

Detailed Site Investigation

Proposed Sand Quarry

3631 Nelson Bay Road, Bobs Farm, NSW

Final Report

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Director	Andrew Norris
Manager	Gray Taylor
Principal Author	Bryson Monaghan

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Suite 201, 20 George St, Hornsby, NSW 2077, Australia
ACN 070 240 890 ABN 85 070 240 890
P +61-2-9476-9999 | mail@martens.com.au | www.martens.com.au

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Glossary of Terms

ABC	Ambient background concentrations
ACL	Added contaminant level
ACM	Asbestos containing material
AEC	Area of environmental concern
AFFF	Aqueous Film-Forming Foam
ANZG	Australian and New Zealand Guidelines
APHA	American Public Health Association
AS	Australian Standard
ASLP	Australian Standard Leaching Procedure
ASS	Acid sulfate soil
AST	Above ground storage tank
BA	Building Application
BH	Borehole
BoM	Bureau of Meteorology
BTEXN	Benzene, toluene, ethylbenzene, xylene, naphthalene
CCME	Canadian Council of Ministers of the Environment
CEC	Cation exchange capacity
CLM	Contaminated land management
COC	Chain of custody
COPC	Contaminants of potential concern
Copper	Cu
CSM	Conceptual site model
DA	Development application
DCP	Development control plan
DCS	Department of Customer Service (NSW)
DEC	Department of Environment and Conservation (NSW)
DECC	Department of Environment and Climate Change (NSW)
DECCW	Department of Environment, Climate Change and Water (NSW)
DGV	Default Guideline Values
DNAPL	Dense nonaqueous phase liquid
DO	Dissolved oxygen
DP	Deposited plan
DPE	Department of Planning and Environment (NSW)
DPI	Department of Primary Industry (NSW)
DQI	Data quality indicator
DQO	Data quality objective
DSI	Detailed Site Investigation
DUAP	Department Urban Affairs and Planning (NSW)
EC	Electrical conductivity
EIL	Ecological investigation level
EPA	Environmental Protection Authority (NSW)
EQL	Estimated quantitation limit (interchangeable with PQL and LOR)
ESL	Ecological screening level
FA	Friable asbestos
GDA	Geocentric Datum of Australia
GDE	Groundwater dependent ecosystem
GG	Ground gas
GIL	Groundwater investigation level
GIPA	Government Information (Public Access)
GME	Groundwater monitoring event
GW	Groundwater
H0	Null hypothesis
HA	Alternate hypothesis
HAP	Historical aerial photography
HAPE	Historical Air Photo Enhancement
HDPE	High density polyethylene

HEPA	Heads of EPAs Australia and New Zealand
HIL	Health investigation level
HM	Heavy metals
HSL	Health screening level
IA	Investigation area
LEP	Local environmental plan
LGA	Local government area
LNAPL	Light nonaqueous phase liquid
LOR	Limit of reporting (interchangeable with EQL and PQL)
LOSP	level of Species Protection
MA	Martens & Associates Pty Ltd
mAHD	Meters, Australian Height Datum
mBGL	Meters below ground level
mBTOC	Meters below top of casing
MGA	Map Grid of Australia
mV	Millivolts
MW	Monitoring well
NATA	National Association of Testing Authorities
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NL	Non limiting
NUDLC	National Uniform Drillers Licensing Committee
OCP	Organochlorine pesticides
OEH	Office of Environment and Heritage (NSW)
OPP	Organophosphorus pesticides
ORP	Oxidation-reduction potential (Redox)
PACM	Potential asbestos containing material
PAH	Polycyclic aromatic hydrocarbons
PASS	Potential acid sulfate soil
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PFAS	Per- and polyfluoroalkyl substances
PFHxS	Perfluorohexane sulfonate
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
PID	Photo-ionisation detector
POEO	Protection of the Environment Operations
PQL	Practical quantitation limit
PQL	Practical quantitation limit (interchangeable with EQL and LOR)
PSH	Phase separated hydrocarbon
PSI	Preliminary Site Investigation
PSLEP	Port Stephens Local Environmental Plan
QA	Quality assurance
QC	Quality control
RAP	Remedial action plan
RL	Reduced level
RPD	Relative percentage difference
RSD	Relative standard deviation
SAC	Site acceptance criteria
SAQP	Sampling, analysis, and quality plan
SD	Standard deviation
SDT	Spatial digital twin
SEAR	Secretary's Environmental Assessment Requirements
SEED	Search engine for environmental data
SEPP	State Environmental Planning Policy
SIX	Spatial information exchange
SMP	Soil Management Plan
SOFAC	Statement of facts and contentions

SQGE	Soil Quality Guidelines for environmental health
SRA	Sample receipt advice
SS	Surface sample
SSDA	State significant development application
SSDCS	Spatial Service Department of Customer Service (NSW)
SWL	Standing water level
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total dissolved solids
TOC	Top of casing
TP	Test pit
TPH	Total petroleum hydrocarbons
TRH	Total recoverable hydrocarbons
UCL	Upper confidence limit
UFP	Unexpected Finds Protocol
UPSS	Underground petroleum storage system
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Authority
UST	Underground storage tank
UXO	Unexploded ordinance
VOC	Volatile organic compounds
WT	Waste Treatment
Zinc	Zn
α	Alpha
β	Beta
γ	Gamma

1 Introduction

1.1 Overview

This report documents a Detailed Site Investigation (**DSI**) completed by Martens and Associates (**MA**) on behalf of Newcastle Sand C/- ADW Johnson (the **Client**) to support a proposed State Significant Development Application (**SSDA**) for a proposed sand quarry to be located at 3631 Nelson Bay Road, Bobs Farm NSW (the **Site**).

This DSI has been prepared to support the SSD application and respond to the Planning Secretary's Environmental Assessment Requirements (**SEARs**), including SEARs Item 8 (Land resources) with respect to land contamination and associated mitigation/management measures.

The investigation area (**IA**) comprises the Site boundary, as shown on Appendix A (Map 01).

1.2 Proposed Development

The Proponent seeks to develop the site for an extractive industry as a sand quarry. Consent is sought for annual extraction of 530,000tpa for 10 years, equating to a total life-of-quarry of approximately 4.4 million tonnes. It is anticipated the proposal will average sales of 10,000 to 12,000 tonnes per week.

The site has an area of approximately 40.9ha with the proposal seeking to use most of the subject site for extractive industry purposes with the exception of:

- A minimum 15m buffer between the site boundary and any areas of extraction
- The existing right-of-carriage way including a 3m buffer in the north-east of the site and the area east of this right-of-carriageway
- The existing electricity easement including a 3m buffer at the southern end of the site and the vegetated area to the south of this easement

No dredging is proposed with only dry (surface) sand extraction being employed.

Preparation of the site and proposed sand quarry operations would broadly comprise:

- Construction of a new left-in left-out intersection
- Establishment of processing and sales area including installation of onsite office (Atco structure), installation of screening and wash facilities, designation of stockpiling areas, associated ancillary structures, and use of the existing dwelling at the site for a manager's residence
- Staged vegetation clearing and topsoil stripping in accordance with the approved staging plan with topsoil stored onsite to be used for future rehabilitation works.
- Dry extraction down to a maximum of 0.7m above the ground water table

- Ongoing rehabilitation

Day-to-day operations would require two (2) articulated haul trucks (Volvo A40G) loaded by a hydraulic excavator (Volvo EC350) to transport sand from the extraction area to the on-site processing facility being a full electric screen and wash plant. Equipment will include excavators, front-end loaders, haul trucks, conveyors and water carts. Operations will utilise modern, well-maintained equipment incorporating advanced noise attenuation and water saving measures as well as fuel efficiency technology to reduce operational impacts on the surrounding environment.

The site benefits from a Water Access Licence (WAL5960) for 40ML per annum which is proposed to be used for sand washing purposes. Approximately 85% of extracted sand will be washed requiring a total of approximately 32ML per annum which is within the current Water Access Licence.

All essential services are available, or able to be made available, at the site including electricity, water tanks for potable water, pump-out system for sewage management, stormwater drainage and suitable vehicular access.

Sales would be by haulage truck at a maximum of ten (10) loaded trucks per hour equating to a maximum of 120 loaded trucks per day but with an average of 46 loaded trucks per day. All transport trucks would travel east along Nelson Bay Road and complete a U-turn at the Port Stephens Drive roundabout. Haulage trucks will be prohibited from using Marsh Road.

Proposed quarry development plans are provided in Appendix B.

1.3 Objectives

Investigation objectives include:

- Identify historical and current activities and uses on the Site and adjacent land which could potentially result in land contamination.
- Identify areas of environmental concern (**AEC**) and associated contaminants of potential concern (**COPC**) to assist with the development of a conceptual site model (**CSM**) for the Site.
- Assess the presence, nature and extent of potential contamination by undertaking soil and groundwater sampling and laboratory analysis.
- Assess the suitability of the Site for the proposed land use, and where required, make recommendations for additional investigations, remediation, or management.

1.4 Scope of Works

The scope of works adopted for the investigation included:

- Review of available online mapping resources.

- Review of available online hydrogeological and groundwater information.
- A desktop study, including review of historical aerial photography, historical Council records, information available on relevant regulatory and government databases completed for the Site.
- Inspection of the Site to confirm desktop study findings and make observations of land use and activities on the Site and surrounding land.
- Completion of intrusive investigations to review soil conditions and collect representative soil samples from former and existing market gardens and / or orchards area and former and existing buildings and / or structures areas.
- Completion of groundwater sampling event including low flow groundwater sampling from 3 onsite monitoring wells with field screening of groundwater quality parameters (pH, Electrical conductivity (**EC**), Oxidation-reduction potential (**ORP**), dissolved oxygen (**DO**) and temperature).
- Laboratory analysis of soil and groundwater samples for COPC identified by the CSM.
- Preparation of this report in general accordance with relevant NSW EPA contaminated land guidance and associated assessment criteria and industry practice.

1.5 Guidelines

The following regulatory guidelines have been considered for the preparation of this report:

- NSW DUAP (1998) Managing Land Contamination: Planning Guidelines.
- NEPC (2013a) Schedule B1: Guideline on Investigation Levels for Soil and Groundwater.
- NEPC (2013b) Schedule B2: Guideline on Site Characterisation.
- NSW DEC (2007) Guidelines for the Assessment and Management of Contamination Groundwater.
- NSW EPA (2017) Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme.
- NSW EPA (2020) Contaminated Land Guidelines: Consultants Reporting on Contaminated Land.
- NSW EPA (2022a) Contaminated Land Guidelines: Sampling design part 1 – application
- NSW EPA (2022b), Contaminated Land Guidelines: Sampling design Part 2 – interpretation

- HEPA (2025) PFAS National Environmental Management Plan, Version 3.0.
- State Environmental Planning Policy (Resilience and Hazards) 2021.

2 Site Setting

2.1 Site Identification

Site identification details are provided in Table 1. The location of the Site and surrounding land is shown in Appendix A (Map 01).

Table 1: Site identification information.

Item	Detail
Site address	3631 Nelson Bay Road, Bobs Farm, NSW
Legal identification	Lot 254 DP 753204
Approximate site area	Approximately 41 ha (By calculation – NSW SDT Explorer)
Geographic site coordinates	Southern portion of Site (datum GDA2020 – MGA56): - Easting: 406650 - Northing: 6372984 (Source: NSW SDT Explorer)
Local government area	Port Stephens Council
Zoning	RU2: Rural Landscape (Port Stephens Local Environmental Plan (PSLEP) 2013)
Current land use(s)	Predominantly bushland / undeveloped land with vehicle tracks. A cleared area adjacent to the south-eastern boundary (near Nelson Bay Road) comprises agricultural uses (including olive and fig plantings), farm sheds, a farm-hand residence and a primary residence. An overhead electricity easement traverses the southern corner of the Site.
Proposed land use(s)	Sand Quarry
Surrounding land use	Rural residential allotments border the Site to the north, west, southwest, and northeast. Nelson Bay Road borders the Site to the southeast, with Worimi National Park located on the southern side of the road. The Australian Shark and Ray Centre is located along the western end of the northern boundary of the Site.

2.2 Environmental Setting

Information relating to the environmental setting of the site is presented in Table 2.

Table 2: Environmental setting information.

Item	Detail
Topography	The majority of the Site slopes towards the east, however, some portions of the Site slope to the north, west and southwest. Slopes are typically low (0 - 5 %) in the eastern portion of the Site and are higher (approximate 10 – 50 %) over the remainder of the Site on dune knolls. Site elevation ranges from approximately 35 metres Australian Height Datum (mAHD) at a knoll in the northwest to approximately 2 mAHD at a depression in the Site's north.

Item	Detail
Geology	The Newcastle 1:250,000 Geological sheet SI 56-2 indicates the Site is underlain by Quaternary beach sand and alluvial deposits consisting of marine and freshwater deposits of gravel, sand, silt and clay overlying Gilmore and Nerong Carboniferous Volcanics.
Soil landscapes	The eSPADE (NSW DPE, 2025) platform indicates the following soil landscapes are mapped within the Site: - Hawks Nest Soil Landscape mapped across the southeast portion of the Site comprising deep (>300 cm), well-drained Podzols on dunes with deep (>300 cm) minor Acid Peats/ Siliceous Sands in swampy swales. - Boyces Track Soil Landscape mapped across the northwest portion of the Site comprising deep (>300 cm), very well-drained weakly developed Podzols. The eSPADE (NSW DPE, 2025) platforms soil modelling covering the Site indicate soil cation exchange capacity (CEC) of the upper 2.0 m of soil ranges between ≤ 5 and 15 cmol/kg, while pH values range between pH 4 to pH 5.5.
Acid sulfate soils	The eSPADE (NSW DPE, 2025) platforms acid sulfate soils (ASS) risk mapping indicates the Site is mapped as having low probability of ASS occurrence > 3 meters below ground level (mBGL). ASS risk mapping associated with the PSLEP 2013 indicates the Site is mapped as predominantly Class 4 ASS risk (any works > 2 m below natural ground surface and where the watertable is likely to be lowered > 2 m). A small area of Class 3 ASS risk (any works > 1 m below natural ground surface and where the watertable is likely to be lowered > 1 m) is present in the northmost corner of the Site. ASS risk is addressed in separate, dedicated ASS assessment reporting prepared for the project (including consideration of proposed excavation depths and any potential groundwater drawdown). Accordingly, detailed assessment of ASS risk and management requirements is outside the scope of this DSI.
Surface hydrology	No watercourses, drainage features or surface ponding are present onsite. The majority of the site drains east, towards Worimi National Park, into the South Pacific Ocean. The northwest portion drains northwest into a large dam on the neighbouring Shark and Ray Centre property or into the drainage network of Tilligerry Creek, located approximately 1km northwest of the Site.
Heritage	No heritage items were identified within the Site boundary based on a review of PSLEP 2013 mapping/records.

2.3 Hydrogeology and Groundwater Use

Consistent with the intent of NSW DEC (2007) *Guidelines for the Assessment and Management of Groundwater Contamination*, preliminary assessment to identify hydrogeological conditions and groundwater receptors has been completed to assist with CSM development. Finding of this preliminary assessment is provided in the following subsections.

2.3.1 Hydrogeological Setting

The Bureau of Meteorology (**BoM**) Australian Groundwater Insight portal (BoM, 2025) indicates the Nelson Bay / coastal Port Stephens area is associated with groundwater resources in coastal sediment aquifers (porous media), which can be locally productive depending on sediment thickness and connectivity.

2.3.2 Groundwater Uses

The WaterNSW (2025) Real-time Water Database was reviewed to identify local groundwater uses ≤ 1 km of the Site. A summary of available bore records is provided in Table 3.

Table 3: Groundwater bore records summary.

Bore Identification	Registered Use	Direction and Distance	Groundwater Depth (mBGL)	Water bearing Zone Information
GW080296	Domestic, irrigation, farming.	245 m west of northwest corner	Unknown	No Information provided
GW056098	Irrigation	320 m northeast of eastern most corner	3.00	Clayey Sand – 3.0 to 7.0 mBGL Yield – 6.31 L/s
GW079677	Unknown	530 m southeast of eastern most corner	Unknown	No Information provided
GW067296	Domestic	672 m north of eastern most corner	0.50	Yield – 2.5 L/s
GW079396	Unknown	530 m southeast of eastern most corner	Unknown	No Information provided
GW067269	Stock	810 m north of eastern most corner	Unknown	No Information provided

On the basis of the records reviewed, groundwater extraction for domestic, irrigation and stock watering purposes occurs on surrounding land. In addition, the Site benefits from Water Access Licence WAL5960, which provides an entitlement of 40 ML/year. Based on information provided by the Client, groundwater extracted under WAL5960 is proposed to be used as process water for sand washing, with approximately 85% of extracted sand requiring washing and an estimated annual water demand of approximately 32 ML/year. This demand is understood to be within the existing licensed entitlement.

Accordingly, while the proposed development is not anticipated to rely on groundwater for potable or domestic supply, groundwater represents a relevant operational water source for the proposed quarry. Groundwater bore information is provided in Appendix C.

3 Previous Investigation

3.1 Overview

A review of information available to MA at the time of reporting did not identify any previous contaminated land assessment reporting (e.g. PSI, DSI, RAP or validation reporting) completed for the Site.

MA previously prepared a hydrogeological assessment for the Site in support of a former SSD concept (since withdrawn). Given the current proposal involves dry (surface) extraction above the groundwater table, the prior hydrogeological assessment is referenced in this DSI for contextual purposes only, including to inform the CSM with respect to groundwater occurrence, groundwater quality characteristics, and potential groundwater receptors.

3.2 Previous MA Hydrogeological Assessment

The following previous MA report has been considered for context:

- MA (2020) Hydrogeological Assessment and Management Plan, Proposed Sand Mine at 3631, 3679 & 3721 Nelson Bay, Bobs Farm, NSW, P1303897JR08V02, dated 5 November 2020.

A high level summary of the aspects relevant to this DSI is provided in Table 4.

Table 4: Summary of the MA (2020) investigations.

Item	Detail
MA (2020) Hydrogeological Assessment and Management Plan	
Groundwater levels / occurrence	Groundwater level monitoring was undertaken in on-site monitoring wells during two monitoring periods. Across the monitoring network, groundwater was encountered at shallow to moderate depths, with levels exhibiting variable responses to rainfall events between wells. This variability was interpreted as being influenced by relative surface elevation and/or local variability in soil materials. <i>(Relevance: informs groundwater as a potential receptor/pathway and supports the CSM in a sandy coastal setting.)</i>
Groundwater quality findings	Groundwater was reported as generally acidic, with pH values ranging from acidic to near-neutral conditions. Reported salinity data indicated groundwater was generally fresh, with isolated higher salinity results suggestive of potential localised saline influence. Nutrient concentrations (notably nitrogen species and phosphorus) were elevated in some wells, with the prior assessment suggesting agricultural sources (e.g. fertiliser application and/or local animal sources) as plausible contributors. <i>(Relevance: informs baseline groundwater chemistry and potential agricultural influences relevant to the CSM and COPCs and provides context for consideration of proposed groundwater use for sand washing)</i>
Overall groundwater risk context	The MA (2020) assessment concluded that groundwater quality within the local aquifer was generally poor, and that risks to groundwater quality could be managed with appropriate engineering and operational controls for the former SSD concept. <i>(Relevance: provides contextual baseline only.)</i>

3.3 Relevance to Current DSI

This DSI includes a single round of groundwater screening (Section 8.5) to support the CSM, identify any indication of groundwater impact associated with current or historical site activities, and provide preliminary contaminated land context relevant to the proposed operational use of groundwater at the Site. Given the limited temporal dataset, the groundwater results are interpreted as screening-level information only and do not constitute a detailed groundwater characterisation program.

If project design changes such that excavation and/or dewatering is proposed to intercept groundwater, and/or if a more detailed assessment of groundwater quality is required to support operational use under WAL5960, the CSM and scope of groundwater assessment would require review and may warrant additional groundwater monitoring and/or investigation.

4 Desktop Study

4.1 Historical Aerial Photography

Historical aerial photography covering the Site and surrounding land for the period 1954 to 2025 was reviewed. Observations are summarised in Table 5, with copies of historical aerial photographs provided in Appendix D.

Based on the imagery reviewed, the Site remained predominantly bushland until sometime between 1993 and 2001, after which clearing occurred in the eastern portion of the Site and agricultural land use and associated buildings/structures became apparent. Further expansion of the agricultural area and associated infrastructure occurred between 2001 and 2016, with little apparent change in more recent imagery.

Table 5: Historical aerial photography observations for the period 1954 to 2025.

Year (Source)	Site Observations	Surrounding Land Observations
1954 (NSW Spatial Services HAPE)	Predominantly bushland and undeveloped.	Agricultural land use to the north. Bushland to the south, east and west.
1966 (NSW Spatial Services HAPE)	Easement intersects the southern portion of the Site. Otherwise, little to no change from previous image.	Development of Nelson Bay Road adjacent to the eastern boundary of the Site. Otherwise, little to no change from previous image.
1975 (NSW Spatial Services HAPE)	Little to no change from previous image.	Little to no change from previous image.
1984 (NSW Spatial Services HAPE)	Little to no change from previous image.	Little to no change from previous image.
1993 (NSW Spatial Services HAPE)	Little to no change from previous image.	Increased development, likely residential, to the northeast. Otherwise, little to no change from previous image.
2001 (NSW Spatial Services HAPE)	Bushland cleared in the eastern portion of the Site. Presence of agricultural land use in the southeast and northeast portions. Presence of a building, likely residential dwelling, in the southeast portion.	Large dam constructed to the north. Increased development to the northeast.
2010 (Nearmap) 19/06/2010	Further clearing in the eastern portion with agricultural land use across much of the eastern half of the Site. Tracks apparent. Additional buildings/structures present in the south-east, including sheds/garages; one structure appears under construction. Small soil mounds apparent near internal tracks (potentially associated with track formation/earthworks).	Little to no change from previous image.

Year (Source)	Site Observations	Surrounding Land Observations
2016 (Nearmap) 2/11/2016	Little to no change from previous image.	Little to no change from previous image.
2025 (Nearmap) 24/07/2025	Shed and tanks removed from the centre of the eastern portion of the Site.	Little to no change from previous image.

4.2 Council Development Records

Port Stephens Council development records were reviewed via the Council's Development Application (**DA**) Tracker. An informal request for information under the Government Information (Public Access) (**GIPA**) process was also undertaken to obtain additional documentation relevant to historical land uses and development approvals at the Site.

A summary of Council records is provided in Table 6. Information of Council development records, obtained from councils' website and via GIPA, are provided in Appendix E.

Table 6: Council development records summary.

Year	Record Number	Status	Description
2018	DA 25-2018-8-1	Completed	Extractive industries
2017	DA 25-2017-3-1	Completed	Bob Farm Sands Project
2008	WT 15-2008-48-1	Approved	Waste treatment system
2007	DA 16-2007-776-1	Approved with Conditions	Storage Shed
2002	DA 16-2002-1875-1	Approved	Temporary Compound Site
2002	DA 16-2002-594-1	Approved with Conditions	Clearing, Machinery Shed and Storage Compound
2000	DA 16-2000-1070-1	Approved with Conditions	Olive farm, olive processing & distribution
2000	WT 15-2000-134-1	Approved with Conditions	Sewage management facility
1999	DA 16-1999-1780-1	Approved with Conditions	Single storey dwelling
1999	DA 16-1999-1780-2	Approved	S.96 Amendment
1995	BA/DA 7-1995-181-1	Approved	Advertising sign

4.3 Government Register Records

A review of available government register records was completed for the investigation using the following online resources:

- Records of public notices of contaminated land under Section 58 of the *Contaminated Land Management Act 1997* (**CLM Act**).
- Records relating to contaminated land notified to NSW EPA under Section 60 of the CLM Act.

- Records relating to licensed activities, applications, notices, and audits under the *Protection of the Environment Operation Act 1997 (POEO Act)*.
- Records relating to sites listed under the NSW EPA per-and polyfluoroalkyl substances (**PFAS**) investigation program.
- Records relating to site being investigated and or managed by the Department of Defence for PFAS contamination.
- Records managed by Department of Defence relating to land affected, or suspected of being affected, by unexploded ordinance (**UXO**).

A summary of information relating to the Site is provided below in Table 7. Applicable records are provided in Appendix F.

Table 7: Summary of government register records.

Record	Onsite	Surrounding Land
Notices under Section 58 of the CLM Act 1997 ¹	No records	No records ≤500 m
Duty to Report Contamination under Section 60 of the CLM Act 1997 ²	No records	No records ≤500 m
Records relating to licensed activities, applications, notices, and audits under the POEO Act 1997 ³	No records	One record ≤500 m: • A penalty notice was identified within 500 m (Hay Enterprises (NSW) Pty Ltd, 3721 Nelson Bay Road, March 2018; penalty notice no. 3173525017). Based on the distance and preliminary understanding of site setting, this record is not considered likely to represent a material contamination source to the Site.
NSW EPA PFAS investigation program ⁴	No records	No records ≤500 m
Department of Defence PFAS management and investigation program ⁵	No records	No records ≤500 m
Department of Defence records relating to sites suspected or affected by UXO ⁶	No records	No records ≤500 m:

Notes.

1. Records available at: <https://apps.epa.nsw.gov.au/prclmapp/searchregister.aspx>.
2. Records available at: <https://www.epa.nsw.gov.au/your-environment/contaminated-land/notified-and-regulated-contaminated-land/list-of-notified-sites>.
3. Records available at: <https://apps.epa.nsw.gov.au/prpoeoapp/>.
4. Records available at: <https://www.epa.nsw.gov.au/Your-environment/Contaminated-land/nsw-government-pfas-investigation-program>.
5. Records available at: <https://www.defence.gov.au/about/locations-property/pfas/pfas-management-sites>.
6. Records available at: <https://uxo-map.defence.gov.au/>.

4.4 Potential Contaminating Activities and Land Uses – Offsite

A review of publicly available online mapping and business directory sources was undertaken to identify potentially contaminating land uses within approximately 500 m

of the Site (e.g. service stations, mechanical workshops, dry cleaners, airports/aviation facilities, industrial premises and waste facilities). No such potentially contaminating land uses were identified within the search radius from the sources reviewed at the time of assessment.

4.5 PFAS Screening Assessment

Potential risk posed by PFAS contamination at the Site has been evaluated by using available desktop study information, in combination with a modified version of the preliminary screening assessment developed by EnRiskS (2016). The preliminary PFAS screening assessment for the Site is presented in Table 8.

Table 8: Preliminary PFAS screening assessment.

Preliminary Screening	Probability	Justification
Did fire training occur on-site?	Low	No evidence of fire training areas identified from desktop review.
Is an airport or fire station on the Site, or located hydraulically upgradient or adjacent to the Site? ¹	Low	Desktop review did not identify an airport/aviation facility or fire station on or in the immediate vicinity of the Site.
Have “fuel” fires ever occurred onsite? (e.g., solvent, petrol, diesel, kerosene)	Low	No evidence of activities typically associated with AFFF use identified from desktop review.
Have PFAS been used in manufacturing or stored onsite? ²	Low	Site history is not consistent with PFAS manufacturing/industrial use; no evidence of bulk storage identified.
Has land application of biosolids/recycled organics (a recognised PFAS pathway in agricultural settings) likely occurred?	Low	No information indicating biosolids/recycled organics application at the Site was identified during the desktop review

Notes:

- ^{7.} PFAS is used in a wide range of industrial processes and consumer products, with further information of potential sources provided in Appendix B of the HEPA (2025) *PFAS National Environmental Management Plan*, Version 3.0.

On the basis of the desktop review, PFAS risk at the Site is considered low, as no land uses typically associated with significant PFAS sources (e.g. fire training areas, airports/aviation facilities, firefighting stations or relevant industrial activities) were identified on or adjacent to the Site.

Notwithstanding the low overall likelihood, PFAS were included in the analytical program for selected soil and groundwater samples as a screening measure. PFAS results are interpreted against the relevant criteria adopted for the project, and further PFAS assessment would only be warranted if screening results indicate PFAS concentrations above the adopted assessment criteria and/or if additional information becomes available indicating a plausible PFAS source

5 Site Inspection

An inspection of the Site was conducted for the investigation by an experienced MA Consultant on 28 October 2025. Observations made during the inspection are provided below in Table 9.

Table 9: Site inspection observations

Item	Observation
Buildings and structures	Two residential dwellings (primary dwelling and granny flat) and five farm sheds (including storage sheds, garage and machinery/workshop structures) were observed in the south-eastern portion of the Site. Several aboveground water tanks were observed, including three tanks within the central-eastern cleared area and one tank adjacent to the granny flat.
Ground surfaces and pavements	The majority of the Site comprises bushland and is generally undeveloped, aside from vehicle access tracks. A cleared area adjacent to the south-eastern boundary (near Nelson Bay Road) comprises agricultural land (including olive and fig plantings) and grassed areas. An overhead electricity easement traverses the southern portion of the Site.
Fill material and stockpiles	No obvious evidence of large-scale imported fill was observed during the inspection. Localised stockpiles/material storage were observed, including timber and vegetation debris, irrigation lines/plastics, and small quantities of building materials/bricks in the vicinity of sheds and within the cleared agricultural area. No potential asbestos-containing material (PACM) was observed in stockpiled materials during the initial site inspection.
Historic structures	No clear evidence of former/removed structures was observed during the inspection.
Chemical storage	No obvious evidence of significant chemical storage was observed during the inspection.
UPSS, USTs and ASTs	No evidence of underground petroleum storage systems (UPSS), underground storage tanks (USTs) or aboveground storage tanks (ASTs) for fuel/chemicals was observed during the inspection. Aboveground water tanks were present as noted above.
Waste materials and storage	No obvious waste storage areas or significant waste accumulation were observed during the inspection.
Odours and staining	No significant odours, staining or stressed ground surface conditions were observed at the time of inspection.
Hazardous building materials	Evidence of hazardous buildings materials was not observed during the initial site inspection. A small quantity of asbestos-containing material (ACM) was subsequently identified during intrusive investigations (refer Section 8.3).
Electrical substation kiosks	Electrical substation kiosks were not observed on the Site or adjacent land during the inspection.
Vegetation and phytotoxicity	Vegetation at the Site consisted mainly of bushland mature trees and open grassland. Vegetation was observed to be in good condition and evidence of potential phytotoxicity effects to vegetation was not identified.

A selection of photographic images obtained during the site inspection are provided in Appendix G.

6 Conceptual Site Model

6.1 Areas of Environmental Concern

An assessment of potential AECs and COPCs has been made for the Site on the basis of previous the desktop study, and site inspection observations. The outcome of this appraisal is provided in Table 10.

Table 10: Potential contamination sources and contaminants of potential concern.

AEC	Potential for Contamination	COPC
AEC A Former and existing market gardens and / or orchards	Historical and/or current horticultural activities may have involved pesticide, herbicide and fungicide application, which can result in residual pesticide compounds and associated metals in surface soils.	Heavy metals (HM), organochlorine pesticides (OCP) and organophosphorus pesticides (OPP).
AEC B Former and existing buildings and / or structures	Potential contamination may occur in areas of the Site from the following: - Former structures identified in historical aerial imagery (noted in Section 4.1) that may have been removed/demolished, with potential for residual building materials or buried fragments in near-surface soils. - Building construction materials associated with current structures may include PACM, zinc-treated (galvanised) metals, and lead-based paints, which upon weathering, could result in contamination of building curtilage soils. - Pesticides may have also been applied to surface soils in the historical period beneath former structures for pest and termite control purposes. - Structures may store, or have stored, low quantities of fuels, oils, and chemicals.	HM, OCP, OPP, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB) and asbestos.

PFAS were not identified as a primary COPC associated with the AECs based on the desktop review and PFAS screening assessment. PFAS were nevertheless included in the analytical program for selected soil and groundwater samples as a screening measure (refer Sections 4.5 and 8).

A map displaying the location of AECs identified in Table 10 is provided in Appendix A (Map 12).

6.2 Source – Exposure Pathway – Receptor Linkages

A CSM outlining *source – exposure pathway – receptor* linkages has been developed from information gathered by the DSI and is presented in Table 11.

Table 11: Conceptual site model *source – exposure pathway – receptor* linkages.

Item	Description
Potential media affected by AECs and mechanism of contamination	Soil is the primary media of interest given the identified AECs. Potential contamination associated with former/current horticultural activities and building/structure curtilage is expected to be localised and generally associated with surface and near-surface soils (“top-down” inputs), with potential for vertical migration depending on the nature of the contaminant, release volumes and soil permeability. Surface, near-surface and deeper soils (including natural soils) were therefore considered in the investigation. Groundwater is not considered a primary media of interest from a contaminated land perspective because no credible site-related groundwater contamination sources were identified from the desktop review and the current proposal involves excavation above the groundwater table. Notwithstanding, groundwater was included in the investigation as a screening measure due to the permeable sandy setting, the presence of groundwater users in the surrounding area, and the proposed operational use of groundwater at the Site for sand washing under WAL5960 (refer Sections 2.3 and 8). Ground gas is not considered a media of interest, as no credible ground gas sources (e.g. landfill, waste disposal or volatile source areas) were identified on the Site or surrounding land.
Potential exposure pathways	<i>Human health</i> • Ingestion • Dermal contact and absorption • Inhalation (dusts and vapours) <i>Ecological</i> • Biota uptake and intake
Potential receptors	<i>Human health</i> • Site workers • Site visitors • Maintenance workers (including intrusive soil workers) • Construction workers <i>Ecological</i> • Rural landscape area (beyond development footprint) • Worimi National Park biota (as an offsite sensitive receptor)

6.3 Review of Information Data Gaps

A summary of information or data which has not been obtained or considered for inclusion in the DSI is discussed in Table 12. This summary also discusses possible constraints and uncertainty relating to the development of the investigation CSM.

Table 12: Information data gap summary.

Data Gap	Commentary
Safework NSW dangerous goods records	There is no historical evidence of large volume storage of petroleum hydrocarbons in the Site, nor of past site uses likely to have required such storage. As such, a search of SafeWork NSW dangerous goods records was not obtained for the investigation.
Section 10.7 planning certificate	Section 10.7 planning certificates were not obtained for review as part of the DSI. It is considered information provided in the planning certificate is unlikely

Data Gap	Commentary
	to change the conclusions or recommendations of this report as sufficient historical information relating to former site activities was obtained from past reporting, historical aerial photography interpretation and inspection of the Site.
Land title records	Land title records were not reviewed as part of this DSI. This is unlikely to affect the findings of the investigation as sufficient historical information relating to former site activities was obtained from past reporting, historical aerial photography interpretation and inspection of the Site.

6.4 Conceptual Site Model Discussion

The proposed sand quarry represents an industrial / commercial land use scenario, with primary human health receptors comprising site workers (operations), construction/earthworks personnel and maintenance contractors.

Based on the source–pathway–receptor linkages outlined in Section 6.2, the following AECs have the greatest potential to contain contamination that could result in receptor exposure:

- AEC A: Former and existing market gardens and/or orchards; and
- AEC B: Former and existing buildings and/or structures and associated curtilage.

Soil was identified as the primary medium of interest for the assessment, as potential contamination associated with the identified AECs would be expected to be largely “top-down” and generally localised within surface and near-surface soils, with potential for vertical migration depending on contaminant mobility and soil permeability. Accordingly, the intrusive investigation and sampling program was designed to characterise soil conditions within the identified AECs and assess potential exposure pathways relevant to the proposed land use scenario.

A groundwater screening investigation was also undertaken as part of this DSI to support the CSM and provide screening level information on groundwater quality in a permeable sandy setting with surrounding groundwater users. Groundwater is not considered a primary medium of concern from a contaminated land perspective because quarry extraction is understood to occur above the groundwater table and no credible site-related groundwater contamination sources were identified from the desktop review. However, groundwater is recognised as a relevant operational medium because groundwater extracted under WAL5960 is proposed to be used for sand washing. On that basis, groundwater screening results have been used to identify whether any indication of groundwater impact is present, provide preliminary contaminated land context relevant to the proposed operational use, and inform whether further groundwater assessment may be warranted.

7 Sampling, Analysis and Quality Plan

A Sampling, Analysis and Quality Plan (**SAQP**) was developed to ensure that limited sampling data collected for this DSI is representative and provides a robust basis for site assessment decisions. The SAQP has been prepared in general accordance with NEPC (2013b) methodology, and includes:

- Data quality objectives (**DQO**).
- Data quality indicators (**DQI**).
- Sampling methodologies and procedures.
- Field screening methods.
- Sample handling, preservation, and storage procedures.
- Field and laboratory quality assurance (**QA**) / quality control (**QC**).

The SAQP is summarised in the following subsections.

7.1 Data Quality Objectives

DQOs for the investigation are prepared as statements specifying the qualitative and quantitative data required to support project decisions. DQOs have been prepared in general accordance with NEPC (2013b) and NSW EPA (2020) and are presented below in Table 13.

Table 13: Data quality objectives.

DQO Process Step		DQO Output
1	State the problem	
	Summary of contamination problem	Soil within the identified AECs requires characterisation to determine suitability for the proposed industrial/commercial land use scenario and to inform whether remediation/management measures are required.
	CSM summary	- Contaminants: AEC A – metals and pesticides (OCP/OPP) associated with horticultural activities. AEC B – metals (incl. lead), petroleum hydrocarbons (TRH/BTEXN), PAHs and asbestos associated with building/structure curtilage and potential historical chemical/fuel storage and use. PFAS were included as screening analytes only (refer Section 4.5). - Sources – horticultural activities (market gardens/orchards) and former/current buildings/structures and associated curtilage. - Pathways – dermal contact, inhalation of dust and / or vapours, ingestion and biota uptake / intake have been identified as the pathways of concern. - Receptors – when developed, site workers, site visitors, maintenance personnel, and biota on land surrounding the development footprint.
	Investigation constraints	No practical constraints have been identified.
2	Identify goals of the study	
	Principal study question(s)	- Are soils within AEC A and AEC B suitable for the proposed industrial/commercial land use scenario based on comparison with adopted criteria? - Do groundwater screening results indicate evidence of impact requiring further assessment and/or management?
	Alternative outcomes or actions that could result from resolution of the principal study question(s)	The alternative outcomes will be: <u>Soil</u> - Soils are suitable for the proposed land use with respect to the contaminants assessed (no further action required). Or - Soils are not suitable and further assessment and/or remediation/management is required <u>Groundwater</u> - Groundwater screening indicates no evidence of impact (no further groundwater assessment). Or - Groundwater screening indicates potential impact (further groundwater assessment and/or management required).
	For decision problems, combine the principal study questions and the alternative actions into decision statements	- If the contamination status of soil and groundwater is <u>acceptable</u>, <i>the land is suitable for commercial land use.</i> - If the contamination status of soil and / or groundwater is <u>unacceptable</u>, <i>prepare a remedial action plan (RAP).</i>
3	Identify information inputs	

DQO Process Step	DQO Output
Information required to resolve the decision statements/estimation	- Development plans. - Soil and groundwater data collected by investigation, including field samples and analytical samples. - Observations during data collection.
Information needed to establish action level(s)	Investigation criteria will be sourced from: - NEPC (2013a) Schedule B1 Health investigation level (HILs) and Health screening level (HSLs) for commercial / industrial land, Ecological investigation level (EILs) and Ecological screening level (ESLs), and Management Limits for soil investigation. - NEPC (2013a) Schedule B1 HSLs and Groundwater investigation level (GILs) and HEPA PFAS NEMP for groundwater screening investigation.
Sampling and analytical methods to provide necessary data	- Sampling and analytical methods will be consistent with existing guidance, including the NEPC (2013b, 2013c) Schedule B2 and B3. - Analytical laboratories will be National Association of Testing Authorities (NATA)-accredited and use analytical methods based on NEPM, USEPA and APHA methods.
4 Define the study boundaries	
Target population of interest and relevant spatial boundaries	- The decision area (Site) is approximately 41 ha. - Primary decision units: AEC A (horticultural areas) and AEC B (building/structure curtilage and former structure areas).
Definition of sampling unit(s)	Sampling units will consist of: <u>Field samples</u> of appropriately described and logged samples. <u>Analytical samples</u> of the laboratory-specified sample jar and bottle quantity.
Temporal boundaries (and practical constraints associated with sample / data collection)	The investigation represents a point-in-time assessment based on the timing of fieldwork and sampling. Groundwater results are screening-level due to limited temporal coverage (single sampling event).
The smallest unit on which decisions or estimates will be made	<u>AEC A</u>: decision-making primarily at the scale of the horticultural decision unit, with follow-up focus on any localised exceedances/hotspots. <u>AEC B</u>: decision-making at the scale of each targeted location/test pit area due to potential point-source behaviour.

DQO Process Step	DQO Output
5 Develop the analytic (statistical) approach	
The statistical parameter that characterises the population of interest	The 95% UCL of the arithmetic mean ($\bar{x}$) will be the key statistical parameter. Evaluation of data will include: • The 95% UCL $\bar{x}$ to be $\leq$ criterion. • No individual sample >250% of criterion. • The sample standard deviation (SD) to be <50% criterion. • No ACM observed on the ground surface or detected in soil. • No laboratory detection of asbestos fibres in soil.
The action level for decision	• To determine if the material is suitable for HIL-D land use, analytical action levels are to be based on the NEPM HILs and HSLs (NEPC, 2013a). • If the material is not suitable for the HIL-D land use, then a RAP is to be prepared. • Samples will be held at the laboratory for additional analyses (if required).
Confirmation that measurement detection will allow reliable comparisons with the action level	• Samples will be submitted to NATA-accredited laboratories. • Limits of reporting (LORs) adopted by analytical laboratories will be below the adopted criteria.
Combined outputs from previous DQOs steps, developed as an 'if ..., then ..., else ...' theoretical decision rule based on chosen action levels.	• If the statistical parameters of the sampling data exceed applicable action levels, <u>then preparation of a RAP will be required.</u> <i>Otherwise</i> • If the statistical parameters are below applicable action levels, <u>then land will be determined to be suitable for HIL-D land use.</u>
6 Specify performance or acceptance criteria	
The decision rule as a statistical hypothesis test.	• The <u>null hypothesis</u> is that soil is contaminated and exceeds adopted criteria. • The <u>alternative hypothesis</u> is that soil is not contaminated above the adopted criteria.
Consequences of making incorrect decisions from the test.	Possible decision errors include: • Soil material being accepted as suitable for HIL-D land use when it is not, thereby potentially risking human health or environmental impacts. • Unnecessary remediation of material offsite, imposing needless financial and resource burdens on the development project.

DQO Process Step	DQO Output
Acceptable limits on the likelihood of making decision errors, including acceptable alpha (α) and beta (β) risk levels	Stated hypotheses: • <i>Null hypothesis</i> (H_0): the 95% UCL, and other requirements, are $>$ the action level; and • <i>Alternate hypothesis</i> (H_A): the 95% UCL, and other requirements, are $\leq$ the action level. Potential outcomes include Type I and Type II errors: • Type I error of determining the fill material is acceptable for the proposed HIL-D land use when it is not (wrongly rejects true H_0). • Type II error of determining the fill material is unacceptable for the proposed HIL-D land use when it is (wrongly accepts false H_0). For performance criteria, the acceptable limits on the likelihood of making decision errors to be applied are: • Alpha risk (Type I error) of $\alpha = 0.05$ • Beta risk (Type II error) of $\beta = 0.2$.
7	Optimised design for obtaining data

DQO Process Step	DQO Output
Sampling and analysis design	<u>AEC A: former and existing market gardens and / or orchards</u> To allow statistical inference, a probabilistic systematic sampling strategy with composite sampling of three discrete samples is to be adopted to screen soils for diffuse contamination within AEC A. NSW EPA (2022a) minimum grid-based sampling requirements will be adopted for the investigation based on the decision area of approximately 8.3 ha. Ninety (90) surface sample (SS) locations will be set out on an approximate 30 m square grid designed to detect a 35.4 m diameter hotspot with 95% confidence. Samples will be selected for analytical testing based on the soil units encountered at sampling locations and field observations made (including visual and olfactory evidence). Further analysis of discrete samples to be undertaken of all primary samples associated with composite sample with reported concentrations that exceed adopted Site assessment criteria (SAC). Additional targeted sampling strategy is to be adopted to screen soils within locations where discrete samples report concentrations that exceed adopted SAC. Ten (10) test pits (TP) will be excavated at each sampling location into underlying natural material (min 0.5 m). Field samples will be collected below previously surface sampled material (0.1-0.2 m), from each fill horizon, and upper surface of natural soil at each sampling location. Additional samples will be collected from deeper fill and natural soil layers. Additional systematic sampling strategy is to be adopted to screen soils within historical bush area to assess soils for geological impacts in relation to discrete samples report concentrations that exceed adopted SAC. Ten (10) test pits will be excavated at each sampling location into underlying natural material (min 0.5 m). Field samples will be collected at the ground surface (0.0-0.1 m), from each fill horizon (if encountered), and upper surface of natural soil at each sampling location. <u>AEC B: former and existing buildings and / or structures.</u> Eleven (11) test pits (TP) will be excavated at each sampling location into underlying natural material (min 0.5 m). Field samples will be collected at the ground surface (0.0-0.1 m), from each fill horizon, and upper surface of natural soil at each sampling location. Additional samples will be collected from deeper fill and natural soil layers. Samples will be selected for analytical testing based on the soil units encountered at sampling locations and field observations made (including visual and olfactory evidence). <u>Groundwater Sampling</u> Three groundwater samples were collected from three on-site monitoring wells (located in proximity to AEC A) using low-flow sampling techniques, with field parameters measured to support stabilisation and interpretation.
Implementation of the design and contingency plans	The field methods for sample collection, handling, and analysis (at analytical laboratories) are described in Section 7.4 and 7.5. Contingencies include, collecting additional samples from material that is significantly different from the reworked natural, and conducting additional analysis where field indicators (staining, odours, field screening results) suggest other contaminants.
QA/QC procedures	Required field QA and field and laboratory QC are described in Section 7.2 and include DQIs and associated measurement quality objectives.

DQO Process Step	DQO Output
Operational details and theoretical assumptions of the selected design in the SAQP.	The design assumes potential for spatial variability and localised hotspots associated with horticultural practices and building/structure areas; therefore, a combination of systematic and targeted sampling was adopted. Groundwater assessment is screening-level due to limited temporal coverage (single event).

7.2 Data Quality Indicators

In accordance with NSW EPA (2017, 2020), the field and laboratory data set obtained for the investigation will be compared with DQIs outlined in Table 14 to ensure acquired data meet the needs of the project and DQOs have been met.

Table 14: Data quality indicators.

Assessment Measure (DQI)	Comment
Precision – a measure of the variability (or reproducibility) of data.	Precision will be assessed by collection of a minimum 5% field duplicates and calculation of the relative percent difference (RPD) with parent samples. Data precision will be deemed acceptable where results are: - Any RPD (for 0 - 10 x estimated quantitation limit (EQL)), or - RPD <50% (for 10 - 30 x EQL) or - RPD <30% (for >30 x EQL) Exceedance of this range may still be considered acceptable where heterogeneous materials are sampled.
Accuracy – a measure of the closeness of reported data to the true value.	Data accuracy will be assessed by: - Field spikes and blanks. - Laboratory duplicates, spikes, surrogates, and blanks.
Representativeness – confidence that data is representative of each media present on site.	To ensure data representativeness, the following field and laboratory procedures will be followed: - Design and implementation of the sampling program completed in accordance with the SAQP. - Use of a trip spike for assessing volatile losses during field sampling and a trip blank to ensure no cross contamination or laboratory artefacts. - Laboratory hold times are met, and sample handling and transportation is completed in accordance with the SAQP.
Completeness – a measure of the amount of usable data from a data collection activity.	To ensure data set completeness, the following is required: - Confirmation sampling was completed in general accordance with SAQP. - Provision of chain of custody (COC) and sample receipt forms (SRA). - Provision of results from all laboratory QA / QC samples (lab blanks, trip blank and trip spike, lab duplicates). - Use of appropriate sampling and analytical methods. - NATA accreditation stamp on all laboratory reports.
Comparability – confidence that data may be considered equivalent for each sampling and analytical event.	Data comparability will be maintained by ensuring: - All sampling events undertaken follow methodologies outlined in the SAQP and published guidelines. - NATA accredited laboratory methodologies are followed for all laboratory analysis.

7.3 Site Assessment Criteria

Site assessment criteria (**SAC**) adopted for the characterisation of soil and groundwater for the DSI are summarised in Table 15.

Table 15: Site assessment criteria.

Adopted Guidelines	Rationale
Soils	
NEPC (2013a), HEPA (2025).	<u>Health investigation levels (HIL)</u> Samples are assessed against: - NEPC (2013a) HIL-D investigation levels for commercial / industrial land use. - HEPA (2025) HIL-D investigation levels for commercial / industrial land use have been adopted for assessment of PFAS in soils. <u>Health screening levels (HSL)</u> <i>Petroleum hydrocarbons</i> Samples are assessed against: - NEPC (2013a) soil HSL-D – commercial / industrial land use (sand dominant soils) has been considered for soil vapour intrusion. <i>Asbestos</i> Asbestos is assessed using the NEPM asbestos assessment framework, supported by field observations of ACM fragments and laboratory results were undertaken. Given the investigation objectives and the nature of potential asbestos occurrence (e.g., fragments), asbestos is primarily assessed as presence/absence and distribution of ACM, with further quantitative assessment or delineation undertaken where required to inform management/remediation decisions. <u>Management Limits</u> Petroleum hydrocarbon management limits for commercial/industrial use (coarse-textured soils) are adopted to inform management of odour/visual impacts and gross contamination considerations.
NEPC (2013a), HEPA (2025), CCME (2010)	<u>Ecological Investigation Levels (EIL)</u> EILs for select metals, DDT, and naphthalene are derived from NEPC (2013a) for protection of terrestrial ecosystems in commercial and industrial land use. EILs are calculated using Added Contaminant Levels (ACL) for respective contaminants in NEPC (2013a) using pH, CEC, clay content values, and Ambient Background Concentrations (ABC) are derived from NSW - old suburb / low traffic ABCs, tabulated in NEPC (2013d). Contamination is also considered aged (>2 years). Soil parameters adopted for EIL calculations were based on site-specific laboratory data from natural soils within the former horticultural area (Appendix M). Reported pH values ranged from 7.0 to 8.8 (average approx. 8.0) and CEC ranged from <1.0 to 2.6 cmolc/kg (average 1.5). EIL calculation sheets are provided in Appendix O. HEPA (2025) interim ecological guideline values for direct soil exposure have been adopted for the assessment of ecological PFAS exposure risk. <u>Ecological Screening Levels (ESL)</u> TRH and BTEX are assessed against ESLs for commercial and industrial land use – coarse textured soils presented in NEPC (2013a). <u>Environmental health guideline value</u> High reliability soil quality guidelines for environmental health (SQG_e) provided in Table 8-1 of CCME (2010) have been adopted for benzo(a)pyrene, instead of low reliability ESLs values outlined in NEPC (2013a).

Adopted Guidelines	Rationale
Groundwater	
ANZG (2018), HEPA (2025), NEPC (2013a)	No groundwater contamination is expected based on the CSM, however, as part of this assessment a groundwater screening investigation has been undertaken with conservative SAC adopted. <u>Groundwater Investigation Levels (GIL) for marine water ecosystems</u> ANZG (2018) marine water toxicant default guideline values (DGV) at the 95% level of species protection (LOSP) have been adopted as GILs assessment of risks to biota from groundwater, as the nearest hydraulically downgradient surface water receptors, Tilligerry Creek to the north and the South Pacific Ocean to the south, are considered estuarine and marine environments, respectively. <u>Health based Screening Levels (HSL)</u> NEPC (2013a) groundwater HSL-D for commercial and industrial land use in sand have been adopted for assessment of vapour risks from petroleum hydrocarbons (TRH, and BTEXN) in groundwater. Should substantial VOC concentrations be reported during the investigation, vapour assessment may be required to quantify potential vapour risks from groundwater. Additionally, HEPA (2025) health-based guideline values for recreational water, adopted from NHMRC (2019) guidance on PFAS in recreational water, for human health risks have also been adopted for the assessment of PFAS in groundwater.

7.4 Field Investigation Methodology

7.4.1 Soil Investigation

The methodology adopted for field investigation and sampling of soils, and to meet established project DQOs, is provided in Table 16.

Table 16: Soil investigation and sampling methodology.

Item	Description
Date of fieldworks	Soil investigation and sampling were completed on 5–6 November 2025 (Stage 1). Additional soil investigation and sampling were completed on 7 January 2026 (Stage 2 follow-up). Stage 2 works were undertaken to: - Undertake targeted delineation around locations where exceedances were identified in Stage 1. - Collect near-surface soil samples from areas interpreted to represent relatively undisturbed bushland conditions for background/reference context.
Investigation method(s)	Soil investigation was conducted by: - Surface soil sampling (Stage 1): collection of 91 surface soil samples (SS001–SS091) using hand tools. - Test pits (Stage 1): excavation of 11 shallow test pits (TP101–TP111) using hand excavation methods. - Test pits (Stage 2): excavation of 20 additional shallow test pits (TP201–TP220) using hand excavation methods. - Test pits were advanced through fill (where present) and into underlying natural soils to a minimum of approximately 0.5 m, where practicable, or until refusal. Sampling locations are shown in Appendix A (Map 13 to Map 16).

Item	Description
Soil logging	Soils were classified in the field with respect to lithological characteristics and texture. Soil classifications and descriptions were based on the Unified Soil Classification System (USCS) and Australian Standard (AS) AS1726:2017 - <i>Geotechnical Site Investigations</i>. Soils were also evaluated qualitatively for odour, visual evidence of contamination, and anthropogenic inclusions. Test pit logs for the investigation are presented in Appendix H. A summary of soil descriptions and field observations is provided in Section 8.3.
Soil sampling	Soil samples were obtained from fill and natural soils by an experienced MA environmental consultant using a dedicated, clean pair of nitrile gloves for collection of each sample. Samples were collected either directly from near surface spoils or directly from the exposed soil face/base of hand dug test pit excavations. Samples were placed into laboratory-supplied containers appropriate to the analytes (e.g., glass jars for organics where required, plastic jars for PFAS where applicable), labelled with unique sample identifiers and stored under appropriate temperature control.
Decontamination procedures	Hand tools were decontaminated between sampling locations with potable water until free of all residual materials.
Sample preservation	Soil samples were stored in a refrigerated (ice filled) chest, whilst on site and in transit to the laboratory. All samples were submitted and analysed within the required holding period, as documented in laboratory SRA presented in Appendix N.
QA sampling	The following QC sampling rates were proposed for soil investigation: - Field duplicate samples were collected and analysed at a rate of approximately 5%. - A laboratory prepared trip blank and trip spike were stored with collected soil samples in the field and during transportation to the analytical laboratory for each analytical sample batch.
Sample handling and transport	Sample storage and transport was conducted according with industry guidance and standards. Samples were placed immediately into an ice chilled cooler box following collection. Primary samples were dispatched to Envirolab Services Pty Ltd (Envirolab), a NATA accredited analytical laboratory, under COC conditions for analysis. COC certificates and SRA documentation was provided to MA for confirmation purposes and is provided in Appendix N.

7.4.2 Groundwater Screening Investigation

A groundwater screening investigation was undertaken to provide screening level information on groundwater quality in a permeable sandy setting and to support the CSM. Groundwater is not considered a primary medium of concern for the current proposal (as extraction is understood to occur above the groundwater table with no planned groundwater use); however, groundwater was screened due to the presence of surrounding groundwater users and potential for vertical migration in sand-dominant soils.

Groundwater sampling was undertaken from three existing monitoring wells on the Site: MW1 and MW5 (installed historically by others) and MW101 (installed by MA). One groundwater monitoring event (water level gauging and sampling) was completed on 5-6 November 2025. Monitoring well locations are shown in Appendix A (Map 11).

Construction details are available for MW101 (refer Appendix I). Construction details for MW1 and MW5 were not available at the time of preparing this report. Where necessary, information has been inferred from previous MA reporting and field observations. This limitation is considered acceptable for the purposes of a screening investigation.

Table 17: Groundwater investigation methodology.

Activity	Detail
Date of fieldworks	One groundwater screening event completed on 5–6 November 2025.
Monitoring wells sampled	MW1, MW5 and MW101
Monitoring well gauging	The monitoring well was gauged for standing water level (SWL) prior to purging at the commencement of the groundwater monitoring event (GME). Gauging was completed using a calibrated electrical dip meter. SWL measurements are shown in Table 22.
Purging, field testing and sampling	Field parameters (pH, EC, temperature, DO and ORP) were monitored using a calibrated meter (flow-through cell where pumped). Sampling was completed following stabilisation, defined as three consecutive readings within: temperature $\pm 0.2^{\circ}\text{C}$; EC $\pm 3\%$; ORP ± 20 mV; DO $\pm 10\%$; pH ± 0.2 . The stabilised field parameters were recorded on the field data sheet and are summarised in Table 22. Water quality meter calibration certificate is provided in Appendix J.
Sample collection and preservation	Sample containers were supplied by the laboratory. All containers were filled with sample to the brim, capped, and stored in ice filled chests until completion of fieldwork, and during sample transit to the analytical laboratory.
Sample identification, storage, and handling	Sampling containers were labelled with site specific nomenclature, including project number, sample location, and date. Samples were stored in a refrigerated (ice brick) cooler box and transported to Envirolab, a NATA accredited analytical laboratory, with accompanying COC documentation and laboratory supplied security seals. SRA was provided by the laboratory, documenting sample conditions upon receipt at the laboratory. Copies of COC and SRA documents are presented in Appendix N.
Decontamination procedure	Prior to, and between, sampling locations, the dip meter was rinsed with potable water and air dried. Decontamination of the pump system was not required as new, dedicated HDPE and silicon tubing was used at each monitoring well.
QC sampling	The following QC samples were collected for the groundwater investigation: - An intra laboratory duplicate sample was collected for laboratory analysis. - A laboratory prepared trip blank and trip spike were stored with groundwater samples in the field and during transportation to the analytical laboratory for each analysis sample batch.

7.5 Sampling and Analysis Rationale

Sample analysis was completed in accordance with NEPC (2013c) Schedule B3: *Guideline on Laboratory Analysis of Potentially Contaminated Soils*. The sampling and analytical rationale adopted for the investigation to screen for COPCs at testing locations, within recognised AECs, is provided in Table 18.

Table 18: Sampling and analysis rationale.

AEC	Sampling Locations	Laboratory Analysis	Rationale
AEC A Former and existing market gardens and / or orchards	SS001 – SS091	HM, OCP and OPP.	Screening for diffuse impacts associated with horticultural practices, including pesticide/fungicide use and potential metals accumulation (e.g., copper-based products). Composite sampling was adopted for initial screening, with component primary samples analysed where composite results exceeded adopted screening criteria and/or to identify the contributing locations.
	TP201 – TP210	HM	Targeted near-surface and subsurface soil sampling in the vicinity of locations where elevated copper/zinc were identified in Stage 1, to refine lateral/vertical interpretation.
	TP211 – TP220	HM	Background/reference screening of near-surface soils within areas interpreted as relatively undisturbed bushland to provide context for interpretation of elevated copper/zinc.
AEC B Former and existing buildings and / or structures	TP101 – TP111	Asbestos, BTEXN, HM, OCP, OPP, PAH, PCBs, PFAS and TRH.	Targeted assessment of potential localised impacts associated with building/structure areas including hazardous building materials (e.g., asbestos fragments), historical pesticide/termite treatment, and small-scale chemical/fuel storage and use.
Groundwater Screening	MW1, MW5 and MW101	BTEXN, HM, OCP, OPP, PAH, PCBs, PFAS, TRH and VOCs.	Screening-level groundwater assessment to support the CSM

A summary of the laboratory analytical suite used for the investigation, with respect to media, is provided in Table 19.

Table 19: Summary of COPC laboratory analysis of media.

COPC	Soil Samples (composites)	Soil Samples (primary)	Material Sample	Groundwater Samples	QC Soil / Water	QC Purpose
Asbestos	-	10	1	-	-	-
BTEXN	-	10	-	3	3 / 1	trip spike
HM	27	72	-	3	9 / 1	duplicates
OCP / OPP	27	14	-	3	-	-

COPC	Soil Samples (composites)	Soil Samples (primary)	Material Sample	Groundwater Samples	QC Soil / Water	QC Purpose
PAH	-	10	-	3	-	-
PCB	-	10	-	3	-	-
PFAS	-	10	-	3	-	-
TRH	-	10	-	3	3 / 1	trip blank
VOCs	-	-	-	3	-	-
CEC	-	4	-	-	-	-
pH	-	4	-	-	-	-

8 Field and Analytical Results

8.1 Investigation Constraints

The proposed scope of works (Section 1.4) for the investigation was largely completed and no constraints have been identified.

8.2 Data Quality Assessment

Field and laboratory QA/QC has been reviewed for the investigation and is presented in the Data Quality Assessment provided Appendix K.

Assessment of the field and analytical data produced by the investigation indicated that data adequately satisfies the DQIs that were developed for the investigation. It is therefore concluded that the overall data quality is of an acceptable standard to be used for interpretation.

8.3 Subsurface Conditions and Field Observations

Shallow surficial materials encountered during the intrusive investigation varied by area. Within the targeted test pits in the vicinity of existing structures (TP101–TP111), a shallow layer of fill/reworked surficial soils was generally present overlying natural sand. Fill in these areas typically comprised grey to brown gravelly to silty sands and sandy gravels, with natural soils generally comprising light brown to grey fine to medium grained sand beneath.

Within the follow-up investigation area (TP201–TP220), surficial conditions ranged from topsoil over natural sand in some locations (e.g., TP201–TP203) to localised areas of fill/reworked surficial soils over natural sands in others (e.g., TP204–TP210). Test pits completed in bushland areas (TP211–TP215 and TP216, TP218–TP220) generally encountered natural sand (commonly with roots/organic matter); however, at TP216 and TP218–TP220, near-surface soils also contained carbonaceous shale gravels and occasional larger rock fragments. This material is not consistent with the sand-dominant soil landscape and regional geology mapping for the Site and is therefore interpreted to represent localised placed or reworked material, potentially associated with historic access track construction/maintenance or minor dumping of material within vegetated areas. While historical aerial imagery does not clearly show widespread filling in these locations, the presence of tracks through the bushland and the limited/localised nature of placement could result in activities that are not readily discernible on aerial photography.

Test pits were advanced to depths typically between approximately 0.4 m and 0.8 mBGL, with a maximum depth of approximately 1.0 mBGL achieved (TP111). Groundwater seepage was not encountered in any test pits during excavation to the achieved depths.

No odours or staining indicative of hydrocarbon or chemical impacts were observed during excavation and sampling. Anthropogenic inclusions were generally not observed; however, isolated inclusions of brick were recorded in fill in the vicinity of structures

(TP102, TP103 and TP111), plastic was recorded at TP102, and glass was recorded at TP216.

Evidence of demolition debris was not observed in excavated soils. PACM was not observed with the exception of a small fragment described as cement fibre/asbestos within fill/reworked material at TP216 (MS01 at 0.05 mBGL), which was collected for laboratory confirmation. The occurrence of this fragment, together with the anthropogenic inclusions noted above, supports the conclusion that some material has been locally deposited within the bushland area.

Test locations are shown on the sampling plan in Appendix A (Map 13 to Map 15) and detailed test pit logs are provided in Appendix H. Selected photographs obtained during the intrusive investigations are provided in Appendix G.

8.4 Soil Results

8.4.1 Soil Analytical Results

Laboratory results have been summarised and reported by area/soil unit to reflect the conceptual site model and to support interpretation against the adopted SAC. In particular, soil results have been grouped to distinguish:

Soil Unit 1 - Horticultural near-surface soils (composite screening grid and associated discrete primary samples), where potential impacts from horticultural land use are plausible.

Soil Unit 2 - Deeper natural sands within the horticultural footprint, to assess whether horticultural impacts persist at depth or are predominantly surficial.

Soil Unit 3 - Structure/curtilage soils associated with existing structures and footprints of former structures, where a broader COPC suite was assessed (e.g., asbestos, petroleum hydrocarbons, PAHs, PCBs, pesticides).

Soil Unit 4 - Bushland “natural” soils sampled to provide an indication of local background metal concentrations in areas considered unlikely to have been impacted by horticultural activity or fill placement.

Soil Unit 5 - Bushland “possible fill” locations where observations (e.g., gravel/shale fragments and/or anthropogenic inclusions) indicated potential localised placement of material, including one location where a small cement fibre sheeting fragment (PACM) was identified (TP216).

Summary laboratory tables are provided for each soil unit (refer Appendix L), laboratory documents provided in Appendix M and laboratory analytical certificates are provided in Appendix N.

A summary of soil analytical results compared to the adopted SAC is provided in Table 20.

Table 20: Summary of soil analytical results compared to assessment criteria.

Analyte	Soil Unit 1 – Composite Samples (AEC A)	Soil Unit 1 – Primary Samples (AEC A)	Soil Unit 2 – Deeper Soils within AEC A	Soil Unit 3 (AEC B)	Soil Unit 4 (Bushland Natural Soils)	Soil Unit 5 (Bushland Possible Fill)
Asbestos (soil)	Not analysed	Not analysed	No asbestos was detected at the reporting limit of 0.01% w/w in analysed soils samples.	Not analysed	Not analysed	Not analysed
Asbestos (material)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	TP216 material fragment confirmed chrysotile asbestos
Heavy Metals (general – excluding Copper and Zinc)	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples below LOR or below adopted SAC	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples below LOR or below adopted SAC	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples below LOR or below adopted SAC	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples below LOR or below adopted SAC with the exception of two near surface samples (TP104 and TP105) which exceeded adopted EILs for nickel.	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples either below LOR or below adopted SAC	HMs (excluding Cu and Zn) were reported at concentrations in analysed samples below LOR or below adopted SAC
Copper (Cu)	Elevated Cu concentrations, exceeding adopted EILs were reported in a number of composite samples.	Elevated Cu confirmed in discrete near-surface soils in parts of AEC A; consistent with diffuse horticultural impacts	Cu concentration lower than near surface soils with all results below the adopted SAC.	Cu concentrations were reported generally below the adopted SAC with the exception of a single near surface samples at TP101 which exceeded the adopted EIL.	Cu concentrations all reported below LOR.	Cu concentrations all reported either below LOR or just above LOR.

Analyte	Soil Unit 1 – Composite Samples (AEC A)	Soil Unit 1 – Primary Samples (AEC A)	Soil Unit 2 – Deeper Soils within AEC A	Soil Unit 3 (AEC B)	Soil Unit 4 (Bushland Natural Soils)	Soil Unit 5 (Bushland Possible Fill)
Zinc (Zn)	Elevated Zn concentrations, exceeding adopted EILs were reported in a number of composite samples.	Elevated Zn confirmed in discrete near-surface soils in parts of AEC A; consistent with diffuse horticultural impacts	Zn concentration lower than near surface soils with all results below the adopted SAC.	Zn concentrations were slightly elevated when compared to natural soils, however all results were below the adopted SAC	Zn concentrations all reported either below LOR or just above LOR	Zn concentrations all reported either below LOR or just generally, just above LOR
OCP/OPP	All composite samples reported OCP/OPP concentrations below the LOR and therefore below SAC	Additional testing of primary samples reported OCP/OPP concentrations below the LOR and therefore below SAC	Not analysed	All samples reported OCP/OPP concentrations below the LOR and therefore below SAC	Not analysed	Not analysed
BTEXN	Not analysed	Not analysed	Not analysed	All samples reported BTEXN concentrations below the LOR and therefore below SAC	Not analysed	Not analysed
PAH	Not analysed	Not analysed	Not analysed	Relevant PAHs concentrations were reported in analysed soil samples by the laboratory at levels below LOR or below the respective SAC adopted.	Not analysed	Not analysed
PCB	Not analysed	Not analysed	Not analysed	All samples reported PCB concentrations below the LOR and therefore below SAC	Not analysed	Not analysed

Analyte	Soil Unit 1 – Composite Samples (AEC A)	Soil Unit 1 – Primary Samples (AEC A)	Soil Unit 2 – Deeper Soils within AEC A	Soil Unit 3 (AEC B)	Soil Unit 4 (Bushland Natural Soils)	Soil Unit 5 (Bushland Possible Fill)
PFAS	Not analysed	Not analysed	Not analysed	PFAS concentrations were reported by the laboratory in soil samples at levels below LOR or below the respective SAC adopted.	Not analysed	Not analysed
TRH	Not analysed	Not analysed	Not analysed	TRHs concentrations were reported by the laboratory in soil samples at levels below LOR or below the respective SAC adopted.	Not analysed	Not analysed

8.4.2 Statistical Analysis of Cu and Zn in Soil Unit 1

Statistical summary calculations were undertaken for analytes that exceeded adopted SAC to support interpretation of potential ecological risks and to inform future soil management options. Statistics were generated using USEPA ProUCL (v5.2) and are provided as an additional line of evidence alongside the sample-by-sample assessment presented in Appendix P.

The statistical population used for this assessment comprises near-surface soils within Soil Unit 1 (AEC A) that were analysed as discrete (primary) samples (including targeted follow-up samples collected to assess local variability). This population is relevant to the proposed quarry, as near-surface soils are most likely to be stripped, stockpiled and possibly reused as growth media during progressive rehabilitation.

The 95% upper confidence limit of the arithmetic mean (95% UCL $\bar{x}$) was calculated for copper and zinc. The 95% UCL $\bar{x}$ provides a conservative estimate of the true mean concentration for the defined decision unit and is used for comparison to ecological criteria. The statistical outputs are summarised in Table 22; ProUCL calculation outputs are provided in Appendix P.

Table 21: Statistical analysis of COPCs exceeding SAC in AEC A near surface soils.

COPC	No. Samples	Sample Population	SAC (mg/kg)	Max. Conc. (mg/kg)	Median (mg/kg)	Mean (mg/kg)	SD (mg/kg)	95% UCL $\bar{x}$ (mg/kg)
Copper	32	Surface Soils (AEC A)	55 (EIL)	230	51	62	51	77
Zinc	32	Surface Soils (AEC A)	220 (EIL)	370	56	106	112	140

Note

- Population comprises discrete near-surface samples analysed within AEC A, including targeted follow-up samples; composites are excluded from the statistical dataset.
 - 95% Student's-t UCL
-  Value exceeding statistical parameter of DQOs (Step 5 – decision rules).

Based on the statistical summary, the 95% UCL $\bar{x}$ for copper (77 mg/kg) exceeds the adopted site-specific copper EIL (55 mg/kg), indicating copper impacts in near-surface horticultural soils (soil unit 1 – AEC A) is present at a scale relevant to ecological/soil management considerations. The 95% UCL $\bar{x}$ for zinc (140 mg/kg) is below the adopted zinc EIL (220 mg/kg), although individual zinc exceedances are present and are expected to be addressed through soil management works.

8.4.3 Soil Results Summary

8.4.3.1 Copper and Zinc in horticulture near surface soils (Soil Unit 1 – AEC A)

Copper and zinc are elevated in near-surface soils within the former horticultural footprint relative to bushland natural soils and deeper natural sands. The Cu/Zn impacts and spatial association with historical horticulture land use is consistent with diffuse

horticultural impacts (e.g., historical agricultural inputs such as fertilisers and copper-based fungicides), rather than point-source contamination.

Composite screening (assessed against SAC divided by 3) identified locations requiring follow-up discrete testing:

- Copper: Composites 2–9, 15-16, 20- 22 and 24 – 27.
- Zinc: Composites 3, 5, 16 and 20–22.

Discrete (primary) testing confirmed elevated Cu and Zn in near-surface soils at selected locations:

- Copper: SS005 -SS007, SS009, SS010, SS016 – SS022, SS056 and SS073 exceeded the adopted site-specific copper EIL.
- Zinc: SS007, SS009 – SS010, SS017, SS019 and SS056 exceeded the adopted site-specific zinc EIL.

Statistical summary results for the near-surface dataset from Soil Unit 1 (AEC A) indicate the 95% UCL $\bar{x}$ for copper exceeds the adopted EIL (Table 22), supporting that copper impacts are present across the former horticultural area. The 95% UCL $\bar{x}$ for zinc is below the adopted EIL (Table 22), noting that individual zinc exceedances occur and expected to be managed as part of future soil management options.

Two discrete near-surface samples within Soil Unit 1 (AEC A) reported marginal exceedances of the adopted site-specific nickel EIL. These exceedances were isolated (i.e., not a consistent pattern across the Soil Unit 1 - AEC A dataset) and were not supported by the broader composite screening dataset or follow-up targeted sampling results. There is no clear site history or plausible contaminant source mechanism to suggest anthropogenic nickel inputs associated with historical horticultural use and are considered consistent with natural variability rather than anthropogenic impact. On this basis, nickel is not considered a contaminant driver for the site and no specific nickel-related management actions are warranted.

8.4.3.2 Deeper natural sands within horticultural footprint (Soil Unit 2 -AEC A)

Deeper natural samples generally reported lower Cu and Zn concentrations than near-surface horticultural soils, indicating the impacts are predominantly surficial within the AEC A area.

8.4.3.3 Structure/curtilage soils (Soil Unit 3 - AEC B)

Analytical results for soils associated with existing structures and footprints of former structures did not identify petroleum hydrocarbons, PAHs, PCBs, pesticides, asbestos or PFAS impacts exceeding adopted SAC. Metals were generally below adopted SAC in AEC B with only 1 minor exceedance of copper EIL and 2 minor exceedances of nickel EIL reported in near surface soils. As noted above, these minor exceedances are not considered to warrant any specific management and are expected to be addressed as part of the overarching soil management program during initial near surface soil stripping works.

8.4.3.4 Bushland soil areas (Soil Unit 4 and Soil Unit 5)

Bushland natural samples reported very low heavy metal concentrations (including low Cu/Zn concentrations) and provide a meaningful background comparison to the horticultural area (AEC A). Bushland “possible fill” locations also generally reported low metals; however, a laboratory confirmed asbestos-containing material fragment at TP216 (TP216/MS01/0.05) confirms localised suspect placed material in at least one location.

8.5 Groundwater Screening Results

Groundwater screening was undertaken to provide a line of evidence for the conceptual site model, identify whether any groundwater impacts are present in the vicinity of AEC A, and provide preliminary contaminated land context relevant to the proposed use of groundwater for sand washing. Groundwater is not considered a primary media of concern for the proposed sand quarry from a contaminated land perspective, noting the current concept does not include excavation below the groundwater table and no credible site-related groundwater contamination sources were identified from the desktop review (refer Section 6)

8.5.1 Groundwater Field Parameters

A GME was conducted at MW1, MW5 and MW101 on 6 November 2025. SWLs were measured during the GME prior to purging, and are recorded with stabilised field parameters on field data sheets provided in Appendix J. A summary of GME field data, including stabilised groundwater parameters, is presented in Table 22.

Table 22: Summary groundwater field parameters.

MW ID	SWL (mBGL) ¹	SWL (mAHD) ²	DO (mg/L)	Field pH	Field EC (µS/cm)	Temp (°C)	ORP (mV)	Observations
MW1	1.88	3.94	0.15	7.07	286.8	19.1	12.8	No odour or sheen, transparent yellow to clear colouration.
MW5	14.65	3.60	3.74	7.13	293.4	20.0	-24.2	Slight sulfidic odour, no sheen, turbid brown colouration.
MW101	3.77	3.00	0.28	7.18	368.9	18.9	-129.5	Slight sulfidic odour, no sheen, transparent yellow to clear colouration.

Notes

- SWL (mBGL) approximately calculated based on manual dip measurements as meters below top of casing (**mBTOC**) minus field measured distance of top of casing (**TOC**) to ground level.
- SWL (mAHD) for MW1 and MW5 approximately calculated based on surveyed ground level minus calculated SWL (mBGL). SWL (mAHD) for MW101 not based on surveyed ground level.

Groundwater field parameters indicate the following:

- Fresh groundwater based on EC values of 286–369 µS/cm.
- Neutral pH (7.07–7.18).

- Variable redox conditions (low DO at MW1 and MW101; slightly higher DO at MW5).
- No hydrocarbon sheen was observed. A slight sulfidic odour and turbid appearance were noted at MW5.

8.5.2 Groundwater Analytical Results

A summary of groundwater analytical results for samples collected, and compared to adopted SAC, is provided in Table 23. Tabulated groundwater analytical results showing contaminant concentrations compared to adopted SAC is provided in Appendix L. Laboratory analytical documentation is provided in Appendix M.

Table 23: Summary of groundwater analytical results compared to groundwater screening investigation criteria.

Analyte	Results Compared to Criteria
BTEXN	BTEXN concentrations were reported in water samples by the laboratory at levels below LOR and below the respective SAC adopted.
HM	HMs concentrations were reported in water samples by the laboratory at levels below LOR or below the respective SAC adopted, except for: • Copper concentrations within MW1, MW5 and MW101 (58, 48 and 4 µg/L respectively) exceeded adopted SAC (1.3 µg/L). • Zinc concentrations within MW5, MW101 and MW1 (0.063, 0.041 and 0.025 mg/L respectively) exceeded adopted SAC (0.008 mg/L). • Lead concentration within MW5 (21 µg/L) exceeded adopted SAC (4.4 µg/L).
OCP / OPP	OCP and OPP concentrations were reported in water samples by the laboratory at levels below LOR and below respective SAC adopted.
PAH	PAH concentrations were reported in water samples by the laboratory at levels below LOR and below adopted SAC.
PCB	PCB (total) concentration were reported in water samples by the laboratory at levels below LOR.
PFAS	PFAS concentrations were reported in water samples by the laboratory at levels below LOR and below adopted SAC.
TRH	TRH concentrations were reported in water samples by the laboratory at levels below LOR or below the adopted SAC.
VOCs	VOCs concentrations were reported in water samples by the laboratory at levels below LOR or below the adopted SAC.

8.5.3 Groundwater Results Summary

The adopted groundwater screening criteria for metals are conservative ecological screening values. Exceedances of these criteria do not necessarily indicate site-derived groundwater contamination and may instead reflect natural regional groundwater chemistry.

Notwithstanding the above, groundwater is not considered a primary exposure pathway for the proposed quarry from a contaminated land perspective, as excavation below the groundwater table is not anticipated and no credible site-related groundwater contamination sources were identified from the desktop review. However, groundwater extracted under WAL5960 is proposed to be used for sand washing. On the basis of the

limited screening data collected, the results do not indicate significant groundwater contamination that would be expected to represent a material contaminated land constraint to the proposed use of groundwater for sand washing.

9 Updated Conceptual Site Model

The CSM presented in Section 6 was developed primarily from desktop information and site inspection observations. The intrusive investigations and laboratory analytical results reported in Section 8 provide additional lines of evidence to refine the CSM for the proposed sand quarry (industrial/commercial land use scenario).

9.1 Updated Sources and AECs

9.1.1 AEC A – Former and existing horticultural footprint (Soil Units 1 and 2)

Near-surface soils within the horticultural footprint show elevated copper and zinc concentrations relative to deeper natural sands and relative to bushland background soils. The association with horticultural land use and the predominately surficial nature of impacts is consistent with diffuse horticultural impacts rather than a point-source release. Discrete (primary) sample results and the statistical assessment provide a line of evidence that copper impacts are present in near surface soils within Soil Unit 1 (AEC A) that require management considerations for the proposed development.

9.1.2 AEC B - Structures/curtilage and footprints of former structures (Soil Unit 3)

The broader COPC suite assessed did not identify petroleum hydrocarbons, PAHs, PCBs, OCP/OPP, PFAS or asbestos-in-soil concentrations exceeding the adopted SAC. Metals were generally below adopted criteria, with only minor isolated exceedances (e.g., copper and nickel) in near-surface soils that are not interpreted to represent a material constraint for the proposed quarry, noting these materials would be addressed under general soil handling controls during stripping and earthworks.

9.1.3 Bushland Areas – Background soils and possible placed materials (Soil Units 4 and 5)

Bushland “natural” location generally encountered sand with organic matter and roots and reported low metal concentrations that provide a meaningful background reference for interpretation of AEC A results. In contrast, a subset of bushland locations (including TP216 and TP218–TP220) encountered near-surface soils containing shale gravels and occasional larger rock fragments that are not consistent with the mapped sand-dominant soil landscapes and regional geology descriptions for the Site. This material is interpreted to represent localised placed or reworked material, potentially associated with historical track construction/maintenance and/or minor dumping within vegetated areas. Although historical aerial imagery does not clearly show widespread filling, limited/localised placement along tracks and within bushland may not be discernible from available imagery. The laboratory-confirmed asbestos-containing cement sheet fragment at TP216 further supports that some material has been placed in at least one bushland location.

9.2 Updated Pathways and Receptors

Under the current quarry concept, soil remains the primary medium of interest. Human health receptors for the proposed industrial/commercial land use scenario are primarily site workers (construction, operations and maintenance), with potential exposure

pathways including dermal contact, incidental ingestion and inhalation of dusts (and vapours where volatile contaminants are present).

Based on the intrusive investigation observations and laboratory analytical results, there is no evidence to suggest that human health receptors are at risk from chemical contamination under the current concept design, noting:

- For the COPCs assessed against human health criteria (including petroleum hydrocarbons, BTEXN, PAHs, PCBs, OCP/OPP, PFAS and metals assessed against relevant human health investigation levels/screening levels where applicable), analytical results were below the adopted human health SAC for the industrial/commercial land use scenario.
- Elevated copper and zinc identified in the former horticultural footprint (AEC A) are relevant to potential ecological receptors only and are not considered to represent a human health constraint for the proposed quarry.

A single fragment of ACM was identified at TP216 within suspected locally placed/reworked near-surface material. This finding is note interpreted as a widespread asbestos in soil impact based on available evidence; however, it confirms that isolated ACM fragments may be present in localised areas. Accordingly, any isolated asbestos finds are expected to be easily managed during initial site stripping / earthworks rather than implementing broad scale site remediation.

9.3 Groundwater Screening

A groundwater screening investigation was completed as a supporting line of evidence given the permeable sandy setting and presence of surrounding groundwater users. Groundwater is not considered a primary exposure pathway for the current quarry concept because excavation is proposed above the groundwater table and no and no credible site-related groundwater contamination sources were identified from the desktop review.

Most organic COPCs were not detected above laboratory reporting limits and did not exceed the adopted screening criteria. Filtered metals results indicated exceedances of conservative ecological screening criteria for select metals in some tested samples.

The adopted groundwater ecological criteria are conservative, and exceedances do not necessarily indicate site-derived groundwater contamination. The results may reflect natural groundwater chemistry and/or regional baseline conditions. On the basis of the limited data collected, the groundwater screening results do not indicate significant groundwater contamination that would be expected to represent a material contaminated land constraint to the proposed use of groundwater under WAL5960 for sand washing, or to require groundwater remediation or active management during future quarry extraction phases. Notwithstanding, the available dataset is screening-level only and does not constitute a detailed groundwater quality assessment for ongoing operational supply.

10 Conclusions and Recommendations

10.1 Introduction

This DSI has been completed by MA to evaluate land contamination at 3631 Nelson Bay Road, Bobs Farm NSW to support a SSDA for a proposed sand quarry development (industrial/commercial land use scenario).

10.2 Desktop Summary

Desktop review indicates the Site remained predominantly bushland until clearing and establishment of agricultural use in the eastern portion of the Site sometime between 1993 and 2001, with subsequent expansion of agricultural infrastructure through to approximately 2016. Little onsite change was noted post 2016. Council records identify development approvals associated with agricultural operations, dwellings/sheds and previous extractive industry proposals. Government contaminated land and PFAS registers reviewed did not identify records indicating the Site is regulated/notified under the CLM Act or identified under PFAS investigation programs at the time of assessment.

The desktop study and site inspection identified two primary areas of environmental concern (AECs):

- AEC A: former and existing market gardens/orchards (diffuse horticultural inputs).
- AEC B: current and former buildings/structures and associated curtilage (potential localised hazardous building materials and minor chemical/fuel use/storage).

10.3 Investigation Conclusions

Based on the intrusive investigations, field observations and laboratory analytical results presented in Section 8, the following conclusions are noted:

1. Copper and zinc concentrations in near-surface soils within the former horticultural footprint are elevated relative to deeper natural sands and bushland background soils. This pattern is consistent with diffuse horticultural impacts (e.g., historical agricultural inputs) rather than point-source contamination.
2. Deeper natural samples from within the horticultural footprint generally reported lower copper and zinc concentrations than near-surface soils, indicating impacts are predominantly surficial.
3. The broader COPC suite assessed in AEC B did not identify petroleum hydrocarbons, BTEXN, PAHs, PCBs, OCP/OPP, PFAS or asbestos-in-soil impacts exceeding the adopted assessment criteria. Metals were generally below adopted criteria, with only minor isolated exceedances (e.g., copper/nickel) that are not interpreted to represent a material constraint for the proposed quarry, noting these materials would be managed under general soil handling controls during stripping and earthworks.

4. Isolated minor nickel EIL exceedances in near-surface soils are not supported by a consistent pattern across the relevant dataset and are not associated with a plausible anthropogenic source mechanism. On this basis, nickel is not considered a contaminant requiring specific management beyond standard soil handling measures.
5. Bushland “natural” soils provide a meaningful background reference and generally reported low metals (including low Cu/Zn). In contrast, several bushland test pits (including TP216 and TP218–TP220) encountered near-surface soils with shale gravels and occasional larger rock fragments inconsistent with mapped sand-dominant soil landscapes, interpreted as localised placed or reworked material, potentially associated with track works and/or minor dumping.
6. A small fragment of ACM sheeting was identified at TP216 and confirmed by laboratory analysis. This indicates isolated ACM fragments may be present locally in placed/reworked material, rather than widespread asbestos in soil contamination. Isolated asbestos impacts are expected to be easily managed during initial site stripping / earthworks rather than implementing broad scale site remediation.
7. A single groundwater screening event was completed from three existing monitoring wells. Organic COPCs were not detected above reporting limits and did not exceed the adopted screening criteria. Filtered metals results included exceedances of conservative ecological screening criteria for selected metals. These criteria are conservative and exceedances may reflect natural groundwater chemistry and/or regional baseline conditions rather than site-derived contamination. While groundwater is not considered a primary exposure pathway for the current quarry concept from a contaminated land perspective, groundwater extracted under WAL5960 is proposed to be used for sand washing. On the basis of the limited screening data collected, the results do not indicate significant groundwater contamination that would be expected to represent a material contaminated land constraint to the proposed operational use of groundwater or to require specific groundwater remediation or active management during future extraction phases of the quarry.
8. On the basis of the findings of this DSI, the Site is considered suitable for the proposed sand quarry (industrial/commercial land use scenario), subject to implementation of appropriate soil and environmental management measures to address:
 - a) Diffuse horticultural copper/zinc impacts in near-surface soils within the horticultural footprint.
 - b) The potential for localised ACM fragments within placed/reworked material (particularly in the bushland/track-associated areas).

10.4 Recommendations

To manage the identified (primarily surficial) soil considerations during construction/operations, we recommend the following:

1. Prepare and implement a Soil Management Plan (**SMP**) for stripping, stockpiling, handling, segregation, reuse and disposal of soils. As a minimum, the SMP should:
 - Define management areas consistent with the Soil Units/AECs (horticultural footprint vs bushland/background)
 - Specify handling procedures for near-surface soils in the horticultural footprint where Cu/Zn are elevated, particularly if soils are proposed for reuse as rehabilitation/growth media.
 - Set out waste classification requirements for soils requiring offsite disposal (including trigger conditions for additional sampling and classification).
2. Implement an Asbestos/Unexpected Finds Protocol (**UFP**) for all stripping and earthworks, with specific emphasis on bushland/track areas and any zones where placed/reworked material is encountered. The UFP should include:
 - Stop-work, isolate and notify procedures.
 - Visual inspection requirements during stripping in areas where fill/placed material is encountered.
 - Procedures for collection, containment, segregation and disposal of suspected ACM, including clearance criteria/hold point inspections where warranted.

11 Limitations Statement

This DSI was undertaken in line with current industry standards.

It is important, however, to note that no land contamination study can be a complete and exhaustive characterisation of a site, nor can it be guaranteed that any assessment shall identify and characterise all areas of potential contamination or all past potentially contaminating land uses. Therefore, this report should not be read as a guarantee that no contamination shall be found on the Site. Should material be exposed in future which appears to be contaminated or inconsistent with natural site soils, additional testing may be required to determine the implications for the site.

Martens & Associates Pty Ltd has undertaken this assessment for the purposes of the current development proposal. No reliance on this report should be made for any other investigation or proposal. Martens & Associates Pty Ltd accepts no responsibility and provides no guarantee regarding the characteristics of areas of the site not specifically studied in this investigation.

12 References

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Appendix A – Maps

Legend

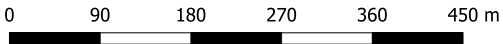
Viewports

Site Boundary

Cadastre



Map	Title
Map 01	Overview
Map 02	Historical Aerial: 1954
Map 03	Historical Aerial: 1966
Map 04	Historical Aerial: 1975
Map 05	Historical Aerial: 1984
Map 06	Historical Aerial: 1993
Map 07	Historical Aerial: 2001
Map 08	Historical Aerial: 2010
Map 09	Historical Aerial: 2016
Map 10	Historical Aerial: 2025
Map 11	Monitoring Wells
Map 12	Areas of Environmental Concern
Map 13	Testing Plan (1 of 2)
Map 14	Testing Plan (2 of 2)
Map 15	Additional Testing Plan (1 of 2)
Map 16	Additional Testing Plan (2 of 2)



1:7500 @ A3

Viewport A

Notes:
- Aerial from Nearmap (2025).
- Cadastre and Site Boundary from NSW Spatial Services Clip and Ship (2025).



0 40 80 120 160 200 m

1:4000 @ A3

Viewport B

Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Monitoring Wells

Map	Map 11
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026

Legend

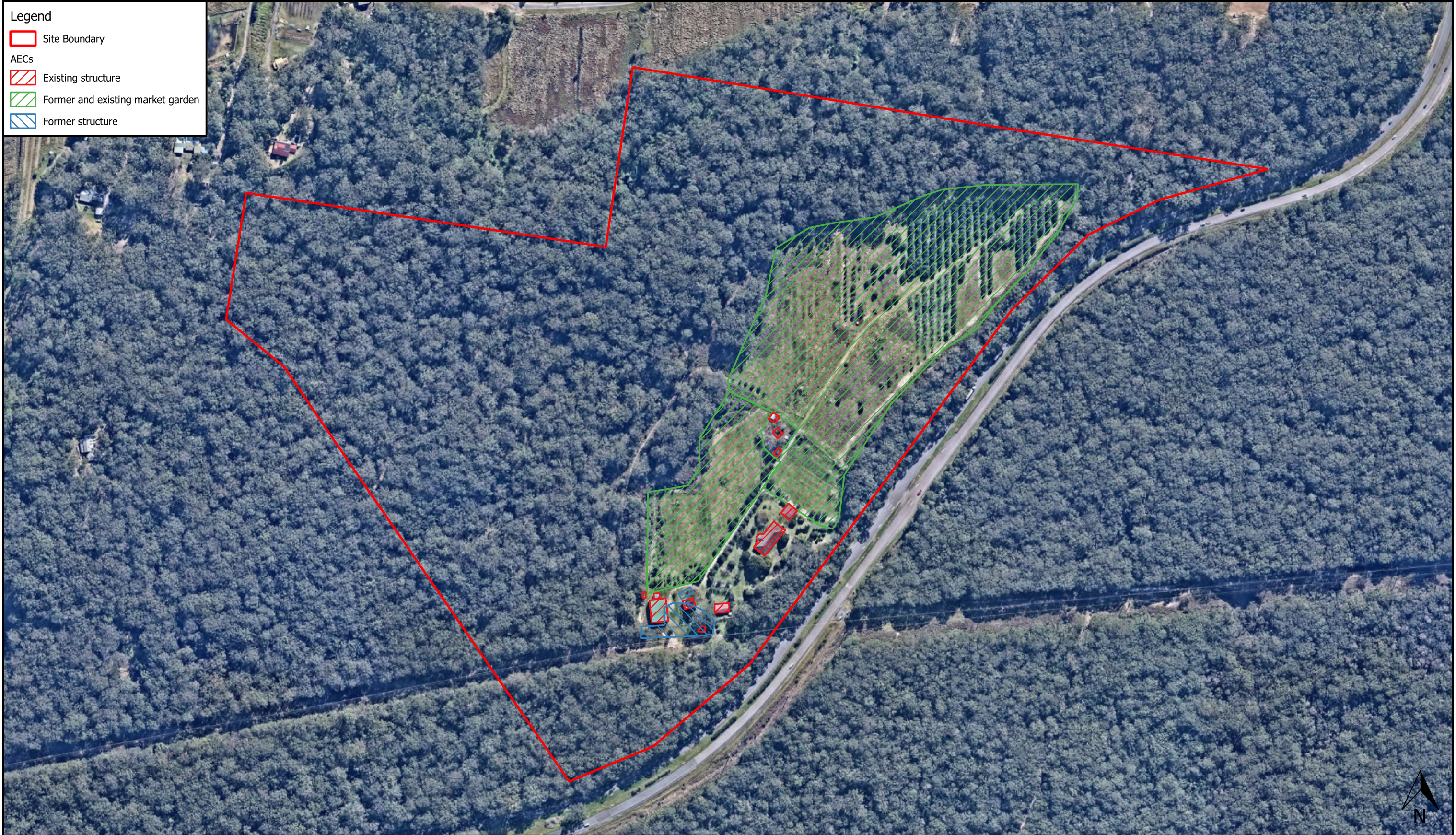
Site Boundary

AECs

Existing structure

Former and existing market garden

Former structure



0 40 80 120 160 200 m

1:4000 @ A3
Viewport B
Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Areas of Environmental Concern

Map	Map 12
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026

Legend

- Site Boundary
- Surface Sample Location
- Composite groups



0 10 20 30 40 50 m

1:1000 @ A3
Viewport E
Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Testing Plan (1 of 2)

Map	Map 13
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026

Legend

Site Boundary

Surface Sample Location

Composite groups

Test Pit Location

TP100s



0 10 20 30 40 50 m

1:1000 @ A3
Viewport D
Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).



0 10 20 30 40 50 m

1:1000 @ A3
Viewport E
Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Additional Testing Plan (1 of 2)

Map	Map 15
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



0 40 80 120 160 200 m

1:4000 @ A3

Viewport B

Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Additional Testing Plan (2 of 2)

Appendix B – Development Plans

Plan of:	Bobs Farm Sand Quarry Proposal - Proposed Extraction Stages
Figure:	Three
Version/ Date:	V2 10/03/2026
Our Ref:	12786_BF_ProposedExtractionStages2026_Q003_V2_F3

Location:	3631 Nelson Bay Road, Bobs Farm, NSW
Council:	Port Stephens
Tenure:	Not Applicable
Client:	Newcastle Sand

Source:	Nearmap 24/07/2025
Survey:	2025 Centurion Survey Pty Ltd
Projection:	GDA2020/MGA Zone 56 EPSG:7856
Contour Interval:	1m

Plan By:	SK
Project Manager:	GT

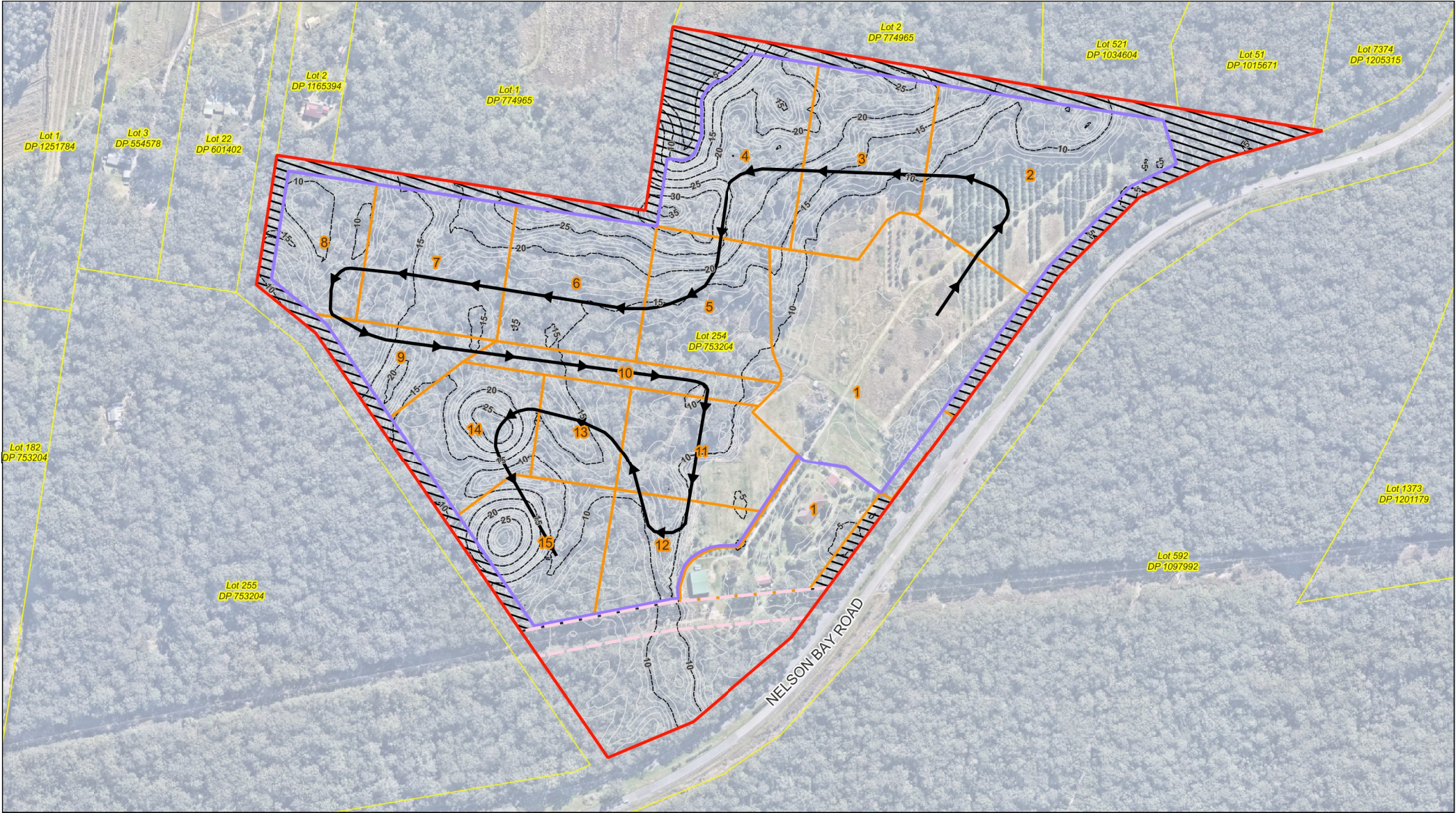


0 25 50 75 100 m



environmental
compliance solutions
and laboratories

This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.



Legend

Lot Boundaries

Project Boundary

Buffers

Electricity Easement

Existing Topography

5m

1m

Proposed Stages

Top of Final Cut

Extraction Path

Stage Boundaries

1-15

VGT Environmental Compliance Solutions Pty Ltd 4/30 Glenwood Drive, Thornton NSW 2322 PO Box 2335, Greenhills NSW 2323 ph: (02) 4028 6412 email: mail@vgt.com.au www.vgt.com.au ABN: 26 621 943 888

Appendix C – Groundwater Bore Information

State Overview

[State Overview](#)

Rivers and Streams

[favourites](#) [search](#) [download sites](#) [find a site](#)

[Real Time Data - Rivers And Streams](#)

Daily River Reports

[Daily River Reports](#)

Dams

[favourites](#) [search](#) [download sites](#) [find a site](#)

[Real Time Data - Major Dams](#)

Groundwater (Telemetered data)

[favourites](#) [search](#) [download sites](#) [find a site](#)

[Real Time Data - Bores](#)

All Groundwater Site details

[search](#) [download sites](#) [find a site](#)

[search by licence](#)

[All Groundwater Map](#)

Meteorology

[favourites](#) [search](#) [download sites](#) [find a site](#)

[Real Time Data - Weather Stations](#)

Hunter River Salinity Trading Scheme

[Hunter River Salinity Trading Scheme](#)

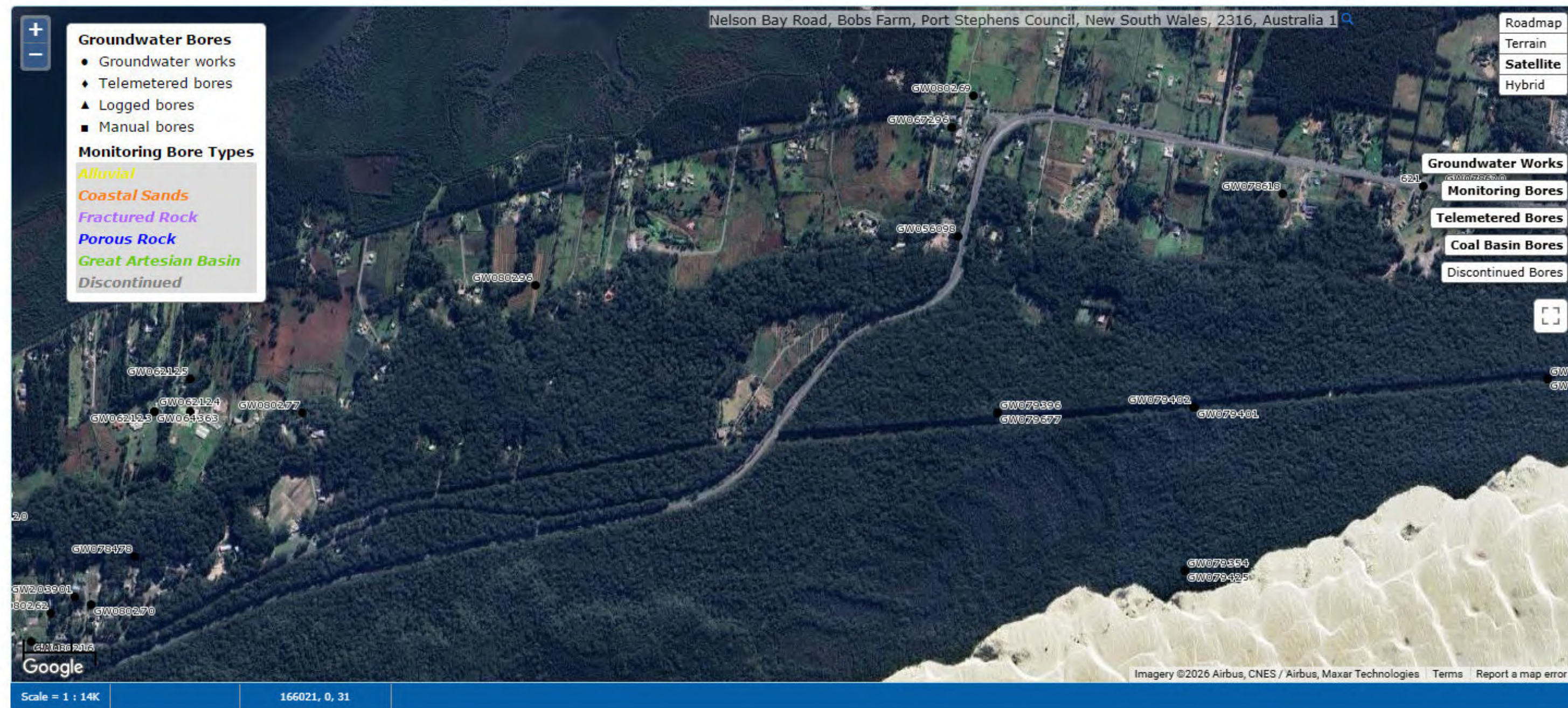
All Groundwater Site Details

ALL GROUNDWATER MAP

All data times are Eastern Standard Time

Map [Info](#)

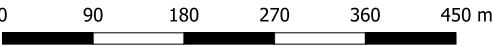
[bookmark this page](#)



Appendix D – Historical Aerial Photography

Legend

Site Boundary



1:7500 @ A3
Viewport A

Notes:

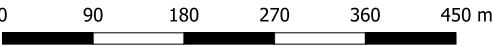
- Aerial from NSW Spatial Services HAPE (1954).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 1954

Map	Map 02
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026

Legend

Site Boundary



1:7500 @ A3

Viewport A

Notes:

- Aerial from NSW Spatial Services HAPE (1966).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 1966

Map	Map 03
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



Legend

Site Boundary

0 90 180 270 360 450 m

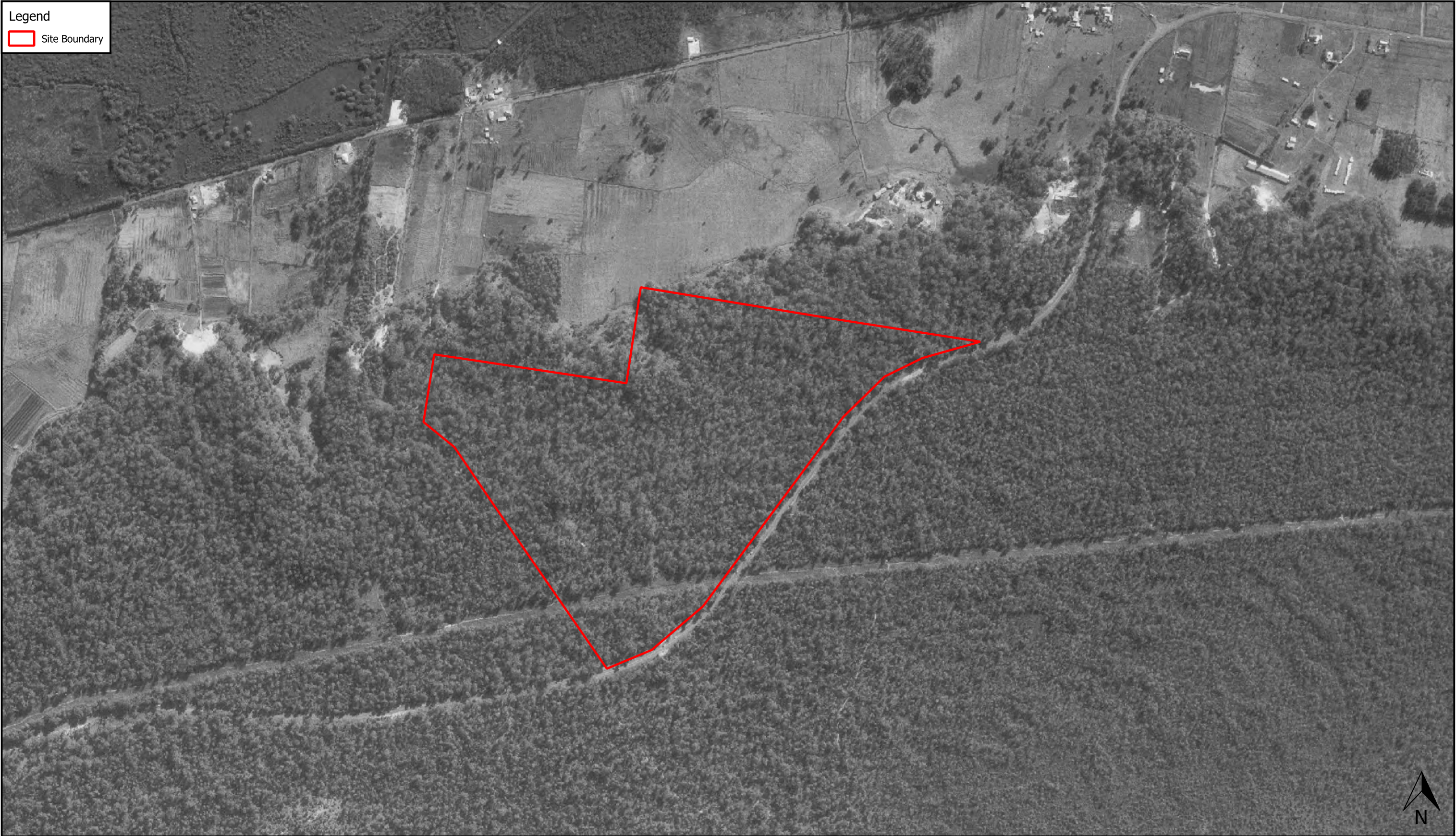
1:7500 @ A3

Viewport A

Notes:
- Aerial from NSW Spatial Services HAPE (1975).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 1975

Map	Map 04
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



Legend

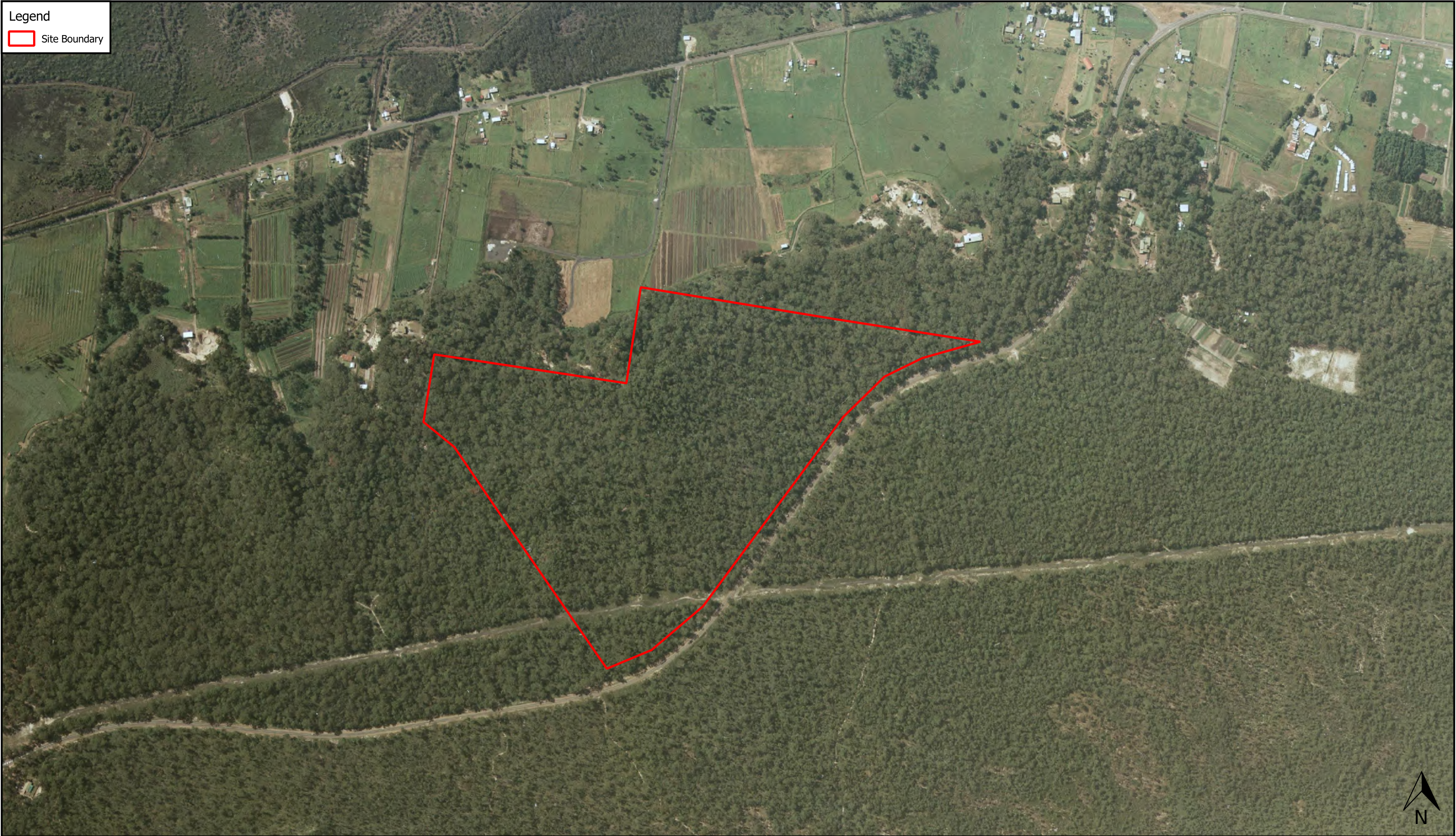
Site Boundary

0 90 180 270 360 450 m

1:7500 @ A3
Viewport A
Notes:
- Aerial from NSW Spatial Services HAPE (1984).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 1984

Map 05	Map
3631 Nelson Bay Road, Bobs Farm, NSW	Site
Proposed Sand Quarry	Project
Detailed Site Investigation	Sub-Project
Newcastle Sand	Client
17/02/2026	Date



Legend

Site Boundary

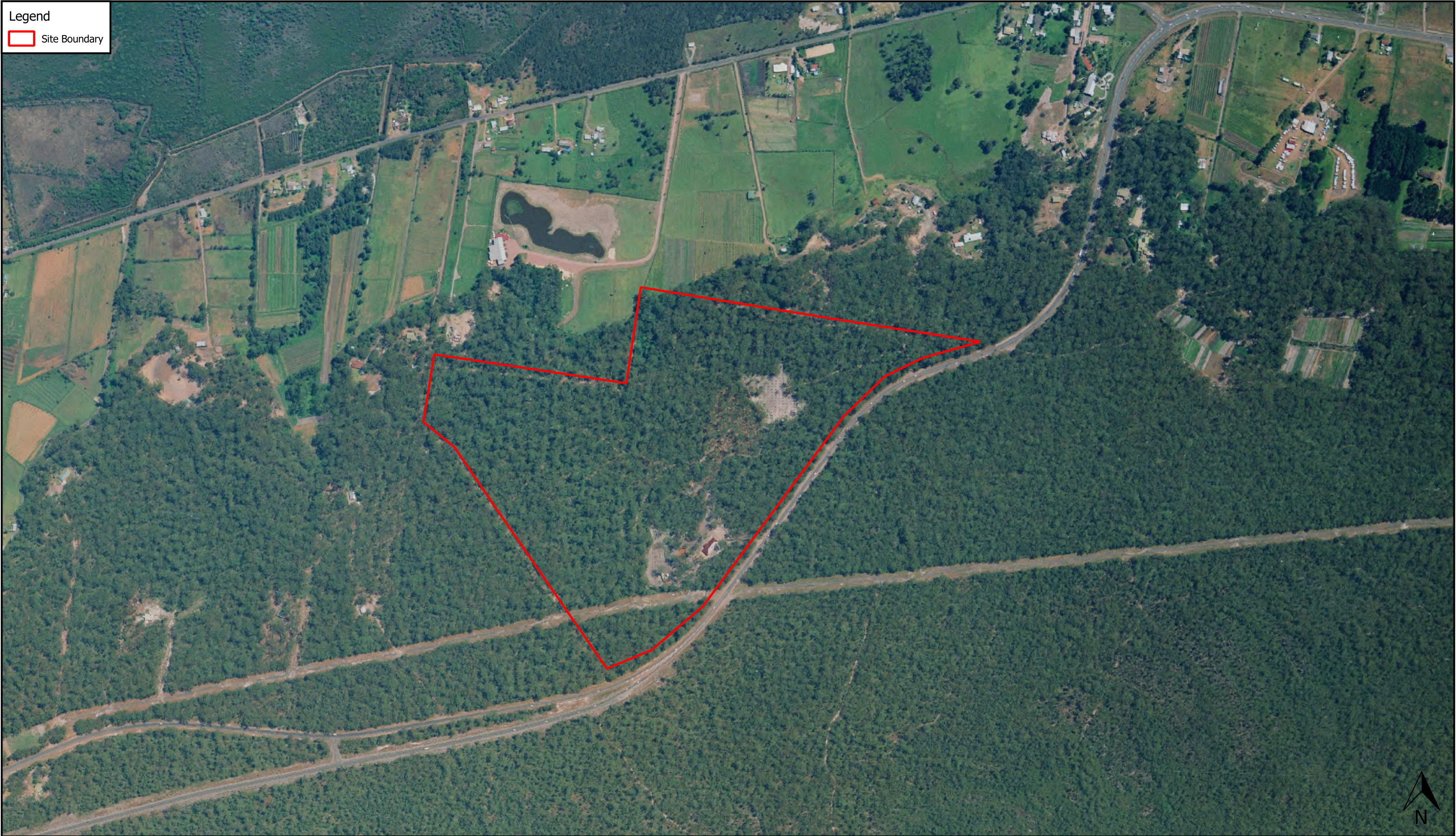
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1:7500 @ A3
Viewport A

Notes:
- Aerial from NSW Spatial Services HAPE (1993).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 1993

Map	Map 06
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



Legend

Site Boundary

0 90 180 270 360 450 m

1:7500 @ A3
Viewport A

Notes:

- Aerial from NSW Spatial Services HAPE (2001).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 2001

Map	Map 07
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



Legend

Site Boundary

0 90 180 270 360 450 m

1:7500 @ A3
Viewport A
Notes:
- Aerial from Nearmap (2010).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 2010

Map	Map 08
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



Legend

Site Boundary

0 90 180 270 360 450 m

1:7500 @ A3
Viewport A
Notes:
- Aerial from Nearmap (2016).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 2016

Map	Map 09
Site	3631 Nelson Bay Road, Bobs Farm, NSW
Project	Proposed Sand Quarry
Sub-Project	Detailed Site Investigation
Client	Newcastle Sand
Date	17/02/2026



0 90 180 270 360 450 m

1:7500 @ A3

Viewport A

Notes:
- Aerial from Nearmap (2025).
- Site Boundary from NSW Spatial Services Clip and Ship (2025).

Map Title / Figure:
Historical Aerial: 2025

Map 10
3631 Nelson Bay Road, Bobs Farm, NSW
Proposed Sand Quarry
Detailed Site Investigation
Newcastle Sand
17/02/2026

Map
Site
Project
Sub-Project
Client
Date

Appendix E – Council Development Records

Bryson Monaghan

From: Sarah Rose <Sarah.Rose@portstephens.nsw.gov.au>
Sent: Wednesday, 19 November 2025 1:04 PM
To: Bryson Monaghan
Subject: Bryson Monaghan - Martens and Associates - Informal GIPA - Information regarding 3631 Nelson Bay Road BOBS FARM - RESPONSE

Follow Up Flag: Follow up
Flag Status: Flagged

Telephone enquiries
Sarah Rose
P: (02) 4980 0421
Please quote file no:
PSC2025-05036

Hi Bryson,

We acknowledge receipt of your request for DA Documents relating to 3631 Nelson Bay Road BOBS FARM.

Please see below screenshot of development applications relating to 3631 Nelson Bay Road BOBS FARM. Could you please confirm whether you require any further information and if so could you please advise of which exact development applications and documents you would like to request?

Formatted Account	Document Type	Precis	Received Date	Dete
025-2018-00000008-001	DA Determined by Govt D...	Extractive industries	27/11/2018	16/0
025-2017-00000003-001	DA Determined by Govt D...	Bob Farm Sands Project	23/03/2017	06/0
016-2007-00000776-001	Development Applications	Storage Shed	04/09/2007	10/1
016-2002-00001875-001	Development Applications	Temporary Compound Site	29/10/2002	27/0
016-2002-00000594-001	Development Applications	Clearing, Machinery Shed and Storage Compound	17/04/2002	29/1
016-2000-00001070-001	Development Applications	OLIVE FARM, OLIVE PROCESSING & DISTRIBUTION	28/06/2000	16/0
016-1999-00001780-002	Development Applications	S.96 Amendment	11/02/2000	21/0
016-1999-00001780-001	Development Applications	SINGLE STOREY DWELLING	22/10/1999	16/1
015-2008-00000048-001	Waste Treatment Device ...	WASTE TREATMENT SYSTEM	05/08/2008	06/0
015-2000-00000134-001	Waste Treatment Device ...	SEWAGE MANAGEMENT FACILITY	14/09/2000	17/1
007-1995-00000181-001	Combined BA/DA	ADVERTISING SIGN	06/02/1995	09/0

If you have any questions, please contact me.

Kind regards,



Sarah Rose
Governance Officer

p 02 4988 0421
w portstephens.nsw.gov.au



Formatted Account	Document Type	Precis	Received Date	Determination Date	Determination	Consent	Completion
025-2018-00000008-001	DA Determined by Govt D...	Extractive industries	27/11/2018	16/01/2019	Completed (COM)	Completed (COM)	Completed (COM)
025-2017-00000003-001	DA Determined by Govt D...	Bob Farm Sands Project	23/03/2017	06/04/2017	Completed (COM)	Completed (COM)	Completed (COM)
016-2007-00000776-001	Development Applications	Storage Shed	04/09/2007	10/10/2007	Approved	Approved	Approved
016-2002-00001875-001	Development Applications	Temporary Compound Site	29/10/2002	27/02/2003	Approved with Condi	Approved with Condi	Approved with Condi
016-2002-00000594-001	Development Applications	Clearing, Machinery Shed and Storage Compound	17/04/2002	29/10/2002	Approved	Approved	Approved
016-2000-00001070-001	Development Applications	OLIVE FARM, OLIVE PROCESSING & DISTRIBUTION	28/06/2000	16/03/2001	Application Withdra	Application Withdra	Application Withdra
016-1999-00001780-002	Development Applications	S.96 Amendment	11/02/2000	21/02/2000	Approved with Condi	Approved with Condi	Approved with Condi
016-1999-00001780-001	Development Applications	SINGLE STOREY DWELLING	22/10/1999	16/12/1999	Approved with Condi	Approved with Condi	Approved with Condi
015-2008-00000048-001	Waste Treatment Device ...	WASTE TREATMENT SYSTEM	05/08/2008	06/08/2008	Approved with Condi	Approved with Condi	Approved with Condi
015-2000-00000134-001	Waste Treatment Device ...	SEWAGE MANAGEMENT FACILITY	14/09/2000	17/10/2000	Approved	Approved	Approved
007-1995-00000181-001	Combined BA/DA	ADVERTISING SIGN	06/02/1995	09/03/1995	Approved	Approved	Approved

Appendix F – Government Register Records

Public registers

+ POEO Public Register

– Contaminated land record of notices

[About the record of notices](#)

[List of notified sites](#)

[Tips for searching](#)

[Disclaimer](#)

[Dangerous goods licences](#)

[Pesticide licences](#)

[Radiation licences](#)

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

Search results

Your search for: LGA: PORT STEPHENS COUNCIL

Matched 5 notices relating to 2 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
RAYMOND TERRACE	82 Benjamin Lee DRIVE	Former Service Station	3 current and 1 former
TOMAGO	23-25 School DRIVE	Former Hydromet Site - DGL GROUP LIMITED	1 former

Page 1 of 1

13 November 2025

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude	
BOBS FARM	Bob's Farm	15 Fenningham Island ROAD	Other Industry	Regulation under CLM Act not required	-32.74867207	152.0316217	

- POEO Public Register

[Licences, applications and notices search](#)
[Penalty notices search](#)
[Enforceable undertakings search](#)
[Enforceable undertakings media releases](#)
[Exemptions and approvals search](#)
[Prosecutions or civil proceedings search](#)
[Terms of use: POEO public register](#)
[Licensing FAQs](#)
[List of licences](#)
[Unlicensed premises regulated by the EPA](#)

+ Contaminated land record of notices

[Dangerous goods licences](#)
[Pesticide licences](#)
[Radiation licences](#)

Search results

Your search for: **General Search** with the following criteria**Suburb - Bobs Farm**

returned 5 results

[Export to excel](#)

1 of 1 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
3173525017	HAY ENTERPRISES (NSW) PTY LTD	3721 Nelson Bay Road, BOBS FARM, NSW 2316	Penalty Notice	Issued	09 Mar 2018
11710	HOLCIM (AUSTRALIA) PTY LTD	Nelson Bay Road , BOBS FARM,POEO licence NSW 2316		Issued	21 Jan 2003
1072125	SIBELCO AUSTRALIA PTY LTD	Nelson Bay Road , BOBS FARM,s.58 Licence NSW 2316	Variation	Issued	16 Apr 2007
1502925	SIBELCO AUSTRALIA PTY LTD	Nelson Bay Road , BOBS FARM,s.58 Licence NSW 2316	Variation	Issued	30 Dec 2011
1539926	SIBELCO AUSTRALIA PTY LTD	Nelson Bay Road , BOBS FARM,s.58 Licence NSW 2316	Variation	Issued	26 Apr 2016

13 November 2025

- POEO Public Register

[Licences, applications and notices search](#)

[Penalty notices search](#)

[Enforceable undertakings search](#)

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Notice summary

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Summary of Notice No: 3173525017

Organisation: HAY ENTERPRISES (NSW) PTY LTD

Location: N/A

LGA: N/A

Catchment: N/A

Issue date: 09 Mar 2018

Notice status: Issued

Complied with date:

Penalty Notice

Offence date: 22 Feb 2018

Legislation: Protection of the Environment Operations Act 1997 - 144(1)

Offence short title: Unlawfully use etc place as waste facility - other officer - Corporation

The NSW Government PFAS Investigation Program

View a map of the sites in NSW that may be contaminated with PFAS, learn how to reduce your exposure to these chemicals, and read about our investigation of the issue.

The EPA is leading an investigation program to assess the legacy of PFAS use across NSW. With the assistance of the NSW PFAS Technical Advisory Group, which includes NSW Health, Department of Primary Industries and the Office of Environment and Heritage, we provide impacted residents with tailored, precautionary dietary advice to help them reduce any exposure to PFAS.

Current investigations are focused on sites where it is likely that large quantities of PFAS have been used. The EPA is currently investigating PFAS at these sites:

Search by Postcode

Organisation

Select filter



Search

Map view List view

Map

Satellite



Key: PFAS investigation site



PFAS INVESTIGATION AND MANAGEMENT PROGRAM SNAPSHOT – October 2024

REMEDIATION ACTIVITIES

Remediation works targeting contaminated water, soil and other materials are underway or completed at Swartz Barracks, HMAS *Cerberus*, Jervis Bay Range Facility and RAAF Bases East Sale, Williamtown, Edinburgh, Richmond, Tindal, Wagga, Darwin, Pearce and Townsville.

Remediation works are scheduled to commence in the coming months at HMAS *Albatross*, Blamey Barracks, Lavarack Barracks, Bandiana Military Area and RAAF Bases Darwin and Amberley.

COMMUNITY EVENTS

Defence has held 183 information sessions to keep communities informed.

Recent events

- 16 October 2024 – RAAF Base Tindal
- 15 October 2024 – RAAF Base Darwin
- 6 August 2024 – RAAF Base Amberley
- 19 June 2024 – HMAS *Cerberus*
- 18 June 2024 – Bandiana Military Area

Upcoming events

- Latest information is available on the Defence website.

KEY STATISTICS

Properties connected to town water **378**

160 rainwater tanks provided to **117** properties

Community engagement events conducted **183**

869 properties have water assistance extended from 6 to 8 years

REMEDIATION

Treated or removed over **160,000** tonnes of contaminated soil

Installed **11** water treatment plants

Treated over **11.5** billion litres of water

FINANCIAL FACTS

\$807m invested to manage, remediate and conduct research

INCLUDING

provided to **\$27m** other government agencies for research into health and remediation

\$165.4m allocated in 2024-2025 to manage and remediate PFAS

ONGOING MONITORING

Defence regularly monitors for PFAS on and around impacted sites. Monitoring results help Defence understand how PFAS is moving in the environment. This information also guides Defence's remediation and management actions.

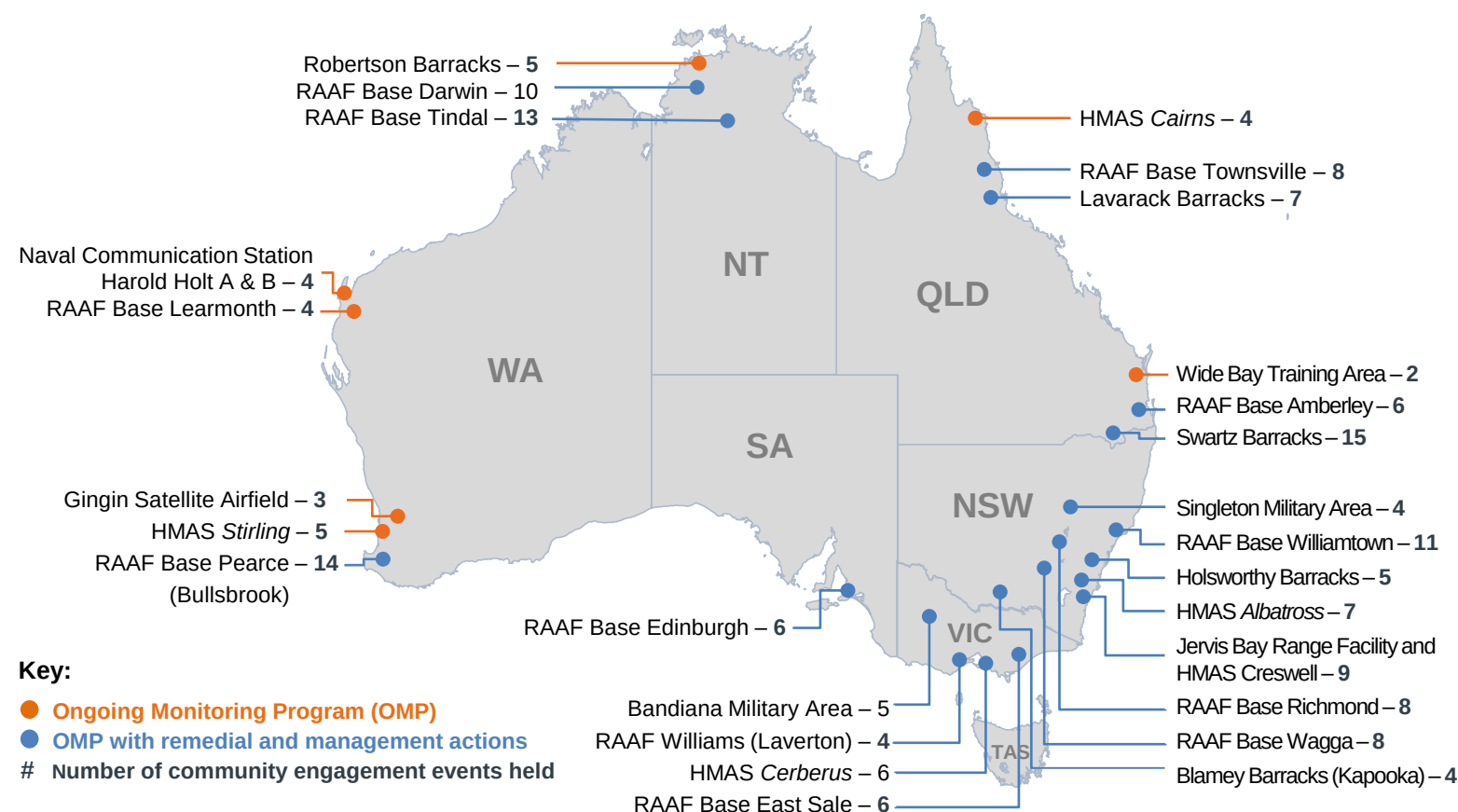
RESEARCH ACTIVITIES

Defence collaborates internationally to share its learnings and to ensure the best remedial actions are implemented on its PFAS impacted bases.

Since 2016, Defence has supported trials of new remediation technologies. Trials such as soil stabilisation form part of Defence's remediation approach on some bases.

RESEARCH FUNDING

- Defence has provided approximately \$26 million in funding for 21 research and technology programs to support PFAS investigation and remediation activities.
- Defence provided over \$27 million in additional funding to other government agencies to support PFAS-related health and remediation research.



Legend

Lat: -32.7848, Lng: 152.0904

Decimal Degrees (latitude, longitude)

Degrees Minutes Seconds

MGA

Substantial Potential

Slight Potential

Remote Potential

Information

Other

Sea Dumping of Depth Charges

Other Sea Dumping Sites

Defence Controlled Area

Property Cadastral Area

This map displays the coastal region around Tilligerry Creek, including Worimi National Park and Anna Bay. A large area in the foreground is highlighted in orange, indicating 'Slight Potential'. The map also shows 'Tilligerry Creek', 'Jessies Island', 'Tilligerry Nature Reserve', 'Bobs Farm', and 'Stockton Beach North 4wd Access'. Roads such as 'Lemon Tree Passage Rd', 'Nelson Bay Rd', and 'Port Stephens Dr' are visible. The map interface includes a search bar at the top, a legend on the left, and navigation controls on the right.

Google

Keyboard shortcuts Map data ©2025 Google 500 m Terms Report a map error

Map Satellite Search Address

Legend

Lat: -32.7412, Lng: 152.0782

Decimal Degrees (latitude, longitude)

Degrees Minutes Seconds

MGA

Substantial Potential

Slight Potential

Remote Potential

Information

Other

Sea Dumping of Depth Charges

Other Sea Dumping Sites

Defence Controlled Area

Property Cadastral Area

1218 Morna Point

UXO Category: Slight Potential

Description:

The Morna Point Air Weapons Range was used for air to ground gunnery and rocketry. 25pdr artillery was also fired into the Range.

Where a Defence report is available, it will be listed below and can be found on the Defence UXO website.

Report Source:

Show interfacing Cadastre

There are 42 interfacing cadastre

Appendix G - Site Photographs



Photo 1 – Main residential dwelling.



Photo 2 – Granny Flat residential dwelling.



Photo 3 – Garage / shed, main residential dwelling (roof in foreground), gravel driveway.



Photo 4 – Shed, water tanks, driveway, overground vegetation.



Photo 5 – Shed, shipping containers, storage area.



Photo 6 – Large shed (workshop, machinery storage)



Photo 7 – Shed, building material stockpiles.



Photo 8 – Shipping containers, large shed, shed (foreground).



Photo 9 – Shed, enclosed pen/kennel area, metal fence, overgrown vegetation area.



Photo 10 – Shelter / shade structure.



Photo 11 – timber, vegetation and irrigation line stockpile.



Photo 12 – Building material stockpiles.



Photo 13 – Timber stockpile adjacent to shipping container / shed.



Photo 14 – Brick stockpiles, property utility cabinet and service pit.



Photo 15 – Grass area, access track, pump station shed, plantations and bushland.



Photo 16 – Electricity easement, access track, bushland.

Appendix H – Test Pit Logs

CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP101	
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A		
EQUIPMENT	Hand Tools		LONGITUDE	6373171.405	RL SURFACE	6.19	DATUM	56H
OPERATOR	JT		LATITUDE	406673.017	ASPECT	South	SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
					Logged Remarks				
			Elevation	Depth (m)					Sample
Hand Tools					S/0-0.1		FILL: Gravelly and Silty SAND; medium grained; grey to brown; medium sized gravel. NATURAL: SAND; fine to medium grained; light brown.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
			6.0 0.2		S/0.2-0.3				No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
	NE								TP101 terminated-Target Depth Reached at 0.5 m

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS									
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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP102		
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED				
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A			
EQUIPMENT			Hand Tools	LONGITUDE	6373107.383	RL SURFACE	7.56	PROJECT NO. P2511038	
OPERATOR			JT	LATITUDE	406688.124	ASPECT	South	DATUM	56H
								SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
			Elevation	Sample	Tests				Logged Remarks
			Depth (m)						
Hand Tools				S/0-0.1		 FILL: Gravelly and Silty SAND; medium grained; grey to brown; medium to coarse sized gravel.		Anthropogenic material (brick and plastic) encountered. No visible PACM, no staining and no odour encountered.	
			7.2 0.4	S/0.4-0.5	 NATURAL: SAND; fine to medium grained; light brown to grey.			No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
	NE					TP102 terminated-Target Depth Reached at 0.5 m			

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Engineering Log -
TESTPIT

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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP105		
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED				
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A			
EQUIPMENT			Hand Tools	LONGITUDE	6373014.122	RL SURFACE	6.42	DATUM	56H
OPERATOR			JT	LATITUDE	406544.052	ASPECT	South	SLOPE	<5%
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Observations	
			Elevation						
			Depth (m)	Sample	Tests				
Hand Tools				S/0-0.1				FILL: Sandy GRAVEL; medium to coarse sized gravel; light brown; medium grained sand. NATURAL: SAND; fine to medium grained; light brown.	No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
			6.1 0.3	S/0.3-0.5					
	NE								TP105 terminated-Target Depth Reached at 0.5 m

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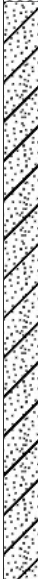
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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP106		
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED				
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A			
EQUIPMENT			Hand Tools	LONGITUDE	6373008.738	RL SURFACE	5.86	DATUM	56H
OPERATOR			JT	LATITUDE	406574.912	ASPECT	South	SLOPE	<5%
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Observations	
			Elevation	Sample				Tests	Logged Remarks
			5.8	S/0-0.1		FILL: Sandy GRAVEL; medium to coarse sized gravel; light brown; medium grained sand. NATURAL: SAND; fine to medium grained; light brown.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
			0.1	S/0.2-0.4					
		0.5						No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
NE						TP106 terminated-Target Depth Reached at 0.6 m			

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CLIENT		Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP107	
PROJECT		Detailed Site Investigation		LOGGED	BTM	CHECKED			
SITE		3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A		
EQUIPMENT		Hand Tools		LONGITUDE	6373006.915	RL SURFACE	5.97	DATUM	56H
OPERATOR		JT		LATITUDE	406610.481	ASPECT	South	SLOPE	<5%
Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
			Elevation	Sample	Tests				Logged Remarks
			Depth (m)						
Hand Tools		NE	5.8 0.2	S/O-0.1 S/O.2-0.4			FILL: Gravelly SAND; fine to medium grained; light brown; medium to coarse sized gravel.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
			0.5				NATURAL: SAND; fine to medium grained; light brown, brown to light orange.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
							TP107 terminated-Target Depth Reached at 0.7 m		
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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP109	
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A		
EQUIPMENT			Hand Tools		LONGITUDE	6373076.285	RL SURFACE	8.37
OPERATOR			JT		LATITUDE	406644.815	ASPECT	South
							DATUM	56H
							SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
			Elevation	Sample	Tests				Logged Remarks
			Depth (m)						
Hand Tools		8.3 0.1	S/0-0.1				FILL: Gravelly SAND; fine to medium grained; light brown; medium to coarse sized gravel. NATURAL: SAND; fine to medium grained; light brown.	No visible anthropogenic material, no visible PACM, no staining and no odour encountered. No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
			S/0.3-0.4						
		0.5							
NE									
							TP109 terminated-Target Depth Reached at 0.6 m		

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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP110	
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A		
EQUIPMENT			Hand Tools		LONGITUDE	6373093.386	RL SURFACE	8.95
OPERATOR			JT		LATITUDE	406662.835	ASPECT	South
							DATUM	56H
							SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
			Elevation	Sample	Tests				Logged Remarks
			Depth (m)						
Hand Tools		8.8 0.1	S/0-0.1			FILL: Gravelly SAND; fine to medium grained; light brown; medium to coarse sized gravel.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
			S/0.2-0.3 + Dup13			NATURAL: SAND; fine to medium grained; light brown to brown.		No visible anthropogenic material, no visible PACM, no staining and no odour encountered.	
		0.5							
NE									
						TP110 terminated-Target Depth Reached at 0.6 m			

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CLIENT	Newcastle Sand		COMMENCED	06/11/2025	COMPLETED	06/11/2025	REF TP111		
PROJECT	Detailed Site Investigation		LOGGED	BTM	CHECKED				
SITE	3631 Nelson Bay Rd, Bobs Farm NSW		GEOLOGY	Quaternary	VEGETATION	N/A			
EQUIPMENT			Hand Tools	LONGITUDE	6373079.904	RL SURFACE	8.52	DATUM	56H
OPERATOR			JT	LATITUDE	406674.83	ASPECT	South	SLOPE	<5%
Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Observations
			Elevation	Sample	Tests				Logged Remarks
		Depth (m)							
Hand Tools			8.3	S/0-0.1			FILL: Silty SAND; medium grained; dark brown; trace medium to coarse sized shale gravel. NATURAL: SAND; fine to medium grained; light brown.		Anthropogenic material (brick) encountered. No visible PACM, no staining and no odour encountered.
			0.2	S/0.2-0.3					No visible anthropogenic material, no visible PACM, no staining and no odour encountered.
		0.5							
	NE								
							TP111 terminated-Target Depth Reached at 1 m		

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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP201	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00606	RL SURFACE	6	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.7731	ASPECT	South	SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0 0.0	S/O-0.1 + DUP01		TOPSOIL: Silty SAND; fine to medium grained; light brown to brown.		Topsoil
			5.9 0.1	S/O.3-0.4		NATURAL: SAND; fine grained; light brown.		Natural
	NE					TP201 terminated-Target Depth Reached at 0.5 m		

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**Engineering Log -
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[illegible]

CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP203 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00575	RL SURFACE	6	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77311	ASPECT	South	SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0 0.0			TOPSOIL: Silty SAND; fine to medium grained; light brown to brown.		Topsoil
			5.9 0.1	S/O.1-0.2		NATURAL: SAND; fine grained; light brown.		Natural
			S/O.3-0.4					
	NE					TP203 terminated-Target Depth Reached at 0.5 m		

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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP204 PROJECT NO. P2511038		
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter			
EQUIPMENT	Hand Tools	LONGITUDE	152.00546	RL SURFACE	6	DATUM	mAHD	
OPERATOR	BTM	LATITUDE	-32.77306	ASPECT	South	SLOPE	<5%	
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0			FILL: Silty SAND; fine grained; light brown; with minor fine to medium black shale rock fragments and medium dark grey granite rock fragments.		Fill
			0.0	S/0.1-0.2				
				S/0.2-0.3				
			5.7			NATURAL: SAND; fine grained; light brown.		Natural
	NE		0.3					
						TP204 terminated-Target Depth Reached at 0.4 m		
EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS								
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP205 PROJECT NO. P2511038				
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF					
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter					
EQUIPMENT	Hand Tools	LONGITUDE	152.00526	RL SURFACE	6	DATUM	mAHD			
OPERATOR	BTM	LATITUDE	-32.77335	ASPECT	South	SLOPE	<5%			
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin		
			Elevation Depth (m)	Sample						Tests
Hand Tools			6.0 0.0	S/0.1-0.2 S/0.2-0.3		FILL: Silty SAND; fine grained; light brown; with minor fine to medium black shale rock fragments.		Fill		
			5.7 0.3					NATURAL: SAND; fine grained; light brown.	Natural	
	NE					TP205 terminated-Target Depth Reached at 0.5 m				
EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS										
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP206 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00522	RL SURFACE	6	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77365	ASPECT	South	SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0 0.0	S/O.1-0.2		FILL: Silty SAND; fine grained; light brown; with minor fine to medium black shale rock fragments.		Fill
			5.7 0.3					
		0.5						
NE						TP206 terminated-Target Depth Reached at 0.6 m		

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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP207 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00366	RL SURFACE	6	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77443	ASPECT	Southeast	SLOPE	<5%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation	Sample				
		Depth (m)						
Hand Tools		6.0 0.0				FILL: Silty SAND; fine to medium grained; light brown to brown; with roots, with minor shell inclusions, with minor fine to medium black shale rock fragments and medium pale white gravel rock fragments.		Fill
		5.9 0.1	S/O.1-0.2			FILL: Silty SAND; fine grained; light brown; with minor fine to medium black shale rock fragments.		
		5.6 0.4	S/O.2-0.3			NATURAL: SAND; fine grained; light brown.		
		0.5						
	NE					TP207 terminated-Target Depth Reached at 0.7 m		



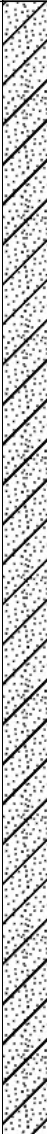
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**Engineering Log -
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP208 PROJECT NO. P2511038		
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter			
EQUIPMENT	Hand Tools	LONGITUDE	152.00353	RL SURFACE	6	DATUM	mAHD	
OPERATOR	BTM	LATITUDE	-32.77437	ASPECT	Southeast	SLOPE	<5%	
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0 0.0			FILL: Silty SAND; fine grained; light brown; with minor medium black aggregate fragments and medium grey and red conglomerate rock fragments.		Fill
				S/O.1-0.2				
				5.7 0.3	S/O.3-0.4		NATURAL: SAND; fine grained; light brown.	
NE						TP208 terminated-Target Depth Reached at 0.4 m		
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP209 PROJECT NO. P2511038		
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter			
EQUIPMENT	Hand Tools	LONGITUDE	152.00373	RL SURFACE	6	DATUM	mAHD	
OPERATOR	BTM	LATITUDE	-32.77547	ASPECT	Southeast	SLOPE	<5%	
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			6.0 0.0	S/O.1-0.2		FILL: Silty SAND; fine grained; light brown; with minor fine to medium black shale rock fragments.		Fill
			5.7 0.3	S/O.3-0.4		NATURAL: SAND; fine grained; light brown.		Natural
	NE							
						TP209 terminated-Target Depth Reached at 0.5 m		
EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS								
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Page 1 of 1

CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP211			
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF				
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter	PROJECT NO. P2511038			
EQUIPMENT	Hand Tools	LONGITUDE	151.99908	RL SURFACE	18	DATUM	mAHD		
OPERATOR	BTM	LATITUDE	-32.77313	ASPECT	West	SLOPE	<15%		
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin	
			Elevation	Sample					Tests
			Depth (m)						
Hand Tools		18.0 0.0	S/0-0.1			NATURAL: SAND; fine grained; light brown; with roots.		Natural	
		17.7 0.3	S/0.3-0.4			NATURAL: SAND; fine grained; light brown.			
		0.5							
	NE								
						TP211 terminated-Target Depth Reached at 0.8 m			
EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS									
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP214 PROJECT NO. P2511038		
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF			
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter			
EQUIPMENT	Hand Tools	LONGITUDE	151.99915	RL SURFACE	10	DATUM	mAHD	
OPERATOR	BTM	LATITUDE	-32.77612	ASPECT	West	SLOPE	<15%	
Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
			10.0 0.0	S/0-0.1		NATURAL: SAND; fine grained; light to pale brown; with roots.		Natural
				S/0.2-0.3				
			9.7 0.3			NATURAL: SAND; fine grained; light to pale brown.		
			0.5					
	NE							
						TP214 terminated-Target Depth Reached at 0.8 m		
EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS								
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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP215	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
		PROJECT NO. P2511038					
EQUIPMENT	Hand Tools	LONGITUDE	152.00144	RL SURFACE	8	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77657	ASPECT	West	SLOPE	<15%

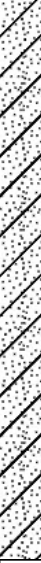
Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation	Sample	Tests				
			Depth (m)						
Hand Tools		8.0 0.0	S/O-0.1			NATURAL: SAND; fine grained; light to pale brown; with roots.		Natural	
		7.8 0.2	S/O.2-0.3			NATURAL: SAND; fine grained; light to pale brown.			
		0.5							
	NE								
						TP215 terminated-Target Depth Reached at 0.8 m			

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS



**Engineering Log -
TESTPIT**

CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP217 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00099	RL SURFACE	27	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.7734	ASPECT	South	SLOPE	<20%

Drilling Method	Water	Depth (m)	Field Samples & Tests			Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation	Sample	Tests				
			Depth (m)						
Hand Tools		27.0					FILL: Silty SAND; fine grained; light to pale brown; with roots, with minor fine to medium black shale rock fragments.		Fill
		0.0							
			S/0.2-0.3						
Hand Tools		26.6					NATURAL: SAND; fine grained; light to pale brown.		Natural
		0.4							
Hand Tools		0.5							
Hand Tools									
			S/0.6-0.7						
NE									
TP217 terminated-Target Depth Reached at 0.8 m									

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CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP218 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00222	RL SURFACE	32	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77321	ASPECT	Northeast	SLOPE	<20%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin
			Elevation Depth (m)	Sample				
Hand Tools			32.0 0.0	S/O-0.1		FILL: Silty SAND; fine grained; light to pale brown; with roots, with trace fine black shale rock fragments.		Fill
			31.6 0.4	S/O.2-0.3		NATURAL: SAND; fine grained; light to pale brown.		Natural
		0.5						
	NE					TP218 terminated-Target Depth Reached at 0.8 m		



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**Engineering Log -
TESTPIT**

CLIENT	Newcastle Sand	COMMENCED	07/11/2025	COMPLETED	07/11/2025	REF TP220 PROJECT NO. P2511038	
PROJECT	Detailed Site Investigation	LOGGED	BTM	CHECKED	BM / NF		
SITE	3631 Nelson Bay Rd, Bobs Farm NSW	GEOLOGY	Quaternary	VEGETATION	Grass / leaf litter		
EQUIPMENT	Hand Tools	LONGITUDE	152.00558	RL SURFACE	9	DATUM	mAHD
OPERATOR	BTM	LATITUDE	-32.77252	ASPECT	South	SLOPE	<15%

Drilling Method	Water	Depth (m)	Field Samples & Tests		Graphic Log	Soil / Rock Material Description	Moisture	Soil Origin	
			Elevation	Sample					Tests
			Depth (m)						
		9.0				FILL: Silty SAND; fine grained; light to pale brown; with roots, with trace fine black shale rock fragments.		Fill	
		0.0	S/O-0.1 + DUP04						
		8.8				NATURAL: SAND; fine grained; light to pale brown.		Natural	
		0.2	S/O.2-0.3						
		0.5							
	NE					TP220 terminated-Target Depth Reached at 0.8 m			

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS



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**Engineering Log -
TESTPIT**

Appendix I – Monitoring Well Logs

CLIENT	Ammos Resource Management Pty Ltd	COMMENCED	18/09/2019	COMPLETED	18/09/2019	REF MW101 Sheet 1 OF 2 PROJECT NO. P1303897	
PROJECT	Supplementary Acid Sulfate Soils Assessment	LOGGED	WX	CHECKED	JF		
SITE	3631 Nelson Bay Road, Bobs Farm, NSW	GEOLOGY	Quaternary	VEGETATION	Grass		
EQUIPMENT	4WD truck-mounted hydraulic drill rig	EASTING	152.0046	RL SURFACE	6.5 m	DATUM	AHD
EXCAVATION DIMENSIONS	ø100 mm x 17.95 m depth	NORTHING	-32.774565	ASPECT	Northeast	SLOPE	<2%

Drilling				Sampling		Field Material Description											
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	PIEZOMETER DETAILS					
AD/T	L			0.10 6.40	3897/MW101/0.0-0.1/S/1 D 0.00 m			SP SP	TOPSOIL: SAND; medium grained; grey black; trace organics and rootlets. ----- SAND; medium grained; pale grey.					MW101			
			1	0.90 5.60	3897/MW101/0.5/S/1 D 0.50 m						Dark orange brown.						
				1.50 5.00	3897/MW101/1.0/S/1 D 1.00 m						Orange brown.						
			2	1.90 4.60	3897/MW101/1.5/S/1 D 1.50 m						Orange yellow brown.		D				
				2.30 4.20	3897/MW101/2.0/S/1 D 2.00 m						Yellow-brown.						
				3.00 3.50	3897/MW101/2.5/S/1 D 2.50 m												
			3	3.50 3.00	3897/MW101/3.0/S/1 D 3.00 m						Brown.						
				4.70 1.80	3897/MW101/3.5/S/1 D 3.50 m						Yellow-brown.						
			4	5.00 1.50	3897/MW101/4.0/S/1 D 4.00 m												

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

Appendix J – Field Documentation Records



CERTIFICATE OF CALIBRATION

Air-Met Scientific
7-11 Ceylon Street
Nunawading
VIC 3131, Australia
Tel: 1800 000 744
Fax: 03 8878 3344

This document certifies that the instrument detailed has been calibrated to the parameters listed below

Certificate Number : 11K100828-R-1-20250829
Calibration Date: 29/08/2025
Next Calibration Due: 29/08/2026

Customer: Air-Met Scientific (National Rental)
Address: 36 Punch Street , ARTARMON , 2064
Equipment No: EP019424
Unit Under Test: YSI ProPlus Water Quality Meter
Serial No: 11K100828
Service Order No: CAL01421

Test Results

Item	Test	Pass	Comments
BATTERY	Capacity checked	Pass	
DISPLAY	Display/Backlight checked	Pass	
PCB	Inspected	Pass	
CASE	Inspected & Cleaned	Pass	
KEYPAD	Function checked	Pass	
SENSOR(S)	Cleaned	Pass	

Reference Equipment :

Equipment ID	Description	Expiry Date	Reference Certificate Number
NSW COND	Conductivity (2760 @ 25C)	20/08/2026	442541
NSW PH7	PH7 Solution	31/08/2026	441789
NSW PH4	pH 4	15/09/2026	443801
NSW ORP A	Zobell A	1/09/2026	434482
NSW ORP B	Zobell B	1/06/2027	447912
NSW DO	DO Powder	1/03/2027	432901

Results :

Sensor	Units	Applied Value	Results		Pass/ Fail	Comments
			As Found	As Left		
TEMPERATURE	°C	19.3	19.3	19.3	Pass	
CONDUCTIVITY	µS/cm	2760	2647	2763	Pass	
PH4	pH	4	4.3	4	Pass	
PH7	pH	7	7.31	7.01	Pass	

ORP	ORP	235.54	214.4	235.5	Pass	
DISSOLVED OXYGEN	%	0	1.2	0	Pass	

Notes :

Calibrated By: ALEX.BUIST

Signed: ALEX.BUIST

Appendix K – Data Quality Assessment

Data Quality Assessment

An assessment of the quality of data acquired by the investigation, compared to designated investigation DQI defined in Section 7.2, is provided in the table below.

Completeness			
Field Considerations	Target	Result	Pass Fail Comment
Critical locations in SAQP sampled?	Yes	Yes	Pass
Critical samples in SAQP collected?	Yes	Yes	Pass
Sampling methods and equipment in SAQP used and complied with?	Yes	Yes	Pass
Sampling by experienced environmental consultant(s)?	Yes	Yes	Pass
Field documentation complete? (i.e., test location logs, field records, calibration records, etc.)	Yes	Yes	Test pit logs are provided in Appendix H. Available monitoring well logs are provided in Appendix I. No monitoring well logs for MW1 to MW5 have not been provided / obtained by MA. Field documentations are provided in Appendix J.
COC complete?	Yes	Yes	Pass
Laboratory Considerations	Target	Result	Pass Fail Comment
Critical samples analysed according to SAQP?	Yes	Yes	Pass
Analysis of samples for COPC according to SAQP?	Yes	Yes	Pass
Appropriate laboratory analytical methods and LOR used by laboratory?	Yes	Yes	Pass
SRA and COC complete?	Yes	Yes	Pass
Sample extraction and holding times complied with?	Yes	Yes	Pass
Comparability			
Field Considerations	Target	Result	Pass Fail Comment
Same SAQP used on each occasion?	Yes	Yes	Pass
Sampling by same environmental consultant(s)?	Yes	Yes	Pass
Climatic conditions conducive for sampling?	Yes	Yes	Pass
Same types of samples collected, handled, and preserved in same manner?	Yes	Yes	Pass

Laboratory Considerations	Target	Result	Pass Fail Comment
Same laboratory used for primary sample analysis?	Yes	Yes	Pass
Same analytical methods used by primary laboratory?	Yes	Yes	Pass
Same LOR adopted by primary laboratory?	Yes	Yes	Pass
Same analytical measurement units adopted?	Yes	Yes	Pass
Representativeness			
Field Considerations	Target	Result	Pass Fail Comment
Media sampled according to SAQP?	Yes	Yes	Pass
All identified media in SAQP sampled?	Yes	Yes	Pass
Min. 5 % field duplicates collected and analysed?	Yes	Yes	Pass 11% field duplicates collected. 6% field duplicates analysed.
Logs / records for each sample collected?	Yes	Yes	Pass Test pit logs are provided in Appendix H.
Laboratory Considerations	Target	Result	Pass Fail Comment
Samples analysed according to SAQP?	Yes	Yes	Pass
Precision			
Field Considerations	Target	Result	Pass Fail Comment
SAQP used and complied with?	Yes	Yes	Pass
Field duplicate RPD (%) values within acceptance limits? - No limit for analytical results <10 x LOR 50% for analytical results 10-30 x LOR 30% for analytical results >30 x LOR	Yes	No	Field RPD calculations between blind and inter-laboratory field duplicates and parent samples were generally acceptable for metals, except for: - Zinc which exceeded acceptance limits of 30% in two samples (SS013 and TP104) within fill material. - Additionally, due to an administrative error, respective duplicates primary samples from TP201 and TP206 were not analysed and therefore could not be compared. While these results indicate some minor heterogeneity of this metal in fill material, concentrations reported are generally low, well below SAC, and consistent with low concentrations reported for other COPC in fill. As such, the data is considered suitably usable for interpretation of land contamination risks at the Site.

Laboratory Considerations	Target	Result	Pass Fail Comment
Laboratory duplicate RPD values within acceptance limits?	Yes	Yes	Laboratory RPD acceptance limits were generally acceptable for organics and metal analytes; however, an exceedance of RPD acceptance limits was reported for zinc in soil (SS005). A subsequent triplicate analytical result therefore issued by the laboratory. While this this information indicated some contaminant heterogeneity in fil, the concentrations are generally low and well below SAC. As such, the data is considered suitable for the interpretation of land contamination risks at the Site.
Accuracy			
Field Considerations	Target	Result	Pass Fail Comment
Laboratory prepared trip spike(s) used and analysed? (Recoveries between 60% and 140%)	Yes	Yes	Pass
Trip blank(s) used and analysed? (Analyte concentration below LOR)	Yes	Yes	Pass
Equipment rinsate(s) collected and analysed? (Analyte concentration below LOR)	Yes	-	-
Laboratory Considerations	Target	Result	Pass Fail Comment
Laboratory method blank(s) within acceptable limits?	Yes	Yes	Pass
Matrix spike recovery within acceptable limits?	Yes	Yes	Pass
Surrogate spike recovery within acceptable limits?	Yes	Yes	Pass
Laboratory control sample recovery within acceptable limits?	Yes	Yes	Pass

Appendix L –Summary Laboratory Results Tables



Detailed Site Investigation
Summary Table 1: Existing and Former Structures
3631 Nelson Bay Road, Bobs Farm

P2511038JR05V01

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil								
PFAS NEMP 2025 Ecological direct exposure – all land uses								
PFAS NEMP 2025 HIL D Industrial/commercial								
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand (>=0m, <1m)								
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800		8	220
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil (>=0m, <2m)								
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	730	6,000	400,000
CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene								

Field ID	Date	Lab Report Number								
11038 / TP101 / 0.2 - 0.3	06 Nov 2025	394982	<4	<0.4	<1	78	2	<0.1	<1	50
11038 / TP102 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	4	7	3	<0.1	1	38
11038 / TP103 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	10	16	15	<0.1	9	43
11038 / TP104 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	12	18	20	<0.1	11	63
11038 / TP105 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	10	10	15	<0.1	8	38
11038 / TP106 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	4	12	28	<0.1	3	79
11038 / TP107 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	<1	1	<1	<0.1	<1	4
11038 / TP108 / 0.3 - 0.4	06 Nov 2025	394982	<4	<0.4	<1	<1	1	<0.1	<1	1
11038 / TP109 / 0 - 0.1	06 Nov 2025	394982	<4	<0.4	3	4	1	<0.1	1	13
11038 / TP110 / 0.2 - 0.3	06 Nov 2025	394982	<4	<0.4	1	2	1	<0.1	<1	6

Statistics

Number of Results	10	10	10	10	10	10	10	10
Number of Detects	0	0	7	9	9	0	6	10
Minimum Concentration	<4	<0.4	<1	<1	<1	<0.1	<1	1
Maximum Concentration	<4	<0.4	12	78	28	<0.1	11	79

Environmental Standards

2010, CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene
2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil
2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil
2025, HEPA, March 2025, PFAS NEMP 2025 Ecological direct exposure – all land uses
2025, HEPA, March 2025, PFAS NEMP 2025 HIL D Industrial/commercial



Detailed Site Investigation
Summary Table 1: Existing and Former Structures
3631 Nelson Bay Road, Bobs Farm

P2511038JR05V01

	Pesticide														
	Chlorpyrifos	OPPs (others)	Phosalone	Aldrin + Dieldrin	BHC (total)	Chlordane (total)	DDT	DDT+DDE+DDD	Endosulfan (total)	Endrin	Heptachlor	Methoxychlor	OCP (others)	Mirex	Hexachlorobenzene
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
PFAS NEMP 2025 Ecological direct exposure – all land uses															
PFAS NEMP 2025 HIL D Industrial/commercial															
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand (>=0m, <1m)															
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind							640								
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil (>=0m, <2m)															
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	2,000			45		530		3,600	2,000	100	50	2,500		100	80
CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene															

Field ID	Date	Lab Report Number														
11038 / TP101 / 0.2 - 0.3	06 Nov 2025	394982	<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
11038 / TP102 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP103 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP104 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP105 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP106 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP107 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP108 / 0.3 - 0.4	06 Nov 2025	394982	<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
11038 / TP109 / 0 - 0.1	06 Nov 2025	394982	<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
11038 / TP110 / 0.2 - 0.3	06 Nov 2025	394982	<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

Statistics																
Number of Results	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<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
Maximum Concentration	<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

Environmental Standards

2010, CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2025, HEPA, March 2025, PFAS NEMP 2025 Ecological direct exposure – all land uses

2025, HEPA, March 2025, PFAS NEMP 2025 HIL D Industrial/commercial



Detailed Site Investigation
Summary Table 1: Existing and Former Structures
3631 Nelson Bay Road, Bobs Farm

P2511038JR05V01

	BTEX					TRH						
	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene Total	C6-C10 Fraction (F1)	C6-C10 (F1) minus BTEX	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)
	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	1	0.2	0.5	1	1	25	25	50	50	100	100	50
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil						700		1,000		2,500	10,000	
PFAS NEMP 2025 Ecological direct exposure – all land uses												
PFAS NEMP 2025 HIL D Industrial/commercial												
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand (>=0m, <1m)		3			230		260					
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	370											
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil (>=0m, <2m)		75	135	165	180		215	170	170	1,700	3,300	
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil												
CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene												

Field ID	Date	Lab Report Number												
11038 / TP101 / 0.2 - 0.3	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP102 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP103 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP104 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP105 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP106 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	210	260	470
11038 / TP107 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP108 / 0.3 - 0.4	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP109 / 0 - 0.1	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50
11038 / TP110 / 0.2 - 0.3	06 Nov 2025	394982	<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<100	<50

Statistics													
Number of Results			10	10	10	10	10	10	10	10	10	10	10
Number of Detects			0	0	0	0	0	0	0	0	1	1	1
Minimum Concentration			<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	<100	<50
Maximum Concentration			<1	<0.2	<0.5	<1	<1	<25	<25	<50	<50	210	470

Environmental Standards

2010, CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2025, HEPA, March 2025, PFAS NEMP 2025 Ecological direct exposure – all land uses

2025, HEPA, March 2025, PFAS NEMP 2025 HIL D Industrial/commercial



Detailed Site Investigation
Summary Table 1: Existing and Former Structures
3631 Nelson Bay Road, Bobs Farm

P2511038JR05V01

	PFAS					PAH				PCBs
	Sum of PFHxS and PFOS	Sum of PFAS	Perfluorooctanoic acid (PFOA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Benzo(a) pyrene	Naphthalene	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)	PCBs (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.0001	0.0001	0.0001	0.0001	0.0001	0.05	0.1	0.5	0.05	0.1
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										
PFAS NEMP 2025 Ecological direct exposure – all land uses			10		1					
PFAS NEMP 2025 HIL D Industrial/commercial	20		50	20	20					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand (>=0m, <1m)										
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind							370			
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil (>=0m, <2m)										
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil								40	4,000	7
CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene						72				

Field ID	Date	Lab Report Number										
11038 / TP101 / 0.2 - 0.3	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP102 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP103 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP104 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP105 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.06	<0.1	<0.5	0.06	<0.1
11038 / TP106 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1.6	<0.1	2.3	19	<0.1
11038 / TP107 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP108 / 0.3 - 0.4	06 Nov 2025	394982	0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP109 / 0 - 0.1	06 Nov 2025	394982	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.1	<0.5	<0.05	<0.1
11038 / TP110 / 0.2 - 0.3	06 Nov 2025	394982	0.0002	0.0002	<0.0001	<0.0001	0.0002	<0.05	<0.1	<0.5	<0.05	<0.1

Statistics											
Number of Results			10	10	10	10	10	10	10	10	10
Number of Detects			2	2	0	0	2	2	0	1	2
Minimum Concentration			0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.05	<0.1	<0.5	<0.05
Maximum Concentration			0.0002	0.0002	<0.0001	<0.0001	0.0002	1.6	<0.1	2.3	19

Environmental Standards

2010, CCME 2010 Table 8-1 Environmental health guideline value for Benzo(a) pyrene
2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil
2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil
2025, HEPA, March 2025, PFAS NEMP 2025 Ecological direct exposure – all land uses
2025, HEPA, March 2025, PFAS NEMP 2025 HIL D Industrial/commercial

Detailed Site Investigation
Summary Table 2: Horticultural Area - Composite Surface Samples
3631 Nelson Bay Road, Bobs Farm NSW

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind - divided by 3	53		106 (III)	18	600		2	73
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil - divided by 3	1000	300	1200 (VI)	80000	500	243	2000	133333

Field ID	Date	Lab Report Number								
Composite 1	06 Nov 2025	394982	<4	<0.4	1	18	2	<0.1	<1	16
Composite 2	06 Nov 2025	394982	<4	<0.4	1	82	3	<0.1	<1	49
Composite 3	06 Nov 2025	394982	<4	<0.4	2	120	2	<0.1	2	210
Composite 4	06 Nov 2025	394982	<4	<0.4	<1	38	2	<0.1	<1	41
Composite 5	06 Nov 2025	394982	<4	<0.4	3	100	5	<0.1	2	230
Composite 6	06 Nov 2025	394982	<4	<0.4	<1	73	2	<0.1	<1	38
Composite 7	06 Nov 2025	394982	<4	<0.4	<1	23	1	<0.1	<1	23
Composite 8	06 Nov 2025	394982	<4	<0.4	<1	21	1	<0.1	<1	12
Composite 9	06 Nov 2025	394982	<4	<0.4	<1	21	2	<0.1	<1	24
Composite 10	06 Nov 2025	394982	<4	<0.4	<1	9	<1	<0.1	<1	6
Composite 11	06 Nov 2025	394982	<4	<0.4	<1	10	<1	<0.1	<1	19
Composite 12	06 Nov 2025	394982	<4	<0.4	<1	15	<1	<0.1	<1	21
Composite 13	06 Nov 2025	394982	<4	<0.4	<1	2	1	<0.1	<1	5
Composite 14	06 Nov 2025	394982	<4	<0.4	<1	12	1	<0.1	<1	22
Composite 15	06 Nov 2025	394982	<4	<0.4	<1	20	2	<0.1	<1	20
Composite 16	06 Nov 2025	394982	<4	<0.4	12	78	9	<0.1	3	230
Composite 17	06 Nov 2025	394982	<4	<0.4	<1	4	1	<0.1	<1	11
Composite 18	06 Nov 2025	394982	<4	<0.4	1	14	3	<0.1	<1	51
Composite 19	06 Nov 2025	394982	<4	<0.4	<1	10	1	<0.1	<1	21
Composite 20	06 Nov 2025	394982	<4	<0.4	3	41	4	<0.1	2	140
Composite 21	06 Nov 2025	394982	<4	<0.4	2	54	3	<0.1	1	100
Composite 22	06 Nov 2025	394982	<4	<0.4	2	25	5	<0.1	<1	100
Composite 23	06 Nov 2025	394982	<4	<0.4	<1	14	<1	<0.1	<1	11
Composite 24	06 Nov 2025	394982	<4	<0.4	<1	28	4	<0.1	<1	54
Composite 25	06 Nov 2025	394982	<4	<0.4	<1	27	3	<0.1	<1	47
Composite 26	06 Nov 2025	394982	<4	<0.4	1	21	5	<0.1	<1	33
Composite 27	06 Nov 2025	394982	<4	<0.4	4	22	15	<0.1	3	47

Statistics

Number of Results	27	27	27	27	27	27	27	27
Number of Detects	0	0	11	27	23	0	6	27
Minimum Concentration	<4	<0.4	<1	2	<1	<0.1	<1	5
Maximum Concentration	<4	<0.4	12	120	15	<0.1	3	230

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

Detailed Site Investigation
Summary Table 2: Horticultural Area - Composite Surface Samples
3631 Nelson Bay Road, Bobs Farm NSW

	Pesticides													
	Chlorpyrifos	OPP (total)	Adrin + Dieldrin	BHC (total)	Chlordane (total)	DDT	DDT+DDE+DDD	Endosulfan (total)	Endrin	Heptachlor	Methoxychlor	Mirex	Phosalone	Hexachlorobenzene
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind - divided by 3						213								
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil - divided by 3	667		15		177		1200	667	33	17	833	33		27

Field ID	Date	Lab Report Number													
Composite 1	06 Nov 2025	394982	<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
Composite 2	06 Nov 2025	394982	<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
Composite 3	06 Nov 2025	394982	<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
Composite 4	06 Nov 2025	394982	<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
Composite 5	06 Nov 2025	394982	<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
Composite 6	06 Nov 2025	394982	<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
Composite 7	06 Nov 2025	394982	<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
Composite 8	06 Nov 2025	394982	<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
Composite 9	06 Nov 2025	394982	<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
Composite 10	06 Nov 2025	394982	<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
Composite 11	06 Nov 2025	394982	<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
Composite 12	06 Nov 2025	394982	<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
Composite 13	06 Nov 2025	394982	<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
Composite 14	06 Nov 2025	394982	<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
Composite 15	06 Nov 2025	394982	<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
Composite 16	06 Nov 2025	394982	<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
Composite 17	06 Nov 2025	394982	<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
Composite 18	06 Nov 2025	394982	<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
Composite 19	06 Nov 2025	394982	<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
Composite 20	06 Nov 2025	394982	<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
Composite 21	06 Nov 2025	394982	<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
Composite 22	06 Nov 2025	394982	<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
Composite 23	06 Nov 2025	394982	<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
Composite 24	06 Nov 2025	394982	<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
Composite 25	06 Nov 2025	394982	<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
Composite 26	06 Nov 2025	394982	<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
Composite 27	06 Nov 2025	394982	<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

Statistics															
Number of Results	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<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
Maximum Concentration	<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

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Metals						
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800	8	220
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	6,000	400,000

Field ID	Date	Lab Report Number						
11038 / SS002	06 Nov 2025	394982, 394982-A	<4	<0.4	1	27	3	<1
11038 / SS005	06 Nov 2025	394982-B	<4	<0.4	<1	71	3	<1
11038 / SS005 - [TRIPLICATE]	06 Nov 2025	394982-B	<4	<0.4	<1	62	2	<1
11038 / SS006	06 Nov 2025	394982-B	<4	<0.4	1	78	2	<1
11038 / SS007	06 Nov 2025	394982, 394982-A	<4	<0.4	2	170	2	4
11038 / SS008	06 Nov 2025	394982-B	<4	<0.4	1	54	2	<1
11038 / SS009	06 Nov 2025	394982-B	<4	<0.4	2	230	2	3
11038 / SS010	06 Nov 2025	394982-B	<4	<0.4	1	100	1	2
11038 / SS011	06 Nov 2025	394982-B	<4	<0.4	<1	26	1	<1
11038 / SS012	06 Nov 2025	394982, 394982-A	<4	<0.4	<1	22	<1	<1
11038 / SS013	06 Nov 2025	394982, 394982-A	<4	<0.4	<1	45	1	<1
11038 / SS014	06 Nov 2025	394982-B	<4	<0.4	<1	8	<1	<1
11038 / SS015	06 Nov 2025	394982-B	<4	<0.4	2	37	4	1
11038 / SS016	06 Nov 2025	394982-B	<4	<0.4	<1	64	1	<1
11038 / SS017	06 Nov 2025	394982-B	<4	<0.4	2	140	2	3
11038 / SS018	06 Nov 2025	394982-B	<4	<0.4	<1	79	2	<1
11038 / SS019	06 Nov 2025	394982-B	<4	<0.4	1	98	2	2
11038 / SS020	06 Nov 2025	394982-B	<4	<0.4	1	110	1	<1
11038 / SS021	06 Nov 2025	394982-B	<4	<0.4	<1	56	2	<1
11038 / SS022	06 Nov 2025	394982-B	<4	<0.4	<1	76	1	<1
11038 / SS054	06 Nov 2025	394982-B	<4	<0.4	2	29	7	1
11038 / SS055	06 Nov 2025	394982-B	<4	<0.4	<1	3	2	<1
11038 / SS056	06 Nov 2025	394982-B	<4	<0.4	18	110	5	3
11038 / SS067	06 Nov 2025	394982-B	<4	<0.4	1	12	3	<1
11038 / SS068	06 Nov 2025	394982-B	<4	<0.4	2	46	4	2
11038 / SS069	06 Nov 2025	394982-B	<4	<0.4	4	34	3	2
11038 / SS070	06 Nov 2025	394982-B	<4	<0.4	2	47	4	2
11038 / SS071	06 Nov 2025	394982-B	<4	<0.4	1	27	1	<1
11038 / SS072	06 Nov 2025	394982-B	<4	<0.4	1	44	2	<1
11038 / SS073	06 Nov 2025	394982-B	<4	<0.4	4	63	11	2
11038 / SS074	06 Nov 2025	394982-B	4	<0.4	2	4	<1	<1
11038 / SS075	06 Nov 2025	394982-B	<4	<0.4	<1	5	1	<1

Statistics

Number of Results	32	32	32	32	32	32	32
Number of Detects	1	0	20	32	29	12	32
Minimum Concentration	<4	<0.4	<1	3	<1	<1	3
Maximum Concentration	4	<0.4	18	230	11	4	370

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Pesticide														
	Chlorpyrifos	OPPs (others)	Phosalone	Aldrin + Dieldrin	BHC (total)	Chlordane (total)	DDT	DDT+DDE+DDD	Endosulfan (total)	Endrin	Heptachlor	Methoxychlor	OCF (others)	Mirex	Hexachlorobenzene
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind							640								
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	2,000			45		530		3,600	2,000	100	50	2,500		100	80

Field ID	Date	Lab Report Number														
11038 / SS002	06 Nov 2025	394982, 394982-A	<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
11038 / SS005	06 Nov 2025	394982-B														
11038 / SS005 - [TRIPLICATE]	06 Nov 2025	394982-B														
11038 / SS006	06 Nov 2025	394982-B														
11038 / SS007	06 Nov 2025	394982, 394982-A	<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
11038 / SS008	06 Nov 2025	394982-B														
11038 / SS009	06 Nov 2025	394982-B														
11038 / SS010	06 Nov 2025	394982-B														
11038 / SS011	06 Nov 2025	394982-B														
11038 / SS012	06 Nov 2025	394982, 394982-A	<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
11038 / SS013	06 Nov 2025	394982, 394982-A	<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
11038 / SS014	06 Nov 2025	394982-B														
11038 / SS015	06 Nov 2025	394982-B														
11038 / SS016	06 Nov 2025	394982-B														
11038 / SS017	06 Nov 2025	394982-B														
11038 / SS018	06 Nov 2025	394982-B														
11038 / SS019	06 Nov 2025	394982-B														
11038 / SS020	06 Nov 2025	394982-B														
11038 / SS021	06 Nov 2025	394982-B														
11038 / SS022	06 Nov 2025	394982-B														
11038 / SS054	06 Nov 2025	394982-B														
11038 / SS055	06 Nov 2025	394982-B														
11038 / SS056	06 Nov 2025	394982-B														
11038 / SS067	06 Nov 2025	394982-B														
11038 / SS068	06 Nov 2025	394982-B														
11038 / SS069	06 Nov 2025	394982-B														
11038 / SS070	06 Nov 2025	394982-B														
11038 / SS071	06 Nov 2025	394982-B														
11038 / SS072	06 Nov 2025	394982-B														
11038 / SS073	06 Nov 2025	394982-B														
11038 / SS074	06 Nov 2025	394982-B														
11038 / SS075	06 Nov 2025	394982-B														

Statistics																
Number of Results	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<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
Maximum Concentration	<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

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Metals						
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800		8
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	730	6,000

Field ID	Date	Lab Report Number								
11038 / TP204 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	8	<1	<0.1	<1	10
11038 / TP205 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	<1	17	<1	<0.1	<1	49
11038 / TP206 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	<1	11	<1	<0.1	<1	4
11038 / TP207 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	10	<1	<0.1	<1	22
11038 / TP208 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	<1	17	2	<0.1	<1	35
11038 / TP209 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	6	35	7	<0.1	8	97

Statistics

Number of Results	6	6	6	6	6	6	6	6
Number of Detects	0	0	1	6	2	0	1	6
Minimum Concentration	<4	<0.4	<1	<1	<1	<0.1	<1	1
Maximum Concentration	<4	<0.4	6	35	7	<0.1	8	97

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800		8	220
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	730	6,000	400,000

Field ID	Date	Lab Report Number								
11038 / TP201 / 0.3 - 0.4	07 Jan 2026	399258	<4	<0.4	<1	2	<1	<0.1	<1	3
11038 / TP202 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1
11038 / TP203 / 0.1 - 0.2	07 Jan 2026	399258	<4	<0.4	<1	19	1	<0.1	<1	20
11038 / TP203 / 0.3 - 0.4	07 Jan 2026	399258	<4	<0.4	<1	5	1	<0.1	<1	3

Statistics

Number of Results	4	4	4	4	4	4	4	4
Number of Detects	0	0	0	3	2	0	0	3
Minimum Concentration	<4	<0.4	<1	<1	<1	<0.1	<1	1
Maximum Concentration	<4	<0.4	<1	19	1	<0.1	<1	20

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800		8	220
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	730	6,000	400,000

Field ID	Date	Lab Report Number								
11038 / TP216 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	1	5	<0.1	<1	13
11038 / TP216 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	1	4	<0.1	<1	6
11038 / TP217 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	2	3	<0.1	<1	3
11038 / TP217 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	2	3	<0.1	<1	3
11038 / TP218 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	2	<0.1	<1	2
11038 / TP218 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1
11038 / TP219 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	1	<1	<0.1	<1	3
11038 / TP219 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	2	<0.1	<1	2
11038 / TP220 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	1	<0.1	<1	2

Statistics									
Number of Results	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	5	7	0	0	8	
Minimum Concentration	<4	<0.4	<1	<1	<1	<0.1	<1	1	
Maximum Concentration	<4	<0.4	<1	2	5	<0.1	<1	13	

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind	160		320 (III)	55	1800		8	220
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,000	900	3,600 (VI)	240,000	1,500	730	6,000	400,000

Field ID	Date	Lab Report Number								
11038 / TP211 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	1
11038 / TP211 / 0.3 - 0.4	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1
11038 / TP212 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	3	<0.1	<1	3
11038 / TP212 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	2	<0.1	<1	1
11038 / TP213 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	2	<0.1	<1	2
11038 / TP213 / 0.3 - 0.4	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1
11038 / TP214 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	1	<0.1	<1	<1
11038 / TP214 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	1	<0.1	<1	<1
11038 / TP215 / 0 - 0.1	07 Jan 2026	399258	<4	<0.4	<1	<1	2	<0.1	<1	2
11038 / TP215 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1
11038 / TP220 / 0.2 - 0.3	07 Jan 2026	399258	<4	<0.4	<1	<1	<1	<0.1	<1	<1

Statistics										
Number of Results	11	11	11	11	11	11	11	11	11	11
Number of Detects	0	0	0	0	6	0	0	0	5	5
Minimum Concentration	<4	<0.4	<1	<1	<1	<0.1	<1	<1	<1	<1
Maximum Concentration	<4	<0.4	<1	<1	3	<0.1	<1	<1	3	3

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(1-5) Generic and Soil-Specific EIL - Comm/Ind



	Metals								PFAS								
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)	Perfluorooctanoic acid (PFOA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)
	mg/L	mg/L	mg/L	µg/L	ug/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	0.0001	0.001	1	1	0.00005	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)		0.0055		1.3	4.4	0.0004	0.07	0.008									
PFAS NEMP 2025 Interim marine 95%												220			0.13		
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (>=2m, <4m)																	

Field ID	Date	Lab Report Number																
11038 / MW1	06 Nov 2025	394982	0.021	<0.0001	0.003	58	1	<0.00005	0.008	0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
11038 / MW5	06 Nov 2025	394982	0.013	0.0002	0.054	48	21	0.00006	0.015	0.063	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
11038 / MW101	06 Nov 2025	394982	0.009	<0.0001	0.017	4	<1	<0.00005	0.006	0.041	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02

Statistics																		
Number of Results	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Number of Detects	3	1	3	3	2	1	3	3	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	0.009	<0.0001	0.003	4	1	<0.00005	0.006	0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
Maximum Concentration	0.021	0.0002	0.054	58	21	0.00006	0.015	0.063	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02

* EQL>SAC thus unable to be determined if exceedance has occurred.

Environmental Standards
2024, ANZG, November 2024, ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)
2025, HEPA, March 2025, PFAS NEMP 2025 Interim marine 95%
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand



	BTEX						TRH						
	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	C6-C10 Fraction (F1)	C6-C10 (F1) minus BTEX	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)
	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	1	1	1	2	1	10	10	50	50	100	100	50
ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)	0.07	700	180	80									
PFAS NEMP 2025 Interim marine 95%													
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (>=2m, <4m)		5,000						6,000					

Field ID	Date	Lab Report Number													
11038 / MW1	06 Nov 2025	394982	<0.001	<1	<1	<1	<2	<1	<10	<10	<50	<50	<100	<100	<50
11038 / MW5	06 Nov 2025	394982	<0.001	<1	<1	<1	<2	<1	<10	<10	110	110	<100	<100	110
11038 / MW101	06 Nov 2025	394982	<0.001	<1	<1	<1	<2	<1	<10	<10	65	65	<100	<100	60

Statistics															
Number of Results			3	3	3	3	3	3	3	3	3	3	3	3	3
Number of Detects			0	0	0	0	0	0	0	0	2	2	0	0	2
Minimum Concentration			<0.001	<1	<1	<1	<2	<1	<10	<10	<50	<50	<100	<100	<50
Maximum Concentration			<0.001	<1	<1	<1	<2	<1	<10	<10	110	110	<100	<100	110

* EQL>SAC thus unable to be determined if exceedance has occurred.

Environmental Standards
2024, ANZG, November 2024, ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)
2025, HEPA, March 2025, PFAS NEMP 2025 Interim marine 95%
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand



	VOCs																
	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Carbon tetrachloride	Chloroform	Trichloroethene	Tetrachloroethene	Vinyl chloride	1,2,4-trichlorobenzene	Chlorobenzene	Hexachlorobenzene *	Isopropylbenzene	tert-butylbenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	1	1	1	1	1	1	10	1	1	0.2	1	1
ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)	270	400	1,900	700	1,900	900	1,100	240	770	330	70	100	80	55	0.1	30	
PFAS NEMP 2025 Interim marine 95%																	
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (>=2m, <4m)																	

Field ID	Date	Lab Report Number																
11038 / MW1	06 Nov 2025	394982	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<0.2	<1
11038 / MW5	06 Nov 2025	394982	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<10	<1	<1	<0.2	<1
11038 / MW101	06 Nov 2025	394982	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<0.2	<1

Statistics																		
Number of Results	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Number of Detects	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Minimum Concentration	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<0.2	<1	<1	<1
Maximum Concentration	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<10	<1	<1	<0.2	<1	<1	<1

* EQL>SAC thus unable to be determined if exceedance has occurred.

Environmental Standards

2024, ANZG, November 2024, ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)

2025, HEPA, March 2025, PFAS NEMP 2025 Interim marine 95%

2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand



	Pesticides												
	Chlorpyrifos *	OPP (others)	Phosalone	Aldrin	BHC (total)	Chlordane (total)	DDT	Endosulfan (total)	Endrin *	Heptachlor	Methoxychlor	OCP (others)	Mirex
	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.2	0.2	0.0002	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)	0.009								0.008				
PFAS NEMP 2025 Interim marine 95%													
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (>=2m, <4m)													

Field ID	Date	Lab Report Number													
11038 / MW1	06 Nov 2025	394982	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.2
11038 / MW5	06 Nov 2025	394982	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.2
11038 / MW101	06 Nov 2025	394982	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.2

Statistics															
Number of Results	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.2	<0.2
Maximum Concentration	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.2	<0.2

* EQL>SAC thus unable to be determined if exceedance has occurred.

Environmental Standards
2024, ANZG, November 2024, ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)
2025, HEPA, March 2025, PFAS NEMP 2025 Interim marine 95%
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand



	PAH							PCBs	Solvents
	Anthracene	Benzo(a) pyrene	Fluoranthene	Naphthalene	Phenanthrene	Benzo(a)pyrene TEQ	PAHs (Sum of positives)		
	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	mg/L
EQL	0.1	0.1	0.1	0.1	0.1	0.0005	0.0001	2	0.001
ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)	0.4	0.2	1.4	70	2				
PFAS NEMP 2025 Interim marine 95%									
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (>=2m, <4m)									

Field ID	Date	Lab Report Number									
11038 / MW1	06 Nov 2025	394982	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0001	<2	<0.001
11038 / MW5	06 Nov 2025	394982	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0001	<2	<0.001
11038 / MW101	06 Nov 2025	394982	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0001	<2	<0.001

Statistics											
Number of Results			3	3	3	3	3	3	3	3	3
Number of Detects			0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0001	<2	<0.001
Maximum Concentration			<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0001	<2	<0.001

* EQL>SAC thus unable to be determined if exceedance has occurred.

Environmental Standards

2024, ANZG, November 2024, ANZG Marine Water Toxicant DGVs LOSP 95% (November 2024)

2025, HEPA, March 2025, PFAS NEMP 2025 Interim marine 95%

2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand

Appendix M – Laboratory Analytical Documentation

CERTIFICATE OF ANALYSIS 394982

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	<u>P2511038 3631 Nelson Bay Road</u>
Number of Samples	158 Soil, 7 Water
Date samples received	07/11/2025
Date completed instructions received	07/11/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	14/11/2025
Date of Issue	14/11/2025

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Asbestos Approved By

Analysed by Asbestos Approved Analyst: Nyovan Moonean
 Authorised by Asbestos Approved Signatory: Nyovan Moonean

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Giovanni Agosti, Group Technical Manager
 Liam Timmins, Organics Supervisor
 Nyovan Moonean, Asbestos Approved Identifier/Counter
 Phalak Inthakesone, Organics Development Manager, Sydney
 Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	106	89	102	102

vTRH(C6-C10)/BTEXN in Soil

Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	106	105	106	93

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		394982-127	394982-128	394982-129	394982-130
Your Reference	UNITS	Trip Spike (soil)	Trip Spike (soil)	Trip Blank (soil)	Trip Blank (soil)
Composite Reference		-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025
TRH C ₆ - C ₉	mg/kg	[NA]	[NA]	<25	<25
TRH C ₆ - C ₁₀	mg/kg	[NA]	[NA]	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	[NA]	[NA]	<25	<25
Benzene	mg/kg	114%	100%	<0.2	<0.2
Toluene	mg/kg	115%	101%	<0.5	<0.5
Ethylbenzene	mg/kg	115%	100%	<1	<1
m+p-xylene	mg/kg	113%	100%	<2	<2
o-Xylene	mg/kg	115%	101%	<1	<1
Naphthalene	mg/kg	[NA]	[NA]	<1	<1
Total +ve Xylenes	mg/kg	[NA]	[NA]	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	97	104	103

svTRH (C10-C40) in Soil						
Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	89	106	88	85

svTRH (C10-C40) in Soil						
Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	210	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	210	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	210	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	260	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	470	<50	<50	<50	<50
Surrogate o-Terphenyl	%	80	100	82	80	96

PAHs in Soil						
Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.06
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	0.06
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	95	96	94	97	96

PAHs in Soil						
Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	2.0	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	3.6	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	3.4	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	1.0	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	1.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2.5	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	1.6	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	1.4	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1.7	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	19	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	2.3	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	2.3	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	2.3	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	78	91	91	91	90

Organochlorine Pesticides in soil						
Our Reference		394982-82	394982-83	394982-84	394982-85	394982-93
Your Reference	UNITS	11038 / SS002	11038 / SS007	11038 / SS012	11038 / SS013	11038 / TP101 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	96	98	101	99	97

Organochlorine Pesticides in soil						
Our Reference		394982-94	394982-96	394982-97	394982-99	394982-101
Your Reference	UNITS	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1	11038 / TP106 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	98	93	96	94	78

Organochlorine Pesticides in soil						
Our Reference		394982-103	394982-106	394982-108	394982-111	394982-139
Your Reference	UNITS	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3	Composite 1
Composite Reference		-	-	-	-	1-3
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	93	92	92	92

Organochlorine Pesticides in soil						
Our Reference		394982-140	394982-141	394982-142	394982-143	394982-144
Your Reference	UNITS	Composite 2	Composite 3	Composite 4	Composite 5	Composite 6
Composite Reference		4-6	7-9	10-12	13-15	16-18
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	90	88	90	89	89

Organochlorine Pesticides in soil						
Our Reference		394982-145	394982-146	394982-147	394982-148	394982-149
Your Reference	UNITS	Composite 7	Composite 8	Composite 9	Composite 10	Composite 11
Composite Reference		19-21	22-24	25-27	28-30	31-33
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	84	88	86	85	88

Organochlorine Pesticides in soil						
Our Reference		394982-150	394982-151	394982-152	394982-153	394982-154
Your Reference	UNITS	Composite 12	Composite 13	Composite 14	Composite 15	Composite 16
Composite Reference		34-36	37-39	40-42	43-45	46-48
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	86	86	85	80	82

Organochlorine Pesticides in soil						
Our Reference		394982-155	394982-156	394982-157	394982-158	394982-159
Your Reference	UNITS	Composite 17	Composite 18	Composite 19	Composite 20	Composite 21
Composite Reference		49-51	52-54	55-57	58-60	61-63
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	94	94	95	92	94

Organochlorine Pesticides in soil						
Our Reference		394982-160	394982-161	394982-162	394982-163	394982-164
Your Reference	UNITS	Composite 22	Composite 23	Composite 24	Composite 25	Composite 26
Composite Reference		64-66	67-69	70-72	73-75	76-78
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	93	95	92	90	90

Organochlorine Pesticides in soil		
Our Reference		394982-165
Your Reference	UNITS	Composite 27
Composite Reference		79-81
Date Sampled		06/11/2025
Type of sample		Soil
Date extracted	-	11/11/2025
Date analysed	-	13/11/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	72

Organophosphorus Pesticides in Soil						
Our Reference		394982-82	394982-83	394982-84	394982-85	394982-93
Your Reference	UNITS	11038 / SS002	11038 / SS007	11038 / SS012	11038 / SS013	11038 / TP101 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	96	98	101	99	97

Organophosphorus Pesticides in Soil						
Our Reference		394982-94	394982-96	394982-97	394982-99	394982-101
Your Reference	UNITS	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1	11038 / TP106 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	98	93	96	94	78

Organophosphorus Pesticides in Soil						
Our Reference		394982-103	394982-106	394982-108	394982-111	394982-139
Your Reference	UNITS	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3	Composite 1
Composite Reference		-	-	-	-	1-3
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	93	92	92	92

Organophosphorus Pesticides in Soil						
Our Reference		394982-140	394982-141	394982-142	394982-143	394982-144
Your Reference	UNITS	Composite 2	Composite 3	Composite 4	Composite 5	Composite 6
Composite Reference		4-6	7-9	10-12	13-15	16-18
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	90	88	90	89	89

Organophosphorus Pesticides in Soil						
Our Reference		394982-145	394982-146	394982-147	394982-148	394982-149
Your Reference	UNITS	Composite 7	Composite 8	Composite 9	Composite 10	Composite 11
Composite Reference		19-21	22-24	25-27	28-30	31-33
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	84	88	86	85	88

Organophosphorus Pesticides in Soil						
Our Reference		394982-150	394982-151	394982-152	394982-153	394982-154
Your Reference	UNITS	Composite 12	Composite 13	Composite 14	Composite 15	Composite 16
Composite Reference		34-36	37-39	40-42	43-45	46-48
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	86	86	85	80	82

Organophosphorus Pesticides in Soil						
Our Reference		394982-155	394982-156	394982-157	394982-158	394982-159
Your Reference	UNITS	Composite 17	Composite 18	Composite 19	Composite 20	Composite 21
Composite Reference		49-51	52-54	55-57	58-60	61-63
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	94	94	95	92	94

Organophosphorus Pesticides in Soil						
Our Reference		394982-160	394982-161	394982-162	394982-163	394982-164
Your Reference	UNITS	Composite 22	Composite 23	Composite 24	Composite 25	Composite 26
Composite Reference		64-66	67-69	70-72	73-75	76-78
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	93	95	92	90	90

Organophosphorus Pesticides in Soil		
Our Reference		394982-165
Your Reference	UNITS	Composite 27
Composite Reference		79-81
Date Sampled		06/11/2025
Type of sample		Soil
Date extracted	-	11/11/2025
Date analysed	-	13/11/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	72

PCBs in Soil						
Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	92	92	89	91	90

PCBs in Soil						
Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	76	88	87	88	86

Acid Extractable metals in soil

Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	4	10	12	10
Copper	mg/kg	78	7	16	18	10
Lead	mg/kg	2	3	15	20	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	1	9	11	8
Zinc	mg/kg	50	38	43	63	38

Acid Extractable metals in soil

Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	<1	<1	3	1
Copper	mg/kg	12	1	<1	4	2
Lead	mg/kg	28	<1	1	1	1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	<1	<1	1	<1
Zinc	mg/kg	79	4	1	13	6

Acid Extractable metals in soil

Our Reference		394982-114	394982-115	394982-116	394982-117	394982-125
Your Reference	UNITS	11038 / Dup01	11038 / Dup02	11038 / Dup03	11038 / Dup04	11038 / Dup12
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	1	1	<1	2	10
Copper	mg/kg	25	140	19	40	11
Lead	mg/kg	4	1	1	4	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	3	<1	1	8
Zinc	mg/kg	62	300	7	92	36

Acid Extractable metals in soil

Our Reference		394982-126	394982-139	394982-140	394982-141	394982-142
Your Reference	UNITS	11038 / Dup13	Composite 1	Composite 2	Composite 3	Composite 4
Composite Reference		-	1-3	4-6	7-9	10-12
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	1	1	2	<1
Copper	mg/kg	2	18	82	120	38
Lead	mg/kg	<1	2	3	2	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	2	<1
Zinc	mg/kg	5	16	49	210	41

Acid Extractable metals in soil

Our Reference		394982-143	394982-144	394982-145	394982-146	394982-147
Your Reference	UNITS	Composite 5	Composite 6	Composite 7	Composite 8	Composite 9
Composite Reference		13-15	16-18	19-21	22-24	25-27
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	<1	<1	<1	<1
Copper	mg/kg	100	73	23	21	21
Lead	mg/kg	5	2	1	1	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	<1	<1	<1	<1
Zinc	mg/kg	230	38	23	12	24

Acid Extractable metals in soil

Our Reference		394982-148	394982-149	394982-150	394982-151	394982-152
Your Reference	UNITS	Composite 10	Composite 11	Composite 12	Composite 13	Composite 14
Composite Reference		28-30	31-33	34-36	37-39	40-42
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	9	10	15	2	12
Lead	mg/kg	<1	<1	<1	1	1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	6	19	21	5	22

Acid Extractable metals in soil

Our Reference		394982-153	394982-154	394982-155	394982-156	394982-157
Your Reference	UNITS	Composite 15	Composite 16	Composite 17	Composite 18	Composite 19
Composite Reference		43-45	46-48	49-51	52-54	55-57
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	12	<1	1	<1
Copper	mg/kg	20	78	4	14	10
Lead	mg/kg	2	9	1	3	1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	3	<1	<1	<1
Zinc	mg/kg	20	230	11	51	21

Acid Extractable metals in soil

Our Reference		394982-158	394982-159	394982-160	394982-161	394982-162
Your Reference	UNITS	Composite 20	Composite 21	Composite 22	Composite 23	Composite 24
Composite Reference		58-60	61-63	64-66	67-69	70-72
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	2	2	<1	<1
Copper	mg/kg	41	54	25	14	28
Lead	mg/kg	4	3	5	<1	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	1	<1	<1	<1
Zinc	mg/kg	140	100	100	11	54

Acid Extractable metals in soil				
Our Reference		394982-163	394982-164	394982-165
Your Reference	UNITS	Composite 25	Composite 26	Composite 27
Composite Reference		73-75	76-78	79-81
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	14/11/2025	14/11/2025	14/11/2025
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	1	4
Copper	mg/kg	27	21	22
Lead	mg/kg	3	5	15
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	3
Zinc	mg/kg	47	33	47

Moisture						
Our Reference	UNITS	394982-82	394982-83	394982-84	394982-85	394982-93
Your Reference		11038 / SS002	11038 / SS007	11038 / SS012	11038 / SS013	11038 / TP101 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	14	10	2.6	2.6	5.8

Moisture						
Our Reference	UNITS	394982-94	394982-96	394982-97	394982-99	394982-101
Your Reference		11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1	11038 / TP106 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	4.7	11	8.3	8.0	3.0

Moisture						
Our Reference	UNITS	394982-103	394982-106	394982-108	394982-111	394982-114
Your Reference		11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3	11038 / Dup01
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	0.6	6.6	5.6	3.0	9.8

Moisture						
Our Reference	UNITS	394982-115	394982-116	394982-117	394982-125	394982-126
Your Reference		11038 / Dup02	11038 / Dup03	11038 / Dup04	11038 / Dup12	11038 / Dup13
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	16	1.3	5.0	9.2	2.8

Moisture						
Our Reference	UNITS	394982-139	394982-140	394982-141	394982-142	394982-143
Your Reference		Composite 1	Composite 2	Composite 3	Composite 4	Composite 5
Composite Reference		1-3	4-6	7-9	10-12	13-15
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	15	3.5	7.7	4.3	5.9

Moisture						
Our Reference	UNITS	394982-144	394982-145	394982-146	394982-147	394982-148
Your Reference		Composite 6	Composite 7	Composite 8	Composite 9	Composite 10
Composite Reference		16-18	19-21	22-24	25-27	28-30
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	3.6	15	4.6	12	9.9

Moisture						
Our Reference	UNITS	394982-149	394982-150	394982-151	394982-152	394982-153
Your Reference		Composite 11	Composite 12	Composite 13	Composite 14	Composite 15
Composite Reference		31-33	34-36	37-39	40-42	43-45
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	1.6	2.9	1.4	1.4	6.7

Moisture						
Our Reference	UNITS	394982-154	394982-155	394982-156	394982-157	394982-158
Your Reference		Composite 16	Composite 17	Composite 18	Composite 19	Composite 20
Composite Reference		46-48	49-51	52-54	55-57	58-60
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	8.9	3.1	4.3	1.5	4.4

Moisture						
Our Reference	UNITS	394982-159	394982-160	394982-161	394982-162	394982-163
Your Reference		Composite 21	Composite 22	Composite 23	Composite 24	Composite 25
Composite Reference		61-63	64-66	67-69	70-72	73-75
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Moisture	%	6.5	1.9	3.0	3.6	4.8

Moisture			
Our Reference	UNITS	394982-164	394982-165
Your Reference		Composite 26	Composite 27
Composite Reference		76-78	79-81
Date Sampled		06/11/2025	06/11/2025
Type of sample		Soil	Soil
Date prepared	-	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025
Moisture	%	6.4	5.4

Asbestos ID - Soils						
Our Reference	UNITS	394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference		11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed		12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Sample Mass Tested	g	Approx. 35g	Approx. 45g	Approx. 40g	Approx. 45g	Approx. 50g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in Soil	-	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*
Residual Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Additional Comments - Refer to Last Page	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - Soils						
Our Reference	UNITS	394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference		11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed		12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Sample Mass Tested	g	Approx. 50g	Approx. 50g	Approx. 45g	Approx. 40g	Approx. 50g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in Soil	-	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*	No asbestos detected at reporting limit 0.01%W/W Organic fibres detected*
Residual Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Additional Comments - Refer to Last Page	-	Nil	Nil	Nil	Nil	Nil

PFAS in Soils Short						
Our Reference		394982-93	394982-94	394982-96	394982-97	394982-99
Your Reference	UNITS	11038 / TP101 / 0.2 - 0.3	11038 / TP102 / 0 - 0.1	11038 / TP103 / 0 - 0.1	11038 / TP104 / 0 - 0.1	11038 / TP105 / 0 - 0.1
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate ¹³ C ₈ PFOS	%	102	106	96	103	103
Surrogate ¹³ C ₂ PFOA	%	94	97	72	76	73
Extracted ISTD ¹³ C ₃ PFBS	%	102	107	76	80	77
Extracted ISTD ¹⁸ O ₂ PFHxS	%	106	105	79	87	82
Extracted ISTD ¹³ C ₄ PFOS	%	99	98	96	93	98
Extracted ISTD ¹³ C ₄ PFOA	%	122	119	131	132	135
Extracted ISTD ¹³ C ₂ 6:2FTS	%	121	119	76	82	91
Extracted ISTD ¹³ C ₂ 8:2FTS	%	142	134	98	101	138
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1

PFAS in Soils Short						
Our Reference		394982-101	394982-103	394982-106	394982-108	394982-111
Your Reference	UNITS	11038 / TP106 / 0 - 0.1	11038 / TP107 / 0 - 0.1	11038 / TP108 / 0.3 - 0.4	11038 / TP109 / 0 - 0.1	11038 / TP110 / 0.2 - 0.3
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1	0.1	<0.1	0.2
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate ¹³ C ₈ PFOS	%	101	107	102	104	102
Surrogate ¹³ C ₂ PFOA	%	94	90	90	94	95
Extracted ISTD ¹³ C ₃ PFBS	%	106	102	98	106	105
Extracted ISTD ¹⁸ O ₂ PFHxS	%	106	99	98	105	102
Extracted ISTD ¹³ C ₄ PFOS	%	102	103	100	104	103
Extracted ISTD ¹³ C ₄ PFOA	%	121	123	118	116	116
Extracted ISTD ¹³ C ₂ 6:2FTS	%	135	110	90	98	103
Extracted ISTD ¹³ C ₂ 8:2FTS	%	188	131	120	130	114
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	0.1	<0.1	0.2
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	0.1	<0.1	0.2
Total Positive PFAS	µg/kg	<0.1	<0.1	0.1	<0.1	0.2

Misc Inorg - Soil					
Our Reference		394982-95	394982-98	394982-100	394982-107
Your Reference	UNITS	11038 / TP102 / 0.4 - 0.5	11038 / TP104 / 0.4 - 0.6	11038 / TP105 / 0.3 - 0.5	11038 / TP108 / 0.7 - 0.9
Composite Reference		-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	11/11/2025	11/11/2025	11/11/2025	11/11/2025
pH 1:5 soil:water	pH Units	8.1	8.8	7.9	7.0

CEC					
Our Reference		394982-95	394982-98	394982-100	394982-107
Your Reference	UNITS	11038 / TP102 / 0.4 - 0.5	11038 / TP104 / 0.4 - 0.6	11038 / TP105 / 0.3 - 0.5	11038 / TP108 / 0.7 - 0.9
Composite Reference		-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Exchangeable Ca	meq/100g	1.3	2.6	0.8	0.4
Exchangeable K	meq/100g	<0.1	<0.1	<0.1	<0.1
Exchangeable Mg	meq/100g	<0.1	<0.1	<0.1	<0.1
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	1.4	2.6	<1	<1

VOCs in water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date Extracted	-	12/11/2025	12/11/2025	12/11/2025
Date Analysed	-	13/11/2025	13/11/2025	13/11/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	<1	2	<1
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1

VOCs in water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Ethylbenzene	µg/L	<1	<1	<1
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	98	98	96
Surrogate Toluene-d8	%	102	102	98
Surrogate 4-Bromofluorobenzene	%	112	112	113

vTRH(C6-C10)/BTEXN in Water						
Our Reference		394982-131	394982-132	394982-133	394982-136	394982-137
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101	Trip Spike (water)	Trip Blank (water)
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	12/11/2025	12/11/2025	12/11/2025	12/11/2025	12/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025	13/11/2025
TRH C ₆ - C ₉	µg/L	<10	<10	<10	[NA]	<10
TRH C ₆ - C ₁₀	µg/L	<10	<10	<10	[NA]	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	<10	<10	[NA]	<10
Benzene	µg/L	<1	<1	<1	110%	<1
Toluene	µg/L	<1	<1	<1	115%	<1
Ethylbenzene	µg/L	<1	<1	<1	104%	<1
m+p-xylene	µg/L	<2	<2	<2	105%	<2
o-xylene	µg/L	<1	<1	<1	104%	<1
Naphthalene	µg/L	<1	<1	<1	[NA]	<1
Surrogate Dibromofluoromethane	%	98	98	96	103	99
Surrogate Toluene-d8	%	102	102	98	102	103
Surrogate 4-Bromofluorobenzene	%	112	112	113	87	112

svTRH (C10-C40) in Water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date extracted	-	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	11/11/2025	11/11/2025	11/11/2025
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50
TRH >C ₁₀ - C ₁₆	µg/L	<50	110	65
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50	110	65
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	110	60
Surrogate o-Terphenyl	%	82	87	93

PAHs in Water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date extracted	-	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	90	86	81

Organochlorine Pesticides in Water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date extracted	-	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025
alpha-BHC	µg/L	<0.2	<0.2	<0.2
HCB	µg/L	<0.2	<0.2	<0.2
beta-BHC	µg/L	<0.2	<0.2	<0.2
gamma-BHC	µg/L	<0.2	<0.2	<0.2
Heptachlor	µg/L	<0.2	<0.2	<0.2
delta-BHC	µg/L	<0.2	<0.2	<0.2
Aldrin	µg/L	<0.2	<0.2	<0.2
Heptachlor Epoxide	µg/L	<0.2	<0.2	<0.2
gamma-Chlordane	µg/L	<0.2	<0.2	<0.2
alpha-Chlordane	µg/L	<0.2	<0.2	<0.2
Endosulfan I	µg/L	<0.2	<0.2	<0.2
pp-DDE	µg/L	<0.2	<0.2	<0.2
Dieldrin	µg/L	<0.2	<0.2	<0.2
Endrin	µg/L	<0.2	<0.2	<0.2
Endosulfan II	µg/L	<0.2	<0.2	<0.2
pp-DDD	µg/L	<0.2	<0.2	<0.2
Endrin Aldehyde	µg/L	<0.2	<0.2	<0.2
pp-DDT	µg/L	<0.2	<0.2	<0.2
Endosulfan Sulphate	µg/L	<0.2	<0.2	<0.2
Methoxychlor	µg/L	<0.2	<0.2	<0.2
Mirex	ug/L	<0.2	<0.2	<0.2
Surrogate 4-Chloro-3-NBTF	%	87	83	75

OP Pesticides in Water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date extracted	-	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025
Dichlorvos	µg/L	<0.2	<0.2	<0.2
Mevinphos	µg/L	<0.2	<0.2	<0.2
Phorate	µg/L	<0.2	<0.2	<0.2
Dimethoate	µg/L	<0.2	<0.2	<0.2
Diazinon	µg/L	<0.2	<0.2	<0.2
Disulfoton	µg/L	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	µg/L	<0.2	<0.2	<0.2
Parathion-Methyl	µg/L	<0.2	<0.2	<0.2
Ronnel	µg/L	<0.2	<0.2	<0.2
Fenitrothion	µg/L	<0.2	<0.2	<0.2
Malathion	µg/L	<0.2	<0.2	<0.2
Chlorpyrifos	µg/L	<0.2	<0.2	<0.2
Fenthion	µg/L	<0.2	<0.2	<0.2
Parathion	µg/L	<0.2	<0.2	<0.2
Bromophos ethyl	µg/L	<0.2	<0.2	<0.2
Methidathion	µg/L	<0.2	<0.2	<0.2
Fenamiphos	µg/L	<0.2	<0.2	<0.2
Ethion	µg/L	<0.2	<0.2	<0.2
Phosalone	µg/L	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	µg/L	<0.2	<0.2	<0.2
Coumaphos	µg/L	<0.2	<0.2	<0.2
Surrogate 4-Chloro-3-NBTF	%	87	83	75

PCBs in Water				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date extracted	-	11/11/2025	11/11/2025	11/11/2025
Date analysed	-	12/11/2025	12/11/2025	12/11/2025
Aroclor 1016	µg/L	<2	<2	<2
Aroclor 1221	µg/L	<2	<2	<2
Aroclor 1232	µg/L	<2	<2	<2
Aroclor 1242	µg/L	<2	<2	<2
Aroclor 1248	µg/L	<2	<2	<2
Aroclor 1254	µg/L	<2	<2	<2
Aroclor 1260	µg/L	<2	<2	<2
Surrogate 2-Fluorobiphenyl	%	86	82	76

HM in water - total					
Our Reference		394982-131	394982-132	394982-133	394982-135
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101	11038 / GW Dup01
Composite Reference		-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Date analysed	-	13/11/2025	13/11/2025	13/11/2025	13/11/2025
Arsenic-Total	µg/L	21	13	9	21
Cadmium-Total	µg/L	<0.1	0.2	<0.1	<0.1
Chromium-Total	µg/L	3	54	17	3
Copper-Total	µg/L	58	48	4	59
Lead-Total	µg/L	1	21	<1	1
Mercury-Total	µg/L	<0.05	0.06	<0.05	<0.05
Nickel-Total	µg/L	8	15	6	9
Zinc-Total	µg/L	25	63	41	25

PFAS in Waters Short				
Our Reference		394982-131	394982-132	394982-133
Your Reference	UNITS	11038 / MW1	11038 / MW5	11038 / MW101
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Water	Water	Water
Date prepared	-	10/11/2025	10/11/2025	10/11/2025
Date analysed	-	10/11/2025	10/11/2025	10/11/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02
Surrogate ¹³ C ₈ PFOS	%	97	100	96
Surrogate ¹³ C ₂ PFOA	%	104	102	100
Extracted ISTD ¹³ C ₃ PFBS	%	98	96	98
Extracted ISTD ¹⁸ O ₂ PFHxS	%	91	91	92
Extracted ISTD ¹³ C ₄ PFOS	%	94	90	96
Extracted ISTD ¹³ C ₄ PFOA	%	95	96	97
Extracted ISTD ¹³ C ₂ 6:2FTS	%	111	103	110
Extracted ISTD ¹³ C ₂ 8:2FTS	%	105	92	101
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01
Total Positive PFOA & PFOS	µg/L	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01

Method ID	Methodology Summary
ASB-003	Asbestos ID –Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques as per Australian Standard 5370. When Inconclusive mineral fibres are detected by polarised light microscopy including dispersion staining, these fibres may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required. When asbestos presence is reported below the reporting limit of 0.01%w/w, the result is not covered by AS5370 and is supplied for information purposes only as required by some state jurisdictions.
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals/elements by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs. Where molecular anion forms are calculated from an element (e.g. SO₄ from S or PO₄ from P stoichiometrically), the assumption is that the element is only present in that molecular anion form.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.

Method ID	Methodology Summary
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			12/11/2025	93	12/11/2025	12/11/2025		12/11/2025	12/11/2025
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	93	<25	<25	0	128	128
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	93	<25	<25	0	128	128
Benzene	mg/kg	0.2	Org-023	<0.2	93	<0.2	<0.2	0	132	128
Toluene	mg/kg	0.5	Org-023	<0.5	93	<0.5	<0.5	0	128	126
Ethylbenzene	mg/kg	1	Org-023	<1	93	<1	<1	0	132	131
m+p-xylene	mg/kg	2	Org-023	<2	93	<2	<2	0	124	127
o-Xylene	mg/kg	1	Org-023	<1	93	<1	<1	0	129	127
Naphthalene	mg/kg	1	Org-023	<1	93	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	104	93	104	106	2	114	109

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	111	12/11/2025	12/11/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	111	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	111	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	111	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	111	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	111	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	111	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	111	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	111	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	111	93	109	16	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	93	<50	<50	0	110	137
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	93	<100	<100	0	89	122
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	93	<100	<100	0	86	137
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	93	<50	<50	0	110	137
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	93	<100	<100	0	89	122
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	93	<100	<100	0	86	137
Surrogate o-Terphenyl	%		Org-020	83	93	88	90	2	115	89

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	111	11/11/2025	11/11/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	111	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	111	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	111	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	111	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	111	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	111	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	111	96	84	13	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			13/11/2025	93	13/11/2025	13/11/2025		13/11/2025	13/11/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	88	88
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	92	92
Fluorene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	94	94
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	90	92
Anthracene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	90	95
Pyrene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	88	91
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	80	82
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	93	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	93	<0.05	<0.05	0	108	125
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	75	93	95	99	4	89	94

QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	111	13/11/2025	13/11/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	111	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	111	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	111	90	93	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			13/11/2025	93	13/11/2025	13/11/2025		13/11/2025	13/11/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	94	94
HCB	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	122	120
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	96	98
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	96	96
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	96	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	86	90
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	96	99
Endrin	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	98	110
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	106	112
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	100	112
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	76	93	97	97	0	89	96

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	394982-140
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			[NT]	111	13/11/2025	13/11/2025		13/11/2025	13/11/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	92	96
HCB	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	118	128
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	92	100
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	94	100
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	94	102
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	86	92
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	96	102
Endrin	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	102	114
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	106	116
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	102	114
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	111	92	92	0	88	92

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	394982-162
Date extracted	-			[NT]	139	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			[NT]	139	13/11/2025	13/11/2025		13/11/2025	13/11/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	76	96
HCB	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	80	119
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	70	92
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	78	102
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	80	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	74	94
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	80	102
Endrin	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	68	106
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	66	114
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	72	106
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	139	92	85	8	76	95

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	151	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	151	13/11/2025	13/11/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	151	86	87	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	161	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	161	13/11/2025	13/11/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	161	95	92	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			13/11/2025	93	13/11/2025	13/11/2025		13/11/2025	13/11/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	123	135
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	95	100
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	125	133
Malathion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	130	133
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	120	127
Fenthion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	118	136
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	123	133
Phosalone	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	76	93	97	97	0	89	96

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	394982-140
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			[NT]	111	13/11/2025	13/11/2025		13/11/2025	13/11/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	127	133
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	93	102
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	133	133
Malathion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	135	133
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	120	130
Fenthion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	127	134
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	133	133
Phosalone	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	111	92	92	0	88	92

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	394982-162
Date extracted	-			[NT]	139	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			[NT]	139	13/11/2025	13/11/2025		13/11/2025	13/11/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	87	138
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	78	100
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	70	138
Malathion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	83	133
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	87	130
Fenthion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	65	132
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	78	133
Phosalone	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	139	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	139	92	85	8	76	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	151	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	151	13/11/2025	13/11/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	151	86	87	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	161	11/11/2025	11/11/2025		[NT]	[NT]
Date analysed	-			[NT]	161	13/11/2025	13/11/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	161	95	92	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date extracted	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	11/11/2025
Date analysed	-			13/11/2025	93	13/11/2025	13/11/2025		13/11/2025	13/11/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	116	100
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	72	93	92	93	1	87	92

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			[NT]	111	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			[NT]	111	13/11/2025	13/11/2025		13/11/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	113	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	111	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	111	86	87	1	85	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	11/11/2025	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	13/11/2025	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	[NT]	[NT]	[NT]	[NT]	90	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	[NT]	[NT]	[NT]	[NT]	74	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-94
Date prepared	-			13/11/2025	93	12/11/2025	12/11/2025		12/11/2025	12/11/2025
Date analysed	-			14/11/2025	93	14/11/2025	14/11/2025		14/11/2025	14/11/2025
Arsenic	mg/kg	4	Metals-020	<4	93	<4	<4	0	112	113
Cadmium	mg/kg	0.4	Metals-020	<0.4	93	<0.4	<0.4	0	98	92
Chromium	mg/kg	1	Metals-020	<1	93	<1	<1	0	103	106
Copper	mg/kg	1	Metals-020	<1	93	78	110	34	104	114
Lead	mg/kg	1	Metals-020	<1	93	2	2	0	104	108
Mercury	mg/kg	0.1	Metals-021	<0.1	93	<0.1	<0.1	0	90	97
Nickel	mg/kg	1	Metals-020	<1	93	<1	<1	0	106	103
Zinc	mg/kg	1	Metals-020	<1	93	50	51	2	105	110

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	394982-140
Date prepared	-			[NT]	111	12/11/2025	12/11/2025		12/11/2025	12/11/2025
Date analysed	-			[NT]	111	14/11/2025	14/11/2025		14/11/2025	14/11/2025
Arsenic	mg/kg	4	Metals-020	[NT]	111	<4	<4	0	114	111
Cadmium	mg/kg	0.4	Metals-020	[NT]	111	<0.4	<0.4	0	100	92
Chromium	mg/kg	1	Metals-020	[NT]	111	1	<1	0	105	101
Copper	mg/kg	1	Metals-020	[NT]	111	2	2	0	107	104
Lead	mg/kg	1	Metals-020	[NT]	111	1	<1	0	106	102
Mercury	mg/kg	0.1	Metals-021	[NT]	111	<0.1	<0.1	0	103	92
Nickel	mg/kg	1	Metals-020	[NT]	111	<1	<1	0	107	102
Zinc	mg/kg	1	Metals-020	[NT]	111	6	8	29	107	103

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	394982-162
Date prepared	-			[NT]	139	12/11/2025	12/11/2025		12/11/2025	12/11/2025
Date analysed	-			[NT]	139	14/11/2025	14/11/2025		14/11/2025	14/11/2025
Arsenic	mg/kg	4	Metals-020	[NT]	139	<4	<4	0	112	115
Cadmium	mg/kg	0.4	Metals-020	[NT]	139	<0.4	<0.4	0	98	95
Chromium	mg/kg	1	Metals-020	[NT]	139	1	1	0	103	105
Copper	mg/kg	1	Metals-020	[NT]	139	18	18	0	106	112
Lead	mg/kg	1	Metals-020	[NT]	139	2	2	0	103	107
Mercury	mg/kg	0.1	Metals-021	[NT]	139	<0.1	<0.1	0	110	100
Nickel	mg/kg	1	Metals-020	[NT]	139	<1	<1	0	107	106
Zinc	mg/kg	1	Metals-020	[NT]	139	16	15	6	106	110

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	151	12/11/2025	12/11/2025		[NT]	[NT]
Date analysed	-			[NT]	151	14/11/2025	14/11/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	151	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	151	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	151	<1	<1	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	151	2	2	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	151	1	1	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	151	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	151	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	151	5	6	18	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	161	12/11/2025	12/11/2025		[NT]	[NT]
Date analysed	-			[NT]	161	14/11/2025	14/11/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	161	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	161	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	161	<1	<1	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	161	14	13	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	161	<1	<1	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	161	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	161	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	161	11	10	10	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			11/11/2025	93	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			12/11/2025	93	12/11/2025	12/11/2025		12/11/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	93	<0.1	<0.1	0	116	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	93	<0.1	<0.1	0	98	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	93	<0.1	<0.1	0	101	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	93	<0.1	<0.1	0	98	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	93	<0.1	<0.1	0	113	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	93	<0.2	<0.2	0	99	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	102	93	102	99	3	102	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	88	93	94	94	0	89	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	102	93	102	102	0	102	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	106	93	106	103	3	104	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	103	93	99	102	3	102	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	131	93	122	120	2	125	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	108	93	121	117	3	110	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	120	93	142	132	7	112	[NT]

QUALITY CONTROL: PFAS in Soils Short					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			[NT]	[NT]	[NT]	[NT]	[NT]	11/11/2025	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	12/11/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	96	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	112	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			11/11/2025	[NT]	[NT]	[NT]	[NT]	11/11/2025	[NT]
Date analysed	-			11/11/2025	[NT]	[NT]	[NT]	[NT]	11/11/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: CEC					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	394982-100
Date prepared	-			12/11/2025	98	12/11/2025	12/11/2025		12/11/2025	12/11/2025
Date analysed	-			12/11/2025	98	12/11/2025	12/11/2025		12/11/2025	12/11/2025
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	98	2.6	3.8	38	104	109
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	98	<0.1	<0.1	0	105	113
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	98	<0.1	<0.1	0	95	110
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	98	<0.1	<0.1	0	98	106

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date Extracted	-			12/11/2025	131	12/11/2025	13/11/2025		12/11/2025	[NT]
Date Analysed	-			13/11/2025	131	13/11/2025	14/11/2025		13/11/2025	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	131	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	131	<1	<1	0	74	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	76	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	76	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	131	<1	<1	0	76	[NT]
Dibromomethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	131	<1	<1	0	88	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	131	<1	<1	0	73	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	131	<1	<1	0	80	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	131	<1	<1	0	77	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	131	<1	<1	0	85	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	131	<1	<1	0	89	[NT]
Bromoform	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	131	<2	<2	0	88	[NT]
Styrene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-023	<1	131	<1	<1	0	89	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	97	131	98	102	4	98	[NT]
Surrogate Toluene-d8	%		Org-023	102	131	102	99	3	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	112	131	112	97	14	111	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			14/11/2025	131	12/11/2025	13/11/2025		12/11/2025	[NT]
Date analysed	-			14/11/2025	131	13/11/2025	14/11/2025		13/11/2025	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	131	<10	<10	0	84	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	131	<10	<10	0	84	[NT]
Benzene	µg/L	1	Org-023	<1	131	<1	<1	0	76	[NT]
Toluene	µg/L	1	Org-023	<1	131	<1	<1	0	80	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	131	<1	<1	0	89	[NT]
m+p-xylene	µg/L	2	Org-023	<2	131	<2	<2	0	88	[NT]
o-xylene	µg/L	1	Org-023	<1	131	<1	<1	0	89	[NT]
Naphthalene	µg/L	1	Org-023	<1	131	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	96	131	98	102	4	98	[NT]
Surrogate Toluene-d8	%		Org-023	96	131	102	99	3	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	93	131	112	97	14	111	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	131	<50	<50	0	112	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	131	<100	<100	0	123	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	131	<100	<100	0	114	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	131	<50	<50	0	112	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	131	<100	<100	0	123	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	131	<100	<100	0	114	[NT]
Surrogate o-Terphenyl	%		Org-020	86	131	82	86	5	111	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			12/11/2025	131	12/11/2025	12/11/2025		12/11/2025	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	85	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	87	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	85	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	90	[NT]
Anthracene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	86	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	90	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	83	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	79	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	131	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	90	131	90	87	3	90	[NT]

QUALITY CONTROL: Organochlorine Pesticides in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			12/11/2025	131	12/11/2025	12/11/2025		12/11/2025	[NT]
alpha-BHC	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	88	[NT]
HCB	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
beta-BHC	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	89	[NT]
gamma-BHC	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Heptachlor	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	93	[NT]
delta-BHC	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Aldrin	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	95	[NT]
Heptachlor Epoxide	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	97	[NT]
gamma-Chlordane	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
alpha-Chlordane	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Endosulfan I	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
pp-DDE	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	86	[NT]
Dieldrin	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	97	[NT]
Endrin	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	88	[NT]
Endosulfan II	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
pp-DDD	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	97	[NT]
Endrin Aldehyde	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
pp-DDT	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	92	[NT]
Methoxychlor	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Mirex	ug/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	81	131	87	78	11	85	[NT]

QUALITY CONTROL: OP Pesticides in Water						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			12/11/2025	131	12/11/2025	12/11/2025		12/11/2025	[NT]
Dichlorvos	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	104	[NT]
Mevinphos	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Phorate	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Dimethoate	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Diazinon	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Disulfoton	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Chlorpyrifos-methyl	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Parathion-Methyl	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Ronnel	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	86	[NT]
Fenitrothion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	83	[NT]
Malathion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	99	[NT]
Chlorpyrifos	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	100	[NT]
Fenthion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Parathion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	88	[NT]
Bromophos ethyl	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Methidathion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Fenamiphos	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Ethion	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	94	[NT]
Phosalone	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Azinphos-methyl (Guthion)	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Coumaphos	µg/L	0.2	Org-022/025	<0.2	131	<0.2	<0.2	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	81	131	87	78	11	85	[NT]

QUALITY CONTROL: PCBs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/11/2025	131	11/11/2025	11/11/2025		11/11/2025	[NT]
Date analysed	-			12/11/2025	131	12/11/2025	12/11/2025		12/11/2025	[NT]
Aroclor 1016	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	107	[NT]
Aroclor 1260	µg/L	2	Org-021/022/025	<2	131	<2	<2	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	79	131	86	81	6	84	[NT]

QUALITY CONTROL: HM in water - total						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date prepared	-			13/11/2025	132	13/11/2025	13/11/2025		13/11/2025	[NT]
Date analysed	-			13/11/2025	132	13/11/2025	13/11/2025		13/11/2025	[NT]
Arsenic-Total	µg/L	1	Metals-022	<1	132	13	[NT]		106	[NT]
Cadmium-Total	µg/L	0.1	Metals-022	<0.1	132	0.2	[NT]		105	[NT]
Chromium-Total	µg/L	1	Metals-022	<1	132	54	[NT]		109	[NT]
Copper-Total	µg/L	1	Metals-022	<1	132	48	[NT]		106	[NT]
Lead-Total	µg/L	1	Metals-022	<1	132	21	[NT]		101	[NT]
Mercury-Total	µg/L	0.05	Metals-021	<0.05	132	0.06	<0.05	18	90	[NT]
Nickel-Total	µg/L	1	Metals-022	<1	132	15	[NT]		106	[NT]
Zinc-Total	µg/L	1	Metals-022	<1	132	63	[NT]		110	[NT]

QUALITY CONTROL: PFAS in Waters Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	394982-132
Date prepared	-			10/11/2025	131	10/11/2025	10/11/2025		10/11/2025	10/11/2025
Date analysed	-			10/11/2025	131	10/11/2025	10/11/2025		10/11/2025	10/11/2025
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	131	<0.01	<0.01	0	112	104
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	131	<0.01	<0.01	0	106	103
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	131	<0.01	<0.01	0	111	108
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	131	<0.01	<0.01	0	112	110
6:2 FTS	µg/L	0.01	Org-029	<0.01	131	<0.01	<0.01	0	109	115
8:2 FTS	µg/L	0.02	Org-029	<0.02	131	<0.02	<0.02	0	105	101
Surrogate ¹³ C ₈ PFOS	%		Org-029	106	131	97	106	9	106	102
Surrogate ¹³ C ₂ PFOA	%		Org-029	98	131	104	105	1	103	103
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	95	131	98	103	5	91	98
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	91	131	91	95	4	92	96
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	88	131	94	91	3	87	93
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	98	131	95	95	0	93	98
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	99	131	111	110	1	100	101
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	105	131	105	107	2	99	96

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

PFAS: For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-003 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.

Note: Samples requested for testing were sub-sampled from jars provided by the client.

CERTIFICATE OF ANALYSIS 394982-A

Client Details

Client	Martens & Associates Pty Ltd
Attention	Robert Mehaffey
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	<u>P2511038 3631 Nelson Bay Road</u>
Number of Samples	158 Soil, 7 Water
Date samples received	07/11/2025
Date completed instructions received	07/11/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	18/11/2025
Date of Issue	18/11/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Nyovan Moonean
 Authorised by Asbestos Approved Signatory: Nyovan Moonean

Results Approved By

Giovanni Agosti, Group Technical Manager

Authorised By

Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil					
Our Reference		394982-A-82	394982-A-83	394982-A-84	394982-A-85
Your Reference	UNITS	11038 / SS002	11038 / SS007	11038 / SS012	11038 / SS013
Composite Reference		-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/11/2025	17/11/2025	17/11/2025	17/11/2025
Date analysed	-	17/11/2025	17/11/2025	17/11/2025	17/11/2025
Arsenic	mg/kg	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	1	2	<1	<1
Copper	mg/kg	27	170	22	45
Lead	mg/kg	3	2	<1	1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	4	<1	<1
Zinc	mg/kg	58	360	11	29

Method ID	Methodology Summary
Metals-020	Determination of various metals/elements by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs. Where molecular anion forms are calculated from an element (e.g. SO₄ from S or PO₄ from P stoichiometrically), the assumption is that the element is only present in that molecular anion form.
Metals-021	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/11/2025	[NT]	[NT]	[NT]	[NT]	17/11/2025	[NT]
Date analysed	-			17/11/2025	[NT]	[NT]	[NT]	[NT]	17/11/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	107	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

CERTIFICATE OF ANALYSIS 394982-B

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	<u>P2511038 3631 Nelson Bay Road</u>
Number of Samples	Additional metals testing
Date samples received	18/11/2025
Date completed instructions received	18/11/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	25/11/2025
Date of Issue	25/11/2025

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Results Approved By

Jack Wallis, Senior Chemist
Larry Ye, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil

Our Reference		394982-B-4	394982-B-5	394982-B-6	394982-B-7	394982-B-8
Your Reference	UNITS	11038 / SS005	11038 / SS006	11038 / SS008	11038 / SS009	11038 / SS010
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	1	1	2	1
Copper	mg/kg	71	78	54	230	100
Lead	mg/kg	3	2	2	2	1
Nickel	mg/kg	<1	<1	<1	3	2
Zinc	mg/kg	21	17	88	340	250

Acid Extractable metals in soil

Our Reference		394982-B-9	394982-B-10	394982-B-11	394982-B-12	394982-B-13
Your Reference	UNITS	11038 / SS011	11038 / SS014	11038 / SS015	11038 / SS016	11038 / SS017
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	2	<1	2
Copper	mg/kg	26	8	37	64	140
Lead	mg/kg	1	<1	4	1	2
Nickel	mg/kg	<1	<1	1	<1	3
Zinc	mg/kg	34	7	86	28	370

Acid Extractable metals in soil

Our Reference		394982-B-14	394982-B-15	394982-B-16	394982-B-17	394982-B-18
Your Reference	UNITS	11038 / SS018	11038 / SS019	11038 / SS020	11038 / SS021	11038 / SS022
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	1	1	<1	<1
Copper	mg/kg	79	98	110	56	76
Lead	mg/kg	2	2	1	2	1
Nickel	mg/kg	<1	2	<1	<1	<1
Zinc	mg/kg	33	230	36	53	31

Acid Extractable metals in soil

Our Reference		394982-B-46	394982-B-47	394982-B-48	394982-B-58	394982-B-59
Your Reference	UNITS	11038 / SS054	11038 / SS055	11038 / SS056	11038 / SS067	11038 / SS068
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	2	<1	18	1	2
Copper	mg/kg	29	3	110	12	46
Lead	mg/kg	7	2	5	3	4
Nickel	mg/kg	1	<1	3	<1	2
Zinc	mg/kg	110	7	300	30	150

Acid Extractable metals in soil

Our Reference		394982-B-60	394982-B-61	394982-B-62	394982-B-63	394982-B-64
Your Reference	UNITS	11038 / SS069	11038 / SS070	11038 / SS071	11038 / SS072	11038 / SS073
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	2	1	1	4
Copper	mg/kg	34	47	27	44	63
Lead	mg/kg	3	4	1	2	11
Nickel	mg/kg	2	2	<1	<1	2
Zinc	mg/kg	130	110	28	110	210

Acid Extractable metals in soil

Our Reference		394982-B-65	394982-B-66	394982-B-166
Your Reference	UNITS	11038 / SS074	11038 / SS075	11038 / SS005 - [TRIPLICATE]
Composite Reference		-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	20/11/2025	20/11/2025	20/11/2025
Date analysed	-	21/11/2025	21/11/2025	21/11/2025
Arsenic	mg/kg	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	2	<1	<1
Copper	mg/kg	4	5	62
Lead	mg/kg	<1	1	2
Nickel	mg/kg	<1	<1	<1
Zinc	mg/kg	3	110	13

Moisture						
Our Reference	UNITS	394982-B-4	394982-B-5	394982-B-6	394982-B-7	394982-B-8
Your Reference		11038 / SS005	11038 / SS006	11038 / SS008	11038 / SS009	11038 / SS010
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/11/2025	19/11/2025	19/11/2025	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Moisture	%	8.6	3.8	4.7	14	6.4

Moisture						
Our Reference	UNITS	394982-B-9	394982-B-10	394982-B-11	394982-B-12	394982-B-13
Your Reference		11038 / SS011	11038 / SS014	11038 / SS015	11038 / SS016	11038 / SS017
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/11/2025	19/11/2025	19/11/2025	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Moisture	%	7.7	5.4	5.8	3.2	11

Moisture						
Our Reference	UNITS	394982-B-14	394982-B-15	394982-B-16	394982-B-17	394982-B-18
Your Reference		11038 / SS018	11038 / SS019	11038 / SS020	11038 / SS021	11038 / SS022
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/11/2025	19/11/2025	19/11/2025	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Moisture	%	2.6	6.9	3.4	6.0	3.1

Moisture						
Our Reference	UNITS	394982-B-46	394982-B-47	394982-B-48	394982-B-58	394982-B-59
Your Reference		11038 / SS054	11038 / SS055	11038 / SS056	11038 / SS067	11038 / SS068
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/11/2025	19/11/2025	19/11/2025	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Moisture	%	5.1	1.9	13	2.7	4.5

Moisture						
Our Reference		394982-B-60	394982-B-61	394982-B-62	394982-B-63	394982-B-64
Your Reference	UNITS	11038 / SS069	11038 / SS070	11038 / SS071	11038 / SS072	11038 / SS073
Composite Reference		-	-	-	-	-
Date Sampled		06/11/2025	06/11/2025	06/11/2025	06/11/2025	06/11/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/11/2025	19/11/2025	19/11/2025	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025	20/11/2025	20/11/2025	20/11/2025
Moisture	%	6.9	8.0	8.8	6.0	5.9

Moisture			
Our Reference		394982-B-65	394982-B-66
Your Reference	UNITS	11038 / SS074	11038 / SS075
Composite Reference		-	-
Date Sampled		06/11/2025	06/11/2025
Type of sample		Soil	Soil
Date prepared	-	19/11/2025	19/11/2025
Date analysed	-	20/11/2025	20/11/2025
Moisture	%	0.2	0.5

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals/elements by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs. Where molecular anion forms are calculated from an element (e.g. SO₄ from S or PO₄ from P stoichiometrically), the assumption is that the element is only present in that molecular anion form.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	394982-B-5
Date prepared	-			20/11/2025	4	20/11/2025	20/11/2025		20/11/2025	20/11/2025
Date analysed	-			21/11/2025	4	21/11/2025	21/11/2025		21/11/2025	21/11/2025
Arsenic	mg/kg	4	Metals-020	<4	4	<4	<4	0	98	105
Cadmium	mg/kg	0.4	Metals-020	<0.4	4	<0.4	<0.4	0	91	92
Chromium	mg/kg	1	Metals-020	<1	4	<1	<1	0	92	98
Copper	mg/kg	1	Metals-020	<1	4	71	49	37	93	104
Lead	mg/kg	1	Metals-020	<1	4	3	2	40	90	95
Nickel	mg/kg	1	Metals-020	<1	4	<1	<1	0	93	98
Zinc	mg/kg	1	Metals-020	<1	4	21	10	71	94	95

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	394982-B-63
Date prepared	-			[NT]	15	20/11/2025	20/11/2025		20/11/2025	20/11/2025
Date analysed	-			[NT]	15	21/11/2025	21/11/2025		21/11/2025	21/11/2025
Arsenic	mg/kg	4	Metals-020	[NT]	15	<4	<4	0	105	99
Cadmium	mg/kg	0.4	Metals-020	[NT]	15	<0.4	<0.4	0	98	86
Chromium	mg/kg	1	Metals-020	[NT]	15	1	2	67	99	92
Copper	mg/kg	1	Metals-020	[NT]	15	98	130	28	99	92
Lead	mg/kg	1	Metals-020	[NT]	15	2	2	0	97	88
Nickel	mg/kg	1	Metals-020	[NT]	15	2	3	40	100	91
Zinc	mg/kg	1	Metals-020	[NT]	15	230	330	36	102	87

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	62	20/11/2025	20/11/2025		[NT]	[NT]
Date analysed	-			[NT]	62	21/11/2025	21/11/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	62	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	62	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	62	1	2	67	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	62	27	30	11	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	62	1	3	100	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	62	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	62	28	31	10	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 394982-B-4 for Zn. Therefore a triplicate result has been issued as laboratory sample number 394982-B-166.

CERTIFICATE OF ANALYSIS 399258-A

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	<u>P2511038 – Detailed Site Investigation</u>
Number of Samples	Additional analysis 1 sample
Date samples received	08/01/2026
Date completed instructions received	12/01/2026

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	19/01/2026
Date of Issue	14/01/2026

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Results Approved By

Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

PAHs in Soil		
Our Reference		399258-A-15
Your Reference	UNITS	11038 / TP208 / 0.1 - 0.2
Date Sampled		07/01/2026
Type of sample		Soil
Date extracted	-	13/01/2026
Date analysed	-	14/01/2026
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	83

Client Reference: P2511038 – Detailed Site Investigation

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.

Client Reference: P2511038 – Detailed Site Investigation

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			13/01/2026	[NT]	[NT]	[NT]	[NT]	13/01/2026	[NT]
Date analysed	-			14/01/2026	[NT]	[NT]	[NT]	[NT]	14/01/2026	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	68	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	70	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	83	[NT]	[NT]	[NT]	[NT]	79	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
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LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

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Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

CERTIFICATE OF ANALYSIS 399258

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	<u>P2511038 – Detailed Site Investigation</u>
Number of Samples	49 Soil
Date samples received	08/01/2026
Date completed instructions received	08/01/2026

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	15/01/2026
Date of Issue	15/01/2026

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Asbestos Approved By

Analysed by Asbestos Approved Analyst: Lucy Zhu
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Dragana Tomas, Senior Chemist
 Jack Wallis, Senior Chemist
 Lucy Zhu, Asbestos Supervisor
 Tabitha Roberts, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Client Reference: P2511038 – Detailed Site Investigation

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		399258-48	399258-49
Your Reference	UNITS	Trip Spike	Trip Blank
Date Sampled		07/01/2026	07/01/2026
Type of sample		Soil	Soil
Date extracted	-	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026
TRH C ₆ - C ₉	mg/kg	[NA]	<25
TRH C ₆ - C ₁₀	mg/kg	[NA]	<25
Benzene	mg/kg	105%	[NA]
Toluene	mg/kg	105%	[NA]
Ethylbenzene	mg/kg	103%	[NA]
m+p-xylene	mg/kg	103%	[NA]
o-Xylene	mg/kg	104%	[NA]
Surrogate aaa-Trifluorotoluene	%	102	105

svTRH (C10-C40) in Soil		
Our Reference		399258-49
Your Reference	UNITS	Trip Blank
Date Sampled		07/01/2026
Type of sample		Soil
Date extracted	-	09/01/2026
Date analysed	-	15/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	94

Client Reference: P2511038 – Detailed Site Investigation

Acid Extractable metals in soil

Our Reference		399258-2	399258-3	399258-5	399258-6	399258-8
Your Reference	UNITS	11038 / TP201 / 0.3 - 0.4	11038 / TP202 / 0.1 - 0.2	11038 / TP203 / 0.1 - 0.2	11038 / TP203 / 0.3 - 0.4	11038 / TP204 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	2	<1	19	5	8
Lead	mg/kg	<1	<1	1	1	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	3	<1	20	3	10

Acid Extractable metals in soil

Our Reference		399258-9	399258-11	399258-14	399258-15	399258-17
Your Reference	UNITS	11038 / TP205 / 0.1 - 0.2	11038 / TP206 / 0.1 - 0.2	11038 / TP207 / 0.2 - 0.3	11038 / TP208 / 0.1 - 0.2	11038 / TP209 / 0.1 - 0.2
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	6
Copper	mg/kg	17	11	10	17	35
Lead	mg/kg	<1	<1	<1	2	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	8
Zinc	mg/kg	49	4	22	35	97

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Acid Extractable metals in soil

Our Reference		399258-21	399258-22	399258-23	399258-24	399258-25
Your Reference	UNITS	11038 / TP211 / 0 - 0.1	11038 / TP211 / 0.3 - 0.4	11038 / TP212 / 0 - 0.1	11038 / TP212 / 0.2 - 0.3	11038 / TP213 / 0 - 0.1
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	<1	<1	<1	<1	<1
Lead	mg/kg	<1	<1	3	2	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	1	<1	3	1	2

Acid Extractable metals in soil

Our Reference		399258-26	399258-27	399258-28	399258-29	399258-30
Your Reference	UNITS	11038 / TP213 / 0.3 - 0.4	11038 / TP214 / 0 - 0.1	11038 / TP214 / 0.2 - 0.3	11038 / TP215 / 0 - 0.1	11038 / TP215 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	<1	<1	<1	<1	<1
Lead	mg/kg	<1	1	1	2	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	<1	<1	<1	2	<1

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Acid Extractable metals in soil

Our Reference		399258-31	399258-32	399258-33	399258-34	399258-36
Your Reference	UNITS	11038 / TP216 / 0 - 0.1	11038 / TP216 / 0.2 - 0.3	11038 / TP217 / 0 - 0.1	11038 / TP217 / 0.2 - 0.3	11038 / TP218 / 0 - 0.1
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	1	1	2	2	<1
Lead	mg/kg	5	4	3	3	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	13	6	3	3	2

Acid Extractable metals in soil

Our Reference		399258-37	399258-38	399258-39	399258-41	399258-42
Your Reference	UNITS	11038 / TP218 / 0.2 - 0.3	11038 / TP219 / 0 - 0.1	11038 / TP219 / 0.2 - 0.3	11038 / TP220 / 0 - 0.1	11038 / TP220 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1	<1	<1
Copper	mg/kg	<1	1	<1	<1	<1
Lead	mg/kg	<1	<1	2	1	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	<1	3	2	2	<1

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Acid Extractable metals in soil				
Our Reference		399258-44	399258-45	399258-46
Your Reference	UNITS	11038 / Dup01	11038 / Dup02	11038 / Dup03
Date Sampled		07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	09/01/2026	09/01/2026	09/01/2026
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	<1	<1
Copper	mg/kg	38	6	<1
Lead	mg/kg	2	<1	2
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1
Zinc	mg/kg	81	3	1

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Moisture						
Our Reference	UNITS	399258-2	399258-3	399258-5	399258-6	399258-8
Your Reference		11038 / TP201 / 0.3 - 0.4	11038 / TP202 / 0.1 - 0.2	11038 / TP203 / 0.1 - 0.2	11038 / TP203 / 0.3 - 0.4	11038 / TP204 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	0.3	2.5	1.4	3.4	1.1

Moisture						
Our Reference	UNITS	399258-9	399258-11	399258-14	399258-15	399258-17
Your Reference		11038 / TP205 / 0.1 - 0.2	11038 / TP206 / 0.1 - 0.2	11038 / TP207 / 0.2 - 0.3	11038 / TP208 / 0.1 - 0.2	11038 / TP209 / 0.1 - 0.2
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	0.7	1.5	1.7	1.7	4.6

Moisture						
Our Reference	UNITS	399258-21	399258-22	399258-23	399258-24	399258-25
Your Reference		11038 / TP211 / 0 - 0.1	11038 / TP211 / 0.3 - 0.4	11038 / TP212 / 0 - 0.1	11038 / TP212 / 0.2 - 0.3	11038 / TP213 / 0 - 0.1
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	3.0	0.9	4.2	1.9	2.5

Moisture						
Our Reference	UNITS	399258-26	399258-27	399258-28	399258-29	399258-30
Your Reference		11038 / TP213 / 0.3 - 0.4	11038 / TP214 / 0 - 0.1	11038 / TP214 / 0.2 - 0.3	11038 / TP215 / 0 - 0.1	11038 / TP215 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	1.2	2.9	2.2	3.5	1.2

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Moisture						
Our Reference		399258-31	399258-32	399258-33	399258-34	399258-36
Your Reference	UNITS	11038 / TP216 / 0 - 0.1	11038 / TP216 / 0.2 - 0.3	11038 / TP217 / 0 - 0.1	11038 / TP217 / 0.2 - 0.3	11038 / TP218 / 0 - 0.1
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	2.5	2.0	2.6	1.7	3.3

Moisture						
Our Reference		399258-37	399258-38	399258-39	399258-41	399258-42
Your Reference	UNITS	11038 / TP218 / 0.2 - 0.3	11038 / TP219 / 0 - 0.1	11038 / TP219 / 0.2 - 0.3	11038 / TP220 / 0 - 0.1	11038 / TP220 / 0.2 - 0.3
Date Sampled		07/01/2026	07/01/2026	07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026	12/01/2026	12/01/2026
Moisture	%	1.1	2.6	2.0	3.4	3.6

Moisture				
Our Reference		399258-44	399258-45	399258-46
Your Reference	UNITS	11038 / Dup01	11038 / Dup02	11038 / Dup03
Date Sampled		07/01/2026	07/01/2026	07/01/2026
Type of sample		Soil	Soil	Soil
Date prepared	-	09/01/2026	09/01/2026	09/01/2026
Date analysed	-	12/01/2026	12/01/2026	12/01/2026
Moisture	%	4.1	12	1.9

Asbestos ID - Materials		
Our Reference	UNITS	399258-43
Your Reference		11038 / TP216 / MS01 / 0 - 0.05
Date Sampled		07/01/2026
Type of sample		Soil
Date analysed		09/01/2026
Dimension of Sample	-	100x80x7mm
Sample Description	-	Brown fibre cement material
Asbestos ID in Material	-	Chrysotile asbestos detected
Residual Analysis	-	[NT]

Client Reference: P2511038 – Detailed Site Investigation

Method ID	Methodology Summary
ASB-003	Asbestos ID –Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques as per Australian Standard 5370. When Inconclusive mineral fibres are detected by polarised light microscopy including dispersion staining, these fibres may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required. When asbestos presence is reported below the reporting limit of 0.01%w/w, the result is not covered by AS5370 and is supplied for information purposes only as required by some state jurisdictions.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals/elements by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs. Where molecular anion forms are calculated from an element (e.g. SO₄ from S or PO₄ from P stoichiometrically), the assumption is that the element is only present in that molecular anion form.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).

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Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			09/01/2026	[NT]	[NT]	[NT]	[NT]	09/01/2026	[NT]
Date analysed	-			12/01/2026	[NT]	[NT]	[NT]	[NT]	12/01/2026	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	96	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	95	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	90	[NT]

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QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			09/01/2026	[NT]	[NT]	[NT]	[NT]	09/01/2026	[NT]
Date analysed	-			15/01/2026	[NT]	[NT]	[NT]	[NT]	15/01/2026	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate o-Terphenyl	%		Org-020	92	[NT]	[NT]	[NT]	[NT]	91	[NT]

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QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	399258-3
Date prepared	-			09/01/2026	2	09/01/2026	09/01/2026		09/01/2026	09/01/2026
Date analysed	-			09/01/2026	2	09/01/2026	09/01/2026		09/01/2026	09/01/2026
Arsenic	mg/kg	4	Metals-020	<4	2	<4	<4	0	98	100
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	93	93
Chromium	mg/kg	1	Metals-020	<1	2	<1	<1	0	95	96
Copper	mg/kg	1	Metals-020	<1	2	2	2	0	99	99
Lead	mg/kg	1	Metals-020	<1	2	<1	<1	0	96	99
Mercury	mg/kg	0.1	Metals-021	<0.1	2	<0.1	<0.1	0	116	114
Nickel	mg/kg	1	Metals-020	<1	2	<1	<1	0	99	100
Zinc	mg/kg	1	Metals-020	<1	2	3	3	0	91	92

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	399258-36
Date prepared	-			[NT]	22	09/01/2026	09/01/2026		09/01/2026	09/01/2026
Date analysed	-			[NT]	22	09/01/2026	09/01/2026		09/01/2026	09/01/2026
Arsenic	mg/kg	4	Metals-020	[NT]	22	<4	<4	0	101	99
Cadmium	mg/kg	0.4	Metals-020	[NT]	22	<0.4	<0.4	0	96	92
Chromium	mg/kg	1	Metals-020	[NT]	22	<1	<1	0	98	96
Copper	mg/kg	1	Metals-020	[NT]	22	<1	<1	0	103	103
Lead	mg/kg	1	Metals-020	[NT]	22	<1	<1	0	99	98
Mercury	mg/kg	0.1	Metals-021	[NT]	22	<0.1	<0.1	0	121	117
Nickel	mg/kg	1	Metals-020	[NT]	22	<1	<1	0	103	100
Zinc	mg/kg	1	Metals-020	[NT]	22	<1	<1	0	94	91

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	34	09/01/2026	09/01/2026		[NT]	[NT]
Date analysed	-			[NT]	34	09/01/2026	09/01/2026		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	34	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	34	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	34	<1	<1	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	34	2	2	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	34	3	3	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	34	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	34	3	2	40	[NT]	[NT]

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QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	44	09/01/2026	09/01/2026		[NT]	[NT]
Date analysed	-			[NT]	44	09/01/2026	09/01/2026		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	44	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	44	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	44	<1	<1	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	44	38	40	5	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	44	2	1	67	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	44	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	44	81	93	14	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Appendix N – COC and SRA

SOIL ANALYSIS CHAIN OF CUSTODY FORM

Additional Testing																	
Name		P2511038 – Detailed Site Investigation – 3631 Nelson Bay Road, Bobs Farm, NSW															
Martens Contact Officer		Bryson Monaghan				Contact Email		bmonaghan@martens.com.au									
Sampling and Shipping		Sample Date		5-6/11/2025		Dispatch Date		7/11/2025		Turnaround Time		standard					
		Our Reference		P2511038COC01V01				Shipping Method (X)		Hand		Post		Courier		X	
		On Ice (X)		X		No Ice (X)				Other (X)							
Laboratory																	
Name		EnviroLab															
Sample Delivery Address		12 Ashley Street, Chatswood															
Delivery Contact		Name		Sampler Receipt		Phone		9910 6200		Fax				Email		samplereceipt@envirolabservices.com.au	
Please Send Report By (X)		Post				Fax				Email		X		Reporting Email Address			
												bmonaghan@martens.com.au					
												gtaylor@martens.com.au					
														rmehaffey@martens.com.au			

Sample ID	Composite	Sample ID	Composite	Sample ID	Composite
1 11038 / SS001	Composite 1	28 11038 / SS034	Composite 10	55 11038 / SS063	Composite 19
2 11038 / SS003		29 11038 / SS035		56 11038 / SS064	
3 11038 / SS004		30 11038 / SS036		57 11038 / SS065	
4 11038 / SS005	Composite 2	31 11038 / SS037	Composite 11	58 11038 / SS067	Composite 20
5 11038 / SS006		32 11038 / SS038		59 11038 / SS068	
6 11038 / SS008		33 11038 / SS039		60 11038 / SS069	
7 11038 / SS009	Composite 3	34 11038 / SS041	Composite 12	61 11038 / SS070	Composite 21
8 11038 / SS010		35 11038 / SS042		62 11038 / SS071	
9 11038 / SS011		36 11038 / SS043		63 11038 / SS072	

ENVIROLAB
 12 Ashley Street
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 394982
 Date Received: 7/11/25
 Time Received: 1445
 Received By: KC
 Temp: Cool/Ambient 10°C
 Cooling: Ice/Icepack
 Security: Intact/Broken/None

Head Office
 Suite 201, Level 2, 20 George Street
 Hornsby NSW 2077, Australia
 Ph 02 9476 9999 Fax 02 9476 8767

> mail@martens.com.au
 > www.martens.com.au
 MARTENS & ASSOCIATES P/L
 ABN 85 070 240 890 ACN 070 240 890

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	Composite
10	11038 / SS014	Composite 4
11	11038 / SS015	
12	11038 / SS016	
13	11038 / SS017	Composite 5
14	11038 / SS018	
15	11038 / SS019	
16	11038 / SS020	Composite 6
17	11038 / SS021	
18	11038 / SS022	
19	11038 / SS023	Composite 7
20	11038 / SS024	
21	11038 / SS025	
22	11038 / SS026	Composite 8
23	11038 / SS028	
24	11038 / SS029	
25	11038 / SS030	Composite 9
26	11038 / SS031	
27	11038 / SS033	

	Sample ID	Composite
37	11038 / SS044	Composite 13
38	11038 / SS045	
39	11038 / SS046	
40	11038 / SS047	Composite 14
41	11038 / SS048	
42	11038 / SS050	
43	11038 / SS051	Composite 15
44	11038 / SS052	
45	11038 / SS053	
46	11038 / SS054	Composite 16
47	11038 / SS055	
48	11038 / SS056	
49	11038 / SS057	Composite 17
50	11038 / SS058	
51	11038 / SS059	
52	11038 / SS060	Composite 18
53	11038 / SS061	
54	11038 / SS062	

	Sample ID	Composite
64	11038 / SS073	Composite 22
65	11038 / SS074	
66	11038 / SS075	
67	11038 / SS076	Composite 23
68	11038 / SS077	
69	11038 / SS078	
70	11038 / SS079	Composite 24
71	11038 / SS080	
72	11038 / SS081	
73	11038 / SS083	Composite 25
74	11038 / SS084	
75	11038 / SS085	
76	11038 / SS086	Composite 26
77	11038 / SS087	
78	11038 / SS088	
79	11038 / SS089	Composite 27
80	11038 / SS090	
81	11038 / SS091	

Sample ID	OCP/OPP	BHM	Combo 6a	PFAS Short Suite	pH	CEC	BTEXN	TRH	Hold
Composite 1	X	X							
Composite 2	X	X							
Composite 3	X	X							
Composite 4	X	X							
Composite 5	X	X							

#394982
7/11/25
K.C.

SOIL ANALYSIS CHAIN OF CUSTODY

Sample ID	OCP/OPP	8HM	Combo 6a	PFAS Short Suite	pH	CEC	BTEXN	TRH	Hold
Composite 6	X	X							
Composite 7	X	X							
Composite 8	X	X							
Composite 9	X	X							
Composite 10	X	X							
Composite 11	X	X							
Composite 12	X	X							
Composite 13	X	X							
Composite 14	X	X							
Composite 15	X	X							
Composite 16	X	X							
Composite 17	X	X							
Composite 18	X	X							
Composite 19	X	X							
Composite 20	X	X							
Composite 21	X	X							
Composite 22	X	X							
Composite 23	X	X							
Composite 24	X	X							
Composite 25	X	X							
Composite 26	X	X							
Composite 27	X	X							
82 11038 / SS002	X	X							
83 11038 / SS007	X	X							

#394982
7/11/25

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	OCP/OPP	8HM	Combo 6a	PFAS Short Suite	pH	CEC	BTEXN	TRH	Hold
84	11038 / SS012	X	X							
85	11038 / SS013	X	X							
86	11038 / SS027									X
87	11038 / SS032									X
88	11038 / SS040									X
89	11038 / SS049									X
90	11038 / SS066									X
91	11038 / SS082									X
92	11038 / TP101 / 0 - 0.1									X
93	11038 / TP101 / 0.2 - 0.3			X	X					
94	11038 / TP102 / 0 - 0.1			X	X					
95	11038 / TP102 / 0.4 - 0.5					X	X			
96	11038 / TP103 / 0 - 0.1			X	X					
97	11038 / TP104 / 0 - 0.1			X	X					
98	11038 / TP104 / 0.4 - 0.6					X	X			
99	11038 / TP105 / 0 - 0.1			X	X					X
100	11038 / TP105 / 0.3 - 0.5					X	X			
101	11038 / TP106 / 0 - 0.1			X	X					
102	11038 / TP106 / 0.2 - 0.4									X
103	11038 / TP107 / 0 - 0.1			X	X					
104	11038 / TP107 / 0.2 - 0.4									X
105	11038 / TP108 / 0 - 0.1									X
106	11038 / TP108 / 0.3 - 0.4			X	X					
107	11038 / TP108 / 0.7 - 0.9					X	X			

#394982
7/11/25
MFC

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	OCP/OPP	8HM	Combo 6a	PFAS Short Suite	pH	CEC	BTEXN	TRH	Hold
108	11038 / TP109 / 0 - 0.1			X	X					
109	11038 / TP109 / 0.3 - 0.4									X
110	11038 / TP110 / 0 - 0.1									X
111	11038 / TP110 / 0.2 - 0.3			X	X					
112	11038 / TP111 / 0 - 0.1									X
113	11038 / TP111 / 0.2 - 0.3									X
114	11038 / Dup01		X							
115	11038 / Dup02		X							
116	11038 / Dup03		X							
117	11038 / Dup04		X							
118	11038 / Dup05									X
119	11038 / Dup06									X
120	11038 / Dup07									X
121	11038 / Dup08									X
122	11038 / Dup09									X
123	11038 / Dup10									X
124	11038 / Dup11									X
125	11038 / Dup12		X							
126	11038 / Dup13		X							
127	Trip Spike (soil)							X		
128	Trip Spike (soil)							X		
129	Trip Blank (soil)								X	
130	Trip Blank (soil)								X	

5 pg

#394982
7/11/25
K.C.

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	Combo 6 (water)	PFAS Short Suite	VOCs	HM	BTEXN	TRH	Hold
131	11038 / MW1	X	X	X				
132	11038 / MW5	X	X	X				
133	11038 / MW101	X	X	X				
134	11038 / MW104							X
135	11038 / GW Dup01				X			
136	Trip Spike (water)					X		
137	Trip Blank (water)						X	

Extra → 138 - TP110 0.4-0.5
-KC

#394982
7/11/25
KC

SAMPLE RECEIPT ADVICE

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan

Sample Login Details

Your reference	P2511038 3631 Nelson Bay Road
Envirolab Reference	394982
Date Sample Received	07/11/2025
Date Instructions Received	07/11/2025
Date Results Expected to be Reported	14/11/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	158 Soil, 7 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / SS001																					✓
11038 / SS003																					✓
11038 / SS004																					✓
11038 / SS005																					✓
11038 / SS006																					✓
11038 / SS008																					✓
11038 / SS009																					✓
11038 / SS010																					✓
11038 / SS011																					✓
11038 / SS014																					✓
11038 / SS015																					✓
11038 / SS016																					✓
11038 / SS017																					✓
11038 / SS018																					✓
11038 / SS019																					✓
11038 / SS020																					✓
11038 / SS021																					✓
11038 / SS022																					✓
11038 / SS023																					✓
11038 / SS024																					✓



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / SS025																					✓
11038 / SS026																					✓
11038 / SS028																					✓
11038 / SS029																					✓
11038 / SS030																					✓
11038 / SS031																					✓
11038 / SS033																					✓
11038 / SS034																					✓
11038 / SS035																					✓
11038 / SS036																					✓
11038 / SS037																					✓
11038 / SS038																					✓
11038 / SS039																					✓
11038 / SS041																					✓
11038 / SS042																					✓
11038 / SS043																					✓
11038 / SS044																					✓
11038 / SS045																					✓
11038 / SS046																					✓
11038 / SS047																					✓



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / SS048																					✓
11038 / SS050																					✓
11038 / SS051																					✓
11038 / SS052																					✓
11038 / SS053																					✓
11038 / SS054																					✓
11038 / SS055																					✓
11038 / SS056																					✓
11038 / SS057																					✓
11038 / SS058																					✓
11038 / SS059																					✓
11038 / SS060																					✓
11038 / SS061																					✓
11038 / SS062																					✓
11038 / SS063																					✓
11038 / SS064																					✓
11038 / SS065																					✓
11038 / SS067																					✓
11038 / SS068																					✓
11038 / SS069																					✓



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / SS070																					✓
11038 / SS071																					✓
11038 / SS072																					✓
11038 / SS073																					✓
11038 / SS074																					✓
11038 / SS075																					✓
11038 / SS076																					✓
11038 / SS077																					✓
11038 / SS078																					✓
11038 / SS079																					✓
11038 / SS080																					✓
11038 / SS081																					✓
11038 / SS083																					✓
11038 / SS084																					✓
11038 / SS085																					✓
11038 / SS086																					✓
11038 / SS087																					✓
11038 / SS088																					✓
11038 / SS089																					✓
11038 / SS090																					✓



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / SS091																					✓
11038 / SS002				✓	✓																
11038 / SS007				✓	✓																
11038 / SS012				✓	✓																
11038 / SS013				✓	✓																
11038 / SS027																					✓
11038 / SS032																					✓
11038 / SS040																					✓
11038 / SS049																					✓
11038 / SS066																					✓
11038 / SS082																					✓
11038 / TP101 / 0 - 0.1																					✓
11038 / TP101 / 0.2 - 0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP102 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP102 / 0.4 - 0.5										✓	✓										
11038 / TP103 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP104 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP104 / 0.4 - 0.6										✓	✓										
11038 / TP105 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP105 / 0.3 - 0.5										✓	✓										



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / TP106 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP106 / 0.2 - 0.4																					✓
11038 / TP107 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP107 / 0.2 - 0.4																					✓
11038 / TP108 / 0 - 0.1																					✓
11038 / TP108 / 0.3 - 0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP108 / 0.7 - 0.9										✓	✓										
11038 / TP109 / 0 - 0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP109 / 0.3 - 0.4																					✓
11038 / TP110 / 0 - 0.1																					✓
11038 / TP110 / 0.2 - 0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓												
11038 / TP111 / 0 - 0.1																					✓
11038 / TP111 / 0.2 - 0.3																					✓
11038 / Dup01							✓														
11038 / Dup02							✓														
11038 / Dup03							✓														
11038 / Dup04							✓														
11038 / Dup05																					✓
11038 / Dup06																					✓
11038 / Dup07																					✓



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
11038 / Dup08																					✓
11038 / Dup09																					✓
11038 / Dup10																					✓
11038 / Dup11																					✓
11038 / Dup12							✓														
11038 / Dup13							✓														
Trip Spike (soil)	✓																				
Trip Spike (soil)	✓																				
Trip Blank (soil)	✓																				
Trip Blank (soil)	✓																				
11038 / MW1												✓	✓	✓	✓	✓	✓	✓	✓	✓	
11038 / MW5												✓	✓	✓	✓	✓	✓	✓	✓	✓	
11038 / MW101												✓	✓	✓	✓	✓	✓	✓	✓	✓	
11038 / MW104																					✓
11038 / GW Dup01																			✓		
Trip Spike (water)													✓								
Trip Blank (water)													✓								
TP110 (0.4-0.5)																					✓
Composite 1				✓	✓		✓														
Composite 2				✓	✓		✓														



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
Composite 3				✓	✓		✓														
Composite 4				✓	✓		✓														
Composite 5				✓	✓		✓														
Composite 6				✓	✓		✓														
Composite 7				✓	✓		✓														
Composite 8				✓	✓		✓														
Composite 9				✓	✓		✓														
Composite 10				✓	✓		✓														
Composite 11				✓	✓		✓														
Composite 12				✓	✓		✓														
Composite 13				✓	✓		✓														
Composite 14				✓	✓		✓														
Composite 15				✓	✓		✓														
Composite 16				✓	✓		✓														
Composite 17				✓	✓		✓														
Composite 18				✓	✓		✓														
Composite 19				✓	✓		✓														
Composite 20				✓	✓		✓														
Composite 21				✓	✓		✓														
Composite 22				✓	✓		✓														



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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - Soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	HM in water - total	PFAS in Waters Short	On Hold
Composite 23				✓	✓		✓														
Composite 24				✓	✓		✓														
Composite 25				✓	✓		✓														
Composite 26				✓	✓		✓														
Composite 27				✓	✓		✓														

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.

ELS Reference #: 394982-B
TAT Requested: STD
Due: 25/11/2025

Sarah Park

SP.

From: Sarah Park
Sent: Tuesday, 18 November 2025 4:49 PM
To: Bryson Monaghan; Simon Song; Envirolab Sydney Sample Receipt
Cc: Gray Taylor; Ben McGiffin
Subject: RE: Results for Registration 394982 P2511038 3631 Nelson Bay Road

Hi Bryson,

Will get the samples organised for additional testing.

Confirming 7HM are As, Cd, Cr, Cu, Pb, Ni, and Zn?

Kind Regards,

Sarah Park | Client Services Officer | Envirolab Services

Great Science. Great Service.

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T 612 9910 6200
E SPark@envirolab.com.au | W www.envirolab.com.au

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Samples will be analysed per our T&C's.

From: Bryson Monaghan <bmonaghan@martens.com.au>
Sent: Tuesday, 18 November 2025 4:15 PM
To: Simon Song <SSong@envirolab.com.au>; Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>
Cc: Gray Taylor <gtaylor@martens.com.au>; Ben McGiffin <bmcgiffin@martens.com.au>
Subject: RE: Results for Registration 394982 P2511038 3631 Nelson Bay Road

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Envirolab,

Can I please have the following (27) samples tested for 7HM for Report No. **394982** P2511038 3631 Nelson Bay Road:

11038 / SS005 - #4 11038 / SS006 - #5 11038 / SS008 - #6
11038 / SS009 - #7 11038 / SS010 - #8 11038 / SS011 - #9
11038 / SS014 - #10 11038 / SS015 - #11 11038 / SS016 - #12
11038 / SS017 - #13 11038 / SS018 - #14 11038 / SS019 - #15
11038 / SS020 - #16 11038 / SS021 - #17 11038 / SS022 - #18
11038 / SS054 - #46 11038 / SS055 - #47 11038 / SS056 - #48
11038 / SS067 - #58 11038 / SS068 - #59 11038 / SS069 - #60
11038 / SS070 - #61 11038 / SS071 - #62 11038 / SS072 - #63
11038 / SS073 - #64 11038 / SS074 - #65 11038 / SS075 - #66

Standard turnaround.

- SP.

SAMPLE RECEIPT ADVICE

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan

Sample Login Details

Your reference	P2511038 3631 Nelson Bay Road
Envirolab Reference	394982-B
Date Sample Received	18/11/2025
Date Instructions Received	18/11/2025
Date Results Expected to be Reported	25/11/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional metals testing
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



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12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

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Sample ID	Acid Extractable metals in soil	On Hold
11038 / SS001		✓
11038 / SS003		✓
11038 / SS004		✓
11038 / SS005	✓	
11038 / SS006	✓	
11038 / SS008	✓	
11038 / SS009	✓	
11038 / SS010	✓	
11038 / SS011	✓	
11038 / SS014	✓	
11038 / SS015	✓	
11038 / SS016	✓	
11038 / SS017	✓	
11038 / SS018	✓	
11038 / SS019	✓	
11038 / SS020	✓	
11038 / SS021	✓	
11038 / SS022	✓	
11038 / SS023		✓
11038 / SS024		✓
11038 / SS025		✓
11038 / SS026		✓
11038 / SS028		✓
11038 / SS029		✓
11038 / SS030		✓
11038 / SS031		✓
11038 / SS033		✓
11038 / SS034		✓
11038 / SS035		✓
11038 / SS036		✓
11038 / SS037		✓
11038 / SS038		✓

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Sample ID	Acid Extractable metals in soil	On Hold
11038 / SS039		✓
11038 / SS041		✓
11038 / SS042		✓
11038 / SS043		✓
11038 / SS044		✓
11038 / SS045		✓
11038 / SS046		✓
11038 / SS047		✓
11038 / SS048		✓
11038 / SS050		✓
11038 / SS051		✓
11038 / SS052		✓
11038 / SS053		✓
11038 / SS054	✓	
11038 / SS055	✓	
11038 / SS056	✓	
11038 / SS057		✓
11038 / SS058		✓
11038 / SS059		✓
11038 / SS060		✓
11038 / SS061		✓
11038 / SS062		✓
11038 / SS063		✓
11038 / SS064		✓
11038 / SS065		✓
11038 / SS067	✓	
11038 / SS068	✓	
11038 / SS069	✓	
11038 / SS070	✓	
11038 / SS071	✓	
11038 / SS072	✓	
11038 / SS073	✓	



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Sample ID	Acid Extractable metals in soil	On Hold
11038 / SS074	✓	
11038 / SS075	✓	
11038 / SS076		✓
11038 / SS077		✓
11038 / SS078		✓
11038 / SS079		✓
11038 / SS080		✓
11038 / SS081		✓
11038 / SS083		✓
11038 / SS084		✓
11038 / SS085		✓
11038 / SS086		✓
11038 / SS087		✓
11038 / SS088		✓
11038 / SS089		✓
11038 / SS090		✓
11038 / SS091		✓
11038 / SS002		✓
11038 / SS007		✓
11038 / SS012		✓
11038 / SS013		✓
11038 / SS027		✓
11038 / SS032		✓
11038 / SS040		✓
11038 / SS049		✓
11038 / SS066		✓
11038 / SS082		✓
11038 / TP101 / 0 - 0.1		✓
11038 / TP101 / 0.2 - 0.3		✓
11038 / TP102 / 0 - 0.1		✓
11038 / TP102 / 0.4 - 0.5		✓
11038 / TP103 / 0 - 0.1		✓



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Sample ID	Acid Extractable metals in soil	On Hold
11038 / TP104 / 0 - 0.1		✓
11038 / TP104 / 0.4 - 0.6		✓
11038 / TP105 / 0 - 0.1		✓
11038 / TP105 / 0.3 - 0.5		✓
11038 / TP106 / 0 - 0.1		✓
11038 / TP106 / 0.2 - 0.4		✓
11038 / TP107 / 0 - 0.1		✓
11038 / TP107 / 0.2 - 0.4		✓
11038 / TP108 / 0 - 0.1		✓
11038 / TP108 / 0.3 - 0.4		✓
11038 / TP108 / 0.7 - 0.9		✓
11038 / TP109 / 0 - 0.1		✓
11038 / TP109 / 0.3 - 0.4		✓
11038 / TP110 / 0 - 0.1		✓
11038 / TP110 / 0.2 - 0.3		✓
11038 / TP111 / 0 - 0.1		✓
11038 / TP111 / 0.2 - 0.3		✓
11038 / Dup01		✓
11038 / Dup02		✓
11038 / Dup03		✓
11038 / Dup04		✓
11038 / Dup05		✓
11038 / Dup06		✓
11038 / Dup07		✓
11038 / Dup08		✓
11038 / Dup09		✓
11038 / Dup10		✓
11038 / Dup11		✓
11038 / Dup12		✓
11038 / Dup13		✓
Trip Spike (soil)		✓
Trip Spike (soil)		✓



Sample ID	Acid Extractable metals in soil	On Hold
Trip Blank (soil)		✓
Trip Blank (soil)		✓
11038 / MW1		✓
11038 / MW5		✓
11038 / MW101		✓
11038 / MW104		✓
11038 / GW Dup01		✓
Trip Spike (water)		✓
Trip Blank (water)		✓
TP110 (0.4-0.5)		✓
Composite 1		✓
Composite 2		✓
Composite 3		✓
Composite 4		✓
Composite 5		✓
Composite 6		✓
Composite 7		✓
Composite 8		✓
Composite 9		✓
Composite 10		✓
Composite 11		✓
Composite 12		✓
Composite 13		✓
Composite 14		✓
Composite 15		✓
Composite 16		✓
Composite 17		✓
Composite 18		✓
Composite 19		✓
Composite 20		✓
Composite 21		✓
Composite 22		✓

Sample ID	Acid Extractable metals in soil	On Hold
Composite 23		✓
Composite 24		✓
Composite 25		✓
Composite 26		✓
Composite 27		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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SOIL ANALYSIS CHAIN OF CUSTODY FORM

Additional Testing											
Name	P2511038 – Detailed Site Investigation – 3631 Nelson Bay Road, Bobs Farm, NSW										
Martens Contact Officer	Bryson Monaghan					Contact Email		bmonaghan@martens.com.au			
Sampling and Shipping	Sample Date	7/01/2026			Dispatch Date	8/01/2026		Turnaround Time		standard	
	Our Reference	P2511038COC03V01				Shipping Method (X)		Hand		Post	
	On Ice (X)	☒	No Ice (X)	☐	Other (X)	☐		Courier	☒	X	
Laboratory											
Name	EnviroLab										
Sample Delivery Address	12 Ashley Street, Chatswood										
Delivery Contact	Name	Sampler Receipt			Phone	9910 6200		Fax		Email	samplereceipt@envirolabservices.com.au
Please Send Report By (X)	Post	☐	Fax	☐	Email	☒	Reporting Email Address		bmonaghan@martens.com.au gtaylor@martens.com.au rmehaffey@martens.com.au		

Sample ID	8HM	Asbestos ID	BTEXN	TRH	Hold
1 11038 / TP201 / 0 - 0.1					X
2 11038 / TP201 / 0.3 - 0.4	X				
3 11038 / TP202 / 0.1 - 0.2	X				
4 11038 / TP202 / 0.3 - 0.4					X
5 11038 / TP203 / 0.1 - 0.2	X				
6 11038 / TP203 / 0.3 - 0.4	X				
7 11038 / TP204 / 0.1 - 0.2					X
8 11038 / TP204 / 0.2 - 0.3	X				
9 11038 / TP205 / 0.1 - 0.2	X				



EnviroLab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 399258

Date Received: 8/1/26

Time Received: 1500

Received By: [Signature]

Temp: Cool/Ambient

Cooling: Ice/cepack

Security: Intact/Broken/None

Head Office
Suite 201, Level 2, 20 George Street
Hornsby NSW 2077, Australia
Ph 02 9476 9999 Fax 02 9476 8767

> mail@martens.com.au
> www.martens.com.au
MARTENS & ASSOCIATES P/L
ABN 85 070 240 890 ACN 070 240 890

SOIL ANALYSIS CHAIN OF CUSTODY

Sample ID	8HM	Asbestos ID	BTEXN	TRH	Hold
10 11038 / TP205 / 0.2 - 0.3					X
11 11038 / TP206 / 0.1 - 0.2	X				
12 11038 / TP206 / 0.3 - 0.4					X
13 11038 / TP207 / 0.1 - 0.2					X
14 11038 / TP207 / 0.2 - 0.3	X				
15 11038 / TP208 / 0.1 - 0.2	X				
16 11038 / TP208 / 0.3 - 0.4					X
17 11038 / TP209 / 0.1 - 0.2	X				
18 11038 / TP209 / 0.3 - 0.4					X
19 11038 / TP210 / 0.1 - 0.2					X
20 11038 / TP210 / 0.3 - 0.4					X
21 11038 / TP211 / 0 - 0.1	X				
22 11038 / TP211 / 0.3 - 0.4	X				
23 11038 / TP212 / 0 - 0.1	X				
24 11038 / TP212 / 0.2 - 0.3	X				
25 11038 / TP213 / 0 - 0.1	X				
26 11038 / TP213 / 0.3 - 0.4	X				
27 11038 / TP214 / 0 - 0.1	X				
28 11038 / TP214 / 0.2 - 0.3	X				
29 11038 / TP215 / 0 - 0.1	X				
30 11038 / TP215 / 0.2 - 0.3	X				
31 11038 / TP216 / 0 - 0.1	X				399258
32 11038 / TP216 / 0.2 - 0.3	X				8/1/26
33 11038 / TP217 / 0 - 0.1	X				OW
34 11038 / TP217 / 0.2 - 0.3	X				

SOIL ANALYSIS CHAIN OF CUSTODY

Sample ID	8HM	Asbestos ID	BTEXN	TRH	Hold
35 11038 / TP217 / 0.6 - 0.7					X
36 11038 / TP218 / 0 - 0.1	X				
37 11038 / TP218 / 0.2 - 0.3	X				
38 11038 / TP219 / 0 - 0.1	X				
39 11038 / TP219 / 0.2 - 0.3	X				
40 11038 / TP219 / 0.4 - 0.5					X
41 11038 / TP220 / 0 - 0.1	X				
42 11038 / TP220 / 0.2 - 0.3	X				
43 11038 / TP216 / MS01 / 0 - 0.05		X			
44 11038 / Dup01	X				
45 11038 / Dup02	X				
46 11038 / Dup03	X				
47 11038 / Dup04					X
48 Trip Spike			X		399258
49 Trip Blank				X	8/1/26

OW

SAMPLE RECEIPT ADVICE

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan

Sample Login Details

Your reference	P2511038 – Detailed Site Investigation
Envirolab Reference	399258
Date Sample Received	08/01/2026
Date Instructions Received	08/01/2026
Date Results Expected to be Reported	15/01/2026

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	49 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	2
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



EnviroLab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metals in soil	Asbestos ID - materials	On Hold
11038 / TP201 / 0 - 0.1					✓
11038 / TP201 / 0.3 - 0.4			✓		
11038 / TP202 / 0.1 - 0.2			✓		
11038 / TP202 / 0.3 - 0.4					✓
11038 / TP203 / 0.1 - 0.2			✓		
11038 / TP203 / 0.3 - 0.4			✓		
11038 / TP204 / 0.1 - 0.2					✓
11038 / TP204 / 0.2 - 0.3			✓		
11038 / TP205 / 0.1 - 0.2			✓		
11038 / TP205 / 0.2 - 0.3					✓
11038 / TP206 / 0.1 - 0.2			✓		
11038 / TP206 / 0.3 - 0.4					✓
11038 / TP207 / 0.1 - 0.2					✓
11038 / TP207 / 0.2 - 0.3			✓		
11038 / TP208 / 0.1 - 0.2			✓		
11038 / TP208 / 0.3 - 0.4					✓
11038 / TP209 / 0.1 - 0.2			✓		
11038 / TP209 / 0.3 - 0.4					✓
11038 / TP210 / 0.1 - 0.2					✓
11038 / TP210 / 0.3 - 0.4					✓
11038 / TP211 / 0 - 0.1			✓		
11038 / TP211 / 0.3 - 0.4			✓		
11038 / TP212 / 0 - 0.1			✓		
11038 / TP212 / 0.2 - 0.3			✓		
11038 / TP213 / 0 - 0.1			✓		
11038 / TP213 / 0.3 - 0.4			✓		
11038 / TP214 / 0 - 0.1			✓		
11038 / TP214 / 0.2 - 0.3			✓		
11038 / TP215 / 0 - 0.1			✓		
11038 / TP215 / 0.2 - 0.3			✓		
11038 / TP216 / 0 - 0.1			✓		
11038 / TP216 / 0.2 - 0.3			✓		



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12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metals in soil	Asbestos ID - materials	On Hold
11038 / TP217 / 0 - 0.1			✓		
11038 / TP217 / 0.2 - 0.3			✓		
11038 / TP217 / 0.6 - 0.7					✓
11038 / TP218 / 0 - 0.1			✓		
11038 / TP218 / 0.2 - 0.3			✓		
11038 / TP219 / 0 - 0.1			✓		
11038 / TP219 / 0.2 - 0.3			✓		
11038 / TP219 / 0.4 - 0.5					✓
11038 / TP220 / 0 - 0.1			✓		
11038 / TP220 / 0.2 - 0.3			✓		
11038 / TP216 / MS01 / 0 - 0.05				✓	
11038 / Dup01			✓		
11038 / Dup02			✓		
11038 / Dup03			✓		
11038 / Dup04					✓
Trip Spike	✓				
Trip Blank	✓	✓			

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.

Anna Bui

From: Bryson Monaghan <bmonaghan@martens.com.au>
Sent: Monday, 12 January 2026 2:11 PM
To: Anna Bui
Cc: Ben McGiffin; Gray Taylor
Subject: RE: [11038] COC for soil samples delivery this afternoon

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Anna,

EW REF: 899258-A

Standard turn-around is fine. Thank you for checking.

MT: STANDARD

Kind Regards,

DE: 19/1/26

AS

From: Anna Bui <ABui@envirolab.com.au>
Sent: Monday, 12 January 2026 1:30 PM
To: Bryson Monaghan <bmonaghan@martens.com.au>; Grace Zhang <GZhang@envirolab.com.au>; Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>
Cc: Ben McGiffin <bmcgiffin@martens.com.au>; Gray Taylor <gtaylor@martens.com.au>
Subject: RE: [11038] COC for soil samples delivery this afternoon

Hi Bryson,

I'll get that organised into an A-job.

Did you need results out on the same day as the original (15/1)?

Kind Regards,

Anna Bui | Client Services Officer | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E ABui@envirolab.com.au | W www.envirolab.com.au

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Samples will be analysed per our T&C's.

From: Bryson Monaghan <bmonaghan@martens.com.au>
Sent: Monday, 12 January 2026 12:25 PM
To: Grace Zhang <GZhang@envirolab.com.au>; Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>
Cc: Ben McGiffin <bmcgiffin@martens.com.au>; Gray Taylor <gtaylor@martens.com.au>
Subject: RE: [11038] COC for soil samples delivery this afternoon

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Hi Grace,

Can I please add an additional test regarding report no. 399258
(5 - Test for PAH for (15) 11038 / TP208 / 0.1-0.2

Thank you,

From: Grace Zhang <GZhang@envirolab.com.au>

Sent: Thursday, 8 January 2026 1:42 PM

To: Bryson Monaghan <bmonaghan@martens.com.au>; Envirolab Sydney Sample Receipt
<Samplereceipt@envirolab.com.au>

Cc: Gray Taylor <gtaylor@martens.com.au>; Robert Mehaffey <rmehaffey@martens.com.au>

Subject: Re: [11038] COC for soil samples delivery this afternoon

Thanks Bryson

Kind Regards,

Grace Zhang | Client Services Officer | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067

T 612 9910 6200

E GZhang@envirolab.com.au | W www.envirolab.com.au



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Emerging Contaminants • Forer



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♻️ Please consider the environment before printing this email.

Samples will be analysed per our T&C's.

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This e-mail message has been scanned for Viruses

From: Bryson Monaghan <bmonaghan@martens.com.au>

Sent: Thursday, 8 January 2026 13:01

To: Envirolab Sydney Sample Receipt <Samplereceipt@envirolab.com.au>

Cc: Gray Taylor <gtaylor@martens.com.au>; Robert Mehaffey <rmehaffey@martens.com.au>

Subject: [11038] COC for soil samples delivery this afternoon

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

SAMPLE RECEIPT ADVICE

Client Details

Client	Martens & Associates Pty Ltd
Attention	Bryson Monaghan

Sample Login Details

Your reference	P2511038 – Detailed Site Investigation
Envirolab Reference	399258-A
Date Sample Received	08/01/2026
Date Instructions Received	12/01/2026
Date Results Expected to be Reported	19/01/2026

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis 1 sample
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	2
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	PAHs in Soil	On Hold
11038 / TP201 / 0 - 0.1		✓
11038 / TP201 / 0.3 - 0.4		✓
11038 / TP202 / 0.1 - 0.2		✓
11038 / TP202 / 0.3 - 0.4		✓
11038 / TP203 / 0.1 - 0.2		✓
11038 / TP203 / 0.3 - 0.4		✓
11038 / TP204 / 0.1 - 0.2		✓
11038 / TP204 / 0.2 - 0.3		✓
11038 / TP205 / 0.1 - 0.2		✓
11038 / TP205 / 0.2 - 0.3		✓
11038 / TP206 / 0.1 - 0.2		✓
11038 / TP206 / 0.3 - 0.4		✓
11038 / TP207 / 0.1 - 0.2		✓
11038 / TP207 / 0.2 - 0.3		✓
11038 / TP208 / 0.1 - 0.2	✓	
11038 / TP208 / 0.3 - 0.4		✓
11038 / TP209 / 0.1 - 0.2		✓
11038 / TP209 / 0.3 - 0.4		✓
11038 / TP210 / 0.1 - 0.2		✓
11038 / TP210 / 0.3 - 0.4		✓
11038 / TP211 / 0 - 0.1		✓
11038 / TP211 / 0.3 - 0.4		✓
11038 / TP212 / 0 - 0.1		✓
11038 / TP212 / 0.2 - 0.3		✓
11038 / TP213 / 0 - 0.1		✓
11038 / TP213 / 0.3 - 0.4		✓
11038 / TP214 / 0 - 0.1		✓
11038 / TP214 / 0.2 - 0.3		✓
11038 / TP215 / 0 - 0.1		✓
11038 / TP215 / 0.2 - 0.3		✓
11038 / TP216 / 0 - 0.1		✓
11038 / TP216 / 0.2 - 0.3		✓



Envirolab Services Pty Ltd

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Sample ID	PAHs in Soil	On Hold
11038 / TP217 / 0 - 0.1		✓
11038 / TP217 / 0.2 - 0.3		✓
11038 / TP217 / 0.6 - 0.7		✓
11038 / TP218 / 0 - 0.1		✓
11038 / TP218 / 0.2 - 0.3		✓
11038 / TP219 / 0 - 0.1		✓
11038 / TP219 / 0.2 - 0.3		✓
11038 / TP219 / 0.4 - 0.5		✓
11038 / TP220 / 0 - 0.1		✓
11038 / TP220 / 0.2 - 0.3		✓
11038 / TP216 / MS01 / 0 - 0.05		✓
11038 / Dup01		✓
11038 / Dup02		✓
11038 / Dup03		✓
11038 / Dup04		✓
Trip Spike		✓
Trip Blank		✓

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Additional Info

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Appendix O – EIL Calculation Sheets

Inputs	
Select contaminant from list below	
Cr_III	
Below needed to calculate fresh and aged ACLs	
Enter % clay (values from 0 to 100%)	
1	
Below needed to calculate fresh and aged ABCs	
Measured background concentration (mg/kg). Leave blank if no measured value	
or for fresh ABCs only	
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration	
7	
or for aged ABCs only	
Enter State (or closest State)	
NSW	
Enter traffic volume (high or low)	
low	

Outputs		
Land use	Cr III soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	100	70
Urban residential and open public spaces	150	190
Commercial and industrial	200	320

Inputs
Select contaminant from list below
Cu
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
1.5
Enter soil pH (calcium chloride method) (values from 1 to 14)
8
Enter organic carbon content (%OC) (values from 0 to 50%)
1
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Cu soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	30	25
Urban residential and open public spaces	35	45
Commercial and industrial	40	55

Inputs
Select contaminant from list below
Ni
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
1.5
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Ni soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	25	5
Urban residential and open public spaces	25	7
Commercial and industrial	30	8

Inputs
Select contaminant from list below
Zn
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
1.5
Enter soil pH (calcium chloride method) (values from 1 to 14)
8
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Zn soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	40	95
Urban residential and open public spaces	70	170
Commercial and industrial	90	220

Appendix P – ProUCL Calculation Sheets

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.2 19/01/2026 10:10:39 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Copper - Surface Soil											
12												
13	General Statistics											
14	Total Number of Observations				32	Number of Distinct Observations				30		
15						Number of Missing Observations				0		
16	Minimum				3	Mean				61.78		
17	Maximum				230	Median				50.5		
18	SD				50.38	Std. Error of Mean				8.907		
19	Coefficient of Variation				0.816	Skewness				1.535		
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.878	Shapiro Wilk GOF Test						
23	1% Shapiro Wilk Critical Value				0.904	Data Not Normal at 1% Significance Level						
24	Lilliefors Test Statistic				0.148	Lilliefors GOF Test						
25	1% Lilliefors Critical Value				0.18	Data appear Normal at 1% Significance Level						
26	Data appear Approximate Normal at 1% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				76.88	95% Adjusted-CLT UCL (Chen-1995)				79.01		
31						95% Modified-t UCL (Johnson-1978)				77.29		
32												

	A	B	C	D	E	F	G	H	I	J	K	L
33	Gamma GOF Test											
34	A-D Test Statistic					0.276	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.767	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.0895	Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value					0.159	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					1.402	k star (bias corrected MLE)					1.291
42	Theta hat (MLE)					44.07	Theta star (bias corrected MLE)					47.84
43	nu hat (MLE)					89.73	nu star (bias corrected)					82.65
44	MLE Mean (bias corrected)					61.78	MLE Sd (bias corrected)					54.37
45							Approximate Chi Square Value (0.05)					62.7
46	Adjusted Level of Significance					0.0416	Adjusted Chi Square Value					61.77
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL					81.44	95% Adjusted Gamma UCL					82.67
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.918	Shapiro Wilk Lognormal GOF Test					
53	10% Shapiro Wilk Critical Value					0.941	Data Not Lognormal at 10% Significance Level					
54	Lilliefors Test Statistic					0.147	Lilliefors Lognormal GOF Test					
55	10% Lilliefors Critical Value					0.142	Data Not Lognormal at 10% Significance Level					
56	Data Not Lognormal at 10% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data					1.099	Mean of logged Data					3.726
60	Maximum of Logged Data					5.438	SD of logged Data					1.051
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL					115.6	90% Chebyshev (MVUE) UCL					116.1
64	95% Chebyshev (MVUE) UCL					136.8	97.5% Chebyshev (MVUE) UCL					165.5
65	99% Chebyshev (MVUE) UCL					222						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL					76.43	95% BCA Bootstrap UCL					79
72	95% Standard Bootstrap UCL					76.11	95% Bootstrap-t UCL					80.68
73	95% Hall's Bootstrap UCL					81.84	95% Percentile Bootstrap UCL					76.94
74	90% Chebyshev(Mean, Sd) UCL					88.5	95% Chebyshev(Mean, Sd) UCL					100.6
75	97.5% Chebyshev(Mean, Sd) UCL					117.4	99% Chebyshev(Mean, Sd) UCL					150.4
76												
77	Suggested UCL to Use											
78	95% Student's-t UCL					76.88						
79												
80	When a data set follows an approximate distribution passing only one of the GOF tests,											
81	it is suggested to use a UCL based upon a distribution passing both GOF tests in ProUCL											
82												
83	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
84	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
85	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
86												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.2 19/01/2026 10:58:05 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Zinc - Surface Soils											
12												
13	General Statistics											
14	Total Number of Observations				32		Number of Distinct Observations				27	
15							Number of Missing Observations				0	
16	Minimum				3		Mean				106	
17	Maximum				370		Median				55.5	
18	SD				112.1		Std. Error of Mean				19.83	
19	Coefficient of Variation				1.058		Skewness				1.252	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.801		Shapiro Wilk GOF Test					
23	1% Shapiro Wilk Critical Value				0.904		Data Not Normal at 1% Significance Level					
24	Lilliefors Test Statistic				0.205		Lilliefors GOF Test					
25	1% Lilliefors Critical Value				0.18		Data Not Normal at 1% Significance Level					
26	Data Not Normal at 1% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				139.6		95% Adjusted-CLT UCL (Chen-1995)				143.3	
31							95% Modified-t UCL (Johnson-1978)				140.4	
32												

	A	B	C	D	E	F	G	H	I	J	K	L
33	Gamma GOF Test											
34	A-D Test Statistic					0.535	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.78	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.159	Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value					0.161	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					0.905	k star (bias corrected MLE)					0.841
42	Theta hat (MLE)					117.1	Theta star (bias corrected MLE)					126.1
43	nu hat (MLE)					57.93	nu star (bias corrected)					53.83
44	MLE Mean (bias corrected)					106	MLE Sd (bias corrected)					115.6
45							Approximate Chi Square Value (0.05)					37.97
46	Adjusted Level of Significance					0.0416	Adjusted Chi Square Value					37.26
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL					150.3	95% Adjusted Gamma UCL					153.2
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.958	Shapiro Wilk Lognormal GOF Test					
53	10% Shapiro Wilk Critical Value					0.941	Data appear Lognormal at 10% Significance Level					
54	Lilliefors Test Statistic					0.11	Lilliefors Lognormal GOF Test					
55	10% Lilliefors Critical Value					0.142	Data appear Lognormal at 10% Significance Level					
56	Data appear Lognormal at 10% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data					1.099	Mean of logged Data					4.018
60	Maximum of Logged Data					5.914	SD of logged Data					1.273
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL					235.8	90% Chebyshev (MVUE) UCL					218.3
64	95% Chebyshev (MVUE) UCL					262.9	97.5% Chebyshev (MVUE) UCL					324.8
65	99% Chebyshev (MVUE) UCL					446.5						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL					138.6	95% BCA Bootstrap UCL					142.5
72	95% Standard Bootstrap UCL					138.2	95% Bootstrap-t UCL					145.4
73	95% Hall's Bootstrap UCL					141.4	95% Percentile Bootstrap UCL					139.6
74	90% Chebyshev(Mean, Sd) UCL					165.5	95% Chebyshev(Mean, Sd) UCL					192.4
75	97.5% Chebyshev(Mean, Sd) UCL					229.8	99% Chebyshev(Mean, Sd) UCL					303.3
76												
77	Suggested UCL to Use											
78	95% Adjusted Gamma UCL					153.2						
79												
80	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.											
81	Please verify the data were collected from random locations.											
82	If the data were collected using judgmental or other non-random methods,											
83	then contact a statistician to correctly calculate UCLs.											
84												
85	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
86	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
88												