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Waste Classification and Virgin Excavated Natural Material Report

Report Reference	18587-ER-1-1	Report Date	4/12/2024
Client	The Ice Skating Club of NSW Cooperative Limited		
Client project name	Canterbury Olympic Ice Rink Extension		
Site address	17A Phillips Avenue, Canterbury (refer to **Appendix B** for a site locality plan)		
Lot & Deposited Plan (DP)	A portion of Lot 1 in DP 818459		
Definition of virgin excavated natural material (VENM)	The Protection of the Environment Operations Act 1997 VENM as: 'natural material (such as clay, gravel, sand, soil or rock fines): a) that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities, and b) that does not contain any sulfidic ores or soils or any other waste, and includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved for the time being pursuant to an EPA Gazettal notice'.		
Location, quantity and history of material	In-situ materials across approximately 920m^2, to a nominal depth of 1.0m below ground level across the majority of the site, with a small portion of deeper excavation to facilitate installation of a lift pit in the south-eastern corner of site across approximately 16m^2 to a nominal depth of 2.4m below ground level (estimated to be an approximate total volume of 950m^3), to be excavated during construction of an extension to Canterbury Olympic Ice Rink. Refer to **Appendix B** for a site layout plan.		
Geology	The NSW seamless geology dataset v2.4 accessed via https://minview.geoscience.nsw.gov.au indicated that the site is likely to be underlain by quaternary deposits of silt, clay, (fluvially deposited) lithic to quartz-lithic sand and gravel.		

EPA Public Registers	A search of the NSW EPA online contaminated land record of notices indicated that the site (and land located immediately adjacent to the site) was not the subject of: • orders made under Part 3 of the Contaminated Land Management (CLM) Act 1997; • notices available to the public under section 58 of the CLM Act • an approved voluntary management proposal under the CLM Act that has not been fully carried out and where NSW EPA approval has not been revoked; • site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land; • where practicable, copies of anything formerly required to be part of the public record; or • actions taken by NSW EPA (or the previous State Pollution Control Commission) under section 35 or 36[1] of the Environmentally Hazardous Chemicals Act 1985. Alliance notes two petrol stations located approximately 800m south-west (Budget Petroleum – 403 Canterbury Road, Campsie), and 1,100m east of the site (Metro Petroleum – 13-19 Canterbury Road, Canterbury) were subject to an agreed voluntary investigation proposal related to potential petroleum hydrocarbon contamination of soil and groundwater. Given the locations subject to these notices are located a considerable distance from the site (>800m) in either an inferred cross-gradient or downgradient location, further assessment of fuel storage and handling related groundwater contamination risks to the site from these locations, in the context of this investigation is considered not warranted. A search of the NSW EPA online POEO public register indicated that the site was not the subject of a licence, application, notice, audit, pollution study or reduction program. Alliance notes the Canterbury Aquatic and Fitness Centre located on Phillips Avenue, directly south-east of the site was the subject of licence number 789 for operation of a public swimming centre and allowed for the discharge of pool backwash of up to 100KL/ day, subject to the water not having chlorine (free residual) present beyond the limit of 1.5mg/L. The licence was surrendered in November 2001. Considering the following: • the location subject to this licence is in an inferred cross or downgradient location from the site; and • the discharge point was likely to an underground stormwater system and/or direct to the nearby Cooks River, further assessment of land contamination risks from pool backwash discharge in the context of this investigation, is considered not warranted. A search of the NSW EPA online list of NSW contaminated sites notified to NSW EPA indicated that the site (and land located immediately adjacent to the site) was not on the list. A copy of the search records is presented in **Appendix E**.
Historical Aerial Imagery	A selection of readily available online historical aerial imagery (from 1930 to 2024) was reviewed. The review indicated that land uses at the site during that period, have been public recreational open space.
Anecdotal Evidence	No anecdotal evidence was made available to Alliance.
Potential land contaminating activities associated with the site	Online searches indicate potential on the land where the material is to be excavated from, for uncontrolled filling, migration of hazardous building materials from adjacent ice-skating rink building and application of termite treatment chemicals on eastern boundary of the site.

[1] Sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985 have been repealed. Notices under these sections are treated by the CLM Act as management orders.

Are sulfidic ores or soils present.	A review of https://www.environment.nsw.gov.au/eSpade2Webapp indicated that the site is located in an area mapped as: • L4: low probability >3m below ground surface Further assessment of ASS, PASS or sulfidic ore risk is considered warranted.
Sampling and Analytical Plan	Refer to **Appendix A** and **Appendix B**.

FIELDWORK	
Description of the material	Fill: SAND, fine to medium grained, brown / yellow, with fine to coarse sandstone and ironstone gravels, trace rootlets, glass, brick, fragments of concrete and low plasticity clay, dry to moist. Natural: CLAY, low to medium plasticity, pale grey / orange / red, trace fine sand and rootlets, dry to moist. Natural: Sandy CLAY, low to medium plasticity, orange / brown / pale grey, with fine grained sand, trace rootlets, dry to moist. No visual evidence of potential asbestos containing materials (PACM), and visual or olfactory evidence of staining or odours detected in the samples collected. A copy of the borehole field logs is presented in **Appendix F**.
Fieldwork observations of potential ASS material indicators	During the fieldwork, Alliance made the following observations of the soils assessed : • Unripe muds (soft, sticky and can be squeezed between fingers, blue grey or dark greenish grey mud with a high water content), were not encountered; • Estuarine silty sands or sands (mid to dark grey) or bottom sediments (dark grey to black for example monosulfidic black oozes) were not encountered; • Peat or peaty soils were not encountered; • Coffee rock horizons were not encountered; • A 'rotten egg' odour was detected in samples collected from 1.9-2.0m below ground level within boreholes BH05 and BH08; • Jarositic horizons or substantial iron oxide mottling in the surface encrustations or in any material excavated and left exposed, were not encountered; • Presence of corroded mollusc shells were not encountered; • Dead, dying or stunted vegetation was not encountered; • Scalding or bare low-lying areas were not encountered; and • Corrosion of concrete or steel structures was not encountered.

Photographs of the fill material being assessed	
Image 1: Fill material excavated from BH01	Image 2: Fill material excavated from BH03
	
Photographs of fill material assessment fieldwork and samples of fill material being assessed	
Image 3: Fill material excavated from BH05	**Image 4:** Fill material excavated from BH08
	

Photographs of the natural material being assessed	
Image 5: Natural Material **encountered at BH02**	**Image 6:** Natural Material **encountered at BH04**
	
Photographs of natural material assessment fieldwork and samples of natural material being assessed	
Image 7: Natural Material **encountered at BH05**	**Image 8:** Natural Material **encountered at BH08**
	

RESULTS	
Data Quality Indicator Assessment	Refer to **Appendix A**.
Laboratory Analytical Results Assessment	Laboratory documentation is presented in **Appendix C**. The sample identifiers, sample depths, analytes and analytical results have been tabulated and are presented in **Appendix D**.
Asbestos	Asbestos was not detected at the laboratory limit of reporting.

Acid Sulfate Soils	*Field pH* On the basis that: • The pHF analytical results were greater than the preliminary 'actual acid sulfate soils' screening criterion of pH < 4; and • Jarosite was not observed in the soils assessed, actual acid sulfate soils (AASS) are unlikely to be present in the soils assessed. *Field pHFox* The pH delta between pHF and pHFox results was often greater one pH unit, however on the basis that: • pHFox analytical results were only below 3 for sample BH02_0.0-0.1; • Reaction rates were predominately none to moderate reacting ratings with only four noted as strong and none as extreme; widespread potential acid sulfate soils (PASS) are unlikely to be present in the soils assessed. *Chromium Reducible Sulfur* A selection of the soil samples based on field screening results, spatial / lithological representativeness, and professional judgement, were subjected to chromium reducible sulfur (CRS) laboratory analysis. For the purpose of deriving action criteria, Alliance reviewed: • Observations of the soils encountered and reported in the field description, and their textures in the context of Table 5.1 of Sullivan et al (2018a) and Appendix D in Sullivan et al (2018b); and • Information regarding the extent of proposed soil disturbance of less than 1000 tonne based on Table 5.4 of Sullivan et al (2018b). o Fill material: Approximately 460m3 (insitu) and 828 tonnes in weight (applying a bulk density of 1.8 t/m3) o Natural material: Approximately 490m3 (insitu) and 880 tonnes in weight (applying a bulk density of 1.8 t/m3) The CRS laboratory analytical results were compared with the adopted action criteria. • Fill: Coarse and Peats (sands to loamy sands), ≥ 0.03 % sulfur and ≥ 18 mol H+/t. • Natural: Medium (clayey sand to light clays), ≥ 0.06 % sulfur and ≥ 36mol H+/t. Subsequent sulfur trail and acid trail analytical results for BH02-0.0-0.1 was greater than the relevant action criteria in Table 5.4 of Sullivan et al (2018), based on the soil texture observed during fieldwork, and the quantity of material being disturbed. A risk assessment of the detected CRS and percentage of Reduced Inorganic Sulfur (RIS) in sample, BH02-0.0-0.1 was undertaken, that given the sample had a recorded laboratory detected CRS results above the relevant action criteria, adopting a multiple lines of evidence approach and applying: • the 'reasonably' test in Section 3 of Sullivan (2018a); and • the 'need to show evidence' test used for Case Study 2 in Appendix A of Sullivan (2018b). On the basis: • the percentage of RIS (by mass) in the sample was less than 0.01% (<0.005%) • Observations of BH02 specific lithology, including those made at sampling point BH02-0.0-0.1 did not include indicators of PASS or AASS materials in the context of Section 7.6 in Dear et al (2024) or Table 5.1 in Sullivan (2018a).

	RIS exceeding 0.01% criteria was identified in sample BH02-2.5-2.6 (0.012%), the sulfur trail and acid trail analytical results for BH02-2.5-2.6 was less than the relevant action criteria in Table 5.4 of Sullivan et al (2018), for PASS requiring management. Adopting a weight of evidence approach, the observations made indicated that the management of PASS or AASS is not required on the site, for the area and depth of proposed excavation. In the event the proposed development scheme changes from that which was considered during this assessment, then the data must be re-assessed, which may result in a different outcome.

SIX STEP WASTE CLASSIFICATION PROCESS [2]	
Step 1	The fill material is not considered to be special waste.
Step 2	The fill material is not considered to be a liquid waste.
Step 3	The fill material is not considered to be pre-classified.
Step 4	The fill material is not considered to possess hazardous characteristics.
Step 5	The detected concentrations of analytes in the fill material samples analysed, were less than the relevant CT1 values in Table 1 of NSW EPA (2014a) and the relevant TCLP1 and SCC1 values in Table 2 of NSW EPA (2016), with the exception of: • lead in samples BH01-0.3-0.4 (270mg/kg), BH04-0.0-0.1 (130mg/kg), BH05-0.0-0.1 (1300mg/kg), BH05-0.5-0.6 (140mg/kg) and BH06-0.0-0.1 (200mg/kg) (CT1 value of 100mg/kg, CT2 value of 400mg/kg). • benzo(a)pyrene in sample BH01-0.3-0.4 (1.7mg/kg, CT1 value of 0.8mg/kg). Samples BH01-0.3-0.4 and BH05-0.0-0.1 (two highest concentrations) were subjected to lead TCLP[3] analysis and the detected concentrations were less than the relevant TCLP1 and SCC1 values in Table 2 of NSW EPA (2014a). Sample BH01-0.3-0.4 was subjected to benzo(a)pyrene TCLP[3] analysis and the detected concentration was less than the relevant TCLP1 value in Table 2 of NSW EPA (2014a).
Step 6	The material is not considered to be putrescible.

[2] NSW EPA (2014a)
[3] Toxicity Characteristic Leaching Procedure

VIRGIN EXCAVATED NATURAL MATERIAL ASSESSMENT	
Organics	The concentration of TRH, BTEX, PAH, OCP, OPP and PCB in the natural material samples analysed were less than the laboratory's limit of reporting, with the exception of • TRH fractions C16-C34, C34-C40 and C10-C40 (Sum) in sample BH05-0.6-0.7. • TPH fraction C10-C14 in sample BH04-0.5-0.6 Silica gel clean-up analysis was undertaken on samples BH04-0.5-0.6 and BH05-0.6-0.7 to determine if the source of TPH in soil was of petrogenic origin. Results of the silica gel clean-up conducted on the soil sample indicated that the identified TPH was non-petrogenic in nature.
Metals	The concentration of arsenic, cadmium, chromium, copper, lead, nickel and zinc were within the relevant background ranges for these metals, presented in Berkman D A (1989). The laboratory's LOR for mercury was 0.1mg/kg. This value is marginally higher than the background range for mercury published in Berkman D A (1989). However, given that the concentrations of: • other metals in the samples analysed were within relevant background ranges; Alliance considers the potential for mercury to be present in the material assessed, and associated with manufactured chemicals or process residues as a result of industrial, commercial, mining or agricultural activities, to be low.

MATERIAL CLASSIFICATION

Based on an assessment of desktop review data, fieldwork observations and laboratory analytical data:

- the fill material assessed as at the time of this report would classify as **General Solid Waste (non-putrescible)**.
- the natural material above 2.0m bgl assessed as at the time of this report would classify as **Virgin Excavated Natural Material (VENM)**.
- the natural material below 2.0m bgl would not classify as VENM due to detectable concentrations of reduced inorganic sulfur ('RIS') above the laboratory limit of reporting and considered to contain sulfidic ores and soils. Material assessed as at the time of this report would classify as **General Solid Waste (non-putrescible)**.

This classification must be read in conjunction with the attached Information About This Report.

Alliance notes that:

- if material not consistent with that described in this report, is encountered during handling of the material, works should stop and further classification assessment should be undertaken;
- waste should be handled, removed and transported by a suitably licensed contractor and disposed of at a suitably licensed waste facility. Further advice regarding licensing and waste tracking can be found at and https://www.epa.nsw.gov.au/your-environment/waste/transporting-waste.;
- the generator of the waste and/or VENM should retain records of removal, transport and disposal;
- a suitably licensed waste recycling facility may be able to receive the waste, subject to the generator and transporter receiving approval from that facility; and
- the consumer of the VENM should retain detailed records of material source, delivery and placement.

REFERENCES

AS 4482.1-2005 'Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds' dated November 2005.

Berkman D A 1989, 'Field Geologist's Manual, Third Edition' published by The Australasian Institute of Mining and Metallurgy.

NSW DPIE 2021, 'State Environmental Planning Policy (Resilience and Hazards) 2021'

EPA VIC 2009 'Industrial Waste Resource Guidelines' dated June 2009, ref: IWRG702.

HEPA 2020, 'PFAS National Environmental Management Plan', dated January 2020, version 2.0.

National Environment Protection Council (NEPC) 2013, 'Schedule B(2) Guideline on Site Characterisation', National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013.

NSW DPIE 2021, 'State Environmental Planning Policy (Resilience and Hazards) 2021'

NSW EPA 2014a, 'Waste Classification Guidelines – Part 1: Classification of waste' dated November 2014, ref: EPA 2014/0796

NSW EPA 2014b, 'Waste Classification Guidelines – Part 2: Immobilisation of waste' dated November 2014, ref: EPA 2014/0815

NSW EPA 2016, 'Addendum to the Wastes Classification Guidelines (2014) – Part 1: classifying waste' dated October 2016, ref: EPA 2016/0559

NSW EPA 2020, 'Contaminated Land Guidelines: Consultants reporting on contaminated land' dated May 2020, ref: EPA2020P2233.

NSW EPA 2022, 'Contaminated Land Guidelines: Sampling design part 1 – application' dated August 2022, ref: EPA2022P3915

SafeWork NSW 2022, 'Code of Practice, How To Safely Remove Asbestos' dated December 2022

Sullivan et al 2018a, 'National Acid Sulfate Soils Guidance: National acid sulfate soils sampling and identification methods manual' dated June 2018

Sullivan et al 2018b, 'National Acid Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual' dated June 2018

WA DWER 2021, 'Assessment and management of contaminated sites', dated November 2021.

WorkCover NSW 2014, 'Managing asbestos in or on soil', dated March 2014

For and on behalf of Alliance Geotechnical Pty Ltd

Jason Roesler
Project Scientist

Approved By

Michael Dunesky
Senior Project Environmental Scientist

Attached
Important Information About This Report
Appendix A – Sampling Plan and Data Quality Indicator Assessment
Appendix B – Site and Sampling Point Layout Plan
Appendix C – Chain of Custody, Sample Receipt and Certificates of Analysis
Appendix D – Sample Data and Analytical Results Summary Table
Appendix E – NSW EPA Online Public Register Search Records
Appendix F – Logs

Important Information About This Report

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This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to Alliance's engagement. The report must not be used for any purpose other than the purpose specified at the time Alliance was engaged to prepare the report.

The findings presented in this report are based on specific data and information made available during the course of this project. To the best of Alliance's knowledge, these findings represent a reasonable interpretation of the general condition of the site at the time of report completion.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Alliance.

Logs, figures, and drawings are generated for this report based on individual Alliance consultant interpretations of nominated data, as well as observations made at the time fieldwork was undertaken.

Data and/or information presented in this report must not be redrawn for its inclusion in other reports, plans or documents, nor should that data and/or information be separated from this report in any way.

Should additional information that may impact on the findings of this report be encountered or site conditions change, Alliance reserves the right to review and amend this report.

Appendix A – Sampling Plan and Data Quality Indicator Assessment

SAMPLING PLAN	
Fieldwork date	18/11/2024
Fieldwork team	Daniel Hilton
Sampling point locations	Sampling point locations are presented in Appendix B.
Rationale for sampling pattern	The sampling pattern for the in-situ materials will be a systematic grid of sampling points across the area being assessed, taking into consideration the area, depth and volume of material being assessed, and guidance in Table 2, Table 3 and Table 4 of NSW EPA (2022). Table 6.1 of Sullivan et al (2018a) provides guidance on sampling point densities for Acid sulfate soils. One sampling point BH01 will target the proposed lift well location.
Rationale for sample collection and analytical quantities	A minimum of 8 samples will be collected for waste classification, based on guidance in Table 3 and Table 4 in NSW EPA (2022) and the area and depth of material being assessed. Where the material is suspected of being impacted by asbestos, a minimum of 3 asbestos samples will be collected for in-situ volumes less than 75m^3, plus one additional asbestos sample for in-situ volumes of 75m^3 or more, based on guidance in Table 5 in NSW EPA (2022); A minimum of 8 samples will be collected for VENM assessment, taking into consideration guidance in Table 3 and Table 4 in NSW EPA (2022) and the area and depth of material being assessed. Where the material is suspected of being impacted by asbestos, a minimum of 3 asbestos samples will be collected for in-situ volumes less than 75m^3, plus one additional asbestos sample for in-situ volumes of 75m^3 or more, based on guidance in Table 5 in NSW EPA (2022); and A minimum of 1 acid sulfate sample at 0.0 and then each 0.5m, to a depth of 1m below the depth of the waste intended to be assessed (where no groundwater alteration is expected), will be collected. Target depth of 2m bgl being 1m below proposed excavation depth across the site, with exception of the lift pit sampling point where target depth is 3.4m bgl as proposed excavation being 2.4m bgl.
Material sampling method	Samples will be collected from boreholes using a hand auger to a depth of 1.0m below ground level, and push tubes from 1.0m to the depth of investigation. Samples will be collected with reference to relevant guidance in Section 7.2 of NEPC (2013) and Section 6.7 of Sullivan et al (2018a). A fresh pair of nitrile gloves will be used to collect each sample. Samples will be placed in laboratory prepared containers and bags, each labelled with the project number, date, sampling point identifier, and sample depth identifier. Samples for acid sulfate soils analysis will be placed in zip lock bags with the air removed. Samples will be stored in an insulated container with ice. Recommended holding times will be considered when arranging sample transport to the analytical laboratory. Field duplicates and triplicates will be collected at a rate of 5%. A rinsate blank will be collected when non disposable sampling equipment is used. A trip spike and trip blank will be kept with the samples during storage and transport.
Material sample collection depths	The first sample will be collected at the surface, then at regular depths thereafter, targeting visual or olfactory signs of contamination, to the target depth of assessment, (including at 0.0m and every 0.5m for ASS assessment).

Rationale for lab selection, analytical suite and analytical data quality	NATA accredited laboratories will be used for sample analysis, adopting limits of reporting (LOR) that are less than adopted assessment criteria. Based on the potential land contaminating activities associated with the site and consideration being given to Table J1 in Appendix J of AS 4482.1-2005[4], Table B1 in Appendix B of WA DWER (2021) and Table B1 and Table B2 in Appendix B of HEPA (2020), the following range of analytes have been selected: • TRH, BTEX, PAH, OCP, PCB, metals, asbestos, pHF/pHFox and chromium reducible sulfur Where a risk of ASS or PASS has been identified, relevant samples will be subjected to pHF/pHFox analysis, and selected samples subjected to chromium reducible sulfur analysis. Laboratory data quality will be checked by assessing holding time compliance, and the results of analysis on method blanks, control samples, spike samples and duplicates.

[4] Alliance understands this standard has been withdrawn, however, guidance on the Aged Standards Review process at https://www.standards.org.au/standards-development/aged-standards, indicates that it is still possible for a withdrawn standard to be used within an industry or reference by a government if chosen to do so. On the basis that this standard is referenced in NEPC (2013b), it is considered reasonable to still refer to it, within the context of this project.

Completeness DQI			
Field Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Experienced sampling team used	Yes	Yes	Pass
Sampling devices and equipment set out in sampling plan were used.	Yes	No	Comment – push tub refusal occurred at borehole locations BH02, BH04 and BH08, at which point drilling was advanced with a solid flight auger to the depth of investigation. Push Tube equipment and Solid flight augers were decontaminated between drilling locations and sampling was undertaken using industry accepted procedures with each sample collected using a fresh pair of nitrile gloves. Risk of cross contamination is considered low to negligible. Performance against this DQI is considered adequate.
Critical locations in sampling plan, sampled.	Yes	No	Comment – the target depth for BH01 (Lift well) was not achieved due to refusal at 1mbgl. The ASS sampling was relocated to BH02 immediately adjacent to BH01. The lithology observed was consistent across these areas, and therefore considered representative. Performance against this DQI is considered adequate.
Critical samples in sampling plan, collected.	Yes	Yes	Pass
Completed field logs attached.	Yes	Yes	Pass
Completed chain of custody attached.	Yes	Yes	Pass
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Complete sample receipt advice and chain of custody attached	Yes	Yes	Pass
Critical samples identified in sampling plan, analysed	Yes	Yes	Pass
Analysis undertaken addresses COPC in sampling plan.	Yes	Yes	Pass
Analytical methods reported in laboratory documentation and appropriate limit of reporting used.	Yes	No	Comment – the analytical laboratory advised that the limit of reporting (LOR) for Organochlorine Pesticides and Polychlorinated Biphenyls in multiple soil samples was raised due to matrix interference. However, the raised LOR was less than the screening criteria adopted for Organochlorine Pesticides and Polychlorinated Biphenyls in soils. Performance against this DQI is considered adequate.
Sample holding times met.	Yes	Yes	Pass

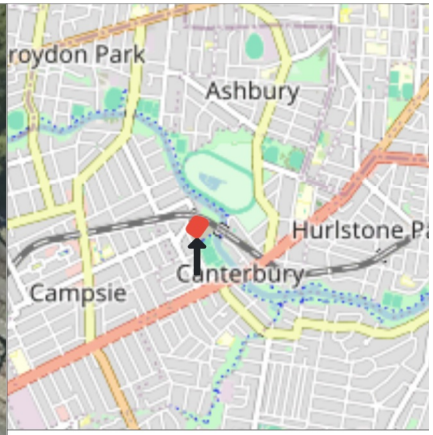
Comparability			
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Same sampling team used for all work.	Yes	Yes	Pass
Weather conditions suitable for sampling.	Yes	Yes	Pass
Same sample types collected and preserved in same way.	Yes	Yes	Pass
Relevant samples stored in insulated containers and chilled.	Yes	Yes	Pass
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Same laboratory used for all analysis.	Yes	Yes	Pass
Comparable methods if different laboratories used.	Not applicable	n/a	n/a
Comparable limits of reporting if different laboratories used.	Not applicable	n/a	n/a
Comparable units of measure if different laboratories have been used.	Not applicable	n/a	n/a

Representativeness			
Field Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Media identified in sampling plan, sampled.	Yes	Yes	Pass
Samples required by sampling plan, collected.	Yes	Yes	Pass
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Samples identified in sampling plan, analysed.	Yes	Yes	Pass

Precision			
Field Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Minimum 5% duplicates and triplicates collected and analysed.	Yes	Yes	Pass
RPD unlimited where detected concentrations are <10 times the limit of reporting.	Yes	Yes	Pass
RPD within 50% where detected concentrations are 10-20 times the limit of reporting.	Yes	Yes	Pass
RPD within 30% where detected concentrations are >20 times the limit of reporting.	Yes	Yes	Pass
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
All laboratory duplicate RPDs within laboratory acceptance criteria.	Yes	No	Comment – Four (4) sample analytes (arsenic, copper (x2), and mercury) recorded exceedances above the laboratories RPD acceptance criteria. The RPD reported passes Eurofins Environment Testing's QC – Acceptance Criteria. Performance against this DQI is considered adequate.

Bias (Accuracy)			
Field Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Trip blank analyte results less than limit of reporting.	Yes	Yes	Pass
Trip spike analyte results less between 60% and 140%.	Yes	Yes	Pass
Rinsate blank analyte results less than limit of reporting.	Yes	No	Comment – A rinsate blank was collected and placed on hold with the analytical laboratory. Hand augers, Push tube equipment and solid flight augers were decontaminated between sampling locations, and samples collected using a fresh pair of nitrile gloves for each sample from soils not in contact with stem or flights, and after scraping away smear soils on outside extracted materials. Risk of cross contamination during sampling is considered to be negligible. Performance against this DQI is considered adequate.
Laboratory Considerations	*Target Criterion*	*Result*	*Pass / Fail / Comment*
Laboratory method blank results within laboratory acceptance limits.	Yes	Yes	Pass
Laboratory control sample results within laboratory acceptance limits.	Yes	Yes	Pass
Laboratory spike sample results within laboratory acceptance limits.	Yes	Yes	Pass

Appendix B – Site and Sampling Point Layout Plan



Legend

- Approximate Acid Sulfate and Waste Classification Bore Locations
- Approximate Waste Classification Bore Locations
- Approximate Lift Pit Area
- Approximate Investigation Area
- Property Boundary

0 10 m 20 m

Basemap: Metromap by Aerometrex

alliance

Title: Site Layout and Sampling Plan	
Client: The Ice Skating Club of NSW Cooperative Limited	Drawn: JR Checked: MD
Project: 17A Phillips Avenue, Canterbury NSW, Australia	Site: Canterbury Olympic Ice Rink
Date: 14-11-2024	Figure No: 1
Report Reference: 18587	Scale: 1:810

Appendix C – Chain of Custody, Sample Receipt and Certificates of Analysis

CHAIN OF CUSTODY

ABN 50 005 085 521

☑ Sydney Laboratory — Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory — Unit 1, 21 Smallwood Pl , Murarrie, QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com

☐ Melbourne Laboratory — 2 Kingston Town Close, Oakleigh, VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	18587	Project Manager	J. Roesler	Sampler(s)	D. Hilton
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Canterbury Ice Skating Rink	EDD Format (ESdat, EQuIS, Custom)	Esdat	Handed over by	D. Hilton
						Email for Invoice	jason@allgeo.com.au
Contact Name	Jason					Email for Results	jason@allgeo.com.au daniel@allgeo.com.au
Phone №	404043610						
Special Directions	-						
Purchase Order	-						
Quote ID №	-						

Analyses (Where metals are required, please specify Total or Filtered | SUITE codes must be used to ensure SUITE pricing)

Containers: 1L Plastic | 250mL Plastic | 125mL Amber Glass | 200mL VOA vial | 40mL VOA vial | Acid Sulfate Soils Bag | Jar (Glass or HDPE) | Other (Asbestos AS4964, WA Guidelines)

Turnaround Time (TAT) Requirements (Default will be 5 days if not ticked)

☐ Overnight (9am)* ☐ 1 Day* ☐ 2 Day* ☐ 3 Day* ☑ 5 Day * Surcharges apply ☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	WAC Suite 2	pHF / pHFOX Field Screen	Metals (8)	BTEXN/TRH C6-C10	HOLD	1L Plastic	250mL Plastic	125mL Amber Glass	200mL VOA vial	40mL VOA vial	Acid Sulfate Soils Bag	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH01-0.0-0.1	18/11/24	S	x											x	x	Please analyse pHF / pHFOX Field Screens on a 24 hr TAT
2	BH01-0.3-0.4	18/11/24	S	x											x	x	
3	BH01-0.6-0.7	18/11/24	S	x											x	x	
4	BH01-0.9-1.0	18/11/24	S					x							x	x	
5	BH02-0.0-0.1	18/11/24	S	x	x									x	x	x	
6	BH02-0.5-0.6	18/11/24	S	x	x									x	x	x	
7	BH02-0.8-0.9	18/11/24	S					x							x	x	
8	BH02-1.0-1.1	18/11/24	S		x									x			
9	BH02-1.5-1.6	18/11/24	S		x									x			
10	BH02-2.0-2.1	18/11/24	S		x									x			
11	BH02-2.5-2.6	18/11/24	S		x									x			
12	BH02-3.0-3.1	18/11/24	S		x									x			
13	BH02-3.3-3.4	18/11/24	S		x									x			
14	BH03-0.0-0.1	18/11/24	S	x											x	x	
15	BH03-0.3-0.4	18/11/24	S	x											x	x	
16	BH03-0.7-0.8	18/11/24	S					x							x	x	
17	BH04-0.0-0.1	18/11/24	S	x	x									x	x	x	
18	BH04-0.5-0.6	18/11/24	S	x	x									x	x	x	
19	BH04-0.7-0.8	18/11/24	S		x			x						x	x	x	
20	BH04-0.9-1.0	18/11/24	S		x			x						x	x	x	
21	BH04-1.2-1.3	18/11/24	S		x									x			
22	BH04-1.7-1.8	18/11/24	S		x									x			
23	BH05-0.0-0.1	18/11/24	S	x	x									x	x	x	
24	BH05-0.5-0.6	18/11/24	S	x	x									x	x	x	
25	BH05-0.6-0.7	18/11/24	S	x	x									x	x	x	
26	BH05-0.9-1.0	18/11/24	S					x							x	x	
27	BH05-1.1-1.2	18/11/24	S		x									x			
28	BH05-1.6-1.7	18/11/24	S		x									x			
29	BH05-1.9-2.0	18/11/24	S		x									x			
30	BH06-0.0-0.1	18/11/24	S	x											x	x	
	Total Counts			13	20			6						20	19	19	

Method of Shipment	☑ Courier (#	☐ Hand Delivered	☐ Postal	Name	D Hilton	DH	Date	18/11/2024	Time
Eurofins | mgt Laboratory Use Only	Received By	Amin	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	18/11/24	Time	6:10pm
	Received By	Tanis	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	/ /	Time	:

Temperature: 3.9 — Report №:

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

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1161470

CHAIN OF CUSTODY

ABN 50 005 085 521

☑ Sydney Laboratory — Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory — Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com

☐ Melbourne Laboratory — 2 Kingston Town Close, Oakleigh, VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	18587	Project Manager	J. Roesler	Sampler(s)	D. Hilton
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Canterbury Ice Skating Rink	EDD Format (ESdat, EQuIS, Custom)	Esdat	Handed over by	D. Hilton
Contact Name	Jason					Email for Invoice	jason@allgeo.com.au
Phone №	404043610					Email for Results	jason@allgeo.com.au daniel@allgeo.com.au
Special Directions	-						
Purchase Order	-						
Quote ID №	-						

Turnaround Time (TAT) Requirements (Default will be 5 days if not ticked)

☐ Overnight (9am)* ☐ 1 Day* ☐ 2 Day* ☐ 3 Day* ☐ 5 Day

* Surcharges apply

☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	Analytes (Note: Where metals are required please specify "Total" or "Filtered". SUITE codes must be used to ensure SUITE pricing)					Containers							Sample Comments / Dangerous Goods Hazard Warning
				WAC Suite 2	pHF / pHFOX Field Screen	Metals (8)	BTEXN/TRH C6-C10	HOLD	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	Acid Sulfate Soils Bag	Jar (Glass or HDPE)	Other (Asbestos AS4964 WA Guidelines)	
1	BH06-0.5-0.6	18/11/24	S	x											x	x	
2	BH06-0.8-0.9	18/11/24	S					x							x	x	
3	BH07-0.0-0.1	18/11/24	S	x											x	x	
4	BH07-0.5-0.6	18/11/24	S	x											x	x	
5	BH07-0.8-0.9	18/11/24	S					x							x	x	
6	BH08-0.0-0.1	18/11/24	S	x	x									x	x	x	
7	BH08-0.5-0.6	18/11/24	S	x	x									x	x	x	
8	BH08-0.8-0.9	18/11/24	S					x							x	x	
9	BH08-1.0-1.1	18/11/24	S		x									x			
10	BH08-1.5-1.6	18/11/24	S		x									x			
11	BH08-1.9-2.0	18/11/24	S		x									x			
12	Dup01	18/11/24	S			x									x		
13	Trip01	18/11/24	S	Please forward Trip01 to ALS for Metals (8) analysis											x		
14	Dup02	18/11/24	S					x							x		
15	Trip02	18/11/24	S					x							x		
16	rinsate-01	18/11/24	S					x			x						
17	trip spike / blank	18/11/24	S				x						x				
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
	Total Counts			6	5	1	1	6			1		1	5	12	8	

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	D Hilton	DH	Date	18/11/2024	Time	-
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	/__/_	Time	:	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	/__/_	Time	:	Report №

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VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: Alliance Geotechnical
Contact name: Jason Roesler
Project name: CANTERBURY ICE SKATING RINK
Project ID: 18587
Turnaround time: 5 Day
Date/Time received Nov 18, 2024 6:10 PM
Eurofins reference 1161470

Sample Information

✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

✓ All samples have been received as described on the above COC.

✓ COC has been completed correctly.

✓ Attempt to chill was evident.

✓ Appropriately preserved sample containers have been used.

✓ All samples were received in good condition.

✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

✓ Appropriate sample containers have been used.

✓ Sample containers for volatile analysis received with zero headspace.

✓ Split sample sent to requested external lab.

✗ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

TRIP01 forwarded to ALS.
Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Jason Roesler - jason@allgeo.com.au.

Note: A copy of these results will also be delivered to the general Alliance Geotechnical email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1161470
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 18, 2024 6:10 PM
Due: Nov 25, 2024
Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X	X	X
External Laboratory							

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	BH01-0.0-0.1	Nov 18, 2024		Soil	S24-No0047927				X			X
2	BH01-0.3-0.4	Nov 18, 2024		Soil	S24-No0047928				X			X
3	BH01-0.6-0.7	Nov 18, 2024		Soil	S24-No0047929				X			X
4	BH02-0.0-0.1	Nov 18, 2024		Soil	S24-No0047930		X		X			X
5	BH02-0.5-0.6	Nov 18, 2024		Soil	S24-No0047931		X		X			X
6	BH02-1.0-1.1	Nov 18, 2024		Soil	S24-No0047932		X					
7	BH02-1.5-1.6	Nov 18, 2024		Soil	S24-No0047933		X					
8	BH02-2.0-2.1	Nov 18, 2024		Soil	S24-No0047934		X					
9	BH02-2.5-2.6	Nov 18, 2024		Soil	S24-No0047935		X					
10	BH02-3.0-3.1	Nov 18, 2024		Soil	S24-No0047936		X					
11	BH02-3.3-3.4	Nov 18, 2024		Soil	S24-No0047937		X					
12	BH03-0.0-0.1	Nov 18, 2024		Soil	S24-No0047938				X			X
13	BH03-0.3-0.4	Nov 18, 2024		Soil	S24-No0047939				X			X
14	BH04-0.0-0.1	Nov 18, 2024		Soil	S24-No0047940		X		X			X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1161470
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 18, 2024 6:10 PM
Due: Nov 25, 2024
Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
15	BH04-0.5-0.6	Nov 18, 2024		Soil	S24-No0047941		X		X			X
16	BH04-0.7-0.8	Nov 18, 2024		Soil	S24-No0047942		X					
17	BH04-0.9-1.0	Nov 18, 2024		Soil	S24-No0047943		X					
18	BH04-1.2-1.3	Nov 18, 2024		Soil	S24-No0047944		X					
19	BH04-1.7-1.8	Nov 18, 2024		Soil	S24-No0047945		X					
20	BH05-0.0-0.1	Nov 18, 2024		Soil	S24-No0047946		X		X			X
21	BH05-0.5-0.6	Nov 18, 2024		Soil	S24-No0047947		X		X			X
22	BH05-0.6-0.7	Nov 18, 2024		Soil	S24-No0047948		X		X			X
23	BH05-1.1-1.2	Nov 18, 2024		Soil	S24-No0047949		X					
24	BH05-1.6-1.7	Nov 18, 2024		Soil	S24-No0047950		X					
25	BH05-1.9-2.0	Nov 18, 2024		Soil	S24-No0047951		X					
26	BH06-0.0-0.1	Nov 18, 2024		Soil	S24-No0047952				X			X
27	BH06-0.5-0.6	Nov 18, 2024		Soil	S24-No0047953				X			X
28	BH07-0.0-0.1	Nov 18, 2024		Soil	S24-No0047954				X			X
29	BH07-0.5-0.6	Nov 18, 2024		Soil	S24-No0047955				X			X
30	BH08-0.0-0.1	Nov 18, 2024		Soil	S24-No0047956		X		X			X
31	BH08-0.5-0.6	Nov 18, 2024		Soil	S24-No0047957		X		X			X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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Address: 10 Welder Road
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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
32	BH08-1.0-1.1	Nov 18, 2024		Soil	S24-No0047958		X					
33	BH08-1.5-1.6	Nov 18, 2024		Soil	S24-No0047959		X					
34	BH08-1.9-2.0	Nov 18, 2024		Soil	S24-No0047960		X					
35	DUP01	Nov 18, 2024		Soil	S24-No0047961			X	X			
36	TRIP SPIKE	Nov 18, 2024		Trip Spike (solid)	S24-No0047962						X	
37	TRIP BLANK	Nov 18, 2024		Trip Blank (solid)	S24-No0047963					X		
38	TSL	Nov 18, 2024		Trip Spike (solid)	S24-No0047964						X	
39	BH01-0.9-1.0	Nov 18, 2024		Soil	S24-No0047965	X						
40	BH02-0.8-0.9	Nov 18, 2024		Soil	S24-No0047966	X						
41	BH03-0.7-0.8	Nov 18, 2024		Soil	S24-No0047967	X						
42	BH05-0.9-1.0	Nov 18, 2024		Soil	S24-No0047968	X						
43	BH06-0.8-0.9	Nov 18, 2024		Soil	S24-No0047969	X						
44	BH07-0.8-0.9	Nov 18, 2024		Soil	S24-No0047970	X						
45	BH08-0.8-0.9	Nov 18, 2024		Soil	S24-No0047971	X						
46	DUP02	Nov 18, 2024		Soil	S24-No0047972	X						

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1161470
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 18, 2024 6:10 PM
Due: Nov 25, 2024
Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
47	TRIP02	Nov 18, 2024		Soil	S24-No0047973	X						
48	RINSATE-01	Nov 18, 2024		Water	S24-No0047974	X						
Test Counts						10	25	1	19	1	2	18

Certificate of Analysis

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Jason Roesler
Report	1161470-AID
Project Name	CANTERBURY ICE SKATING RINK
Project ID	18587
Received Date	Nov 18, 2024
Date Reported	Nov 27, 2024

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Man-made vitreous fibre (MMVF)	Fibres exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF). Simple analytical procedures such as polarised light microscopy cannot detect or reliably identify asbestos in some types of commercial products containing asbestos, either because the fibres are below the resolution of optical microscopy or because the matrix material adheres too strongly to the fibres. For these types of products, electron microscopy may be necessary.
Subsampling Soil Samples	The sample submitted is dried and passed through a 10 mm sieve followed by a 2 mm sieve. All fibrous matter greater than 10 mm and greater than 2 mm and the material passing through the 2 mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 g to 60 g, then a subsampling routine based on ISO 3082:2017(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be subsampled for trace analysis, in accordance with AS 5370:2024*.*
Bonded asbestos-containing material (ACM)	The material is first examined, and any fibres are isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 5370:2024*. *NOTE: Even after disintegration, it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting (LOR)	The performance limitation of the AS 5370:2024* method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory limit of reporting, per se. Examination of large sample size (e.g., 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 5370:2024*, and hence, NATA Accreditation does not cover the performance of this service (non-NATA results are shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964-2004: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

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Project ID 18587
Date Sampled Nov 18, 2024
Report 1161470-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH01-0.0-0.1	24-No0047927	Nov 18, 2024	Approximate Sample 212g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH01-0.3-0.4	24-No0047928	Nov 18, 2024	Approximate Sample 228g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH01-0.6-0.7	24-No0047929	Nov 18, 2024	Approximate Sample 221g Sample consisted of: Brown fine-grained clayey sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH02-0.0-0.1	24-No0047930	Nov 18, 2024	Approximate Sample 225g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH02-0.5-0.6	24-No0047931	Nov 18, 2024	Approximate Sample 188g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH03-0.0-0.1	24-No0047938	Nov 18, 2024	Approximate Sample 218g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH03-0.3-0.4	24-No0047939	Nov 18, 2024	Approximate Sample 215g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH04-0.0-0.1	24-No0047940	Nov 18, 2024	Approximate Sample 215g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH04-0.5-0.6	24-No0047941	Nov 18, 2024	Approximate Sample 217g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH05-0.0-0.1	24-No0047946	Nov 18, 2024	Approximate Sample 270g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH05-0.5-0.6	24-No0047947	Nov 18, 2024	Approximate Sample 255g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH05-0.6-0.7	24-No0047948	Nov 18, 2024	Approximate Sample 281g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH06-0.0-0.1	24-No0047952	Nov 18, 2024	Approximate Sample 319g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH06-0.5-0.6	24-No0047953	Nov 18, 2024	Approximate Sample 289g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07-0.0-0.1	24-No0047954	Nov 18, 2024	Approximate Sample 205g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07-0.5-0.6	24-No0047955	Nov 18, 2024	Approximate Sample 203g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH08-0.0-0.1	24-No0047956	Nov 18, 2024	Approximate Sample 232g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH08-0.5-0.6	24-No0047957	Nov 18, 2024	Approximate Sample 198g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 18, 2024	Indefinite

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Site# 2370 & 2554

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH01-0.0-0.1	Nov 18, 2024		Soil	S24-No0047927				X			X
2	BH01-0.3-0.4	Nov 18, 2024		Soil	S24-No0047928				X			X
3	BH01-0.6-0.7	Nov 18, 2024		Soil	S24-No0047929				X			X
4	BH02-0.0-0.1	Nov 18, 2024		Soil	S24-No0047930		X		X			X
5	BH02-0.5-0.6	Nov 18, 2024		Soil	S24-No0047931		X		X			X
6	BH02-1.0-1.1	Nov 18, 2024		Soil	S24-No0047932		X					
7	BH02-1.5-1.6	Nov 18, 2024		Soil	S24-No0047933		X					
8	BH02-2.0-2.1	Nov 18, 2024		Soil	S24-No0047934		X					
9	BH02-2.5-2.6	Nov 18, 2024		Soil	S24-No0047935		X					
10	BH02-3.0-3.1	Nov 18, 2024		Soil	S24-No0047936		X					
11	BH02-3.3-3.4	Nov 18, 2024		Soil	S24-No0047937		X					
12	BH03-0.0-0.1	Nov 18, 2024		Soil	S24-No0047938				X			X
13	BH03-0.3-0.4	Nov 18, 2024		Soil	S24-No0047939				X			X
14	BH04-0.0-0.1	Nov 18, 2024		Soil	S24-No0047940		X		X			X

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
15	BH04-0.5-0.6	Nov 18, 2024		Soil	S24-No0047941		X		X			X
16	BH04-0.7-0.8	Nov 18, 2024		Soil	S24-No0047942		X					
17	BH04-0.9-1.0	Nov 18, 2024		Soil	S24-No0047943		X					
18	BH04-1.2-1.3	Nov 18, 2024		Soil	S24-No0047944		X					
19	BH04-1.7-1.8	Nov 18, 2024		Soil	S24-No0047945		X					
20	BH05-0.0-0.1	Nov 18, 2024		Soil	S24-No0047946		X		X			X
21	BH05-0.5-0.6	Nov 18, 2024		Soil	S24-No0047947		X		X			X
22	BH05-0.6-0.7	Nov 18, 2024		Soil	S24-No0047948		X		X			X
23	BH05-1.1-1.2	Nov 18, 2024		Soil	S24-No0047949		X					
24	BH05-1.6-1.7	Nov 18, 2024		Soil	S24-No0047950		X					
25	BH05-1.9-2.0	Nov 18, 2024		Soil	S24-No0047951		X					
26	BH06-0.0-0.1	Nov 18, 2024		Soil	S24-No0047952				X			X
27	BH06-0.5-0.6	Nov 18, 2024		Soil	S24-No0047953				X			X
28	BH07-0.0-0.1	Nov 18, 2024		Soil	S24-No0047954				X			X
29	BH07-0.5-0.6	Nov 18, 2024		Soil	S24-No0047955				X			X
30	BH08-0.0-0.1	Nov 18, 2024		Soil	S24-No0047956		X		X			X
31	BH08-0.5-0.6	Nov 18, 2024		Soil	S24-No0047957		X		X			X

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
32	BH08-1.0-1.1	Nov 18, 2024		Soil	S24-No0047958		X					
33	BH08-1.5-1.6	Nov 18, 2024		Soil	S24-No0047959		X					
34	BH08-1.9-2.0	Nov 18, 2024		Soil	S24-No0047960		X					
35	DUP01	Nov 18, 2024		Soil	S24-No0047961			X	X			
36	TRIP SPIKE	Nov 18, 2024		Trip Spike (solid)	S24-No0047962						X	
37	TRIP BLANK	Nov 18, 2024		Trip Blank (solid)	S24-No0047963					X		
38	BH01-0.9-1.0	Nov 18, 2024		Soil	S24-No0047965	X						
39	BH02-0.8-0.9	Nov 18, 2024		Soil	S24-No0047966	X						
40	BH03-0.7-0.8	Nov 18, 2024		Soil	S24-No0047967	X						
41	BH05-0.9-1.0	Nov 18, 2024		Soil	S24-No0047968	X						
42	BH06-0.8-0.9	Nov 18, 2024		Soil	S24-No0047969	X						
43	BH07-0.8-0.9	Nov 18, 2024		Soil	S24-No0047970	X						
44	BH08-0.8-0.9	Nov 18, 2024		Soil	S24-No0047971	X						
45	DUP02	Nov 18, 2024		Soil	S24-No0047972	X						
46	TRIP02	Nov 18, 2024		Soil	S24-No0047973	X						

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
47	RINSATE-01	Nov 18, 2024		Water	S24-No0047974	X						
Test Counts						10	25	1	19	1	1	18

Internal Quality Control Review and Glossary General

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

Holding Times

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

Units

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

Calculations

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos-containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to distinguish visibly and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess the degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012), .ISBN: 9780717665020
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and “bio-soluble fibres. NOTE: previously known as “synthetic mineral fibre” (SMF).
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

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

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos

Authorised by:

Laxman Dias	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Jason Roesler**

Report **1161470-S**
Project name CANTERBURY ICE SKATING RINK
Project ID 18587
Received Date Nov 18, 2024

Client Sample ID			**BH01-0.0-0.1**	[G01]**BH01-0.3-0.4**	**BH01-0.6-0.7**	**BH02-0.0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-No0047927**	**S24-No0047928**	**S24-No0047929**	**S24-No0047930**
Date Sampled			**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	108	99	122	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	120	< 50	63
TRH C29-C36	50	mg/kg	< 50	50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	170	< 50	63
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	150	< 100	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	150	< 100	110
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.6	2.9	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.9	2.9	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	2.9	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	1.9	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	1.9	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.5	1.7	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	1.8	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	0.6	2.2	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	2.7	< 0.5	< 0.5

Client Sample ID			BH01-0.0-0.1	[G01]BH01-0.3-0.4	BH01-0.6-0.7	BH02-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047927	S24-No0047928	S24-No0047929	S24-No0047930
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.9	6.0	< 0.5	0.7
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	5.8	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.8	4.1	< 0.5	0.6
Total PAH*	0.5	mg/kg	2.8	30	< 0.5	1.3
2-Fluorobiphenyl (surr.)	1	%	88	96	86	80
p-Terphenyl-d14 (surr.)	1	%	84	115	88	133
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 10	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	57	[Q09]INT	60	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	83	77	85	101
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	57	[Q09]INT	60	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	83	77	85	101

Client Sample ID			BH01-0.0-0.1	[G01]BH01-0.3-0.4	BH01-0.6-0.7	BH02-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047927	S24-No0047928	S24-No0047929	S24-No0047930
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	14	34	3.9	9.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	28	8.1	14
Copper	5	mg/kg	17	54	17	9.3
Lead	5	mg/kg	71	270	67	40
Mercury	0.1	mg/kg	0.2	1.0	0.4	0.1
Nickel	5	mg/kg	< 5	13	< 5	< 5
Zinc	5	mg/kg	58	210	27	27
Sample Properties						
% Moisture	1	%	13	7.2	5.7	11
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	-	-	5.9
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	-	-	2.7
Reaction Ratings*[S05]	0	comment	-	-	-	3.0

Client Sample ID			BH02-0.5-0.6	BH02-1.0-1.1	BH02-1.5-1.6	BH02-2.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047931	S24-No0047932	S24-No0047933	S24-No0047934
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	80	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-

Client Sample ID			BH02-0.5-0.6	BH02-1.0-1.1	BH02-1.5-1.6	BH02-2.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047931	S24-No0047932	S24-No0047933	S24-No0047934
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	100	-	-	-
p-Terphenyl-d14 (surr.)	1	%	129	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	[Q09]INT	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	-

Client Sample ID			BH02-0.5-0.6	BH02-1.0-1.1	BH02-1.5-1.6	BH02-2.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047931	S24-No0047932	S24-No0047933	S24-No0047934
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	[Q09]INT	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	5.6	-	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-	-
Chromium	5	mg/kg	11	-	-	-
Copper	5	mg/kg	< 5	-	-	-
Lead	5	mg/kg	20	-	-	-
Mercury	0.1	mg/kg	< 0.1	-	-	-
Nickel	5	mg/kg	< 5	-	-	-
Zinc	5	mg/kg	< 5	-	-	-
Sample Properties						
% Moisture	1	%	17	-	-	-
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	5.0	4.7	5.3	5.7
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	4.1	3.7	4.2	4.7
Reaction Ratings*[S05]	0	comment	2.0	3.0	1.0	1.0

Client Sample ID			BH02-2.5-2.6	BH02-3.0-3.1	BH02-3.3-3.4	BH03-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047935	S24-No0047936	S24-No0047937	S24-No0047938
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	56
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	23
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50

Client Sample ID			BH02-2.5-2.6	BH02-3.0-3.1	BH02-3.3-3.4	BH03-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047935	S24-No0047936	S24-No0047937	S24-No0047938
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	INT
p-Terphenyl-d14 (surr.)	1	%	-	-	-	74
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-HCH	0.05	mg/kg	-	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			BH02-2.5-2.6	BH02-3.0-3.1	BH02-3.3-3.4	BH03-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047935	S24-No0047936	S24-No0047937	S24-No0047938
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	0.5	mg/kg	-	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	[Q09]INT
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	[Q09]INT
Heavy Metals						
Arsenic	2	mg/kg	-	-	-	18
Cadmium	0.4	mg/kg	-	-	-	< 0.4
Chromium	5	mg/kg	-	-	-	22
Copper	5	mg/kg	-	-	-	8.9
Lead	5	mg/kg	-	-	-	96
Mercury	0.1	mg/kg	-	-	-	0.2
Nickel	5	mg/kg	-	-	-	< 5
Zinc	5	mg/kg	-	-	-	93
Sample Properties						
% Moisture	1	%	-	-	-	8.4
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	6.0	5.7	6.0	-
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	3.7	3.8	4.2	-
Reaction Ratings*[S05]	0	comment	1.0	1.0	2.0	-

Client Sample ID			BH03-0.3-0.4	BH04-0.0-0.1	BH04-0.5-0.6	BH04-0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047939	S24-No0047940	S24-No0047941	S24-No0047942
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	99	94	76	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	22	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	98	83	85	-
p-Terphenyl-d14 (surr.)	1	%	101	133	106	-

Client Sample ID			BH03-0.3-0.4	BH04-0.0-0.1	BH04-0.5-0.6	BH04-0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047939	S24-No0047940	S24-No0047941	S24-No0047942
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	62	[Q09]INT	[Q09]INT	-
Tetrachloro-m-xylene (surr.)	1	%	93	86	79	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	62	[Q09]INT	[Q09]INT	-
Tetrachloro-m-xylene (surr.)	1	%	93	86	79	-
Heavy Metals						
Arsenic	2	mg/kg	9.1	9.4	20	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	12	14	23	-
Copper	5	mg/kg	< 5	5.6	< 5	-
Lead	5	mg/kg	17	130	22	-
Mercury	0.1	mg/kg	< 0.1	0.3	< 0.1	-
Nickel	5	mg/kg	< 5	< 5	< 5	-
Zinc	5	mg/kg	< 5	140	15	-
Sample Properties						
% Moisture	1	%	13	12	14	-

Client Sample ID			BH03-0.3-0.4	BH04-0.0-0.1	BH04-0.5-0.6	BH04-0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047939	S24-No0047940	S24-No0047941	S24-No0047942
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	6.6	4.9	4.7
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	3.7	4.1	3.9
Reaction Ratings*[S05]	0	comment	-	3.0	2.0	2.0

Client Sample ID			BH04-0.9-1.0	BH04-1.2-1.3	BH04-1.7-1.8	BH05-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047943	S24-No0047944	S24-No0047945	S24-No0047946
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	0.8

Client Sample ID			BH04-0.9-1.0	BH04-1.2-1.3	BH04-1.7-1.8	BH05-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047943	S24-No0047944	S24-No0047945	S24-No0047946
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	0.7
Total PAH*	0.5	mg/kg	-	-	-	1.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	65
p-Terphenyl-d14 (surr.)	1	%	-	-	-	111
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-HCH	0.05	mg/kg	-	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	0.5	mg/kg	-	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	71
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	71

Client Sample ID			BH04-0.9-1.0	BH04-1.2-1.3	BH04-1.7-1.8	BH05-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047943	S24-No0047944	S24-No0047945	S24-No0047946
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	-	11
Cadmium	0.4	mg/kg	-	-	-	< 0.4
Chromium	5	mg/kg	-	-	-	16
Copper	5	mg/kg	-	-	-	71
Lead	5	mg/kg	-	-	-	1300
Mercury	0.1	mg/kg	-	-	-	0.5
Nickel	5	mg/kg	-	-	-	< 5
Zinc	5	mg/kg	-	-	-	490
Sample Properties						
% Moisture	1	%	-	-	-	8.3
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	4.8	5.1	5.5	6.6
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	3.9	4.1	3.9	3.4
Reaction Ratings*[S05]	0	comment	2.0	1.0	1.0	3.0

Client Sample ID			BH05-0.5-0.6	BH05-0.6-0.7	BH05-1.1-1.2	BH05-1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047947	S24-No0047948	S24-No0047949	S24-No0047950
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	62	76	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	93	-	-
TRH C29-C36	50	mg/kg	< 50	400	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	493	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	300	-	-
TRH >C34-C40	100	mg/kg	< 100	570	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	870	-	-

Client Sample ID			BH05-0.5-0.6	BH05-0.6-0.7	BH05-1.1-1.2	BH05-1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047947	S24-No0047948	S24-No0047949	S24-No0047950
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	78	88	-	-
p-Terphenyl-d14 (surr.)	1	%	107	140	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	[Q09]INT	[Q09]INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	89	78	-	-

Client Sample ID			BH05-0.5-0.6	BH05-0.6-0.7	BH05-1.1-1.2	BH05-1.6-1.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047947	S24-No0047948	S24-No0047949	S24-No0047950
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	[Q09]INT	[Q09]INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	89	78	-	-
Heavy Metals						
Arsenic	2	mg/kg	11	22	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-
Chromium	5	mg/kg	19	27	-	-
Copper	5	mg/kg	11	< 5	-	-
Lead	5	mg/kg	140	43	-	-
Mercury	0.1	mg/kg	0.2	< 0.1	-	-
Nickel	5	mg/kg	< 5	< 5	-	-
Zinc	5	mg/kg	77	16	-	-
Sample Properties						
% Moisture	1	%	11	11	-	-
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	7.0	7.1	6.6	6.1
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	4.7	5.7	5.2	4.1
Reaction Ratings*[S05]	0	comment	2.0	2.0	2.0	2.0

Client Sample ID			BH05-1.9-2.0	BH06-0.0-0.1	BH06-0.5-0.6	[G01]BH07-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047951	S24-No0047952	S24-No0047953	S24-No0047954
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	123	90	115
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	-	< 50	< 50	< 50

Client Sample ID			BH05-1.9-2.0	BH06-0.0-0.1	BH06-0.5-0.6	[G01]BH07-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047951	S24-No0047952	S24-No0047953	S24-No0047954
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	0.8	< 0.5	0.9
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	1.1	0.6	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.4	1.2	1.4
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	0.7
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	0.6
Benzo(a)pyrene	0.5	mg/kg	-	0.6	< 0.5	0.6
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	1.0	< 0.5	1.1
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	0.9	< 0.5	1.0
Chrysene	0.5	mg/kg	-	0.5	< 0.5	0.6
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	0.9	< 0.5	0.8
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	0.8	< 0.5	0.8
Total PAH*	0.5	mg/kg	-	4.7	< 0.5	6.7
2-Fluorobiphenyl (surr.)	1	%	-	107	113	102
p-Terphenyl-d14 (surr.)	1	%	-	86	110	87
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 10
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5

Client Sample ID			BH05-1.9-2.0	BH06-0.0-0.1	BH06-0.5-0.6	[G01]BH07-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047951	S24-No0047952	S24-No0047953	S24-No0047954
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 10
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 10
Dibutylchlorendate (surr.)	1	%	-	[Q09]INT	66	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	87	110	87
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	< 1
Dibutylchlorendate (surr.)	1	%	-	[Q09]INT	66	[Q09]INT
Tetrachloro-m-xylene (surr.)	1	%	-	87	110	87
Heavy Metals						
Arsenic	2	mg/kg	-	13	17	12
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	20	27	18
Copper	5	mg/kg	-	12	< 5	36
Lead	5	mg/kg	-	63	26	200
Mercury	0.1	mg/kg	-	0.2	< 0.1	0.2
Nickel	5	mg/kg	-	< 5	< 5	6.2
Zinc	5	mg/kg	-	40	< 5	110
Sample Properties						
% Moisture	1	%	-	9.6	16	20
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	5.3	-	-	-
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	4.0	-	-	-
Reaction Ratings*[S05]	0	comment	1.0	-	-	-

Client Sample ID			BH07-0.5-0.6	BH08-0.0-0.1	BH08-0.5-0.6	BH08-1.0-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047955	S24-No0047956	S24-No0047957	S24-No0047958
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	103	119	117	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	96	61	59	-
p-Terphenyl-d14 (surr.)	1	%	92	81	56	-

Client Sample ID			BH07-0.5-0.6	BH08-0.0-0.1	BH08-0.5-0.6	BH08-1.0-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047955	S24-No0047956	S24-No0047957	S24-No0047958
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	59	[Q09]INT	[Q09]INT	-
Tetrachloro-m-xylene (surr.)	1	%	87	64	57	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	59	[Q09]INT	[Q09]INT	-
Tetrachloro-m-xylene (surr.)	1	%	87	64	57	-
Heavy Metals						
Arsenic	2	mg/kg	10	10.0	12	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	17	15	15	-
Copper	5	mg/kg	6.5	9.6	< 5	-
Lead	5	mg/kg	41	47	20	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	< 5	< 5	< 5	-
Zinc	5	mg/kg	< 5	29	< 5	-
Sample Properties						
% Moisture	1	%	15	11	14	-

Client Sample ID			BH07-0.5-0.6	BH08-0.0-0.1	BH08-0.5-0.6	BH08-1.0-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0047955	S24-No0047956	S24-No0047957	S24-No0047958
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	6.2	5.0	5.0
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	3.7	4.2	4.2
Reaction Ratings*[S05]	0	comment	-	3.0	2.0	1.0

Client Sample ID			BH08-1.5-1.6	BH08-1.9-2.0	DUP01	TRIP SPIKE
Sample Matrix			Soil	Soil	Soil	Trip Spike (solid)
Eurofins Sample No.			S24-No0047959	S24-No0047960	S24-No0047961	S24-No0047962
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	9.1	-
Cadmium	0.4	mg/kg	-	-	< 0.4	-
Chromium	5	mg/kg	-	-	15	-
Copper	5	mg/kg	-	-	7.6	-
Lead	5	mg/kg	-	-	69	-
Mercury	0.1	mg/kg	-	-	0.1	-
Nickel	5	mg/kg	-	-	< 5	-
Zinc	5	mg/kg	-	-	71	-
Sample Properties						
% Moisture	1	%	-	-	7.3	-
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	5.5	6.0	-	-
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	4.3	4.6	-	-
Reaction Ratings*[S05]	0	comment	1.0	1.0	-	-
TRH C6-C10	1	%	-	-	-	91
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	-	84
TRH C6-C9	1	%	-	-	-	91
BTEX						
Benzene	1	%	-	-	-	93
Ethylbenzene	1	%	-	-	-	93
m&p-Xylenes	1	%	-	-	-	78
o-Xylene	1	%	-	-	-	94
Toluene	1	%	-	-	-	79
Xylenes - Total	1	%	-	-	-	88
4-Bromofluorobenzene (surr.)	1	%	-	-	-	105

Client Sample ID			TRIP BLANK
Sample Matrix			Trip Blank (solid)
Eurofins Sample No.			S24-No0047963
Date Sampled			Nov 18, 2024
Test/Reference	LOR	Unit	
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
BTEX and Naphthalene			
Naphthalene[N02]	0.5	mg/kg	< 0.5

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Nov 22, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons	Sydney	Nov 22, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 22, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 20, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 20, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 20, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 20, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Nov 20, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Nov 20, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Nov 18, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Acid Sulfate Soils Field pH Test	Sydney	Nov 18, 2024	7 Days
- Method: LTM-GEN-7060 Determination of field pH (pHF) and field pH peroxide (pHFOX) tests			

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1161470
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 18, 2024 6:10 PM
Due: Nov 25, 2024
Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH01-0.0-0.1	Nov 18, 2024		Soil	S24-No0047927				X			X
2	BH01-0.3-0.4	Nov 18, 2024		Soil	S24-No0047928				X			X
3	BH01-0.6-0.7	Nov 18, 2024		Soil	S24-No0047929				X			X
4	BH02-0.0-0.1	Nov 18, 2024		Soil	S24-No0047930		X		X			X
5	BH02-0.5-0.6	Nov 18, 2024		Soil	S24-No0047931		X		X			X
6	BH02-1.0-1.1	Nov 18, 2024		Soil	S24-No0047932		X					
7	BH02-1.5-1.6	Nov 18, 2024		Soil	S24-No0047933		X					
8	BH02-2.0-2.1	Nov 18, 2024		Soil	S24-No0047934		X					
9	BH02-2.5-2.6	Nov 18, 2024		Soil	S24-No0047935		X					
10	BH02-3.0-3.1	Nov 18, 2024		Soil	S24-No0047936		X					
11	BH02-3.3-3.4	Nov 18, 2024		Soil	S24-No0047937		X					
12	BH03-0.0-0.1	Nov 18, 2024		Soil	S24-No0047938				X			X
13	BH03-0.3-0.4	Nov 18, 2024		Soil	S24-No0047939				X			X
14	BH04-0.0-0.1	Nov 18, 2024		Soil	S24-No0047940		X		X			X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
15	BH04-0.5-0.6	Nov 18, 2024		Soil	S24-No0047941		X		X			X
16	BH04-0.7-0.8	Nov 18, 2024		Soil	S24-No0047942		X					
17	BH04-0.9-1.0	Nov 18, 2024		Soil	S24-No0047943		X					
18	BH04-1.2-1.3	Nov 18, 2024		Soil	S24-No0047944		X					
19	BH04-1.7-1.8	Nov 18, 2024		Soil	S24-No0047945		X					
20	BH05-0.0-0.1	Nov 18, 2024		Soil	S24-No0047946		X		X			X
21	BH05-0.5-0.6	Nov 18, 2024		Soil	S24-No0047947		X		X			X
22	BH05-0.6-0.7	Nov 18, 2024		Soil	S24-No0047948		X		X			X
23	BH05-1.1-1.2	Nov 18, 2024		Soil	S24-No0047949		X					
24	BH05-1.6-1.7	Nov 18, 2024		Soil	S24-No0047950		X					
25	BH05-1.9-2.0	Nov 18, 2024		Soil	S24-No0047951		X					
26	BH06-0.0-0.1	Nov 18, 2024		Soil	S24-No0047952				X			X
27	BH06-0.5-0.6	Nov 18, 2024		Soil	S24-No0047953				X			X
28	BH07-0.0-0.1	Nov 18, 2024		Soil	S24-No0047954				X			X
29	BH07-0.5-0.6	Nov 18, 2024		Soil	S24-No0047955				X			X
30	BH08-0.0-0.1	Nov 18, 2024		Soil	S24-No0047956		X		X			X
31	BH08-0.5-0.6	Nov 18, 2024		Soil	S24-No0047957		X		X			X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
32	BH08-1.0-1.1	Nov 18, 2024		Soil	S24-No0047958		X					
33	BH08-1.5-1.6	Nov 18, 2024		Soil	S24-No0047959		X					
34	BH08-1.9-2.0	Nov 18, 2024		Soil	S24-No0047960		X					
35	DUP01	Nov 18, 2024		Soil	S24-No0047961			X	X			
36	TRIP SPIKE	Nov 18, 2024		Trip Spike (solid)	S24-No0047962						X	
37	TRIP BLANK	Nov 18, 2024		Trip Blank (solid)	S24-No0047963					X		
38	TSL	Nov 18, 2024		Trip Spike (solid)	S24-No0047964						X	
39	BH01-0.9-1.0	Nov 18, 2024		Soil	S24-No0047965	X						
40	BH02-0.8-0.9	Nov 18, 2024		Soil	S24-No0047966	X						
41	BH03-0.7-0.8	Nov 18, 2024		Soil	S24-No0047967	X						
42	BH05-0.9-1.0	Nov 18, 2024		Soil	S24-No0047968	X						
43	BH06-0.8-0.9	Nov 18, 2024		Soil	S24-No0047969	X						
44	BH07-0.8-0.9	Nov 18, 2024		Soil	S24-No0047970	X						
45	BH08-0.8-0.9	Nov 18, 2024		Soil	S24-No0047971	X						
46	DUP02	Nov 18, 2024		Soil	S24-No0047972	X						

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Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1161470
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 18, 2024 6:10 PM
Due: Nov 25, 2024
Priority: 5 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD*	Acid Sulfate Soils Field pH Test	Metals M8	Moisture Set	BTEXN and Volatile TRH	BTEXN and Volatile TRH	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
47	TRIP02	Nov 18, 2024		Soil	S24-No0047973	X						
48	RINSATE-01	Nov 18, 2024		Water	S24-No0047974	X						
Test Counts						10	25	1	19	1	2	18

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	100			70-130	Pass	
Toluene	%	108			70-130	Pass	
Ethylbenzene	%	107			70-130	Pass	
m&p-Xylenes	%	106			70-130	Pass	
o-Xylene	%	106			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	102			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	109			70-130	Pass	
TRH C6-C10	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-No0047938	CP	%	85			70-130	Pass	
Toluene	S24-No0047938	CP	%	93			70-130	Pass	
Ethylbenzene	S24-No0047938	CP	%	99			70-130	Pass	
m&p-Xylenes	S24-No0047938	CP	%	96			70-130	Pass	
o-Xylene	S24-No0047938	CP	%	97			70-130	Pass	
Xylenes - Total*	S24-No0047938	CP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-No0047938	CP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-No0047938	CP	%	83			70-130	Pass	
TRH C6-C10	S24-No0047938	CP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-No0047941	CP	%	75			75-125	Pass	
Cadmium	S24-No0047941	CP	%	84			75-125	Pass	
Chromium	S24-No0047941	CP	%	79			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	S24-No0047941	CP	%	87			75-125	Pass	
Lead	S24-No0047941	CP	%	100			75-125	Pass	
Mercury	S24-No0047941	CP	%	97			75-125	Pass	
Nickel	S24-No0047941	CP	%	90			75-125	Pass	
Zinc	S24-No0047941	CP	%	109			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-No0047929	CP	mg/kg	3.9	5.9	40	30%	Fail	Q15
Cadmium	S24-No0047929	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-No0047929	CP	mg/kg	8.1	9.2	13	30%	Pass	
Copper	S24-No0047929	CP	mg/kg	17	32	59	30%	Fail	Q15
Lead	S24-No0047929	CP	mg/kg	67	81	19	30%	Pass	
Mercury	S24-No0047929	CP	mg/kg	0.4	0.6	38	30%	Fail	Q15
Nickel	S24-No0047929	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-No0047929	CP	mg/kg	27	34	25	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-No0047931	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-No0047931	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-No0047931	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S24-No0047931	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-No0047931	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-No0047931	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-No0047931	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-No0047931	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-No0047931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	S24-No0047931	CP	pH Units	5.0	5.0	pass	20%	Pass	
pH-FOX (Field pH Peroxide test)*	S24-No0047931	CP	pH Units	4.1	4.1	pass	0%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-No0047938	CP	mg/kg	18	19	6.0	30%	Pass	
Cadmium	S24-No0047938	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-No0047938	CP	mg/kg	22	21	3.0	30%	Pass	
Copper	S24-No0047938	CP	mg/kg	8.9	12	31	30%	Fail	Q15
Lead	S24-No0047938	CP	mg/kg	96	120	25	30%	Pass	
Mercury	S24-No0047938	CP	mg/kg	0.2	0.2	30	30%	Pass	
Nickel	S24-No0047938	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-No0047938	CP	mg/kg	93	120	28	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-No0047940	CP	mg/kg	9.4	11	15	30%	Pass	
Cadmium	S24-No0047940	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-No0047940	CP	mg/kg	14	17	18	30%	Pass	
Copper	S24-No0047940	CP	mg/kg	5.6	6.2	11	30%	Pass	
Mercury	S24-No0047940	CP	mg/kg	0.3	0.3	13	30%	Pass	
Nickel	S24-No0047940	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-No0047940	CP	mg/kg	140	130	10	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-No0047941	CP	%	14	14	1.0	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	S24-No0047946	CP	pH Units	6.6	6.6	pass	20%	Pass	
pH-FOX (Field pH Peroxide test)*	S24-No0047946	CP	pH Units	3.4	3.4	pass	0%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-No0047952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-No0047952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-No0047952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-No0047952	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-No0047952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-No0047952	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-No0047952	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-No0047952	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-No0047952	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-No0047954	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-No0047954	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-No0047954	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-No0047954	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-No0047954	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-No0047954	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-No0047954	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-No0047954	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-No0047954	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-No0047955	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-No0047955	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-No0047955	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S24-No0047955	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-No0047955	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-No0047955	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-No0047955	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-No0047955	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-No0047955	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	S24-No0047960	CP	pH Units	6.0	5.9	pass	20%	Pass	
pH-FOX (Field pH Peroxide test)*	S24-No0047960	CP	pH Units	4.6	4.6	pass	0%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-No0047961	CP	%	7.3	8.2	12	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q09	The Surrogate recovery is outside of the recommended acceptance criteria due to matrix interference. Acceptance criteria were met for all other QC
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.
S05	Field Screen uses the following fizz rating to classify the rate the samples reacted to the peroxide: 1.0; No reaction to slight. 2.0; Moderate reaction. 3.0; Strong reaction with persistent froth. 4.0; Extreme reaction.

Authorised by:

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

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Outlook

RE: Eurofins Test Results - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

From Daniel Hilton <daniel@allgeo.com.au>
Date Wed 27/11/2024 12:07 PM
To Andrew Black <andrewblack@eurofins.com>
Cc Jason Roesler <Jason@allgeo.com.au>

Thanks Andrew,

Can we please order the following TCLP's on a 24 hour TAT:

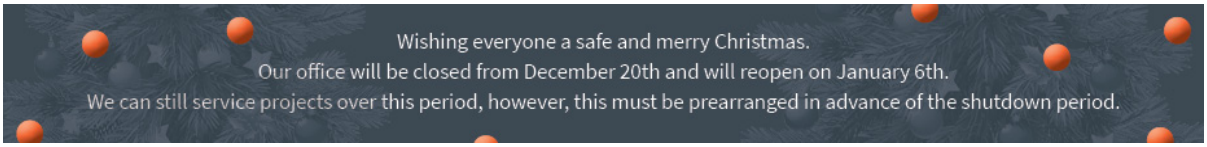
- Lead TCLP: BH01-0.3-0.4 & BH05-0.0-0.1
- Benzo(a)pyrene TCLP: BH01-0.3-0.4

Thank you!

Regards,
Daniel Hilton
Graduate Scientist
Email: daniel@allgeo.com.au

alliance

Office Phone: 1800 288 188
Admin Email: admin@allgeo.com.au
Website: allgeo.com.au
Head Office & Lab: 8-10 Welder Road, Seven Hills NSW 2147
Wollongong Office & Lab: 51 / 6 Bellambi Lane, Bellambi NSW 2518



From: AndrewBlack@eurofins.com <AndrewBlack@eurofins.com>
Sent: Wednesday, 27 November 2024 11:48 AM
To: Jason Roesler <jason@allgeo.com.au>
Cc: Daniel Hilton <daniel@allgeo.com.au>
Subject: Eurofins Test Results - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

Updated prelim thanks guys. Only asbestos remaining which is our bottleneck right now. Most likely tomorrow.

Kindest Regards,

Andrew Black
Analytical Services Manager

Eurofins | Environment Testing
Unit 1
2 Frost Drive
MAYFIELD WEST NSW 2304
AUSTRALIA
Phone: +61 299 008 490

Mobile: +61 410 220 750
Email: Andrew.Black@eurofinsanz.com
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View our latest EnviroNotes

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Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: Alliance Geotechnical
Contact name: Jason Roesler
Project name: ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID: 18587
Turnaround time: 1 Day
Date/Time received Nov 27, 2024 12:07 PM
Eurofins reference 1164774

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Jason Roesler - jason@allgeo.com.au.

Note: A copy of these results will also be delivered to the general Alliance Geotechnical email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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ABN: 50 005 085 521

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1164774
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 27, 2024 12:07 PM
Due: Nov 28, 2024
Priority: 1 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Benzo(a)pyrene	Lead	USA Leaching Procedure
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH01-0.3-0.4	Nov 18, 2024		US Leachate	S24-No0075235	X	X	X
2	BH05-0.0-0.1	Nov 18, 2024		US Leachate	S24-No0075236		X	X
Test Counts						1	2	2

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

Attention: **Jason Roesler**

Report **1164774-L**
Project name ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID 18587
Received Date Nov 27, 2024

Client Sample ID			**BH01-0.3-0.4**	**BH05-0.0-0.1**
Sample Matrix			**US Leachate**	**US Leachate**
Eurofins Sample No.			**S24-No0075235**	**S24-No0075236**
Date Sampled			**Nov 18, 2024**	**Nov 18, 2024**
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene	0.001	mg/L	< 0.001	-
Heavy Metals				
Lead	0.01	mg/L	0.03	0.48
USA Leaching Procedure				
Leachate Fluid*[C01]		comment	1.0	1.0
pH (initial)	0.1	pH Units	8.7	9.0
pH (off)*	0.1	pH Units	5.1	5.0
pH (USA HCl addition)*	0.1	pH Units	1.9	1.8

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 27, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Heavy Metals	Sydney	Nov 27, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
USA Leaching Procedure	Sydney	Nov 27, 2024	14 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Benzo(a)pyrene	Lead	USA Leaching Procedure
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
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1	BH01-0.3-0.4	Nov 18, 2024		US Leachate	S24-No0075235	X	X	X
2	BH05-0.0-0.1	Nov 18, 2024		US Leachate	S24-No0075236		X	X
Test Counts						1	2	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Lead	mg/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	%	129			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Lead	%	104			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Benzo(a)pyrene	S24-No0071147	NCP	%	126			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S24-No0070927	NCP	%	105			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(a)pyrene	S24-No0071148	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S24-No0075235	CP	mg/L	0.03	0.03	2.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised by:

Nileshni Goundar	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Outlook

Additional Analysis - RE: Eurofins Test Results - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

From Jason Roesler <Jason@allgeo.com.au>
Date Wed 20/11/2024 11:33 AM
To Andrew Black <andrewblack@eurofins.com>
Cc Daniel Hilton <daniel@allgeo.com.au>

Good morning Andrew,

Could we please arrange **additional TCLP** analysis for **CRS** on a **3 day TaT** for the following sample.

- **CRS**
  - BH02-0.0-0.1
  - BH02-2.5-2.6
  - BH02-3.0-3.1
  - BH02-3.3-3.4
  - BH04-1.7-1.8
  - BH05-0.0-0.1
  - BH05-0.5-0.6
  - BH05-1.9-2.0

1162162

Regards,

Jason Roesler
Project Scientist
Mobile: 0404 043 610 | **Email:** Jason@allgeo.com.au

alliance
geotechnical & environmental solutions

Office Phone: 1800 288 188
Admin Email: admin@allgeo.com.au
Website: allgeo.com.au
Head Office & Lab: 8-10 Welder Road, Seven Hills NSW 2147
Wollongong Office & Lab: 51 / 6 Bellambi Lane, Bellambi NSW 2518

From: AndrewBlack@eurofins.com <AndrewBlack@eurofins.com>
Sent: Tuesday, 19 November 2024 10:11 PM
To: Jason Roesler <jason@allgeo.com.au>
Cc: Daniel Hilton <daniel@allgeo.com.au>
Subject: Eurofins Test Results - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

pH field fox results.

Kindest Regards,

Andrew Black

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

Eurofins ARL Pty Ltd

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Perth
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Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Alliance Geotechnical
Contact name:	Jason Roesler
Project name:	CANTERBURY ICE SKATING RINK
Project ID:	18587
Turnaround time:	3 Day
Date/Time received	Nov 20, 2024 11:33 AM
Eurofins reference	1162162

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Jason Roesler - jason@allgeo.com.au.

Note: A copy of these results will also be delivered to the general Alliance Geotechnical email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1162162
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 20, 2024 11:33 AM
Due: Nov 25, 2024
Priority: 3 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Moisture Set	Chromium Suite - NASSG (Excluding ANC)
Sydney Laboratory - NATA # 1261 Site # 18217						X	
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780							X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	BH02-0.0-0.1	Nov 18, 2024		Soil	B24-No0054043	X	X
2	BH02-2.5-2.6	Nov 18, 2024		Soil	B24-No0054044	X	X
3	BH02-3.0-3.1	Nov 18, 2024		Soil	B24-No0054045	X	X
4	BH02-3.3-3.4	Nov 18, 2024		Soil	B24-No0054046	X	X
5	BH04-1.7-1.8	Nov 18, 2024		Soil	B24-No0054047	X	X
6	BH05-0.0-0.1	Nov 18, 2024		Soil	B24-No0054048	X	X
7	BH05-0.5-0.6	Nov 18, 2024		Soil	B24-No0054049	X	X
8	BH05-1.9-2.0	Nov 18, 2024		Soil	B24-No0054050	X	X
Test Counts						8	8

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 20794 & 2780

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

Attention: **Jason Roesler**

Report **1162162-S**
Project name CANTERBURY ICE SKATING RINK
Project ID 18587
Received Date Nov 20, 2024

Client Sample ID			**BH02-0.0-0.1**	**BH02-2.5-2.6**	**BH02-3.0-3.1**	**BH02-3.3-3.4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B24-No0054043**	**B24-No0054044**	**B24-No0054045**	**B24-No0054046**
Date Sampled			**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**
Test/Reference	LOR	Unit				
Extraneous Material						
<2mm Fraction	0.005	g	31	33	29	30
>2mm Fraction	0.005	g	5.8	< 0.005	< 0.005	< 0.005
Analysed Material	0.1	%	84	100	100	100
Extraneous Material	0.1	%	16	< 0.1	< 0.1	< 0.1
Net Acidity (Excluding ANC)						
s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	0.02	% S	0.06	0.03	0.02	< 0.02
CRS Suite - Net Acidity - NASSG (Excluding ANC)	10	mol H+/t	37	17	13	< 10
CRS Suite - Liming Rate - NASSG (Excluding ANC)	1	kg CaCO3/t	2.8	1.3	1.0	< 1
Actual Acidity (NLM-3.2)						
pH-KCL (NLM-3.1)	0.1	pH Units	4.9	5.2	5.1	5.3
Titratable Actual Acidity (NLM-3.2)	2	mol H+/t	37	10	13	7.0
Titratable Actual Acidity (NLM-3.2)	0.003	% pyrite S	0.060	0.020	0.020	0.010
Potential Acidity - Chromium Reducible Sulfur						
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)[S04]	0.005	% S	< 0.005	0.012	< 0.005	< 0.005
Chromium Reducible Sulfur (a-SCr) (NLM-2.1)	3	mol H+/t	< 3	7.7	< 3	< 3
Extractable Sulfur						
Sulfur - KCl Extractable	0.005	% S	N/A	N/A	N/A	N/A
HCl Extractable Sulfur	0.005	% S	N/A	N/A	N/A	N/A
Retained Acidity (S-NAS)						
Net Acid soluble sulfur (SNAS) NLM-4.1	0.005	% S	N/A	N/A	N/A	N/A
Net Acid soluble sulfur (s-SNAS) NLM-4.1[S02]	0.005	% S	N/A	N/A	N/A	N/A
Net Acid soluble sulfur (a-SNAS) NLM-4.1	2	mol H+/t	N/A	N/A	N/A	N/A
HCl Extractable Sulfur Correction Factor	1	factor	2.0	2.0	2.0	2.0
Acid Neutralising Capacity (ANCbt)						
Acid Neutralising Capacity - (ANCbt) (NLM-5.2)	0.01	% CaCO3	N/A	N/A	N/A	N/A
Acid Neutralising Capacity - (s-ANCbt) (NLM-5.2)[S03]	0.02	% S	N/A	N/A	N/A	N/A
Acid Neutralising Capacity - (a-ANCbt) (NLM-5.2)	2	mol H+/t	N/A	N/A	N/A	N/A
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
Net Acidity (Including ANC)						
s-CRS Suite - Net Acidity - NASSG (including ANC)	0.02	% S	0.06	0.03	0.02	< 0.02
CRS Suite - Net Acidity - NASSG (Including ANC)	10	mol H+/t	37	17	13	< 10
CRS Suite - Liming Rate - NASSG (Including ANC)[S01]	1	kg CaCO3/t	2.8	1.3	1.0	< 1
Sample Properties						
% Moisture	1	%	11	7.0	10	8.3

Client Sample ID			BH04-1.7-1.8	BH05-0.0-0.1	BH05-0.5-0.6	BH05-1.9-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-No0054047	B24-No0054048	B24-No0054049	B24-No0054050
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Extraneous Material						
<2mm Fraction	0.005	g	33	29	29	30
>2mm Fraction	0.005	g	0.57	1.8	1.6	< 0.005
Analysed Material	0.1	%	98	94	95	100
Extraneous Material	0.1	%	1.7	5.9	5.2	< 0.1
Net Acidity (Excluding ANC)						
s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	0.02	% S	0.02	< 0.02	< 0.02	0.03
CRS Suite - Net Acidity - NASSG (Excluding ANC)	10	mol H+/t	13	< 10	< 10	19
CRS Suite - Liming Rate - NASSG (Excluding ANC)	1	kg CaCO3/t	< 1	< 1	< 1	1.4
Actual Acidity (NLM-3.2)						
pH-KCL (NLM-3.1)	0.1	pH Units	5.0	6.2	6.1	4.8
Titratable Actual Acidity (NLM-3.2)	2	mol H+/t	13	6.0	5.0	19
Titratable Actual Acidity (NLM-3.2)	0.003	% pyrite S	0.020	0.010	0.010	0.030
Potential Acidity - Chromium Reducible Sulfur						
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)[S04]	0.005	% S	< 0.005	< 0.005	< 0.005	< 0.005
Chromium Reducible Sulfur (a-SCr) (NLM-2.1)	3	mol H+/t	< 3	< 3	< 3	< 3
Extractable Sulfur						
Sulfur - KCl Extractable	0.005	% S	N/A	N/A	N/A	N/A
HCl Extractable Sulfur	0.005	% S	N/A	N/A	N/A	N/A
Retained Acidity (S-NAS)						
Net Acid soluble sulfur (SNAS) NLM-4.1	0.005	% S	N/A	N/A	N/A	N/A
Net Acid soluble sulfur (s-SNAS) NLM-4.1[S02]	0.005	% S	N/A	N/A	N/A	N/A
Net Acid soluble sulfur (a-SNAS) NLM-4.1	2	mol H+/t	N/A	N/A	N/A	N/A
HCl Extractable Sulfur Correction Factor	1	factor	2.0	2.0	2.0	2.0
Acid Neutralising Capacity (ANCbt)						
Acid Neutralising Capacity - (ANCbt) (NLM-5.2)	0.01	% CaCO3	N/A	N/A	N/A	N/A
Acid Neutralising Capacity - (s-ANCbt) (NLM-5.2)[S03]	0.02	% S	N/A	N/A	N/A	N/A
Acid Neutralising Capacity - (a-ANCbt) (NLM-5.2)	2	mol H+/t	N/A	N/A	N/A	N/A
ANC Fineness Factor		factor	1.5	1.5	1.5	1.5
Net Acidity (Including ANC)						
s-CRS Suite - Net Acidity - NASSG (including ANC)	0.02	% S	0.02	< 0.02	< 0.02	0.03
CRS Suite - Net Acidity - NASSG (Including ANC)	10	mol H+/t	13	< 10	< 10	19
CRS Suite - Liming Rate - NASSG (Including ANC)[S01]	1	kg CaCO3/t	< 1	< 1	< 1	1.4
Sample Properties						
% Moisture	1	%	9.6	8.6	10	9.0

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Extraneous Material	Brisbane	Nov 20, 2024	6 Week
- Method: LTM-GEN-7050/7070			
Chromium Suite - NASSG (Excluding ANC)	Brisbane	Nov 20, 2024	6 Week
- Method: LTM-GEN-7070 Chromium Reducible Sulfur Suite			
% Moisture	Sydney	Nov 20, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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NZBN: 9429046024954

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1162162
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 20, 2024 11:33 AM
Due: Nov 25, 2024
Priority: 3 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Moisture Set	Chromium Suite - NASSG (Excluding ANC)
Sydney Laboratory - NATA # 1261 Site # 18217						X	
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780							X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	BH02-0.0-0.1	Nov 18, 2024		Soil	B24-No0054043	X	X
2	BH02-2.5-2.6	Nov 18, 2024		Soil	B24-No0054044	X	X
3	BH02-3.0-3.1	Nov 18, 2024		Soil	B24-No0054045	X	X
4	BH02-3.3-3.4	Nov 18, 2024		Soil	B24-No0054046	X	X
5	BH04-1.7-1.8	Nov 18, 2024		Soil	B24-No0054047	X	X
6	BH05-0.0-0.1	Nov 18, 2024		Soil	B24-No0054048	X	X
7	BH05-0.5-0.6	Nov 18, 2024		Soil	B24-No0054049	X	X
8	BH05-1.9-2.0	Nov 18, 2024		Soil	B24-No0054050	X	X
Test Counts						8	8

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Actual Acidity (NLM-3.2)							
pH-KCL (NLM-3.1)	%	98			80-120	Pass	
Titratable Actual Acidity (NLM-3.2)	%	95			80-120	Pass	
LCS - % Recovery							
Potential Acidity - Chromium Reducible Sulfur							
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)	%	92			80-120	Pass	
LCS - % Recovery							
Extractable Sulfur							
HCl Extractable Sulfur	%	96			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	W24-No0054027	NCP	%	15	19	29	30%	Pass	
Duplicate									
Net Acidity (Excluding ANC)				Result 1	Result 2	RPD			
s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	B24-No0054048	CP	% S	< 0.02	< 0.02	<1	30%	Pass	
CRS Suite - Net Acidity - NASSG (Excluding ANC)	B24-No0054048	CP	mol H+/t	< 10	< 10	<1	20%	Pass	
CRS Suite - Liming Rate - NASSG (Excluding ANC)	B24-No0054048	CP	kg CaCO3/t	< 1	< 1	<1	30%	Pass	
Duplicate									
Actual Acidity (NLM-3.2)				Result 1	Result 2	RPD			
pH-KCL (NLM-3.1)	B24-No0054048	CP	pH Units	6.2	6.2	<1	20%	Pass	
Titratable Actual Acidity (NLM-3.2)	B24-No0054048	CP	mol H+/t	6.0	5.0	14	20%	Pass	
Titratable Actual Acidity (NLM-3.2)	B24-No0054048	CP	% pyrite S	0.010	0.010	14	30%	Pass	
Duplicate									
Potential Acidity - Chromium Reducible Sulfur				Result 1	Result 2	RPD			
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)	B24-No0054048	CP	% S	< 0.005	< 0.005	<1	20%	Pass	
Chromium Reducible Sulfur (a-SCr) (NLM-2.1)	B24-No0054048	CP	mol H+/t	< 3	< 3	<1	30%	Pass	
Duplicate									
Extractable Sulfur				Result 1	Result 2	RPD			
Sulfur - KCl Extractable	B24-No0054048	CP	% S	N/A	N/A	N/A	30%	Pass	
HCl Extractable Sulfur	B24-No0054048	CP	% S	N/A	N/A	N/A	20%	Pass	
Duplicate									
Retained Acidity (S-NAS)				Result 1	Result 2	RPD			
Net Acid soluble sulfur (SNAS) NLM-4.1	B24-No0054048	CP	% S	N/A	N/A	N/A	30%	Pass	
Net Acid soluble sulfur (s-SNAS) NLM-4.1	B24-No0054048	CP	% S	N/A	N/A	N/A	30%	Pass	
Net Acid soluble sulfur (a-SNAS) NLM-4.1	B24-No0054048	CP	mol H+/t	N/A	N/A	N/A	30%	Pass	
Duplicate									
Acid Neutralising Capacity (ANCbt)				Result 1	Result 2	RPD			
Acid Neutralising Capacity - (ANCbt) (NLM-5.2)	B24-No0054048	CP	% CaCO3	N/A	N/A	N/A	20%	Pass	
Acid Neutralising Capacity - (s-ANCbt) (NLM-5.2)	B24-No0054048	CP	% S	N/A	N/A	N/A	30%	Pass	
ANC Fineness Factor	B24-No0054048	CP	factor	1.5	1.5	<1	30%	Pass	

Duplicate									
Net Acidity (Including ANC)				Result 1	Result 2	RPD			
s-CRS Suite - Net Acidity - NASSG (including ANC)	B24-No0054048	CP	% S	< 0.02	< 0.02	<1	30%	Pass	
CRS Suite - Net Acidity - NASSG (Including ANC)	B24-No0054048	CP	mol H+/t	< 10	< 10	<1	30%	Pass	
CRS Suite - Liming Rate - NASSG (Including ANC)	B24-No0054048	CP	kg CaCO3/t	< 1	< 1	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
S01	Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from 'kg/t dry weight' to 'kg/m3 in-situ soil' multiply 'reported results' x 'wet bulk density of soil in t/m3'
S02	Retained Acidity is Reported when the pHKCl is less than pH 4.5
S03	Acid Neutralising Capacity is only required if the pHKCl if greater than or equal to pH 6.5
S04	Acid Sulfate Soil Samples have a 24 hour holding time unless frozen or dried within that period

Authorised by:

Andrew Black	Analytical Services Manager
Jonathon Angell	Senior Analyst-SPOCAS
Roopesh Rangarajan	Senior Analyst-Sample Properties

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

CERTIFICATE OF ANALYSIS

Work Order	: **ES2437683**	Page	: 1 of 2
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: Jason Roesler	Contact	: Customer Services ES
Address	: 8/10 Welder Road, Seven Hills 2147	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 18587 Canterbury Ice Skating Rink	Date Samples Received	: 19-Nov-2024 14:15
Order number	: ----	Date Analysis Commenced	: 21-Nov-2024
C-O-C number	: ----	Issue Date	: 25-Nov-2024 11:41
Sampler	: D. Hilton		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	Trip01	----	----	----	----
			Sampling date / time	18-Nov-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2437683-001	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**9.2**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**9**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**19**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**8**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**92**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**2**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**83**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	----	----	----	----

QUALITY CONTROL REPORT

Work Order	: **ES2437683**	Page	: 1 of 3
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: Jason Roesler	Contact	: Customer Services ES
Address	: 8/10 Welder Road, Seven Hills 2147	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 18587 Canterbury Ice Skating Rink	Date Samples Received	: 19-Nov-2024
Order number	: ----	Date Analysis Commenced	: 21-Nov-2024
C-O-C number	: ----	Issue Date	: 25-Nov-2024
Sampler	: D. Hilton		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6203014)									
ES2437681-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	6	6	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	21	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	44	44	0.0	No Limit
ES2437734-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	11	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	105	99	6.6	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	45	43	4.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	29	26	9.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	263	246	6.8	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6203023)									
ES2437659-005	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	2.9	3.0	0.0	No Limit
ES2437734-004	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	8.3	8.6	2.7	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6203015)									
ES2437681-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6203014)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	111	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	101	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	107	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	101	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	95.6	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	94.6	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	88.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6203015)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	80.4	70.0	125

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6203014)							
ES2437681-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	96.7	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	105	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	99.3	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.4	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	101	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	97.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6203015)							
ES2437681-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	84.5	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2437683**	Page	: 1 of 4
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: Jason Roesler	Telephone	: +61-2-8784 8555
Project	: 18587 Canterbury Ice Skating Rink	Date Samples Received	: 19-Nov-2024
Site	: ----	Issue Date	: 25-Nov-2024
Sampler	: D. Hilton	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
Trip01	**18-Nov-2024**	**----**	----	----	**21-Nov-2024**	02-Dec-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
Trip01	**18-Nov-2024**	**21-Nov-2024**	17-May-2025	✓	**22-Nov-2024**	17-May-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
Trip01	**18-Nov-2024**	**21-Nov-2024**	16-Dec-2024	✓	**23-Nov-2024**	16-Dec-2024	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	*Method*	*Matrix*	*Method Descriptions*
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).

CHAIN OF CUSTODY

ABN 50 005 085 521

☑ Sydney Laboratory — Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory — Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com

☐ Melbourne Laboratory — 2 Kingston Town Close, Oakleigh, VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	18587
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Canterbury Ice Skating Rink
Contact Name	Jason	Project Manager	J. Roesler
Phone №	404043610	EDD Format (ESdat, EQuIS, Custom)	Esdat
Special Directions	-	Sampler(s)	D. Hilton
Purchase Order	-	Handed over by	D. Hilton
Quote ID №	-	Email for Invoice	jason@allgeo.com.au
		Email for Results	jason@allgeo.com.au; daniel@allgeo.com.au

Turnaround Time (TAT) Requirements (please tick as appropriate)

☐ Overnight (9am)* ☐ 1 Day* ☐ 2 Day* ☐ 3 Day* ☑ 5 Day * Surcharges apply ☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy (h:mm))	Matrix (Soil (S) Water (W))	Analytes: WAC Suite 2	pHF / pHFOX Field Screen	Metals (8)	BTEXN/TRH C6-C10	HOLD	Containers: 1G P Bottle	250mL Plastic	125mL Plastic	500mL Amber Glass	40mL VOA Vial	Acid Sulfate Soil Bag	Jar (Glass (*) HDPE)	Other (Please Specify & TAT Requirements)	Sample Comments / Dangerous Goods Hazard Warning
1	BH01-0.0-0.1	18/11/24	S	x										x	x		
2	BH01-0.3-0.4	18/11/24	S	x										x	x		
3	BH01-0.6-0.7	18/11/24	S	x										x	x		
4	BH01-0.9-1.0	18/11/24	S					x						x	x		
5	BH02-0.0-0.1	18/11/24	S	x	x									x	x	x	
6	BH02-0.5-0.6	18/11/24	S	x	x									x	x	x	
7	BH02-0.8-0.9	18/11/24	S					x						x	x		
8	BH02-1.0-1.1	18/11/24	S		x									x			
9	BH02-1.5-1.6	18/11/24	S		x									x			
10	BH02-2.0-2.1	18/11/24	S		x									x			
11	BH02-2.5-2.6	18/11/24	S		x									x			
12	BH02-3.0-3.1	18/11/24	S		x									x			
13	BH02-3.3-3.4	18/11/24	S		x									x			
14	BH03-0.0-0.1	18/11/24	S	x											x	x	
15	BH03-0.3-0.4	18/11/24	S	x											x	x	
16	BH03-0.7-0.8	18/11/24	S					x							x	x	
17	BH04-0.0-0.1	18/11/24	S	x	x									x	x	x	
18	BH04-0.5-0.6	18/11/24	S	x	x									x	x	x	
19	BH04-0.7-0.8	18/11/24	S		x			x						x	x	x	
20	BH04-0.9-1.0	18/11/24	S		x			x						x	x	x	
21	BH04-1.2-1.3	18/11/24	S		x									x			
22	BH04-1.7-1.8	18/11/24	S		x									x			
23	BH05-0.0-0.1	18/11/24	S	x	x									x	x	x	
24	BH05-0.5-0.6	18/11/24	S	x	x									x	x	x	
25	BH05-0.6-0.7	18/11/24	S	x	x									x	x	x	
26	BH05-0.9-1.0	18/11/24	S					x							x	x	
27	BH05-1.1-1.2	18/11/24	S		x									x			
28	BH05-1.6-1.7	18/11/24	S		x									x			
29	BH05-1.9-2.0	18/11/24	S		x									x			
30	BH06-0.0-0.1	18/11/24	S	x											x	x	
	Total Counts			13	20			6						20	19	19	

Please analyse pHF / pHFOX Field Screens on a 24 hr TAT

Environmental Division Sydney
Work Order Reference
ES2437683

Telephone : +61-2-8784 8555

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal — Name: D Hilton — DH — Date: 18/11/2024 — Time: 4:5

Eurofins | mgt Laboratory Use Only — Received By: [signature] — SYD | BNE | MEL | PER | ADL | NTL | DRW — Signature — Date: 19/11/24 — Time: 6:10pm — Temperature: 3.9

Laboratory Use Only — Received by: [signature] — SYD | BNE | MEL | PER | ADL | NTL | DRW — Signature — Date: / / — Time: — Temperature:

Bees 19/11/24 1415

116 1470

CHAIN OF CUSTODY

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project No	18587	Project Manager	J. Roesler
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Canterbury Ice Skating Rink	EDD Format (ESdat, EQuIS, Custom)	Esdat
Contact Name	Jason				
Phone No	404043610				
Special Directions	-				
Purchase Order	-				
Quote ID No	-				

Sampler(s)	D. Hilton
Handed over by	D. Hilton
Email for Invoice	jason@allgeo.com.au
Email for Results	jason@allgeo.com.au daniel@allgeo.com.au

Turnaround Time (TAT) Requirements (Select all that apply)

☐ Overnight (9am)*
☐ 1 Day* ☐ 2 Day*
☐ 3 Day* ☐ 5 Day
* Surcharges apply
☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	Analytes: WAC Suite 2	pH F / pH FOX Field Screen	Metals (8)	BTEX/TRH C6-C10	HOLD	Containers: 1x Plastic	250mL Plastic	125mL Plastic	40mL Amber Glass	40mL VOA Vial	Aqua Regia Soil Bag	Jar (Glass or HDPE)	Other (Asbestos/Sieve/Manganese)	Sample Comments / Dangerous Goods Hazard Warning
1	BH06-0.5-0.6	18/11/24	S	X											X		X
2	BH06-0.8-0.9	18/11/24	S					X							X		X
3	BH07-0.0-0.1	18/11/24	S	X											X		X
4	BH07-0.5-0.6	18/11/24	S	X											X		X
5	BH07-0.8-0.9	18/11/24	S					X							X		X
6	BH08-0.0-0.1	18/11/24	S	X	X										X		X
7	BH08-0.5-0.6	18/11/24	S	X	X										X		X
8	BH08-0.8-0.9	18/11/24	S					X							X		X
9	BH08-1.0-1.1	18/11/24	S		X										X		
10	BH08-1.5-1.6	18/11/24	S		X										X		
11	BH08-1.9-2.0	18/11/24	S		X										X		
12	Dup01	18/11/24	S			X									X		
13 (1)	Trip01	18/11/24	S	Please forward Trip01 to ALS for Metals (8) analysis											X		
14	Dup02	18/11/24	S					X							X		
15	Trip02	18/11/24	S					X							X		
16	rinsate-01	18/11/24	S					X				X					
17	trip spike / blank	18/11/24	S				X						X				
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
	Total Comps:			6	5	1	1	6							1		1	5	12	8	

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal Name: D Hilton DH Date: 18/11/2024 Time: -

Eurofins | mgt Received By: SYD | BNE | MEL | PER | ADL | NTL | DRW Signature: Date: / / Time: Temperature:

Laboratory Use Only Received By: SYD | BNE | MEL | PER | ADL | NTL | DRW Signature: Date: / / Time: Report #:

Rec: 19/11/24
1415.

Outlook

RE: Eurofins Test Results, Invoice - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

From Jason Roesler <Jason@allgeo.com.au>
Date Fri 29/11/2024 11:13 AM
To Andrew Black <Andrew.Black@eurofinsanz.com>
Cc Daniel Hilton <daniel@allgeo.com.au>

Good morning Andrew,

Could we please arrange **additional** analysis on a **2 day TaT** for the following sample.

- **Total Recoverable Hydrocarbons (TRH) with Silica Gel Clean–Up**
  - Lab ID: S24-No0047941, Field ID: BH04-0.5-0.6
  - Lab ID: S24-No0047948, Field ID: BH05-0.6-0.7

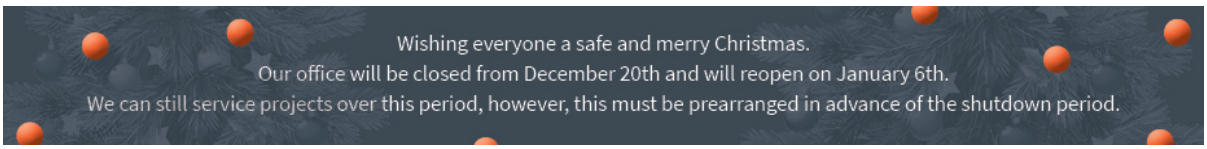
- **Alliance WAC suite 2**
  - Lab ID: S24-No0047942, Field ID: BH04-0.7-0.8
  - Lab ID: S24-No0047968, Field ID: BH04-0.9-1.0

Thanks

Regards,
Jason Roesler
Project Scientist
Mobile: 0404 043 610 | **Email:** Jason@allgeo.com.au

alliance

Office Phone: 1800 288 188
Admin Email: admin@allgeo.com.au
Website: allgeo.com.au
Head Office & Lab: 8-10 Welder Road, Seven Hills NSW 2147
Wollongong Office & Lab: 51 / 6 Bellambi Lane, Bellambi NSW 2518



From: NileshniGoundar@eurofins.com <NileshniGoundar@eurofins.com>
Sent: Wednesday, 27 November 2024 8:19 PM
To: Jason Roesler <jason@allgeo.com.au>
Cc: enviro <enviro@allgeo.com.au>; Daniel Hilton <daniel@allgeo.com.au>
Subject: Eurofins Test Results, Invoice - Report 1161470 : Site CANTERBURY ICE SKATING RINK (18587)

Please find the attached reports.

Kind Regards,
Nileshni (Neena) Goundar
Assistant Analytical Services Manager
*Please note my work hours are **2pm-10pm,** anything outside of that please contact your ASM for anything urgent.*

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: Alliance Geotechnical
Contact name: Jason Roesler
Project name: ADDITIONAL: CENTERBURY ICE SKATING RINK
Project ID: 18587
Turnaround time: 2 Day
Date/Time received Nov 29, 2024 11:13 AM
Eurofins reference 1165749

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Jason Roesler - jason@allgeo.com.au.

Note: A copy of these results will also be delivered to the general Alliance Geotechnical email address.

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Jason Roesler**

Report **1165749-S**
Project name ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID 18587
Received Date Nov 29, 2024

Client Sample ID			**BH04-0.5-0.6**	**BH05-0.6-0.7**	**BH04-0.7-0.8**	**BH04-0.9-1.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-No0083363**	**S24-No0083364**	**S24-No0083365**	**S24-No0083366**
Date Sampled			**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**	**Nov 18, 2024**
Test/Reference	LOR	Unit				
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34 (after silica gel clean-up)	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40 (after silica gel clean-up)	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total) (after silica-gel clean up)*	100	mg/kg	< 100	< 100	-	-
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	50	mg/kg	< 50	< 50	-	-
TRH C15-C28 (after silica gel clean-up)	100	mg/kg	< 100	< 100	-	-
TRH C29-C36 (after silica gel clean-up)	100	mg/kg	< 100	< 100	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	50	mg/kg	< 100	< 100	-	-
Sample Properties						
% Moisture	1	%	15	15	12	13
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	< 50
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	104	72
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			BH04-0.5-0.6	BH05-0.6-0.7	BH04-0.7-0.8	BH04-0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0083363	S24-No0083364	S24-No0083365	S24-No0083366
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	93	91
p-Terphenyl-d14 (surr.)	1	%	-	-	141	INT
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	79	INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	102	79

Client Sample ID			BH04-0.5-0.6	BH05-0.6-0.7	BH04-0.7-0.8	BH04-0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-No0083363	S24-No0083364	S24-No0083365	S24-No0083366
Date Sampled			Nov 18, 2024	Nov 18, 2024	Nov 18, 2024	Nov 18, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	79	INT
Tetrachloro-m-xylene (surr.)	1	%	-	-	102	79
Heavy Metals						
Arsenic	2	mg/kg	-	-	5.0	6.7
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	6.4	8.4
Copper	5	mg/kg	-	-	< 5	< 5
Lead	5	mg/kg	-	-	12	20
Mercury	0.1	mg/kg	-	-	< 0.1	< 0.1
Nickel	5	mg/kg	-	-	< 5	< 5
Zinc	5	mg/kg	-	-	< 5	< 5

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Sydney	Nov 29, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 29, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Nov 29, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Nov 29, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: ADDITIONAL: CENTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1165749
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 29, 2024 11:13 AM
Due: Dec 3, 2024
Priority: 2 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						TRH (after Silica Gel cleanup)	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH04-0.5-0.6	Nov 18, 2024		Soil	S24-No0083363	X	X	
2	BH05-0.6-0.7	Nov 18, 2024		Soil	S24-No0083364	X	X	
3	BH04-0.7-0.8	Nov 18, 2024		Soil	S24-No0083365		X	X
4	BH04-0.9-1.0	Nov 18, 2024		Soil	S24-No0083366		X	X
Test Counts						2	4	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	75			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	76			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	97			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
TRH C6-C10	%	96			70-130	Pass	
TRH >C10-C16	%	71			70-130	Pass	
LCS - % Recovery							
BTEX							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	%	90			70-130	Pass	
Toluene	%	102			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	121			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	103			70-130	Pass	
Acenaphthylene	%	84			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	
Benzo(a)pyrene	%	106			70-130	Pass	
Benzo(b&j)fluoranthene	%	85			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	111			70-130	Pass	
Dibenz(a.h)anthracene	%	71			70-130	Pass	
Fluoranthene	%	84			70-130	Pass	
Fluorene	%	111			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	78			70-130	Pass	
Naphthalene	%	111			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	102			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	101			70-130	Pass	
4.4'-DDD	%	88			70-130	Pass	
4.4'-DDE	%	97			70-130	Pass	
4.4'-DDT	%	86			70-130	Pass	
a-HCH	%	89			70-130	Pass	
Aldrin	%	74			70-130	Pass	
b-HCH	%	92			70-130	Pass	
d-HCH	%	84			70-130	Pass	
Dieldrin	%	80			70-130	Pass	
Endosulfan I	%	106			70-130	Pass	
Endosulfan II	%	97			70-130	Pass	
Endosulfan sulphate	%	83			70-130	Pass	
Endrin	%	89			70-130	Pass	
Endrin aldehyde	%	85			70-130	Pass	
Endrin ketone	%	96			70-130	Pass	
g-HCH (Lindane)	%	74			70-130	Pass	
Heptachlor	%	90			70-130	Pass	
Heptachlor epoxide	%	75			70-130	Pass	
Hexachlorobenzene	%	84			70-130	Pass	
Methoxychlor	%	88			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	82			70-130	Pass	
Aroclor-1260	%	102			70-130	Pass	
LCS - % Recovery							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals									
Arsenic			%	101			80-120	Pass	
Cadmium			%	108			80-120	Pass	
Chromium			%	106			80-120	Pass	
Copper			%	107			80-120	Pass	
Lead			%	105			80-120	Pass	
Mercury			%	99			80-120	Pass	
Nickel			%	106			80-120	Pass	
Zinc			%	109			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-No0081335	NCP	%	98			70-130	Pass	
TRH C6-C10	S24-No0081335	NCP	%	98			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-No0081335	NCP	%	99			70-130	Pass	
Toluene	S24-No0081335	NCP	%	97			70-130	Pass	
Ethylbenzene	S24-No0081335	NCP	%	98			70-130	Pass	
m&p-Xylenes	S24-No0081335	NCP	%	94			70-130	Pass	
o-Xylene	S24-No0081335	NCP	%	89			70-130	Pass	
Xylenes - Total*	S24-No0081335	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-No0081335	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-No0065813	NCP	%	99			70-130	Pass	
Acenaphthylene	S24-No0065813	NCP	%	90			70-130	Pass	
Anthracene	S24-No0065813	NCP	%	98			70-130	Pass	
Benz(a)anthracene	S24-No0081740	NCP	%	86			70-130	Pass	
Benzo(a)pyrene	S24-No0081740	NCP	%	76			70-130	Pass	
Benzo(b&j)fluoranthene	S24-No0065813	NCP	%	97			70-130	Pass	
Benzo(g.h.i)perylene	S24-No0065813	NCP	%	108			70-130	Pass	
Benzo(k)fluoranthene	S24-No0065813	NCP	%	112			70-130	Pass	
Chrysene	S24-No0081740	NCP	%	90			70-130	Pass	
Dibenz(a.h)anthracene	S24-No0081740	NCP	%	125			70-130	Pass	
Fluoranthene	S24-No0065813	NCP	%	95			70-130	Pass	
Fluorene	S24-No0065813	NCP	%	95			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-No0065813	NCP	%	111			70-130	Pass	
Naphthalene	S24-No0081740	NCP	%	83			70-130	Pass	
Phenanthrene	S24-No0065813	NCP	%	93			70-130	Pass	
Pyrene	S24-No0065813	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-No0065813	NCP	%	89			70-130	Pass	
4.4'-DDD	S24-No0065813	NCP	%	93			70-130	Pass	
4.4'-DDE	S24-No0065813	NCP	%	104			70-130	Pass	
4.4'-DDT	S24-No0065813	NCP	%	91			70-130	Pass	
a-HCH	S24-No0078234	NCP	%	88			70-130	Pass	
Aldrin	S24-No0065813	NCP	%	87			70-130	Pass	
b-HCH	S24-No0065813	NCP	%	97			70-130	Pass	
d-HCH	S24-No0081740	NCP	%	76			70-130	Pass	
Dieldrin	S24-No0065813	NCP	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	S24-No0065813	NCP	%	101			70-130	Pass	
Endosulfan II	S24-No0065813	NCP	%	95			70-130	Pass	
Endosulfan sulphate	S24-No0065813	NCP	%	87			70-130	Pass	
Endrin	S24-No0065813	NCP	%	90			70-130	Pass	
Endrin aldehyde	S24-No0065813	NCP	%	89			70-130	Pass	
Endrin ketone	S24-No0065813	NCP	%	87			70-130	Pass	
g-HCH (Lindane)	S24-No0078234	NCP	%	85			70-130	Pass	
Heptachlor	S24-No0065813	NCP	%	97			70-130	Pass	
Heptachlor epoxide	S24-No0065813	NCP	%	86			70-130	Pass	
Hexachlorobenzene	S24-No0065813	NCP	%	93			70-130	Pass	
Methoxychlor	S24-No0065813	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S24-No0078234	NCP	%	86			70-130	Pass	
Aroclor-1260	S24-No0078234	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-No0079521	NCP	%	104			75-125	Pass	
Cadmium	S24-No0079521	NCP	%	108			75-125	Pass	
Chromium	S24-No0079521	NCP	%	112			75-125	Pass	
Copper	S24-No0082814	NCP	%	100			75-125	Pass	
Lead	S24-No0079521	NCP	%	117			75-125	Pass	
Mercury	S24-No0079521	NCP	%	103			75-125	Pass	
Nickel	S24-No0079521	NCP	%	107			75-125	Pass	
Zinc	S24-No0082814	NCP	%	88			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-No0083366	CP	%	72			70-130	Pass	
TRH >C10-C16	S24-No0083366	CP	%	71			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-No0082812	NCP	%	13	13	3.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-No0076099	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S24-No0083365	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-No0083365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-No0083365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S24-No0076099	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S24-No0083365	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-No0083365	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-No0083365	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-No0076099	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-No0076099	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-No0076099	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-No0076099	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-No0076099	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-No0076099	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-No0076099	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-No0059219	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-No0059219	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-No0083365	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-No0083365	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-No0083365	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-No0084751	NCP	mg/kg	4.2	3.7	13	30%	Pass	
Cadmium	S24-No0084751	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-No0084751	NCP	mg/kg	20	17	17	30%	Pass	
Copper	S24-No0084751	NCP	mg/kg	55	50	9.0	30%	Pass	
Lead	S24-No0084751	NCP	mg/kg	52	39	27	30%	Pass	
Mercury	S24-No0084751	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-No0084751	NCP	mg/kg	19	12	46	30%	Fail	Q15
Zinc	S24-No0084751	NCP	mg/kg	250	220	11	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

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

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Certificate of Analysis

eurofins | Environment Testing

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Jason Roesler
Report	1165749-AID
Project Name	ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID	18587
Received Date	Nov 29, 2024
Date Reported	Dec 03, 2024

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Man-made vitreous fibre (MMVF)	Fibres exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF). Simple analytical procedures such as polarised light microscopy cannot detect or reliably identify asbestos in some types of commercial products containing asbestos, either because the fibres are below the resolution of optical microscopy or because the matrix material adheres too strongly to the fibres. For these types of products, electron microscopy may be necessary.
Subsampling Soil Samples	The sample submitted is dried and passed through a 10 mm sieve followed by a 2 mm sieve. All fibrous matter greater than 10 mm and greater than 2 mm and the material passing through the 2 mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 g to 60 g, then a subsampling routine based on ISO 3082:2017(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be subsampled for trace analysis, in accordance with AS 5370:2024*.*
Bonded asbestos-containing material (ACM)	The material is first examined, and any fibres are isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 5370:2024*. *NOTE: Even after disintegration, it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting (LOR)	The performance limitation of the AS 5370:2024* method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory limit of reporting, per se. Examination of large sample size (e.g., 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 5370:2024*, and hence, NATA Accreditation does not cover the performance of this service (non-NATA results are shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964-2004: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID 18587
Date Sampled Nov 18, 2024
Report 1165749-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH04-0.7-0.8	24-No0083365	Nov 18, 2024	Approximate Sample 216g Sample consisted of: Off-white coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH04-0.9-1.0	24-No0083366	Nov 18, 2024	Approximate Sample 198g Sample consisted of: Off-white coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 29, 2024	Indefinite

eurofins

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

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Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: ADDITIONAL: CANTERBURY ICE SKATING RINK
Project ID: 18587

Order No.:
Report #: 1165749
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Nov 29, 2024 11:13 AM
Due: Dec 3, 2024
Priority: 2 Day
Contact Name: Jason Roesler

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						TRH (after Silica Gel cleanup)	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH04-0.5-0.6	Nov 18, 2024		Soil	S24-No0083363	X	X	
2	BH05-0.6-0.7	Nov 18, 2024		Soil	S24-No0083364	X	X	
3	BH04-0.7-0.8	Nov 18, 2024		Soil	S24-No0083365		X	X
4	BH04-0.9-1.0	Nov 18, 2024		Soil	S24-No0083366		X	X
Test Counts						2	4	2

Internal Quality Control Review and Glossary General

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

Holding Times

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

Units

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

Calculations

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos-containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to distinguish visibly and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess the degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012), .ISBN: 9780717665020
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and “bio-soluble fibres. NOTE: previously known as “synthetic mineral fibre” (SMF).
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

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

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos

Authorised by:

Laxman Dias	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Appendix D – Sample Data and Analytical Results Summary Table

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

Table 1 - Analytical Summary Table (Waste)

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		Metals									Asbestos	BTEX							Halogenated Benzenes
		Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead		Mercury	Nickel	Zinc	Asbestos Reported Result	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Hexachlorobenzene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		2	0.4	5	5	5	0.01	0.1	5	5	D/ND	0.5	0.1	0.1	0.1	0.2	0.1	0.3	0.05
General Solid Waste CT1 (No Leaching)		100	20	100**	-	100	-	4	40	-	ND	-	10	288	600	-	-	1,000	<50^
General Solid Waste SCC1 (with leached)		500	100	-	-	1500	-	50	1,050	-	-	-	18	518	1,080	-	-	1,800	-
General Solid Waste TCLP1 (leached)		-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
Restricted Solid Waste CT2 (No Leaching)		400	80	400**	-	400	-	16	160	-	ND	-	40	1,152	2,400	-	-	4,000	<50^
Field ID	**Date**																		
BH01-0.0-0.1	**18/11/24**	14	<0.4	22	17	71	-	0.2	<5	58	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH01-0.3-0.4	**18/11/24**	34	<0.4	28	54	270	0.03	1.0	13	210	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5
BH01-0.6-0.7	**18/11/24**	3.9	<0.4	8.1	17	67	-	0.4	<5	27	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH02-0.0-0.1	**18/11/24**	9.4	<0.4	14	9.3	40	-	0.1	<5	27	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH03-0.0-0.1	**18/11/24**	18	<0.4	22	8.9	96	-	0.2	<5	93	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH04-0.0-0.1	**18/11/24**	9.4	<0.4	14	5.6	130	-	0.3	<5	140	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH05-0.0-0.1	**18/11/24**	11	<0.4	16	71	1,300	0.48	0.5	<5	490	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH05-0.5-0.6	**18/11/24**	11	<0.4	19	11	140	-	0.2	<5	77	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH06-0.0-0.1	**18/11/24**	13	<0.4	20	12	63	-	0.2	<5	40	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH07-0.0-0.1	**18/11/24**	12	<0.4	18	36	200	-	0.2	6.2	110	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5
BH08-0.0-0.1	**18/11/24**	10.0	<0.4	15	9.6	47	-	<0.1	<5	29	ND	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
DUP01	**18/11/24**	9.1	<0.4	15	7.6	69	-	0.1	<5	71	-	-	-	-	-	-	-	-	-
Trip01	**18/11/24**	9	<1	19	8	92	-	0.1	2	83	-	-	-	-	-	-	-	-	-

Statistics

Minimum Detect	**3.9**	**ND**	**8.1**	**5.6**	**40**	**0.03**	**0.1**	**2**	**27**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect	**34**	**ND**	**28**	**71**	**1,300**	**0.48**	**1**	**13**	**490**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *	**13**	**0.22**	**18**	**21**	**199**	**0.26**	**0.27**	**3.6**	**112**	**-**	**0.25**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.15**	**0.066**
Standard Deviation *	**7.2**	**0.083**	**4.9**	**20**	**337**	**0.32**	**0.25**	**3**	**125**	**-**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.091**
95% UCL (Student's-t) *	**16.16**	**0.264**	**20.13**	**30.65**	**365.6**	**1.676**	**0.398**	**5.049**	**173.6**	**-**	**0.25**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.15**	**0.116**

* A Non Detect Multiplier of 0.5 has been applied.
**Chromium(VI)
"" assessed as combined sum in accordance with footnote 5 of NSW EPA (2014)
^ assessed as combined sum of scheduled chemicals under footnote 11 of NSW EPA (2014)
D-Detect, ND-Non Detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

Table 1 - Analytical Summary Table (Waste)

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		TRH							TPH					PCBs							
		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)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		20	20	50	50	100	100	100	20	20	50	50	50	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
General Solid Waste CT1 (No Leaching)		-	-	-	-	-	-	-	650	-	-	-	10,000	-	-	-	-	-	-	-	50
General Solid Waste SCC1 (with leached)		-	-	-	-	-	-	-	650	-	-	-	10,000	-	-	-	-	-	-	-	50
General Solid Waste TCLP1 (leached)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Restricted Solid Waste CT2 (No Leaching)		-	-	-	-	-	-	-	2,600	-	-	-	40,000	-	-	-	-	-	-	-	50
Field ID	**Date**																				
BH01-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01-0.3-0.4	**18/11/24**	<20	<20	<50	<50	150	<100	150	<20	<20	120	50	170	<1	<1	<1	<1	<1	<1	<1	<1
BH01-0.6-0.7	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02-0.0-0.1	**18/11/24**	<20	<20	<50	<50	110	<100	110	<20	<20	63	<50	63	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	23	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<1	<1	<1	<1	<1	<1	<1	<1
BH08-0.0-0.1	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Minimum Detect	**ND**	**ND**	**ND**	**ND**	**110**	**ND**	**110**	**ND**	**23**	**63**	**50**	**63**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect	**ND**	**ND**	**ND**	**ND**	**150**	**ND**	**150**	**ND**	**23**	**120**	**50**	**170**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *	**10**	**10**	**25**	**25**	**65**	**50**	**65**	**10**	**11**	**37**	**27**	**42**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**
Standard Deviation *	**0**	**0**	**0**	**0**	**34**	**0**	**34**	**0**	**3.9**	**30**	**7.5**	**44**	**0.18**	**0.18**	**0.18**	**0.18**	**0.18**	**0.18**	**0.18**	**0.18**
95% UCL (Student's-t) *	**10**	**10**	**25**	**25**	**82.89**	**50**	**82.89**	**10**	**13.32**	**53.36**	**31.39**	**65.72**	**0.231**	**0.231**	**0.231**	**0.231**	**0.231**	**0.231**	**0.231**	**0.231**

* A Non Detect Multiplier of 0.5 has been applied.
**Chromium(VI)
"" assessed as combined sum in accordance with footnote 5 of NSW EPA (2014)
^ assessed as combined sum of scheduled chemicals under footnote 11 of NSW EPA (2014)
D-Detect, ND-Non Detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

Table 1 - Analytical Summary Table (Waste)

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		PAH																	
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene		Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg	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		0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
General Solid Waste CT1 (No Leaching)		-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	200
General Solid Waste SCC1 (with leached)		-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	200
General Solid Waste TCLP1 (leached)		-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-
Restricted Solid Waste CT2 (No Leaching)		-	-	-	-	3.2	-	-	-	-	-	-	-	-	-	-	-	-	800
Field ID	**Date**																		
BH01-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	0.5	-	<0.5	<0.5	0.6	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	0.8	2.8
BH01-0.3-0.4	**18/11/24**	<0.5	<0.5	1.9	1.9	1.7	<1	1.8	0.9	2.2	2.7	0.5	6.0	<0.5	0.8	<0.5	5.8	4.1	30
BH01-0.6-0.7	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH02-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	0.6	1.3
BH03-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	0.7	1.5
BH05-0.5-0.6	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH06-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	0.6	-	1.0	<0.5	0.9	0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	0.8	4.7
BH07-0.0-0.1	**18/11/24**	<0.5	<0.5	0.7	0.6	0.6	-	1.1	0.5	1.0	0.6	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	0.8	6.7
BH08-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DUP01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Minimum Detect	**ND**	**ND**	**0.7**	**0.6**	**0.5**	**ND**	**1**	**0.5**	**0.6**	**0.5**	**0.5**	**0.7**	**ND**	**0.8**	**ND**	**5.8**	**0.6**	**1.3**
Maximum Detect	**ND**	**ND**	**1.9**	**1.9**	**1.7**	**ND**	**1.8**	**0.9**	**2.2**	**2.7**	**0.5**	**6**	**ND**	**0.8**	**ND**	**5.8**	**4.1**	**30**
Average Concentration *	**0.25**	**0.25**	**0.44**	**0.43**	**0.47**	**-**	**0.54**	**0.33**	**0.59**	**0.53**	**0.27**	**1**	**0.25**	**0.3**	**0.25**	**0.75**	**0.82**	**4.4**
Standard Deviation *	**0**	**0**	**0.5**	**0.5**	**0.43**	**-**	**0.53**	**0.2**	**0.61**	**0.73**	**0.075**	**1.7**	**0**	**0.17**	**0**	**1.7**	**1.1**	**8.8**
95% UCL (Student's-t) *	**0.25**	**0.25**	**0.715**	**0.704**	**0.706**	**-**	**0.825**	**0.443**	**0.917**	**0.927**	**0.314**	**1.946**	**0.25**	**0.391**	**0.25**	**1.669**	**1.432**	**9.174**

* A Non Detect Multiplier of 0.5 has been applied.
**Chromium(VI)
"" assessed as combined sum in accordance with footnote 5 of NSW EPA (2014)
^ assessed as combined sum of scheduled chemicals under footnote 11 of NSW EPA (2014)
D-Detect, ND-Non Detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

Table 1 - Analytical Summary Table (Waste)

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		Organochlorine Pesticides																					
		4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
General Solid Waste CT1 (No Leaching)		<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	60''	60''	60''	<50^	<50^	<50^	<50^	<50^	<50^	-	-
General Solid Waste SCC1 (with leached)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Solid Waste TCLP1 (leached)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Restricted Solid Waste CT2 (No Leaching)		<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	<50^	240''	240''	240''	<50^	<50^	<50^	<50^	<50^	<50^	-	-
Field ID	**Date**																						
BH01-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH01-0.3-0.4	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
BH01-0.6-0.7	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH02-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH03-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH04-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH05-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH05-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH06-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH07-0.0-0.1	**18/11/24**	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
BH08-0.0-0.1	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
DUP01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip01	**18/11/24**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Minimum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *		**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.54**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.7**
Standard Deviation *		**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**1.5**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**0.091**	**1.4**
95% UCL (Student's-t) *		**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**1.352**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**1.484**

* A Non Detect Multiplier of 0.5 has been applied.
**Chromium(VI)
"" assessed as combined sum in accordance with footnote 5 of NSW EPA (2014)
^ assessed as combined sum of scheduled chemicals under footnote 11 of NSW EPA (2014)
D-Detect, ND-Non Detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587

Table 2 - Analytical Summary Table (VENM)

		Asbestos	Metals								BTEX							Halogenated Benzenes
		Asbestos Reported Result	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Hexachlorobenzene
		Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		D/ND	2	0.4	5	5	5	0.1	5	5	0.5	0.1	0.1	0.1	0.2	0.1	0.3	0.05
Ambient Background Range		Detect	50	1	1000	100	200	0.03	500	300	ND	ND	ND	ND	ND	ND	ND	ND
Field ID	**Date**																	
BH02-0.5-0.6	**18/11/24**	ND	5.6	<0.4	11	<5	20	<0.1	<5	<5	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH03-0.3-0.4	**18/11/24**	ND	9.1	<0.4	12	<5	17	<0.1	<5	<5	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH04-0.5-0.6	**18/11/24**	ND	20	<0.4	23	<5	22	<0.1	<5	15	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH05-0.6-0.7	**18/11/24**	ND	22	<0.4	27	<5	43	<0.1	<5	16	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH06-0.5-0.6	**18/11/24**	ND	17	<0.4	27	<5	26	<0.1	<5	<5	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH07-0.5-0.6	**18/11/24**	ND	10	<0.4	17	6.5	41	<0.1	<5	<5	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
BH08-0.5-0.6	**18/11/24**	ND	12	<0.4	15	<5	20	<0.1	<5	<5	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.05
Statistics																		
Minimum Detect		**ND**	**5.6**	**ND**	**11**	**6.5**	**17**	**ND**	**ND**	**15**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect		**ND**	**22**	**ND**	**27**	**6.5**	**43**	**ND**	**ND**	**16**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *		**-**	**14**	**0.2**	**19**	**3.1**	**27**	**0.05**	**2.5**	**6.2**	**0.25**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.15**	**0.025**
Standard Deviation *		**-**	**6.1**	**0**	**6.8**	**1.5**	**11**	**0**	**0**	**6.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
95% UCL (Student's-t) *		**-**	**18.15**	**0.2**	**23.85**	**4.182**	**34.8**	**0.05**	**2.5**	**10.88**	**0.25**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.15**	**0.025**

* A Non Detect Multiplier of 0.5 has been applied.
D = Detect
ND = Non-detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587

Table 2 - Analytical Summary Table (VENM)

		TRH							TRH - (Silica Gel Cleanup)				TPH					TPH - (Silica Gel Cleanup)			
		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)	>C10-C16 Fraction (SG)	>C16-C34 Fraction (SG)	>C34-C40 Fraction (SG)	>C10-C40 Fraction (SG)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)	C10-C14 Fraction (SG)	C15-C28 Fraction (SG)	C29-C36 Fraction (SG)	C10-C36 Fraction (Sum)(SG)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		20	20	50	50	100	100	100	50	100	100	100	20	20	50	50	50	50	100	100	50
Ambient Background Range		ND	ND	ND	ND	ND	ND	ND					ND	ND	ND	ND	ND	ND	ND	ND	ND
Field ID	**Date**																				
BH02-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	<20	<20	<50	<50	<50	-	-	-	-
BH03-0.3-0.4	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	<20	<20	<50	<50	<50		-	-	-
BH04-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100	<100	<20	22	<50	<50	<50	<50	<100	<100	<100
BH05-0.6-0.7	**18/11/24**	<20	<20	<50	<50	300	570	870	<50	<100	<100	<100	<20	<20	93	400	493	<50	<100	<100	<100
BH06-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	<20	<20	<50	<50	<50	-	-	-	-
BH07-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	<20	<20	<50	<50	<50	-	-	-	-
BH08-0.5-0.6	**18/11/24**	<20	<20	<50	<50	<100	<100	<100	-	-	-	-	<20	<20	<50	<50	<50	-	-	-	-
Statistics																					
Minimum Detect		**ND**	**ND**	**ND**	**ND**	**300**	**570**	**870**	**ND**	**ND**	**ND**	**ND**	**ND**	**22**	**93**	**400**	**493**	**ND**	**ND**	**ND**	**ND**
Maximum Detect		**ND**	**ND**	**ND**	**ND**	**300**	**570**	**870**	**ND**	**ND**	**ND**	**ND**	**ND**	**22**	**93**	**400**	**493**	**ND**	**ND**	**ND**	**ND**
Average Concentration *		**10**	**10**	**25**	**25**	**86**	**124**	**167**	**25**	**50**	**50**	**50**	**10**	**12**	**35**	**79**	**92**	**25**	**50**	**50**	**50**
Standard Deviation *		**0**	**0**	**0**	**0**	**94**	**197**	**310**	**0**	**0**	**0**	**0**	**0**	**4.5**	**26**	**142**	**177**	**0**	**0**	**0**	**0**
95% UCL (Student's-t) *		**10**	**10**	**25**	**25**	**155.1**	**268.6**	**394.8**	**25**	**50**	**50**	**50**	**10**	**15.05**	**53.59**	**182.7**	**221.8**	**25**	**50**	**50**	**50**

* A Non Detect Multiplier of 0.5 has been applied.
D = Detect
ND = Non-detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587

Table 2 - Analytical Summary Table (VENM)

		PCBs								PAH																
		Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Ambient Background Range		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field ID	**Date**																									
BH02-0.5-0.6	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH03-0.3-0.4	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04-0.5-0.6	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05-0.6-0.7	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH06-0.5-0.6	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH07-0.5-0.6	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH08-0.5-0.6	**18/11/24**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistics																										
Minimum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *		**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**
Standard Deviation *		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
95% UCL (Student's-t) *		**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**

* A Non Detect Multiplier of 0.5 has been applied.
D = Detect
ND = Non-detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587

Table 2 - Analytical Summary Table (VENM)

		Organochlorine Pesticides																				
		4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
Ambient Background Range		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field ID	**Date**																						
BH02-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH03-0.3-0.4	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH04-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH05-0.6-0.7	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH06-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH07-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
BH08-0.5-0.6	**18/11/24**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
Statistics																							
Minimum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Maximum Detect		**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Average Concentration *		**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.05**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.25**
Standard Deviation *		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
95% UCL (Student's-t) *		**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.05**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.25**

* A Non Detect Multiplier of 0.5 has been applied.
D = Detect
ND = Non-detect

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

Table 1 - Analytical Summary Table
(Acid Sulfate Soils)

alliance
geotechnical & environmental solutions

			Acid Sulphate Soils - Field				Acid Sulphate Soils			Acid Sulphate Soils - Acid Base Accounting	Acid Sulphate Soils - Acidity Trail		Acid Sulphate Soils - Liming Rate		Acid Sulphate Soils - Potential Acidity	
			pHF	pHFox	Difference between pHF & pHFox	Reaction Rate	Net Acidity (Acidity Units) - CRS Suite	Net Acidity (Sulfur Units) - CRS Suite	s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	ANC Fineness Factor	Titratable Actual Acidity (sulfur units)	Titratable Actual Acidity	CRS Suite - Liming Rate	Liming Rate excluding ANC	Chromium Reducible Sulphur (acidity units)	Chromium Reducible Sulfur
			-	-		-	MOL H+/T	% S	% S	-	%S	mole H+/t	KG CACO3/T	kg CaCO3/t	mole H+/t	%S
EQL			0.1	0.1	0.2	0	10	0.02	0.02		0.003	2	1	1	3	0.005
Sullivan 2018 Acid Sulfate Soils Action Criteria (Coarse and Peats), 1–1000 t materials disturbed			<4	<3	<1	≥ 3	≥ 18	≥ 0.03	-	-	-	-	-	-	-	0.1
Sullivan 2018 Acid Sulfate Soils Action Criteria (clayey sand to light clays), 1–1000 t materials			<4	<3	<1	≥ 3	≥ 36	≥ 0.06	-	-	-	-	-	-	-	0.1
Field ID	**Date**	**Matrix Description**														
BH02-0.0-0.1	**18/11/24**	**Fill**	5.9	2.7		3.0	37	0.06	0.06	1.5	0.060	37	2.8	2.8	<3	<0.005
BH02-0.5-0.6	**18/11/24**	**Nat**	5.0	4.1		2.0	-	-	-	-	-	-	-	-	-	-
BH02-1.0-1.1	**18/11/24**	**Nat**	4.7	3.7		3.0	-	-	-	-	-	-	-	-	-	-
BH02-1.5-1.6	**18/11/24**	**Nat**	5.3	4.2		1.0	-	-	-	-	-	-	-	-	-	-
BH02-2.0-2.1	**18/11/24**	**Nat**	5.7	4.7		1.0	-	-	-	-	-	-	-	-	-	-
BH02-2.5-2.6	**18/11/24**	**Nat**	6.0	3.7		1.0	17	0.03	0.03	1.5	0.020	10	1.3	1.3	7.7	0.012
BH02-3.0-3.1	**18/11/24**	**Nat**	5.7	3.8		1.0	13	0.02	0.02	1.5	0.020	13	1.0	1.0	<3	<0.005
BH02-3.3-3.4	**18/11/24**	**Nat**	6.0	4.2		2.0	<10	<0.02	<0.02	1.5	0.010	7.0	<1	<1	<3	<0.005
BH04-0.0-0.1	**18/11/24**	**Fill**	6.6	3.7		3.0	-	-	-	-	-	-	-	-	-	-
BH04-0.5-0.6	**18/11/24**	**Nat**	4.9	4.1		2.0	-	-	-	-	-	-	-	-	-	-
BH04-0.7-0.8	**18/11/24**	**Nat**	4.7	3.9		2.0	-	-	-	-	-	-	-	-	-	-
BH04-0.9-1.0	**18/11/24**	**Nat**	4.8	3.9		2.0	-	-	-	-	-	-	-	-	-	-
BH04-1.2-1.3	**18/11/24**	**Nat**	5.1	4.1		1.0	13	0.02	0.02	1.5	0.020	13	<1	<1	<3	<0.005
BH04-1.7-1.8	**18/11/24**	**Nat**	5.5	3.9		1.0	-	-	-	-	-	-	-	-	-	-
BH05-0.0-0.1	**18/11/24**	**Fill**	6.6	3.4		3.0	<10	<0.02	<0.02	1.5	0.010	6.0	<1	<1	<3	<0.005
BH05-0.5-0.6	**18/11/24**	**Fill**	7.0	4.7		2.0	<10	<0.02	<0.02	1.5	0.010	5.0	<1	<1	<3	<0.005
BH05-0.6-0.7	**18/11/24**	**Nat**	7.1	5.7		2.0	-	-	-	-	-	-	-	-	-	-
BH05-1.1-1.2	**18/11/24**	**Nat**	6.6	5.2		2.0	-	-	-	-	-	-	-	-	-	-
BH05-1.6-1.7	**18/11/24**	**Nat**	6.1	4.1		2.0	-	-	-	-	-	-	-	-	-	-
BH05-1.9-2.0	**18/11/24**	**Nat**	5.3	4.0		1.0	19	0.03	0.03	1.5	0.030	19	1.4	1.4	<3	<0.005
BH08-0.0-0.1	**18/11/24**	**Fill**	6.2	3.7		3.0	-	-	-	-	-	-	-	-	-	-
BH08-0.5-0.6	**18/11/24**	**Nat**	5.0	4.2		2.0	-	-	-	-	-	-	-	-	-	-
BH08-1.0-1.1	**18/11/24**	**Nat**	5.0	4.2		1.0	-	-	-	-	-	-	-	-	-	-
BH08-1.5-1.6	**18/11/24**	**Nat**	5.5	4.3		1.0	-	-	-	-	-	-	-	-	-	-
BH08-1.9-2.0	**18/11/24**	**Nat**	6.0	4.6		1.0	-	-	-	-	-	-	-	-	-	-
Statistics																
Minimum Detect			**4.7**	**2.7**		**1**	**13**	**0.02**	**0.02**	**1.5**	**0.01**	**5**	**1**	**1**	**7.7**	**0.012**
Maximum Detect			**7.1**	**5.7**		**3**	**37**	**0.06**	**0.06**	**1.5**	**0.06**	**37**	**2.8**	**2.8**	**7.7**	**0.012**
Average Concentration *			**5.7**	**4.1**		**1.8**	**14**	**0.024**	**0.024**	**1.5**	**0.023**	**14**	**1.1**	**1.1**	**2.3**	**0.0037**
Standard Deviation *			**0.72**	**0.58**		**0.76**	**11**	**0.017**	**0.017**	**0**	**0.017**	**10**	**0.8**	**0.8**	**2.2**	**0.0034**
95% UCL (Student's-t) *			**5.939**	**4.311**		**2.061**	**21.44**	**0.035**	**0.035**	**1.5**	**0.0337**	**20.75**	**1.597**	**1.597**	**3.743**	**0.00594**

* A Non Detect Multiplier of 0.5 has been applied.

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

QA/QC - RPD

		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		2	0.4	2	5	5	0.1	2	5
Field ID	**Date**								
BH03-0.0-0.1	**18 Nov 2024**	18	<0.4	22	8.9	96	0.2	<5	93
DUP01	**18 Nov 2024**	9.1	<0.4	15	7.6	69	0.1	<5	71
RPD		66	0	38	16	33	67	0	27
BH03-0.0-0.1	**18 Nov 2024**	18	<0.4	22	8.9	96	0.2	<5	93
Trip01	**18 Nov 2024**	9	<1	19	8	92	0.1	2	83
RPD		67	0	15	11	4	67	0	11

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 99999999 (0 - 10 x EQL); 50 (10 - 20 x EQL); 30 (> 20 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

Client: The Ice Skating Club of NSW Cooperative Limited
Project: Canterbury Olympic Ice Rink
Project Number: 18587-ER-1-1

QA/QC - Trip spike/blank

alliance

		BTEX														TRH			TPH	
		Naphthalene (VOC)		Benzene		Toluene		Ethylbenzene		Xylene (m & p)		Xylene (o)		Xylene Total	Xylene Total	C6-C10 Fraction (F1)		C6-C10 (F1 minus BTEX)	C6-C9 Fraction	C6-C9 Fraction
		mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	mg/kg	%
EQL		0.5	1	0.1	1	0.1	1	0.1	1	0.2	1	0.1	1	0.3	1	20	1	20	20	1
Field ID	**Date**																			
TRIP BLANK	**18 Nov 2024**	<0.5	-	<0.1	-	<0.1	-	<0.1	-	<0.2	-	<0.1	-	<0.3	-	<20	-	<20	<20	-
TRIP SPIKE	**18 Nov 2024**	-	84	-	93	-	79	-	93	-	78	-	94	-	88	-	91	-	-	91
Statistics																				
Minimum Detect		**ND**	**84**	**ND**	**93**	**ND**	**79**	**ND**	**93**	**ND**	**78**	**ND**	**94**	**ND**	**88**	**ND**	**91**	**ND**	**ND**	**91**
Maximum Detect		**ND**	**84**	**ND**	**93**	**ND**	**79**	**ND**	**93**	**ND**	**78**	**ND**	**94**	**ND**	**88**	**ND**	**91**	**ND**	**ND**	**91**
Average Concentration *																				
Standard Deviation *																				
95% UCL (Student's-t) *																				

* A Non Detect Multiplier of 0.5 has been applied.

Appendix E – NSW EPA Online Public Register Search Records

Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the ***Contaminated Land Management Act 1997*** (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under ***Government Information (Public Access) Act 2009***.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

• regulation under the CLM Act, POEO Act, or both
• notifying the relevant planning authority for management under the planning and development process
• managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*.
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the *Contaminated Land Management Act 1997*, to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.

Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).

Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the *Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAMPERDOWN	The Spruce	12-14 Marsden STREET	Other Industry	Regulation under CLM Act not required	-33.88720632	151.1784514
CAMPSIE	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una STREET	Service Station	Contamination currently regulated under CLM Act	-33.91605617	151.1086596
CAMPSIE	Former Sunbeam factory	60 Charlotte STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.92254225	151.1025796
CANLEY HEIGHTS	Former Caltex Canley Heights	368 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88271081	150.9154176
CANLEY HEIGHTS	Caltex Canley Heights Service Station	280-286 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88393501	150.9241656
CANLEY VALE	Coles Express Lansvale	99 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89295753	150.9606136
CANLEY VALE	Former Mobil Service Station	96 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88591573	150.9369801
CANOWINDRA	BP-branded Jasbe Service Station	76 Rodd STREET	Service Station	Regulation under CLM Act not required	-33.56131773	148.6682805
CANTERBURY	Metro Petroleum Service Station	13-19 Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90783455	151.125207
CAPTAINS FLAT	Rail corridor adjacent to Lake George Mine	1 Copper Creek Road ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.59038471	149.4382246
CAPTAINS FLAT	Captains Flat former Station Masters Cottage	2 Copper Creek ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.59027127	149.4384122
CAPTAINS FLAT	Captains Flat Rail Corridor	Copper Creek ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.590513	149.438729
CAPTAINS FLAT	Vacant Land - 58 Foxlow Street, Captains Flat NSW 2623	58 Foxlow STREET	Landfill	Under assessment	-35.592825	149.445142
CARDIFF	7-Eleven Service Station	399 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93391137	151.6562111
CARDIFF	Former Caltex Service Station	367 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93761223	151.6577781
CARDIFF	Maneela Oval	Main ROAD	Other Industry	Regulation under CLM Act not required	-32.93018443	151.6435559

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- **Licence number: 789**
- **File number: 400364**
- **Licence Anniversary Date: 01-February**
- **Review date not later than 01-Jul-2002**

Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

01-February

This licence is issued to

CANTERBURY CITY COUNCIL
P.O. BOX 77
CAMPSIE NSW 2194

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 This licence regulates water pollution resulting from the activity/ies specified below carried out at the premises specified in A2.

OPERATION OF PUBLIC SWIMMING CENTRE

A1.2 Not applicable.

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
CANTERBURY AQUATIC & FITNESS CENTRE
PHILLIPS AVE
CANTERBURY
NSW
2193
LOT 6-11 SECT F DP 2785 PART LOT 1-2 DP818459

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998 and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identi-fication no.	Type of monitoring point	Type of discharge point	Description of location
1		Discharge of pool backwash	Discharge at rear of filter beds, as marked "Discharge Point 001" on map titled "Canterbury Aquatic Centre 'Location & Discharge Point'" submitted with Licence Information Form dated 16/2/00

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

Water and Land

POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile Concentration Limit
Chlorine (free residual)	mg/L				1.5

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:

(a) liquids discharged to water; or;

(b) solids or liquids applied to the area;

must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of measure	Volume/Mass Limit
1	KL/day	100

L5 Waste

L5.1 Not applicable.

L6 Noise Limits

L6.1 Not applicable.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 Not applicable.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Not applicable.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:

(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:

(a) the date of the issue of this licence or
(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee,
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;

(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

U1 Backwash works program

U1.1 The Licensee must by 30 June 2001 carry out the works proposed in Councils report dated May 1998, headed ‘Pool Filter Backwash’.

Special conditions

E1.1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence

waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Tim Gilbert

Principal Officer Sydney Industry

(By Delegation)

Date of this edition - 28-Nov-2001

End Notes

1	Licence varied by notice V/M upgrade, issued on 10-Jul-2000, which came into effect on 10-Jul-2000.
2	This licence was surrendered by notice 1012929 on 28-Nov-2001.

Number	Name	Location	Type	Status	Issued date
6069	B. M. HIGGINBOTTOM PTY LTD	15 ELIZABETH STREET, CAMPSIE, NSW 2194	POEO licence	No longer in force	14-Feb-00
1044233	B. M. HIGGINBOTTOM PTY LTD	15 ELIZABETH STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	8-Feb-05
1027203	MORRIS PRODUCTIONS PTY. LIMITED	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	19-May-03
1028579	MORRIS PRODUCTIONS PTY. LIMITED	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	2-Jul-03
6973	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	POEO licence	Surrendered	26-Jun-00
1050831	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	30-Aug-05
1056123	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	6-Mar-06
1095136	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	11-Feb-09
1097966	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	13-May-09
1111439	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	4-May-10
1118273	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	13-Aug-10
1528444	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	8-Apr-15
1548759	QUALITY HOLDINGS PTY LTD	4-10 HARP STREET, CAMPSIE, NSW 2194	s.80 Surrender of a Licence	Issued	14-Feb-17
7618	SANDFIRE PTY LTD	34 HARP STREET, CAMPSIE, NSW 2194	POEO licence	Surrendered	30-May-00
1015259	SANDFIRE PTY LTD	34 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	17-May-02
1018520	SANDFIRE PTY LTD	34 HARP STREET, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	22-Aug-02
1033865	SANDFIRE PTY LTD	34 HARP STREET, CAMPSIE, NSW 2194	s.80 Surrender of a Licence	Issued	13-Jan-04
6876	SUNBEAM CORPORATION LTD	TROY STREET, CAMPSIE, NSW 2194	POEO licence	Surrendered	1-Sep-00
1018737	SUNBEAM CORPORATION LTD	TROY STREET, CAMPSIE, NSW 2194	s.80 Surrender of a Licence	Issued	5-Jul-02
7124	SYDNEY SOUTH WEST AREA HEALTH SERVICE	CANTERBURY ROAD, CAMPSIE, NSW 2194	POEO licence	No longer in force	27-Jun-00
1048195	SYDNEY SOUTH WEST AREA HEALTH SERVICE	CANTERBURY ROAD, CAMPSIE, NSW 2194	s.58 Licence Variation	Issued	27-May-05
10544	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	POEO licence	Surrendered	23-Feb-00
1001762	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	s.58 Licence Variation	Issued	18-Sep-00
1014102	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	s.58 Licence Variation	Issued	21-Jan-02
1035249	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	s.58 Licence Variation	Issued	10-Mar-04
1057322	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	s.58 Licence Variation	Issued	15-Mar-06
1078297	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	s.80 Surrender of a Licence	Issued	4-Oct-07
789	CANTERBURY CITY COUNCIL	PHILLIPS AVE, CANTERBURY, NSW 2193	POEO licence	Surrendered	26-Apr-00
1012929	CANTERBURY CITY COUNCIL	PHILLIPS AVE, CANTERBURY, NSW 2193	s.80 Surrender of a Licence	Issued	27-Nov-01
3.1E+09	MASTERS CIVIL (AUST) PTY LTD	885 Canterbury Road, CANTERBURY, NSW 2193	Penalty Notice	Issued	16-Jul-12

Search results

Your search for:Suburb: CAMPSIE

Matched 5 notices to 2 sites.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related this sit
CAMPSIE	403 Canterbury Road and 1 Una STREET	Budget Petroleum and adjacent property	1 curre
CAMPSIE	60 Charlotte STREET	Former Sunbeam factory	4 forme

Page 1 of 1

14 Novemb

For business and industry ^

For local government ^

Contact us

131 555 (tel:131555)

Online (https://www.epa.nsw.gov.au/about-us/contact-us/feedback)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Search results

Your search for:Suburb: CANTERBURY

Matched 2 notices to 1 site.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related this sit
CANTERBURY	13-19 Canterbury ROAD	Metro Petroleum Service Station	2 curre

Page 1 of 1

14 Novemb

For business and industry

For local government

Contact us

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info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Appendix F – Logs

alliance

ENVIRONMENTAL BOREHOLE BH01

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, trace low plasticity clay and rootlets, dry to moist.	0.0-0.1 J + ASB	FILL No PACM, odour or staining
	0.5		(FILL) SAND, fine to medium grained, pale brown, trace rootlets and coarse gravels of sandstone and brick, dry to moist	0.3-0.4 J + ASB	FILL No PACM, odour or staining
			(FILL) SAND, fine to medium grained, pale yellow/brown, trace fragments of concrete, dry to moist.	0.6-0.7 J + ASB	FILL No PACM, odour or staining
	1			0.9-1.0 J + ASB	
			BH01 terminated at 1.0m bgl, auger refusal.		

alliance

ENVIRONMENTAL BOREHOLE BH02

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS Push tube refusal at 2.3m bgl, drilling advanced with solid flight auger to 3.4m bgl.

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA	0.0		(FILL) SAND, fine to medium grained, brown, trace glass, rootlets and medium ironstone gravels, dry to moist.	0.0-0.1 J + ASB + ASS	FILL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
	0.5		CLAY, low to medium plasticity, pale grey mottled orange and red, trace rootlets, dry to moist.	0.5-0.6 J + ASB + ASS 0.8-0.9 J + ASB	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
PT	1		CLAY, low to medium plasticity, pale grey mottled orange and red, with fine sand, dry to moist.	1.0-1.1 ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
	1.5			1.5-1.6 ASS	
	2			2.0-2.1 ASS	
SFA	2.5			2.5-2.6 ASS	
	3			3.0-3.1 ASS 3.3-3.4 ASS	
	3.5		BH02 terminated at 3.4m bgl, target depth.		
	4				

alliance

ENVIRONMENTAL BOREHOLE BH03

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, with fine to medium sandstone and ironstone gravels, trace low plasticity clay	0.0-0.1 J + ASB Dup01 Trip01	FILL No PACM, odour or staining.
	0.5		Sandy CLAY, medium plasticity, orange and brown, with fine grained sand, trace rootlets, dry to moist.	0.3-0.4 J + ASB	NATURAL No PACM, odour or staining.
			Sandy CLAY, medium plasticity, pale grey mottled orange, with fine grained sand, trace rootlets, dry to moist.	0.7-0.8 J + ASB	NATURAL No PACM, odour or staining.
	1		BH03 terminated at 1.0m bgl, target depth.		

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ENVIRONMENTAL BOREHOLE BH04

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS Push tube refusal at 1.5m bgl, drilling advanced with solid flight auger to 2.0m bgl

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, with fine to medium sandstone and ironstone gravels, trace low plasticity clay and glass, dry to moist.	0.0-0.1 J + ASB + ASS rinsate-01	FILL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
	0.5		Sandy CLAY, medium plasticity, brown and orange, with fine sand, trace rootlets, dry to moist.	0.5-0.6 J + ASB + ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
			Sandy CLAY, medium plasticity, pale grey mottled orange, with fine sand, trace rootlets, dry to moist.	0.7-0.8 J + ASB + ASS 0.9-1.0 J + ASB + ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
PT	1				
			CLAY, low to medium plasticity, grey, dry	1.2-1.3 ASS 1.7-1.8 ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
SFA	1.5				
	2		BH04 terminated at 2.0m bgl, target depth.		
	2.5				

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ENVIRONMENTAL BOREHOLE BH05

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA	0		(FILL) SAND, fine to medium grained, brown, trace fine to medium gravels of sandstone and brick, trace glass, dry to moist.	0.0-0.1 J + ASB + ASS Dup02 Trip02	FILL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
	0.5			0.5-0.6 J + ASB + ASS	
			CLAY, low to medium plasticity, pale grey mottled orange, trace fine sand and rootlets, dry to moist.	0.6-0.7 J + ASB + ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
				0.9-1.0 J + B	
PT	1			1.1-1.2 ASS	
	1.5			1.6-1.7 ASS	
				1.9-2.0 ASS	Strong rotten egg odour observed in soil arisings from 1.9m bgl.
	2		BH05 terminated at 2.0m bgl, target depth.		
	2.5				

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ENVIRONMENTAL BOREHOLE BH06

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, trace fine to medium sandstone gravels and rootlets, dry to moist.	0.0-0.1 J + ASB	FILL No PACM, odour or staining.
	0.5		Sandy CLAY, low to medium plasticity, orange and brown, fine grained sand, dry to moist.	0.5-0.6 J + ASB	NATURAL No PACM, odour or staining.
			CLAY, low to medium plasticity, pale grey mottled orange, dry to moist.	0.8-0.9 J + ASB	NATURAL No PACM, odour or staining.
	1		BH06 terminated at 1.0m bgl, target depth.		

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ENVIRONMENTAL BOREHOLE BH07

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, trace medium to coarse ironstone gravels, trace rootlets, dry to moist.	0.0-0.1 J + ASB	FILL No PACM, odour or staining.
	0.5		CLAY, low to medium plasticity, pale grey mottled orange, dry to moist.	0.5-0.6 J + ASB 0.8-0.9 J + ASB	NATURAL No PACM, odour or staining.
	1		BH07 terminated at 1.0m bgl, target depth.		

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ENVIRONMENTAL BOREHOLE BH08

CLIENT The Ice Skating Club of NSW Cooperative LTD
PROJECT Waste Classification & VENM Assessment
PROJECT NUMBER 18587
ADDRESS 17A Phillips Avenue, Canterbury

CONTRACTOR Epoca Environmental
DRILLER BD
RIG TYPE Geoprobe 7822DT
BOREHOLE SIZE 125mm

STARTED 18/11/24
FINISHED 18/11/24
LOGGED DH
CHECKED JR

COMMENTS Push tube refusal at 1.8m bgl, drilling advanced with solid flight auger to 2.0m bgl.

Method	Depth (m)	Graphic Log	Material Description	Samples	Additional Observations
HA			(FILL) SAND, fine to medium grained, brown, trace medium to coarse ironstone gravels, trace rootlets, dry to moist.	0.0-0.1 J + ASB + ASS	FILL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
	0.5		CLAY, low to medium plasticity, pale grey mottled orange, dry to moist.	0.5-0.6 J + ASB + ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
PT				0.8-0.9 J + ASB	
	1			1.0-1.1 ASS	
	1.5		CLAY, low to medium plasticity, pale grey, orange and red, dry to moist.	1.5-1.6 ASS	NATURAL No PACM, odour or staining. No visual or olfactory indicators of PASS or ASS.
SFA				1.9-2.0 ASS	Moderate rotten egg odour observed in soil arisings from 1.9m bgl.
	2		BH05 terminated at 2.0m bgl, target depth.		
	2.5				