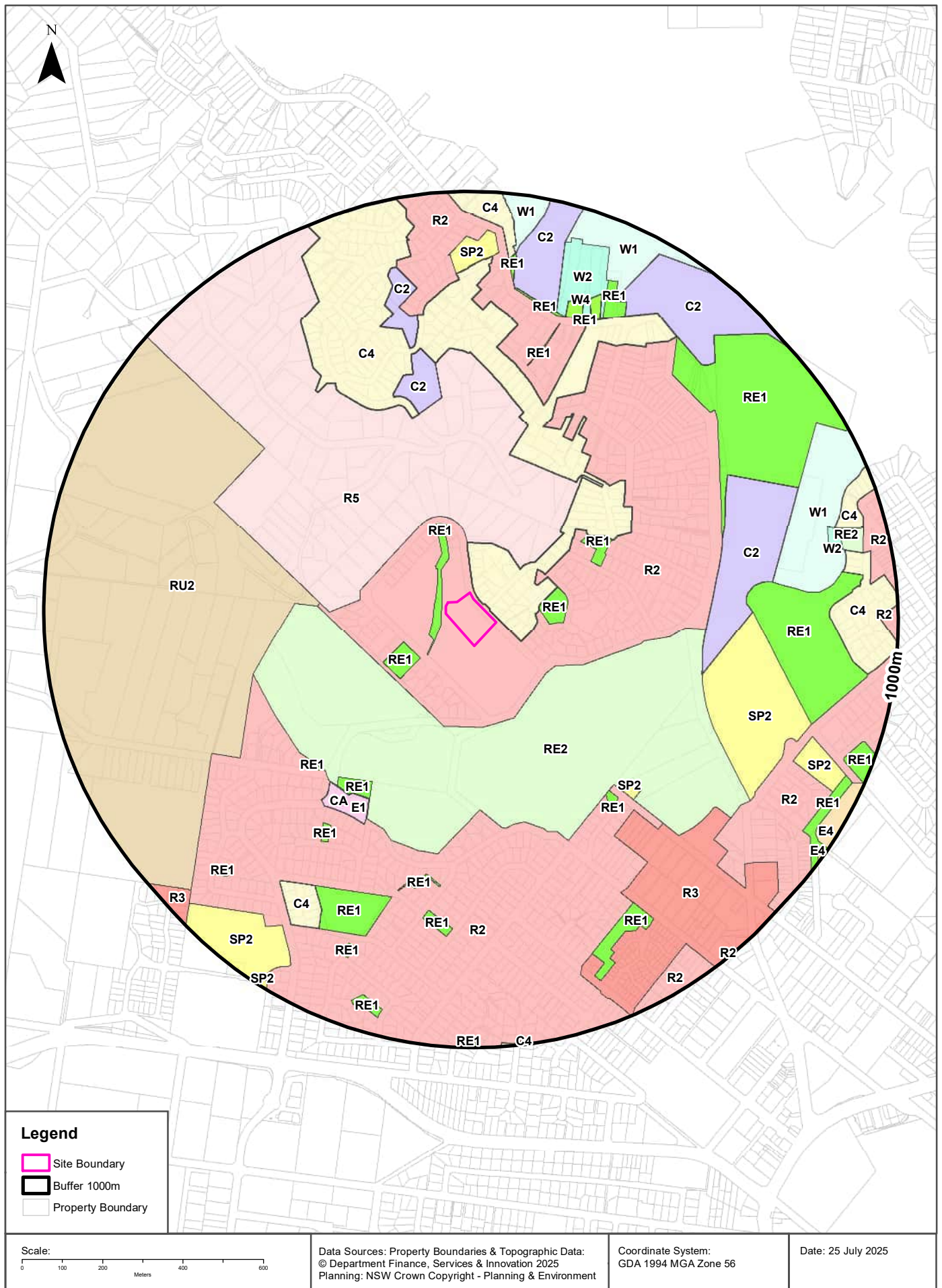
What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

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EPI Planning Zones

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Environmental Planning Instrument

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R2	Low Density Residential		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	0m	On-site
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	10m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	11m	North West
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	111m	East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	120m	South West
R5	Large Lot Residential		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	126m	North West
RE2	Private Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	174m	South
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	279m	North East
RU2	Rural Landscape		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	314m	West
R2	Low Density Residential		Pittwater Local Environmental Plan 2014	17/04/2025	17/04/2025	17/04/2025	Amendment No 13	406m	South
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	423m	South West
E1	Local Centre		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	461m	South West
CA	Complex Area		Pittwater Local Environmental Plan 2014	23/02/2024	23/02/2024	17/04/2025	State Environmental Planning Policy Amendment (Land Use Zones) (No 2) 2024	461m	South West
C2	Environmental Conservation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	465m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	484m	South West
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	489m	South East
R2	Low Density Residential		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	503m	North
SP2	Infrastructure	Water Supply System	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	509m	South East
C2	Environmental Conservation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	515m	East

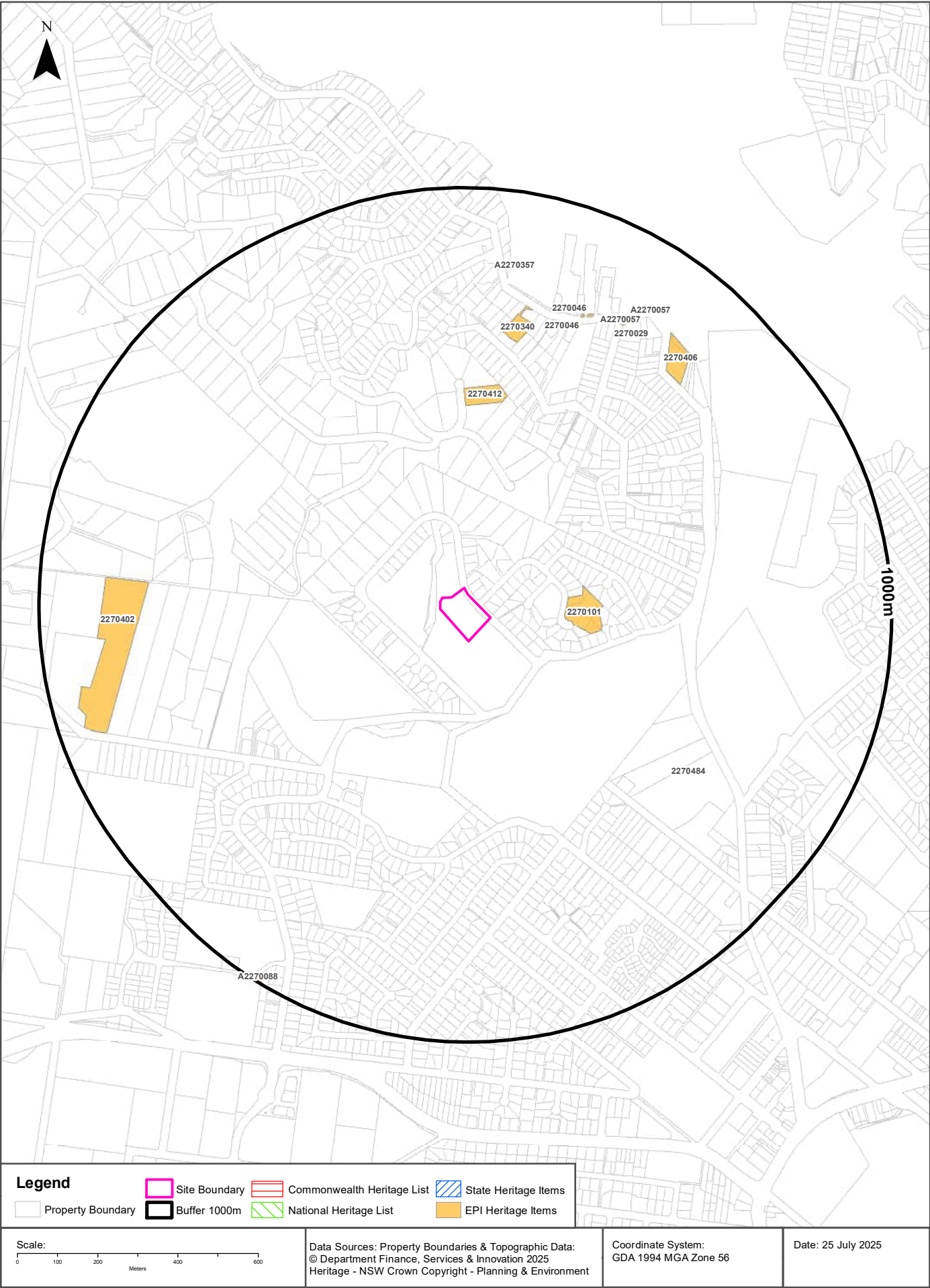
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Educational Establishment	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	526m	East
R3	Medium Density Residential		Pittwater Local Environmental Plan 2014	17/04/2025	17/04/2025	17/04/2025	Amendment No 13	567m	South East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	571m	South West
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	578m	South
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	584m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	599m	North East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	624m	East
C2	Environmental Conservation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	628m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	656m	South West
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	666m	South
W1	Natural Waterways		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	694m	North East
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	715m	South West
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	725m	North
W4	Working Waterfront		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	728m	North
W2	Recreational Waterways		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	730m	North
C2	Environmental Conservation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	733m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	735m	North
W4	Working Waterfront		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	742m	North
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	749m	South East
R2	Low Density Residential		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	757m	East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	758m	North East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	780m	North
C2	Environmental Conservation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	789m	North East
SP2	Infrastructure	Educational Establishment	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	797m	North

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	802m	South
SP2	Infrastructure	Water Supply System	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	813m	South East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	819m	South West
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	827m	East
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	835m	North
SP2	Infrastructure	Electricity Supply	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	842m	South West
W2	Recreational Waterways		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	846m	East
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	872m	East
RE2	Private Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	872m	East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	909m	South
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	919m	South East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	926m	East
R3	Medium Density Residential		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	929m	South West
E4	General Industrial		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	945m	South East
RE1	Public Recreation		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	973m	South
SP2	Infrastructure	Cemetery	Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	976m	South West
C4	Environmental Living		Pittwater Local Environmental Plan 2014	14/04/2023	26/04/2023	17/04/2025	Map Amendment No 3	987m	South

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Heritage Items

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Heritage

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Commonwealth Heritage List

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

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

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

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

Note. Please click on Place Id to activate a hyperlink to online website.

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

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

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

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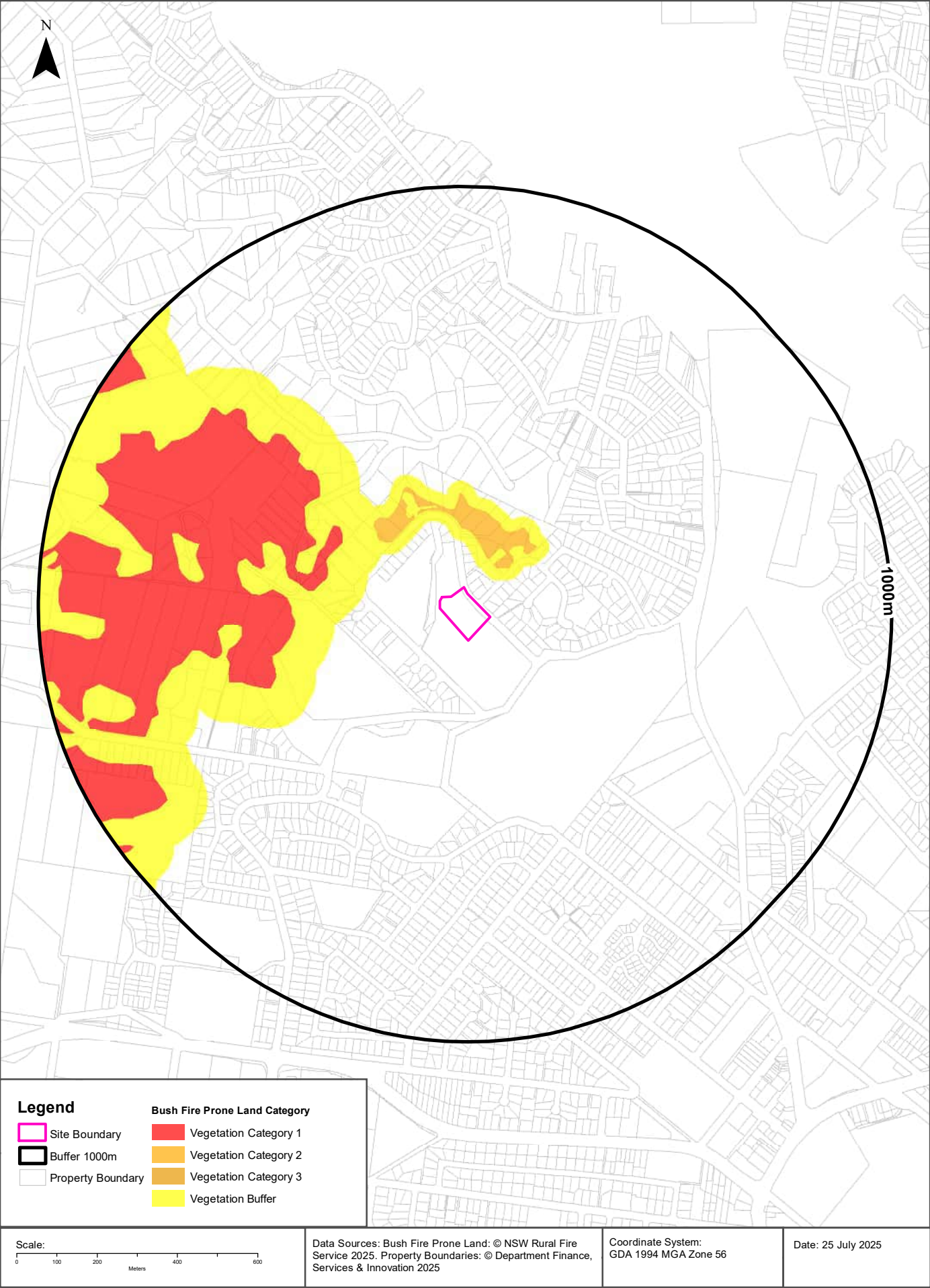
Environmental Planning Instrument - Heritage

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
2270101	House	Item - General	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	183m	East
2270412	Curry House 2	Item - General	Local	Pittwater Local Environmental Plan 2014	22/01/2016	22/01/2016	22/01/2016	459m	North
2270484	Concrete statues at Bayview Golf Course	Item - General	Local	Pittwater Local Environmental Plan 2014	22/01/2016	22/01/2016	22/01/2016	619m	South East
2270340	Maybanke House ("Stoneleigh") and Plaque	Item - General	Local	Pittwater Local Environmental Plan 2014	22/01/2016	22/01/2016	22/01/2016	628m	North
2270402	Waterfall Cottage and Garden	Item - General	Local	Pittwater Local Environmental Plan 2014	22/01/2016	22/01/2016	22/01/2016	729m	West
2270046	Street Trees - 1 Bunya Pine (Araucaria Bidwillii), 2 Norfolk Island Pines (Araucaria heterophylla)	Item - General	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	736m	North
2270406	Sea Scout Hall	Item - General	Local	Pittwater Local Environmental Plan 2014	22/01/2016	22/01/2016	22/01/2016	740m	North East
2270046	Street Trees - 1 Bunya Pine (Araucaria Bidwillii), 2 Norfolk Island Pines (Araucaria heterophylla)	Item - General	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	743m	North East
2270029	Street Trees (Araucaria species)	Item - General	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	764m	North East
A2270057	Sandstone retaining wall	Item - Archaeological	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	768m	North East
A2270057	Sandstone retaining wall	Item - Archaeological	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	782m	North East
A2270357	World War II Tank Traps	Item - Archaeological	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	814m	North
A2270088	Mona Vale Cemetery	Item - Archaeological	Local	Pittwater Local Environmental Plan 2014	30/05/2014	27/06/2014	22/01/2016	977m	South West

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Natural Hazards

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Bush Fire Prone Land

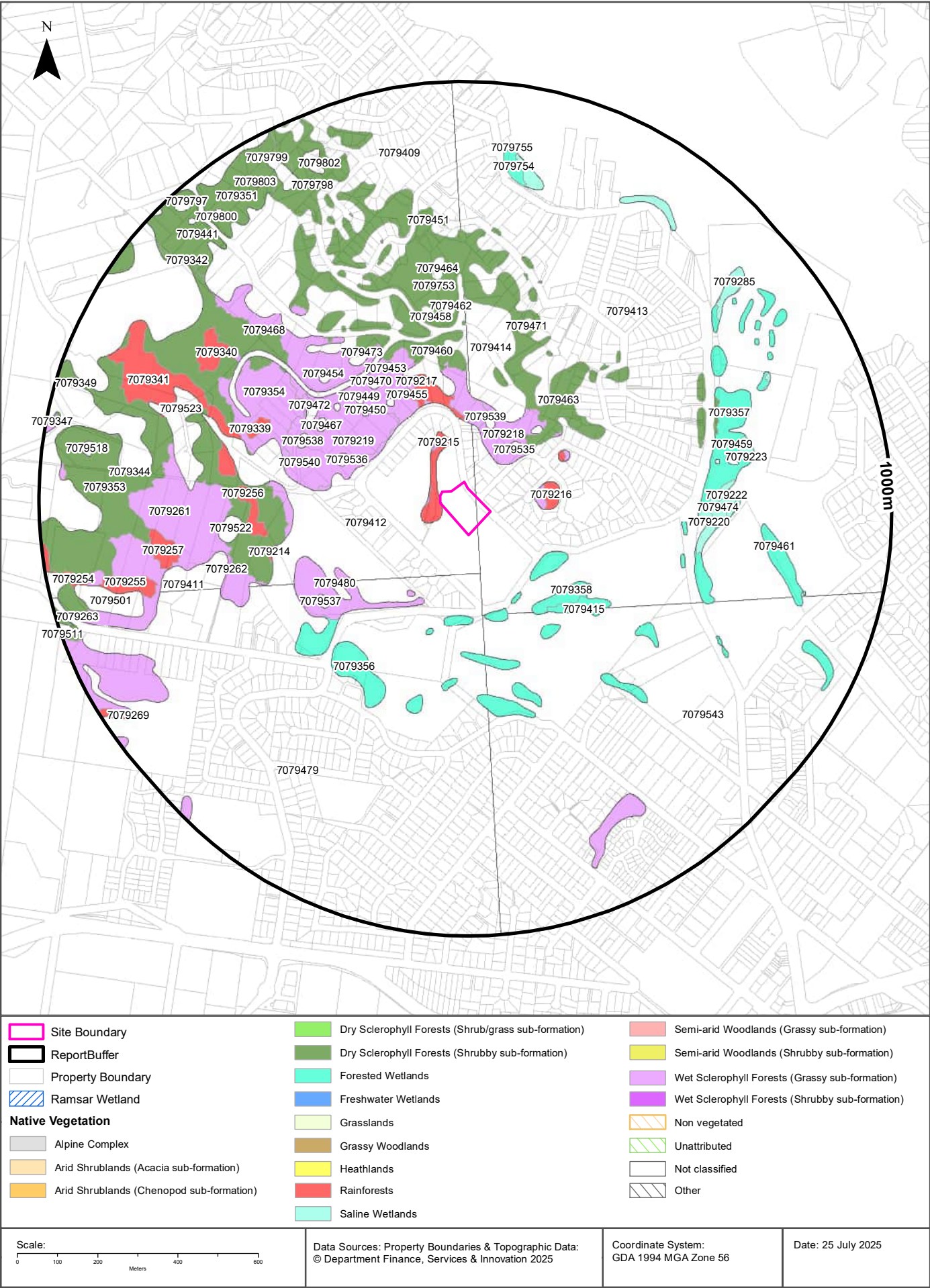
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	63m	West
Vegetation Category 2	93m	North
Vegetation Category 1	282m	West

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

Ecological Constraints - Vegetation & Ramsar Wetlands

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Ecological Constraints

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
7079215	Rainforests	(Rainforests) Sydney Coastal Lilly Pilly-Palm Gallery Rainforest	Northern Warm Temperate Rainforests	0m	On-site
7079412	Not classified	(Not classified) Not classified	Not classified	0m	On-site
7079413	Not classified	(Not classified) Not classified	Not classified	0m	On-site
7079354	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Central Coast Escarpment Moist Forest	Northern Hinterland Wet Sclerophyll Forests	26m	West
7079218	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Hunter Coast Lowland Spotted Gum Moist Forest	Northern Hinterland Wet Sclerophyll Forests	92m	North East
7079479	Not classified	(Not classified) Not classified	Not classified	95m	South West
7079216	Rainforests	(Rainforests) Sydney Coastal Lilly Pilly-Palm Gallery Rainforest	Northern Warm Temperate Rainforests	135m	East
7079535	Not classified	(Not classified) Not classified	Not classified	141m	North East
7079539	Not classified	(Not classified) Not classified	Not classified	147m	North
7079753	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Hunter Coast Foothills Apple Forest	Sydney Coastal Dry Sclerophyll Forests	164m	North
7079357	Forested Wetlands	(Forested Wetlands) Estuarine Swamp Oak Twig-rush Forest	Coastal Floodplain Wetlands	169m	East
7079414	Not classified	(Not classified) Not classified	Not classified	184m	North
7079356	Forested Wetlands	(Forested Wetlands) Northern Paperbark-Swamp Mahogany Saw-sedge Forest	Coastal Swamp Forests	187m	South
7079219	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Hunter Coast Lowland Spotted Gum Moist Forest	Northern Hinterland Wet Sclerophyll Forests	189m	North West
7079543	Not classified	(Not classified) Not classified	Not classified	200m	South East
7079542	Not classified	(Not classified) Not classified	Not classified	207m	North East
7079460	Not classified	(Not classified) Not classified	Not classified	221m	North
7079409	Not classified	(Not classified) Not classified	Not classified	222m	North West
7079358	Forested Wetlands	(Forested Wetlands) Estuarine Swamp Oak Twig-rush Forest	Coastal Floodplain Wetlands	235m	South East
7079355	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Central Coast Escarpment Moist Forest	Northern Hinterland Wet Sclerophyll Forests	239m	South East
7079536	Not classified	(Not classified) Not classified	Not classified	246m	West
7079469	Not classified	(Not classified) Not classified	Not classified	248m	North West
7079455	Not classified	(Not classified) Not classified	Not classified	254m	North West
7079217	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Central Coast Escarpment Moist Forest	Northern Hinterland Wet Sclerophyll Forests	266m	North
7079450	Not classified	(Not classified) Not classified	Not classified	267m	North West
7079449	Not classified	(Not classified) Not classified	Not classified	300m	North West
7079463	Not classified	(Not classified) Not classified	Not classified	300m	North East
7079470	Not classified	(Not classified) Not classified	Not classified	307m	North West
7079480	Not classified	(Not classified) Not classified	Not classified	317m	South West

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
7079415	Not classified	(Not classified) Not classified	Not classified	327m	South East
7079453	Not classified	(Not classified) Not classified	Not classified	330m	North West
7079465	Not classified	(Not classified) Not classified	Not classified	330m	North West
7079467	Not classified	(Not classified) Not classified	Not classified	333m	North West
7079540	Not classified	(Not classified) Not classified	Not classified	333m	West
7079538	Not classified	(Not classified) Not classified	Not classified	358m	North West
7079537	Not classified	(Not classified) Not classified	Not classified	367m	South West
7079472	Not classified	(Not classified) Not classified	Not classified	369m	North West
7079473	Not classified	(Not classified) Not classified	Not classified	378m	North West
7079353	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Gully Forest	Sydney Coastal Dry Sclerophyll Forests	382m	West
7079454	Not classified	(Not classified) Not classified	Not classified	397m	North West
7079471	Not classified	(Not classified) Not classified	Not classified	397m	North
7079458	Not classified	(Not classified) Not classified	Not classified	418m	North
7079462	Not classified	(Not classified) Not classified	Not classified	422m	North
7079214	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	429m	West
7079256	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	434m	West
7079339	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	461m	West
7079522	Not classified	(Not classified) Not classified	Not classified	496m	West
7079341	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	510m	West
7079464	Not classified	(Not classified) Not classified	Not classified	511m	North
7079261	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Hunter Coast Lowland Spotted Gum Moist Forest	Northern Hinterland Wet Sclerophyll Forests	516m	West
7079220	Saline Wetlands	(Saline Wetlands) Grey Mangrove-River Mangrove Forest	Mangrove Swamps	517m	East
7079222	Saline Wetlands	(Saline Wetlands) Prickly Couch-Sea Rush Saltmarsh	Saltmarshes	547m	East
7079411	Not classified	(Not classified) Not classified	Not classified	548m	West
7079262	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Gully Forest	Sydney Coastal Dry Sclerophyll Forests	557m	West
7079474	Not classified	(Not classified) Not classified	Not classified	557m	East
7079466	Not classified	(Not classified) Not classified	Not classified	573m	East
7079468	Not classified	(Not classified) Not classified	Not classified	592m	North West
7079523	Not classified	(Not classified) Not classified	Not classified	594m	West
7079457	Not classified	(Not classified) Not classified	Not classified	601m	East
7079459	Not classified	(Not classified) Not classified	Not classified	614m	East
7079340	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	617m	North West
7079223	Saline Wetlands	(Saline Wetlands) Samphire Saltmarsh	Saltmarshes	636m	East
7079451	Not classified	(Not classified) Not classified	Not classified	651m	North
7079257	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	661m	West

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
7079461	Not classified	(Not classified) Not classified	Not classified	707m	East
7079255	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	733m	West
7079285	Saline Wetlands	(Saline Wetlands) Grey Mangrove-River Mangrove Forest	Mangrove Swamps	741m	North East
7079754	Forested Wetlands	(Forested Wetlands) Estuarine Swamp Oak Twig-rush Forest	Coastal Floodplain Wetlands	755m	North
7079344	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Central Coast Escarpment Moist Forest	Northern Hinterland Wet Sclerophyll Forests	774m	West
7079501	Not classified	(Not classified) Not classified	Not classified	777m	West
7079351	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Enriched Sandstone Forest	Sydney Coastal Dry Sclerophyll Forests	802m	North West
7079349	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Hunter Coast Foothills Apple Forest	Sydney Coastal Dry Sclerophyll Forests	818m	West
7079798	Not classified	(Not classified) Not classified	Not classified	831m	North West
7079755	Saline Wetlands	(Saline Wetlands) Grey Mangrove-River Mangrove Forest	Mangrove Swamps	833m	North
7079799	Not classified	(Not classified) Not classified	Not classified	846m	North West
7079347	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Central Coast Escarpment Moist Forest	Northern Hinterland Wet Sclerophyll Forests	847m	West
7079802	Not classified	(Not classified) Not classified	Not classified	849m	North West
7079342	Rainforests	(Rainforests) Sydney Coastal Lilly Pilly-Palm Gallery Rainforest	Northern Warm Temperate Rainforests	851m	North West
7079518	Not classified	(Not classified) Not classified	Not classified	874m	West
7079441	Not classified	(Not classified) Not classified	Not classified	875m	North West
7079800	Not classified	(Not classified) Not classified	Not classified	879m	North West
7079803	Not classified	(Not classified) Not classified	Not classified	890m	North West
7079254	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	895m	West
7079431	Not classified	(Not classified) Not classified	Not classified	911m	North West
7079263	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Gully Forest	Sydney Coastal Dry Sclerophyll Forests	917m	West
7079269	Rainforests	(Rainforests) Illawarra Escarpment Warm Temperate Rainforest	Northern Warm Temperate Rainforests	929m	South West
7079797	Not classified	(Not classified) Not classified	Not classified	948m	North West
7079511	Not classified	(Not classified) Not classified	Not classified	970m	West

Native Vegetation Type Map : NSW Department of Planning and Environment 2022

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Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

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

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

Ecological Constraints

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Collaborative Australian Protected Areas Database - Terrestrial

Protected areas in terrestrial environments identified by the CAPAD within the dataset buffer:

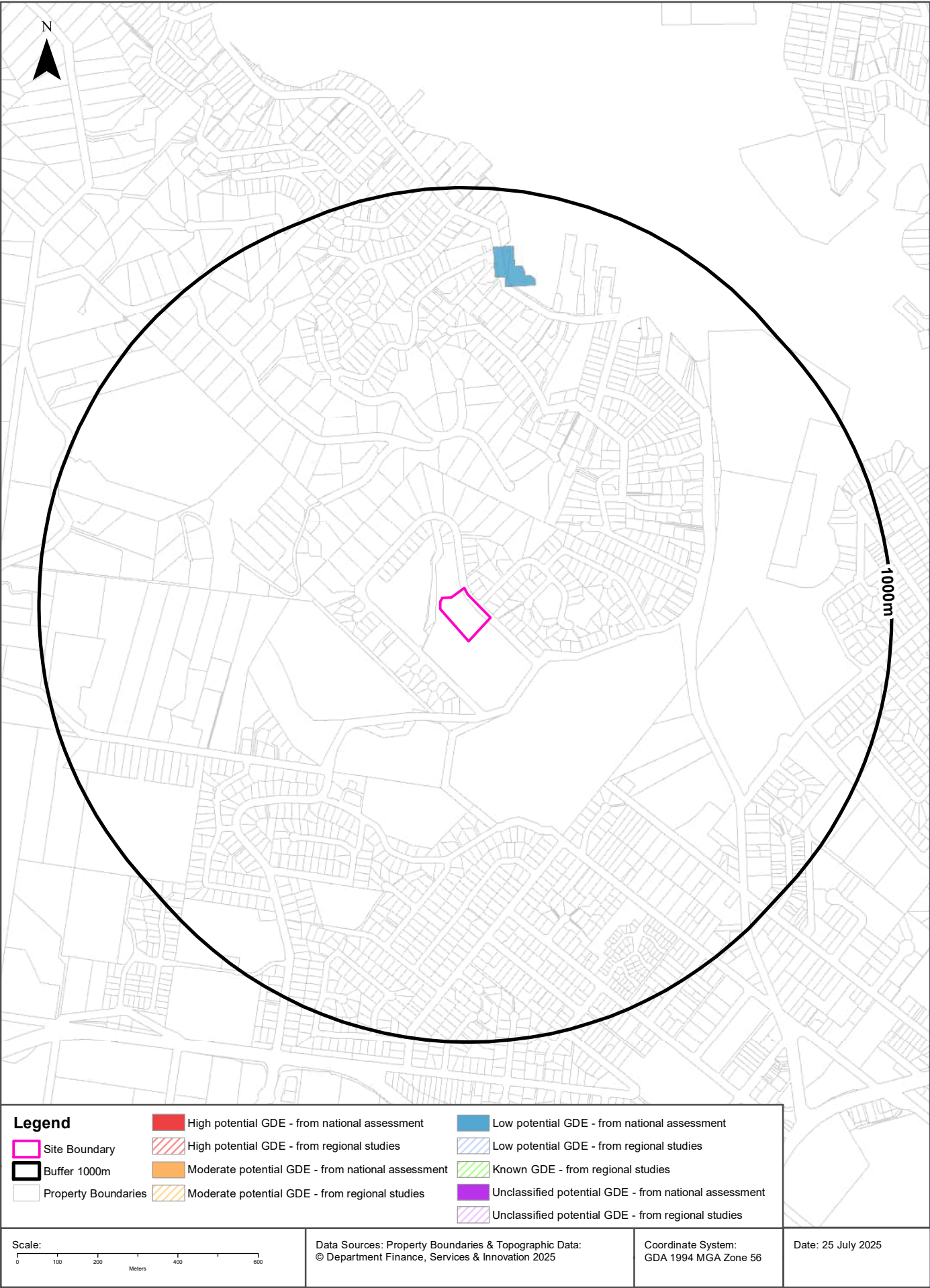
Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Collaborative Australian Protected Areas Database - Marine

Protected areas in marine environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Source: Collaborative Australian Protected Areas Database (CAPAD) 2022
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Ecological Constraints

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Groundwater Dependent Ecosystems Atlas

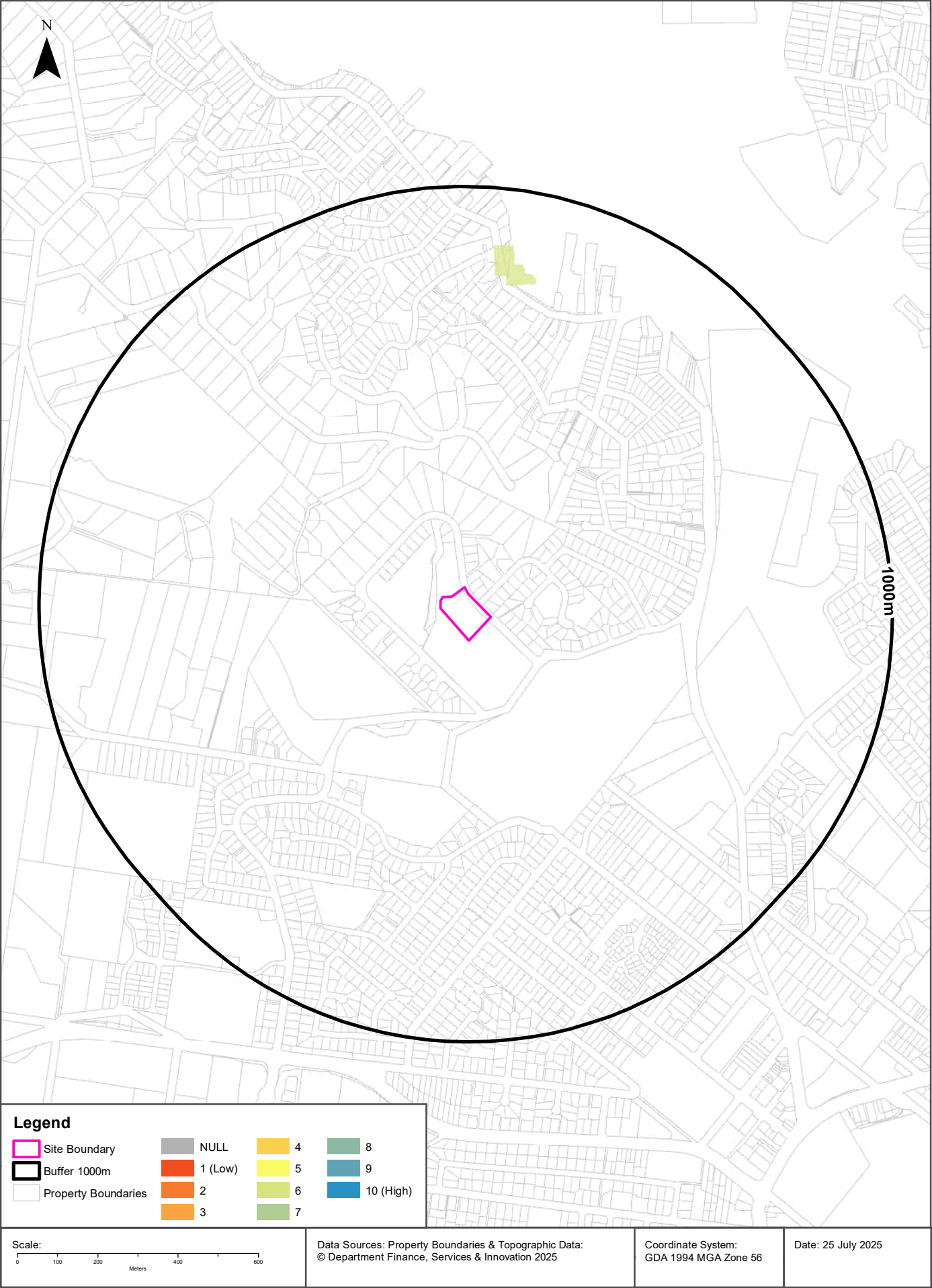
Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	761m	North
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	780m	North East

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

36 - 42 Cabbage Tree Road, Bayview, NSW 2104



Ecological Constraints

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	761m	North
Terrestrial	3	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	780m	North East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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Ecological Constraints

36 - 42 Cabbage Tree Road, Bayview, NSW 2104

NSW BioNet Species Sightings

Species sightings from the NSW BioNet Repository that have either a state or federal conservation status, or a sensitivity status, and are within 10 km of the site:

Note: This data does not include NSW Category 1 sensitive species.

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Not Sensitive	Endangered	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anous aibivitta	Grey Ternlet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Anous stolidus	Common Noddy	Not Sensitive	Not Listed	Not Listed	CAMBA;JAMBA
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Category 2	Critically Endangered	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna camelpes	Flesh-footed Shearwater	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Sensitive	Not Listed	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Not Sensitive	Critically Endangered	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Category 3	Endangered	Endangered	
Animalia	Aves	Calonectris leucometas	Streaked Shearwater	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Category 2	Vulnerable	Not Listed	
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Category 2	Vulnerable	Vulnerable	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Not Sensitive	Vulnerable	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Cinclosoma castaneotum	Chestnut Quail-thrush	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Dasyornis brachypterus	Eastern Bristlebird	Category 2	Endangered	Endangered	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Not Sensitive	Endangered	Vulnerable	
Animalia	Aves	Diomedea gibsoni	Gibson's Albatross	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Esacus magnirostris	Beach Stone-curlew	Not Sensitive	Critically Endangered	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Fregetta grallaria	White-bellied Storm-Petrel	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;JAMBA
Animalia	Aves	Gygis alba	White Tern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Halobaena caerulea	Blue Petrel	Not Sensitive	Not Listed	Vulnerable	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Not Sensitive	Endangered	Critically Endangered	
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Pink Cockatoo	Category 2	Vulnerable	Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Category 3	Vulnerable	Not Listed	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Ninox connivens	Barking Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Sensitive	Critically Endangered	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion anaethetus	Bridled Tern	Not Sensitive	Not Listed	Not Listed	CAMBA;JAMBA
Animalia	Aves	Onychoprion fuscatus	Sooty Tern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pachycephala olivacea	Olive Whistler	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Parvipsitta pusilla	Little Lorikeet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Phaethon rubricauda	Red-tailed Tropicbird	Not Sensitive	Vulnerable	Not Listed	CAMBA;JAMBA
Animalia	Aves	Philomachus pugnax	Ruff	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Not Sensitive	Vulnerable	Endangered	
Animalia	Aves	Pterodroma nigripennis	Black-winged Petrel	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Stercorarius longicaudus	Long-tailed Jaeger	Not Sensitive	Not Listed	Not Listed	CAMBA;JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Not Sensitive	Endangered	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Sula leucogaster	Brown Booby	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Thalassarche bulleri	Buller's Albatross	Not Sensitive	Not Listed	Vulnerable	
Animalia	Aves	Thalassarche cauta	Shy Albatross	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Thalassarche chrysostoma	Grey-headed Albatross	Not Sensitive	Not Listed	Endangered	
Animalia	Aves	Thalassarche melanophrys	Black-browed Albatross	Not Sensitive	Vulnerable	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	<i>Thalasseus bergii</i>	Crested Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	<i>Thinornis cucullatus cucullatus</i>	Eastern Hooded Dotterel	Not Sensitive	Critically Endangered	Vulnerable	
Animalia	Aves	<i>Tringa brevipes</i>	Grey-tailed Tattler	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tringa incana</i>	Wandering Tattler	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	<i>Tringa nebularia</i>	Common Greenshank	Not Sensitive	Endangered	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tyto novaehollandiae</i>	Masked Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	<i>Tyto tenebricosa</i>	Sooty Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	<i>Xenus cinereus</i>	Terek Sandpiper	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	<i>Meridolum maryae</i>	Maroubra Woodland Snail	Not Sensitive	Endangered	Endangered	
Animalia	Gastropoda	<i>Pommerhelix duralensis</i>	Dural Land Snail	Not Sensitive	Endangered	Endangered	
Animalia	Insecta	<i>Petalura gigantea</i>	Giant Dragonfly	Not Sensitive	Endangered	Not Listed	
Animalia	Mammalia	<i>Arctocephalus forsteri</i>	New Zealand Fur-seal	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Balaenoptera musculus</i>	Blue Whale	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	Not Sensitive	Vulnerable	Endangered	
Animalia	Mammalia	<i>Dugong dugon</i>	Dugong	Not Sensitive	Endangered	Not Listed	
Animalia	Mammalia	<i>Eubalaena australis</i>	Southern Right Whale	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Isodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern)	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Macrotis lagotis</i>	Bilby	Not Sensitive	Extinct	Vulnerable	
Animalia	Mammalia	<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Miniopterus australis</i>	Little Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Myotis macropus</i>	Southern Myotis	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Notamacropus parma</i>	Parma Wallaby	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Petauroides volans</i>	Southern Greater Glider	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Petaurus norfolcensis</i>	Squirrel Glider	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Petaurus norfolcensis</i>	Squirrel Glider	Not Sensitive	Endangered Population, Vulnerable	Not Listed	
Animalia	Mammalia	<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Not Sensitive	Endangered	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	<i>Petrogale xanthopus</i>	Yellow-footed Rock-wallaby	Not Sensitive	Endangered	Vulnerable	
Animalia	Mammalia	<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Phascogale cinereus</i>	Koala	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	<i>Phoniscus papuensis</i>	Golden-tipped Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Physeter macrocephalus</i>	Sperm Whale	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Pseudomys novaehollandiae</i>	New Holland Mouse	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	<i>Vespadelus troungtoni</i>	Eastern Cave Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	<i>Antaresia childreni</i>	Children's Python	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	<i>Aspidites ramsayi</i>	Woma	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	<i>Cacophis harriettae</i>	White-crowned Snake	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	<i>Caretta caretta</i>	Loggerhead Turtle	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	<i>Chelonia mydas</i>	Green Turtle	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Reptilia	<i>Cyclodomorphus melanops elongatus</i>	Mallee Slender Blue-tongue Lizard	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	<i>Dermochelys coriacea</i>	Leatherback Turtle	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	<i>Diplodactylus platyurus</i>	Eastern Fat-tailed Gecko	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Not Sensitive	Not Listed	Vulnerable	
Animalia	Reptilia	<i>Hemiaspis damelli</i>	Grey Snake	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	<i>Tiliqua occipitalis</i>	Western Blue-tongued Lizard	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	<i>Uvidicolus sphyrurus</i>	Border Thick-tailed Gecko	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Reptilia	<i>Varanus rosenbergi</i>	Rosenberg's Goanna	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	<i>Acacia terminalis</i> subsp. Eastern Sydney	Sunshine wattle	Not Sensitive	Endangered	Endangered	
Plantae	Flora	<i>Boronia umbellata</i>	Orara Boronia	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Brachyscome muelleroides</i>	Claypan Daisy	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Callistemon linearifolius</i>	Netted Bottle Brush	Category 3	Vulnerable	Not Listed	
Plantae	Flora	<i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	Category 2	Vulnerable	Vulnerable	
Plantae	Flora	<i>Diuris bracteata</i>		Category 2	Endangered	Extinct	
Plantae	Flora	<i>Epacris purpurascens</i> var. <i>purpurascens</i>		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	<i>Eriocaulon australasicum</i>	Austral Pipewort	Not Sensitive	Endangered	Endangered	
Plantae	Flora	<i>Eucalyptus camfieldii</i>	Camfield's Stringybark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	Not Sensitive	Vulnerable	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	<i>Euphorbia psammogelon</i>	Sand spurge	Not Sensitive	Endangered	Not Listed	
Plantae	Flora	<i>Genoplesium baueri</i>	Bauer's Midge Orchid	Category 2	Endangered	Endangered	
Plantae	Flora	<i>Grammitis stenophylla</i>	Narrow-leaf Finger Fern	Category 3	Endangered	Not Listed	
Plantae	Flora	<i>Grevillea caleyi</i>	Caley's Grevillea	Category 3	Critically Endangered	Critically Endangered	
Plantae	Flora	<i>Grevillea shiressii</i>		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Haloragodendron lucasii</i>		Not Sensitive	Endangered	Endangered	
Plantae	Flora	<i>Isotoma fluviatilis</i> subsp. <i>fluviatilis</i>		Category 3	Not Listed	Extinct	
Plantae	Flora	<i>Kunzea rupestris</i>		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Lasiopetalum joryceae</i>		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Macadamia integrifolia</i>	Macadamia Nut	Not Sensitive	Not Listed	Vulnerable	
Plantae	Flora	<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Melaleuca deanei</i>	Deane's Paperbark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Microtis angusii</i>	Angus's Onion Orchid	Category 2	Endangered	Endangered	
Plantae	Flora	<i>Persoonia hirsuta</i>	Hairy Geebung	Category 3	Endangered	Endangered	
Plantae	Flora	<i>Persoonia laxa</i>		Not Sensitive	Extinct	Extinct	
Plantae	Flora	<i>Persoonia pauciflora</i>	North Rothbury Persoonia	Category 3	Critically Endangered	Critically Endangered	
Plantae	Flora	<i>Pimelea curviflora</i> var. <i>curviflora</i>		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Prostanthera densa</i>	Villous Mint-bush	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Prostanthera marifolia</i>	Seaforth Mintbush	Category 3	Critically Endangered	Critically Endangered	
Plantae	Flora	<i>Rhodamnia rubescens</i>	Scrub Turpentine	Not Sensitive	Critically Endangered	Critically Endangered	
Plantae	Flora	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	<i>Tetratheca glandulosa</i>		Not Sensitive	Vulnerable	Not Listed	

Source: NSW BioNet Species Sightings

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Location Confidences

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

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

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APPENDIX E

PHOTOGRAPHIC LOG



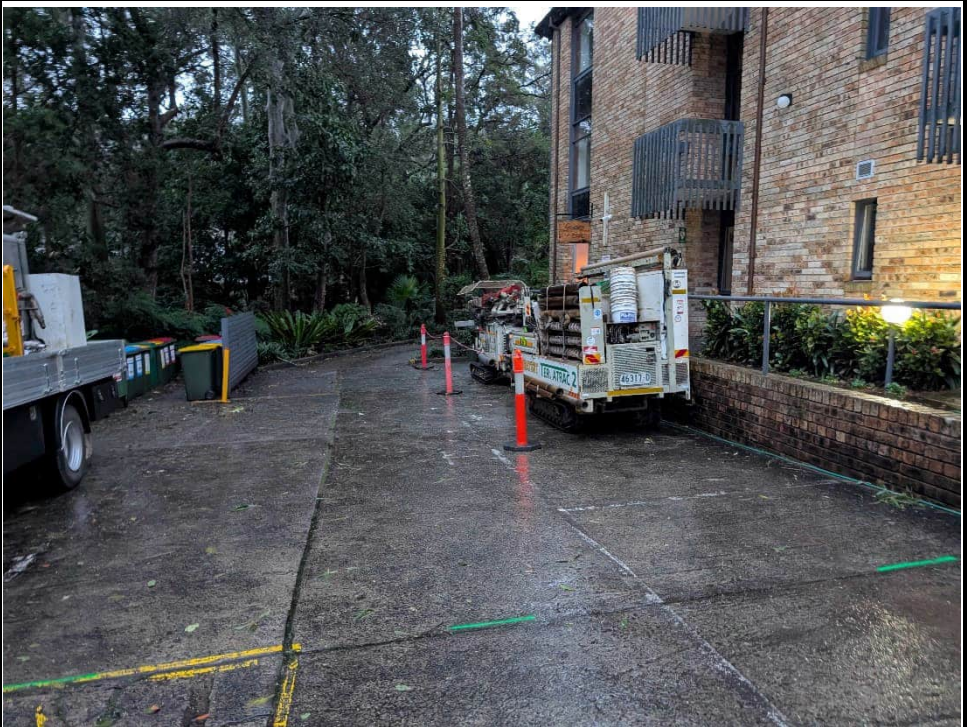


Photographic Log

36-42 Cabbage Tree Road, Bayview

PS206292

Photo No.	Date	
1	30/6/2025- 3/7/2025	
Description General site layout and land use.		

Photo No.	Date	
2	30/6/2025- 3/7/2025	
Description General site layout and land use.		

	Photographic Log	
	36-42 Cabbage Tree Road, Bayview	PS206292

Photo No. 3	Date 30/6/2025- 3/7/2025	
Description General site layout and land use.		

Photo No. 4	Date 30/6/2025- 3/7/2025	
Description Natural material underlying the site.		

	Photographic Log	
	36-42 Cabbage Tree Road, Bayview	PS206292

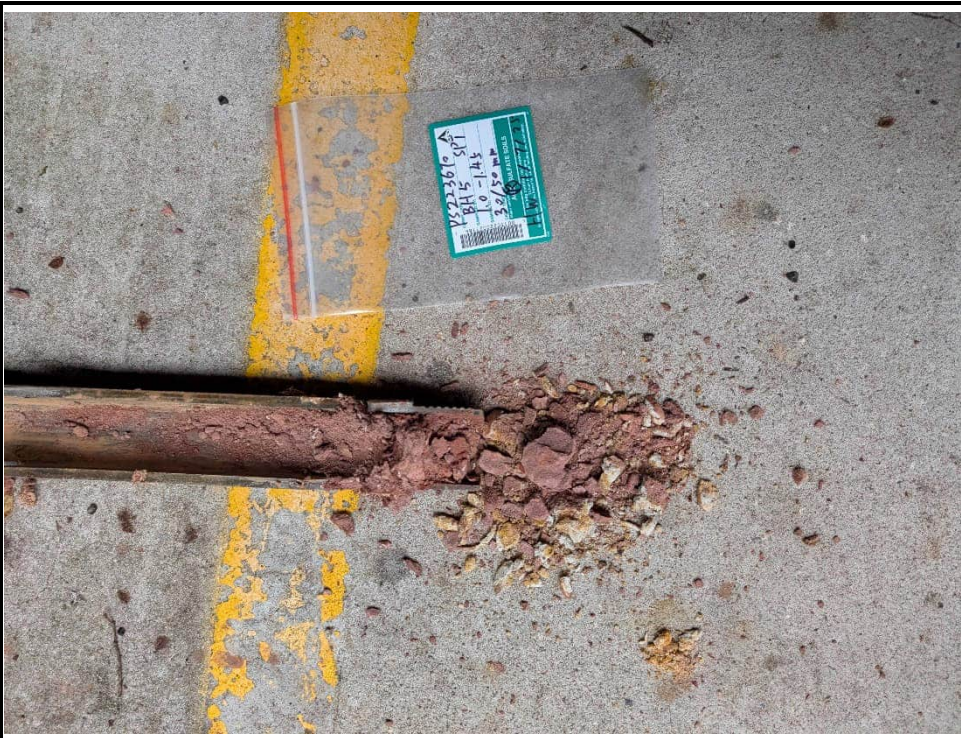
Photo No.	Date	
5	30/6/2025- 3/7/2025	
Description Natural material underlying the site.		

Photo No.	Date	
6	30/6/2025- 3/7/2025	
Description Natural material underlying the site.		

APPENDIX F

BORE LOGS





NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH01

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 3

POSITION : E: 341927, N: 6273574 (MGA2020-56) SURFACE ELEVATION : 28.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 30/6/2025 DATE COMPLETED : 1/7/2025 DATE LOGGED : 1/7/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL								
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations		
DRILLING & CASING	WATER												
AD/T		F-H	Not Encountered		0.0 28.0			FILL: Brick paver, brown grey	D		ROAD SURFACE		
				0.10m ES		0.10m 0.15m	FILL SAND: Fine to coarse grained, grey to brown, well graded	FILL 0.10: PID = 0.1 ppm					
				0.30m ES		0.30m	FILL: CONCRETE, pale grey	0.15-0.30: Aggregate is angular, 5-20mm					
				0.50m ES		0.50m	FILL Silty SAND: fine to medium grained, grey to dark brown, poorly graded, low plasticity silt	FILL 0.30: PID = 0.1 ppm					
						0.5 27.5	CH		Silty CLAY: high plasticity, orange-brown to red-brown, with fine grained sand, trace fine grained gravel	VSt - H	w<PL	RESIDUAL SOIL 0.50: PID = 0.1 ppm	
				0.80m ES									
				SPT 15,17,15 N=32		1.0 27.0						1.00m: becoming pale grey, slightly mottled red	1.00: PID = 0.1 ppm; 1.00: PP >600 kPa
				1.45m		1.5 26.5							
						2.0 26.0			2.00m: with fine to medium grained ironstone gravel, sub-angular to sub-rounded	H	2.00: PID = 0.1 ppm		
						2.5 25.5		2.50m	SANDSTONE: fine grained, pale grey to pale brown, heavily stained red to orange-red, inferred highly weathered, very low to low strength		HIGHLY WEATHERED MATERIAL		
					VH	SPT 30,30/50mm HB N=R 2.70m	3.0 25.0	3.07m	Continued as Cored Drill Hole				
							</						

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

HOLE NO : BH01

FILE / JOB NO : PS223670
SHEET : 2 OF 3

POSITION : E: 341927, N: 6273574 (MGA2020-56)

SURFACE ELEVATION : 28.00 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : GEO205

MOUNTING : Track

CONTRACTOR : Terratest

DRILLER : KM

DATE STARTED : 30/6/2025

DATE COMPLETED : 1/7/2025

DATE LOGGED : 1/7/2025

LOGGED BY : HW

CHECKED BY : BMS

CASING DIAMETER : 65 mm

BARREL (Length) : 1.50 m

BIT : 8-step

BIT CONDITION : good

DRILLING					MATERIAL					FRACTURES				
PROGRESS		CORE LOSS (CORE LOSS DRILL DEPTH)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH ● - Axial ○ - Diametral ■ - UCS UCS-20 L ₁₀₀ L ₁₀ 20 40 60 80 100 M 20 40 60 80 100 H 20 40 60 80 100 VH 20 40 60 80 100 EH	NATURAL FRACTURE (mm)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other		
DRILLING & CASING	WATER													
					0.0									
					0.5									
					1.0									
					1.5									
					2.0									
					2.5									
					3.0		3.07m START CORING AT 3.07m							
					3.5		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine grained, brown to pale grey, thinly to medium bedded at 0°-10°	HW to MW					J, 75°, Fe SN, PR, RF	
					4.0								P, 5°, Fe SN, PR, RF P, 5°, CN, PR, RF P, 5°, CN, PR, RF J, 90°, CN, PR, RF P, 5°, CN, PR, RF FZ, clay infill	
					4.5								P, 10°, Fe SN, PR, RF	
					5.0								IS, CR infill P, 10°, Fe SN, PR, RF, sand infill J, 70°, healed	

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU CORED BOREHOLE 2A PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 12:57 10.03.00.00 Datalog Lab used in Situ Tool - DCD Lib: WSP 6.00.0 2024-06-03 Proj: WSP 6.00.0 2024-06-03



CORED DRILL HOLE LOG

HOLE NO : BH01

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 3 OF 3

POSITION : E: 341927, N: 6273574 (MGA2020-56)	SURFACE ELEVATION : 28.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DATE STARTED : 30/6/2025	DATE COMPLETED : 1/7/2025	DATE LOGGED : 1/7/2025
CASING DIAMETER : 65 mm	BARREL (Length) : 1.50 m	BIT : 8-step
		BIT CONDITION : good

DRILLING				MATERIAL				FRACTURES																
PROGRESS		CORE LOSS (% DRILL RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH		NATURAL FRACTURE (mm)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other											
DRILLING & CASING	WATER								UCS<20 MPa ● - Axial ○ - Diametral ■ - UCS	UCS 20-200 MPa ■ - UCS														
HQ3	100% RETURN	0% LOSS	100	Is(50) D=0.0700 MPa Is(50) A=0.200 MPa	5.0		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine grained, brown to pale grey, thinly to medium bedded at 0°-10° (continued) 5.00m: becoming dark brown to grey-brown	HW to MW				P, 5°, Fe SN, PR, RF												
	100% RETURN	6.50	0% LOSS		87									INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): pale grey to pale red-brown, medium bedded at 0°-5°, sandstone is fine grained	MW			J, 75°, Fe SN, PR, RF						
	100% RETURN	8.00	0% LOSS		93															INTERBEDDED SILTSTONE (80%) AND SANDSTONE (20%): pale grey to pale red-brown, medium bedded at 0°-5°, sandstone is fine grained	MW to SW			FZ, Fe SN, CR infill
	100% RETURN	8.47m	0% LOSS		20																			
100% RETURN	9.50	0% LOSS	20		Hole Terminated at 10.00 m Target depth Groundwater monitoring well installed	MW to SW																		
100% RETURN	10.00	0% LOSS	20								HW													
100% RETURN	10.00	0% LOSS	20													MW								
100% RETURN	10.00	0% LOSS	20																		HW			

See Explanatory Notes for details of abbreviations & basis of descriptions.



FINAL REPORT OF CORE PHOTOGRAPHS: BH01

CLIENT: Bloompark
PROJECT: Opal Bayview SI
LOCATION: Bayview - 5 Main Drive
JOB NO: PS223670

COORDS: 341927 m E 6273574 m N MGA2020-56
SURFACE RL: 28.00 m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 110 mm HOLE DEPTH: 10.00 m

SHEET: 1 OF 2
DRILL RIG: GEO205
CONTRACTOR: Terratest
LOGGED: HW DATE: 1/7/25
CHECKED: BMS DATE: 24/7/25



PointID : BH01 Depth Range: 3.07 - 7.00 m

This report of core photographs must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



FINAL REPORT OF CORE PHOTOGRAPHS: BH01

CLIENT: Bloompark
PROJECT: Opal Bayview SI
LOCATION: Bayview - 5 Main Drive
JOB NO: PS223670

COORDS: 341927 m E 6273574 m N MGA2020-56
SURFACE RL: 28.00 m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 110 mm HOLE DEPTH: 10.00 m

SHEET: 2 OF 2
DRILL RIG: GEO205
CONTRACTOR: Terratest
LOGGED: HW DATE: 1/7/25
CHECKED: BMS DATE: 24/7/25



PointID : BH01 Depth Range: 7.00 - 10.00 m

This report of core photographs must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH02

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 3

POSITION : E: 341877, N: 6273566 (MGA2020-56) SURFACE ELEVATION : 26.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 2/7/2025 DATE COMPLETED : 2/7/2025 DATE LOGGED : 2/7/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL							
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations	
DRILLING & CASING	WATER											
ADT		F-H	Not Encountered	0.10m ES	0.0 26.0			FILL: CONCRETE, pale grey	M	ROAD SURFACE	0.10: PID = 0 ppm 0.11-0.13: Aggregate is angular, 5-20 mm FILL 0.30: PID = 0 ppm 0.50: PID = 0 ppm 1.00: PID = 0.2 ppm; 1.00: PP >600 kPa	
	0.30m ES			0.13m	FILL SAND: fine to coarse grained, dark orange-brown, poorly graded, trace fine grained gravel							
	0.50m ES			0.30m	FILL Sandy Silty CLAY: low to medium plasticity, dark brown to pale grey, fine to coarse grained sand							
	0.80m ES											
	SPT 3,6,16 N=22			1.0 25.0	1.10m							
	1.45m			1.5 24.5	CH	Silty CLAY: high plasticity, pale grey to brown-grey, mottled orange-red, with fine to medium grained sand, with coarse grained ironstone gravel, sub-angular to sub-rounded	w>PL	VS _t	RESIDUAL SOIL			
	2.00m ES			2.0 24.0							w<PL	2.00: PID = 0 ppm
	SPT 15,30,30/100mm HB N=R			2.5 23.5							H	2.50: PP >600 kPa
	2.90m			2.80m								
	VH					3.0 23.0			SANDSTONE: fine grained, red-brown to grey-brown, inferred highly weathered, very low to low strength			
								3.20m	Continued as Cored Drill Hole			
						3.5 22.5						
						4.0 22.0						
						4.5 21.5						
						5.0 21.0						

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH02

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 2 OF 3

POSITION : E: 341877, N: 6273566 (MGA2020-56)	SURFACE ELEVATION : 26.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DATE STARTED : 2/7/2025	DATE COMPLETED : 2/7/2025	DATE LOGGED : 2/7/2025
CASING DIAMETER : 65 mm	BARREL (Length) : 1.50 m	BIT : 8-step
		BIT CONDITION : good

DRILLING					MATERIAL					FRACTURES						
PROGRESS		CORE LOSS (% CORE LOSS DRILL RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH UCS-20-1250 ● - Axial ○ - Diametral ■ - UCS L-6 M-20 H-60 VH-200 EH-200	NATURAL FRACTURE (mm)				VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other	
DRILLING & CASING	WATER									20	40	100	300			1000
					0.0											
					0.5											
					1.0											
					1.5											
					2.0											
					2.5											
					3.0											
					3.20m		START CORING AT 3.20m									
		0% LOSS	0	Is(50) D=0.500 MPa Is(50) A=0.540 MPa	3.5		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine grained, red-brown to dark brown-grey, thinly to medium bedded at 0°-5°	HW to MW							FZ, CR infill P, 5°, Fe SN, PR, RF J, 80°, CU, RF, clay infill IS, CR infill, sand infill J, 80°, IR, RF, CR infill	
		0% LOSS	50		4.0		3.90m: becoming pale grey to pale red-brown									FZ, clay infill P, 0°, CN, PR, RF
		0% LOSS	75		4.5			HW								FZ, clay infill
		0% LOSS		Is(50) D=0.280 MPa Is(50) A=0.470 MPa	5.0										FZ, sand infill, CR infill	

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH02

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 3 OF 3

POSITION : E: 341877, N: 6273566 (MGA2020-56)	SURFACE ELEVATION : 26.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DATE STARTED : 2/7/2025	DATE COMPLETED : 2/7/2025	DATE LOGGED : 2/7/2025
CASING DIAMETER : 65 mm	BARREL (Length) : 1.50 m	BIT : 8-step
		BIT CONDITION : good

DRILLING					MATERIAL					FRACTURES				
PROGRESS		CORE LOSS (CORE LOSS DRILL RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH ● - UCS ○ - Axial ○ - Diametral ■ - UCS UCS<20 MPa UCS 20-50 MPa UCS 50-100 MPa UCS 100-200 MPa UCS >200 MPa	NATURAL FRACTURE (mm)	VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other		
DRILLING & CASING	WATER													
HQ3	100% RETURN	0% LOSS	75	MPa	5.0		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine grained, red-brown to dark brown-grey, thinly to medium bedded at 0°-5° (continued) 5.10m: becoming medium to coarse grained, pale grey to pale brown, stained orange-red, medium bedded at 10°-20°	HW MW				— FZ, clay infill — P, 10°, Fe SN, PR, RF — J, 70°, CN, PR, RF — P, 15°, Fe SN, PR, RF		
		6.00		Is(50) D=0.440 MPa Is(50) A=0.270 MPa	6.0		Hole Terminated at 6.00 m Target depth Groundwater monitoring well installed							
					6.5									
					7.0									
					7.5									
					8.0									
					8.5									
					9.0									
					9.5									
					10.0									

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU CORED BOREHOLE 2A PS223670-GINT.GPJ <-DrawingFile> 25/7/2025 12:57 10.03.00.00 D:\git\Lab and in Situ Tool - DGD [Lib: WSP 6.00.0 2024-06-03 Proj: WSP 6.00.0 2024-06-03]



FINAL REPORT OF CORE PHOTOGRAPHS: BH02

CLIENT: Bloompark
PROJECT: Opal Bayview SI
LOCATION: Bayview - 5 Main Drive
JOB NO: PS223670

COORDS: 341877 m E 6273566 m N MGA2020-56
SURFACE RL: 26.00 m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 110 mm HOLE DEPTH: 6.00 m

SHEET: 1 OF 1
DRILL RIG: GEO205
CONTRACTOR: Terratest
LOGGED: HW DATE: 2/7/25
CHECKED: BMS DATE: 24/7/25



PointID : BH02 Depth Range: 3.20 - 6.00 m

This report of core photographs must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH03

CLIENT : Bloompark

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670

LOCATION : Bayview 5 Main Drive

SHEET : 1 OF 3

POSITION : E: 341910, N: 6273523 (MGA2020-56)

SURFACE ELEVATION : 26.00 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : GEO205

MOUNTING : Track

CONTRACTOR : Terratest

DRILLER : KM

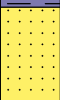
DATE STARTED : 3/7/2025

DATE COMPLETED : 4/7/2025

DATE LOGGED : 4/7/2025

LOGGED BY : HW

CHECKED BY : BMS

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
AD/T					0.0 26.0			FILL: Asphalt pavement, dark grey			ROAD SURFACE
				0.10m ES				FILL Gravelly SAND: fine to coarse grained, brown-grey, poorly graded, fine to medium grained gravel, sub-angular to angular	D		0.00-0.10: Aggregate is angular, 5-10 mm
				0.30m ES				0.40m			FILL 0.10: PID = 0.1 ppm
				0.50m ES	0.5 25.5			Silty Sandy CLAY: high plasticity, pale grey to brown, mottled red-orange, sand is fine grained, with fine to coarse grained ironstone gravel, sub-rounded			RESIDUAL SOIL
				0.80m ES							0.50: PID = 0.1 ppm
				SPT 25,10,13 N=23	1.0 25.0						1.00: PID = 0.1 ppm; 1.00: PP >600 kPa
				1.45m	1.5 24.5		CH		w<PL	VSt to H	
					2.0 24.0						
				SPT 25,15,30/100mm HB N=R	2.5 23.5						2.50: PP >600 kPa
				2.90m				SANDSTONE: fine grained, pale grey to pale brown, inferred highly weathered, very low to low strength			HIGHLY WEATHERED MATERIAL
		VH		3.0 23.0			3.10m				
								Continued as Cored Drill Hole			
					3.5 22.5						
					4.0 22.0						
					4.5 21.5						

See Explanatory Notes for details of abbreviations & basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH03

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 2 OF 3

POSITION : E: 341910, N: 6273523 (MGA2020-56)	SURFACE ELEVATION : 26.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DRILLER : KM	DATE STARTED : 3/7/2025	DATE COMPLETED : 4/7/2025
DATE LOGGED : 4/7/2025	LOGGED BY : HW	CHECKED BY : BMS
CASING DIAMETER : 65 mm	BARREL (Length) : 1.50 m	BIT : 8-step
BIT CONDITION : good		

DRILLING					MATERIAL					FRACTURES				
PROGRESS		CORE LOSS (DRILL DEPTH RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH		NATURAL FRACTURE (mm)		VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
DRILLING & CASING	WATER								UCS=20 L ● Axial ○ Diametral ■ UCS	EH	20 40 100 300 1000			
					0.0				VL L M H VH EH					
					0.5									
					1.0									
					1.5									
					2.0									
					2.5									
					3.0									
					3.10m		START CORING AT 3.10m							
					3.5		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine to coarse grained, pale grey to red-brown, thinly to medium bedded at 5°-10°	HW to MW						FZ, clay infill
					4.0		4.03m: becoming orange-brown to pale grey, with cross bedded at 10°-20°							FZ, clay infill
					4.5									P, 20°, Fe SN, PR, RF
					5.0			HW						J, 60°, healed

See Explanatory Notes for
details of abbreviations
& basis of descriptions.



CORED DRILL HOLE LOG

HOLE NO : BH03

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 3 OF 3

POSITION : E: 341910, N: 6273523 (MGA2020-56)	SURFACE ELEVATION : 26.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DRILLER : KM	DATE STARTED : 3/7/2025	DATE COMPLETED : 4/7/2025
DATE LOGGED : 4/7/2025	LOGGED BY : HW	CHECKED BY : BMS
CASING DIAMETER : 65 mm	BARREL (Length) : 1.50 m	BIT : 8-step
BIT CONDITION : good		

DRILLING					MATERIAL					FRACTURES						
PROGRESS		CORE LOSS (% CORE RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	WEATHERING	ESTIMATED STRENGTH				NATURAL FRACTURE (mm)		VISUAL	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
DRILLING & CASING	WATER								VL-2 L-4 M-6 H-8 VH-200 EH	UCS-20 D ₅₀ - Axis O - Diametral ■ - UCS	20 40 100 300 1000					
HQ3 ↓	100% RETURN ↓	0% LOSS	100	Is(50) A=0.0200 MPa	5.0		INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%); fine to coarse grained, pale grey to red-brown, thinly to medium bedded at 5°-10° (continued)	MW to SW				P, 10°, Fe SN, PR, RF J, 70°, healed				
				Is(50) D=0.250 MPa Is(50) A=0.460 MPa	5.5		5.30m: becoming pale brown-grey					J, 70°, Fe SN, PR, RF, CR infill				
		6.15			6.0		Hole Terminated at 6.15 m Target depth Groundwater monitoring well installed					P, 15°, CN, PR, RF J, 60°, PR, RF, CR infill				
					6.5											
					7.0											
					7.5											
					8.0											
					8.5											
					9.0											
					9.5											
					10.0											

See Explanatory Notes for
details of abbreviations
& basis of descriptions.



CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

HOLE NO : BH03

FILE / JOB NO : PS223670
SHEET : 1 OF 2

POSITION : E: 341910, N: 6273523 (MGA2020-56)	SURFACE ELEVATION : 26.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DATE STARTED : 3/7/2025	DATE COMPLETED : 4/7/2025	DATE LOGGED : 4/7/2025
LOGGED BY : HW	CHECKED BY : BMS	

DRILLING			MATERIAL		PIEZOMETER CONSTRUCTION DETAILS							
PROGRESS		GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	ID BH03	Type Standpipe	Stick Up & RL	Tip Depth & RL 5.00 m 21.00 m AHD	Installation Date 4/7/2025	Static Water Level
DRILLING & CASING	WATER											
AD/T 65mm 100% RETURN 100% RETURN 100% RETURN 100% RETURN	100% RETURN 100% RETURN 100% RETURN 100% RETURN 100% RETURN	Not Encountered	0.0			0.10m FILL: Asphalt pavement, dark grey 0.00-0.10: Aggregate is angular, 5-10 mm						
			0.40m			FILL Gravelly SAND: fine to coarse grained, brown-grey, poorly graded, fine to medium grained gravel, sub-angular to angular						
			1.0		CH	CLAY: high plasticity, pale grey to brown, mottled red-orange, with fine to coarse grained ironstone gravel, sub-rounded						
			2.0									
			2.80m			SANDSTONE: fine grained, pale grey to pale brown, inferred highly weathered, very low to low strength						
			3.0			INTERBEDDED SANDSTONE (80%) AND SILTSTONE (20%): fine to coarse grained, pale grey to red-brown, thinly to medium bedded at 5°-10°	3.00 m					
			3.10m									
			4.0			4.03m: becoming orange-brown to pale grey, with cross bedded at 10°-20°						
			5.0			5.30m: becoming pale brown-grey						
			6.0									
			6.15m			Hole Terminated at 6.15 m Target depth Groundwater monitoring well installed						

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU PIEZOMETER INSTALLATION 2 PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 14:10 10.03.00.09 Dated Lab and In Situ Tool - DGD | Lib: WSP 6.00.0.2024-06-03 Proj: WSP 6.00.0.2024-06-03



FINAL REPORT OF CORE PHOTOGRAPHS: BH03

CLIENT: Bloompark
PROJECT: Opal Bayview SI
LOCATION: Bayview - 5 Main Drive
JOB NO: PS223670

COORDS: 341910 m E 6273523 m N MGA2020-56
SURFACE RL: 26.00 m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 110 mm HOLE DEPTH: 6.15 m

SHEET: 1 OF 1
DRILL RIG: GEO205
CONTRACTOR: Terratest
LOGGED: HW DATE: 4/7/25
CHECKED: BMS DATE: 24/7/25



PointID : BH03 Depth Range: 3.10 - 6.15 m

This report of core photographs must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH05

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 1

POSITION : E: 341901, N: 6273603 (MGA2020-56)	SURFACE ELEVATION : 28.00 (AHD)	ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205	MOUNTING : Track	CONTRACTOR : Terratest
DRILLER : KM	DATE STARTED : 1/7/2025	DATE COMPLETED : 1/7/2025
DATE LOGGED : 1/7/2025	LOGGED BY : HW	CHECKED BY : BMS

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
AD/T		F-H	Not Encountered	0.10m ES	28.0		0.05m	FILL: Asphalt pavement, dark grey	D		ROAD SURFACE 0.00-0.05: Aggregate is angular, 5-10 mm
	0.30m ES			FILL Gravelly Silty SAND: fine to coarse grained, grey to dark grey, poorly graded, fine to medium grained gravel, sub-angular to sub-rounded	FILL 0.10: PID = 0.2 ppm						
	0.50m ES			0.40m							
	0.80m ES			0.5		CH	Sandy Gravelly CLAY: high plasticity, pale grey, mottled orange-red, gravel is fine to medium grained, sub-angular, sand is fine to medium grained	VSt	w<PL	RESIDUAL SOIL 0.50: PID = 0 ppm	
	SPT 30/50mm HB N=R 1.05m			1.0						1.00: PID = 0 ppm; 1.00: PP >600 kPa	
				1.5							
				2.0							
				2.5							
				2.95m							
	SPT 7,10,21 N=31			2.5						2.50: PP >600 kPa	
				3.0							
				3.5							
				4.0							
	VH				3.00m					HIGHLY WEATHERED MATERIAL	
	4.20m	Hole Terminated at 4.20 m Target depth Grouted to surface									

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU BOREHOLE 2A PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 15:12 10.03.00.09 D:\git\Lab and In Situ Tool - DGD\Lib: WSP 6.00.0.0 2024-06-03 Proj: WSP 6.00.0.0 2024-06-03



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH06

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 1

POSITION : E: 341916, N: 6273551 (MGA2020-56) SURFACE ELEVATION : 26.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 2/7/2025 DATE COMPLETED : 2/7/2025 DATE LOGGED : 2/7/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
AD/T		F-H	Not Encountered	0.10m ES	26.0			FILL: Brick paver, brown grey	M to W		ROAD SURFACE
					0.10m 0.15m			FILL SAND: Fine to coarse grained, grey to brown, well graded			0.10: PID = 0.1 ppm
				0.30m ES				FILL: CONCRETE, pale grey			FILL 0.15-0.40: Aggregate is angular, 5-20 mm
				0.50m ES	25.5			Silty CLAY: high plasticity, pale grey to red-brown, with fine to medium grained sand, trace fine to coarse grained ironstone gravel, sub-rounded			RESIDUAL SOIL 0.50: PID = 0 ppm
				0.80m ES			CH		w<PL	VSt to H	
				SPT 15,30/100mm HB N=R 1.25m	25.0						1.00: PID = 0 ppm; 1.00: PP >600 kPa
					1.5 24.5						
					2.0 24.0						
					2.20m			SANDSTONE: fine grained, pale grey to dark brown, inferred highly weathered, very low to low strength			HIGHLY WEATHERED MATERIAL
					2.5 23.5						
				SPT 15,30/50mm HB N=R 2.70m							
					2.90m			Hole Terminated at 2.90 m Target depth Grouted to surface			
					3.0 23.0						
					3.5 22.5						
					4.0 22.0						
					4.5 21.5						
					5.0 21.0						

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU BOREHOLE 2A PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 15:12 10.03.00.09 D:\git\Lab and In Situ Tool - DGD Lib: WSP 6.00.0.0 2024-06-03 Proj: WSP 6.00.0.0 2024-06-03



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH07

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 1

POSITION : E: 341945, N: 6273562 (MGA2020-56) SURFACE ELEVATION : 28.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 30/6/2025 DATE COMPLETED : 30/6/2025 DATE LOGGED : 30/6/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL								
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations		
DRILLING & CASING	WATER												
↑ ADT ↓		F-H		0.10m ES	28.0			0.10m FILL: Brick paver, brown grey			ROAD SURFACE 0.00-0.10: Aggregate is angular, 5-10 mm 0.10: PID = 0.2 ppm FILL 0.15-0.30: Aggregate is angular, 5-20 mm		
				0.30m ES	27.7			0.15m FILL SAND: Fine to coarse grained, grey to brown, well graded	D				
				0.50m ES	27.5			0.30m FILL: CONCRETE, pale grey					
				0.80m ES	27.0			0.50m FILL Silty SAND: fine to medium grained, grey to dark brown, poorly graded, low plasticity silt	D				
				SPT 5,10,19 N=29	27.0		CH	Silty CLAY: high plasticity, red-brown to orange-grey, with fine to medium grained sand.	w<PL	VSt	RESIDUAL SOIL 0.50: PID = 0.2 ppm RESIDUAL SOIL 1.00: PID = 0.2 ppm; 1.00: PP >600 kPa		
				1.45m	26.5							1.50m: becoming pale grey, mottled red	
				2.00m	26.0							SANDSTONE: fine grained, brown to pale grey, stained red to orange, inferred highly weathered, very low to low strength	
				Not Encountered		SPT 14,30/100mm HB N=R	25.5						HIGHLY WEATHERED MATERIAL 2.00: PID = 0.1 ppm
					2.75m	25.0	3.0m: becoming low to medium strength						
					SPT 20/50mm HB N=R	24.0							
			4.05m		23.5								
						4.70m			Hole Terminated at 4.70 m Target depth Grouted to surface				
						5.0							

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB GLEB Log IS AU BOREHOLE 2A PS223670 GINT GPJ <<DrawingFile>> 25/7/2025 15:12 10:03:00.09 Dageb Lab and In Situ Tool - DGD | Lib: WSP 6.00.0.2024-06-03 Proj: WSP 6.00.0.2024-06-03



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH08

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 1

POSITION : E: 341926, N: 6273516 (MGA2020-56) SURFACE ELEVATION : 27.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 3/7/2025 DATE COMPLETED : 3/7/2025 DATE LOGGED : 3/7/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
↑ AD/T ↓		F-H	Not Encountered	0.10m ES	0.0 27.0			FILL: Asphalt pavement, dark grey	D		ROAD SURFACE 0.00-0.15: Aggregate is angular, 5-10 mm
	0.30m ES			0.15m 26.7			FILL Gravelly SAND: fine to coarse grained, brown-grey, poorly graded, medium to coarse grained gravel, angular	0.10: PID = 0.2 ppm FILL			
	0.50m ES			0.30m 26.5			Silty CLAY: high plasticity, pale grey to pale brown, mottled red-orange, with fine to medium grained sand, with medium to coarse grained ironstone gravel, sub-rounded	w<PL	VSt to H	RESIDUAL SOIL	
	0.80m ES			0.5 26.2						0.50: PID = 0 ppm	
	SPT 10,10,17 N=27			1.0 26.0		CH				1.00: PID = 0 ppm; 1.00: PP >600 kPa	
		VH		1.45m	1.5 25.5						
				1.70m			SANDSTONE: fine grained, pale grey to brown-grey, inferred highly weathered, very low to low strength			HIGHLY WEATHERED MATERIAL	
				2.0 25.0							
					2.5 24.5			Hole Terminated at 2.50 m Target depth Grouted to surface			
					3.0 24.0						
					3.5 23.5						
					4.0 23.0						
					4.5 22.5						
					5.0 22.0						

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU BOREHOLE 2A PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 15:12 10.03.00.09 Dagnet Lab and In Situ Tool - DGD | Lib: WSP 6.00.0.2024-06-03 Proj: WSP 6.00.0.2024-06-03



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH09

CLIENT : Bloompark
LOCATION : Bayview 5 Main Drive

PROJECT : Opal Bayview SI

FILE / JOB NO : PS223670
SHEET : 1 OF 1

POSITION : E: 341948, N: 6273493 (MGA2020-56) SURFACE ELEVATION : 26.00 (AHD) ANGLE FROM HORIZONTAL : 90°
RIG TYPE : GEO205 MOUNTING : Track CONTRACTOR : Terratest DRILLER : KM
DATE STARTED : 3/7/2025 DATE COMPLETED : 3/7/2025 DATE LOGGED : 3/7/2025 LOGGED BY : HW CHECKED BY : BMS

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
AD/T		F-H	Not Encountered	0.10m ES	0.0 26.0			FILL: Asphalt pavement, dark grey	D		ROAD SURFACE
					0.15m	FILL Gravelly SAND: fine to coarse grained, brown-grey, poorly graded, medium to coarse grained gravel, angular	0.00-0.15: Aggregate is angular, 5-10 mm				
					0.30m ES	0.30m	Silty CLAY: high plasticity, pale grey to pale brown, mottled orange to red, with fine grained sand, with fine to coarse grained ironstone gravel, sub-rounded to rounded			0.10: PID = 0.1 ppm	
					0.50m ES	0.5 25.5	CH	w<PL	H	FILL	
		0.80m ES	1.0 25.0	RESIDUAL SOIL							
		SPT 30/100mm HB N=R 1.10m	1.30m	0.50: PID = 0.4 ppm							
		VH									1.00: PID = 0.3 ppm; 1.00: PP >600 kPa
					1.5 24.5			Hole Terminated at 1.30 m Target depth Grouted to surface			
					2.0 24.0						
					2.5 23.5						
					3.0 23.0						
					3.5 22.5						
					4.0 22.0						
					4.5 21.5						
					5.0 21.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 6.00.0.0 JB.GLB Log IS AU BOREHOLE 2A PS223670-GINT.GPJ <<DrawingFile>> 25/7/2025 15:12 10.03.00.09 Dagnet Lab and In Situ Tool - DGD | Lib: WSP 6.00.0.0 2024-06-03 Proj: WSP 6.00.0.0 2024-06-03

