WINSTONE AGGREGATES

Belmont Quarry Development – Part B

Substantive Application
Appendix B.3.A – PSI/DSI – OBDA
Winstone Aggregates

16 August 2026

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7 August 2026

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Dear Shalini,

PRELIMINARY AND DETAILED SITE INVESTIGATION - BELMONT QUARRY – PROPOSED OVERBURDEN DISPOSAL AREA

1.0 Introduction and Background

Winstone Aggregates Limited (Winstone; the client) owns and operates Belmont Quarry in Lower Hutt, Wellington. The quarry's current Overburden Disposal Area (OBDA) has reached overburden placement capacity. Therefore, a new OBDA is proposed immediately north of the quarry. The proposed OBDA will be constructed across 10 stages and will accommodate approximately 2.8 million m^3 of overburden including topsoil, subsoil, weathered greywackes and process and pond fines over a 35-year period.

Winstone has engaged Pattle Delamore Partners Limited (PDP) to undertake a preliminary and detailed site investigation (PSI/DSI) for the area of the proposed OBDA (the site) at Belmont Quarry, as shown in Figure 1, attached. The PSI has been produced in support of Winstone's substantive aspect of the Belmont Quarry Development Fast-Track Approval Application (FAA). This version of the report (dated July 2026) supersedes the previously issued report.

The PSI/DSI has been directed and reviewed by a Suitably Qualified and Experienced Practitioner (SQEP) with respect to contaminated land and has been undertaken in accordance with the Ministry for the Environment's (MfE) *Contaminated Land Management Guidelines (CLMG) No. 1 – Guidelines for Reporting on contaminated Sites in New Zealand* (MfE, 2021a) and *CLMG No. 5 – Site Investigation and Analysis of Soils* (MfE, 2021b). A certifying statement to this effect is provided in Appendix A.

2.0 Objectives and Scope

The objectives of the PSI/DSI are to:

- Determine whether any Hazardous and Industrial List (HAIL)[1] or other potentially contaminating activities, either from historical or current activities, have been undertaken within the proposed OBDA;

[1] The Hazardous Activities and Industries List (HAIL) is a compilation of activities and industries that are considered likely to cause land contamination resulting from hazardous substance use, storage or disposal. The HAIL is intended to identify most situations in New Zealand where hazardous substances could cause, and in many cases have caused, land contamination.

- Conduct a preliminary assessment of the potential contaminated land risks of any identified HAIL activities;
- Assess, by means of soil sampling and analysis, for the presence of any residual contamination impacts to surface and near-surface soils from these current or historical activities;
- Assess the requirements/likelihood for potential consents in relation to the Resource Management (*National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health)* Regulations 2011 (NESCS) and the contaminated land rules within the Greater Wellington Regional Council's (GWRC's) *Natural Resources Plan* (NRP; 2023); and
- Provide recommendations for further investigations, if required.

The scope of work included:

- Obtaining and reviewing a selection of publicly available historical aerial imagery of the site;
- Reviewing GWRC Selected Land Use Register (SLUR) for the site;
- Viewing property files for the site held by the Hutt City Council (HCC);
- Reviewing publicly available geological and hydrogeological information for the site;
- Visiting the Belmont Quarry and Regional Park to undertake a site walkover;
- Initial soil sampling at ground surface level and 0.3 m below ground level (bgl) for heavy metals and semi-quantitative asbestos;
- Delineation (lateral and vertical) of elevated contaminants up to 0.5 m bgl;
- Comparison of the results against the relevant criteria;
- Assessing the requirements of the NESCS and the contaminated land rules within the GWRC's NRP;
- Assessing whether any further investigation work is recommended to inform site management and/or consenting and/or soil disturbance requirements; and
- Preparation of this PSI/DSI report.

3.0 Property Description and Background

Belmont Quarry is located at 541 Hebden Crescent, Belmont, Wellington. The investigation is limited to the parcel of land directly adjacent to the northern boundary of Belmont Quarry referred to as the 'proposed OBDA' (the site), shown in Figure 1 (Appendix B).

The site is located across a 23.86 ha, irregularly shaped area, which extends across three parcels of land legally described as Part Section 200A Hutt DIST, Section 255 Hutt DIST and Part Section Hutt DIST. The site is currently owned by the Department of Conservation (DOC), forms part of Belmont Regional Park and is zoned as Recreation Reserve under HCC's District Plan.

Land use surrounding the site is as follows:

- North: Dense bush within Belmont Regional Park.
- East: Dense bush.
- South: Belmont Quarry.
- West: Dense bush within Belmont Regional Park and Belmont Quarry.

4.0 Topography, Geology and Hydrology

The geological map of the region indicates that the site is underlain by undifferentiated Rakaia Terrane Triassic sandstone and mudstone[2]. These comprise alternating sandstone and mudstone, poorly bedded sandstone with minor coloured mudstone, conglomerate, basalt and chert.

There are various small streams, likely ephemeral, flowing through the site in an easterly, southerly and westerly direction discharging into larger gullies located outside of the site boundary, which flow to the south-southeast towards the Hutt River. The stream locations are presented on Figure 1, provided in Appendix B. There are also several steep gullies throughout the site which are likely to contain ephemeral streams.

The Hutt River is located approximately 530 m to the southeast of the site. This flows in a south-westerly direction discharging into Wellington Harbour.

The hydrology report undertaken for the proposed OBDA development concluded that the surficial geology within the proposed OBDA comprises a relatively thin layer of regolith, derived from both in situ weathering and colluvial processes, overlying generally impermeable greywacke bedrock. The report concluded that these conditions are not conducive to the formation of aquifers or significant groundwater resources and that any groundwater is therefore likely to only exist within the regolith in the heads of gullies or other concave depressions following heavy or prolonged rainfall.

5.0 Site History

The purpose of the information review is to establish past land uses at the property and therefore the potential for soil contamination to have arisen from those uses.

5.1 Historical Aerial Photographs

Five historical aerial photographs were obtained from Retrolens (dated between 1942 and 2000), and five aerial photographs were sourced from Google Earth Pro (dated between 2004 and 2024). The aerial photographs are provided in Appendix C. A summary is provided below.

Table 1: Historical Aerial Photograph Review

Date	Description
1942	The site and surrounding area appear to be predominately grassed and in pastural use. A small building and coppice of trees are visible in the western portion of the site. The site appears to be part of a wider farm, with an access track running from the site's northern boundary to farm buildings (including an animal race and associated buildings).
1957	Dense vegetation cover is present across most of the site. Three pylons are visible in the north-western, central and south-western areas of the site. No other significant changes were observed.
1966	Significant vegetation clearance has occurred in the eastern portion of the site. Sheep are visible across the site. The adjacent quarry (i.e. Belmont Quarry) to the south is now well established.
1984	The onsite structures are no longer present. No other significant changes were observed.

[2] https://data.gns.cri.nz/geology/ accessed 29/01/26

Table 1: Historical Aerial Photograph Review	
2000	The site is now covered in varying degrees of dense vegetation. There appears to be some minor ground disturbance on the site's south-western boundary associated with Belmont Quarry, which is well established to the south of the site. The two previously identified pylons located in the central and south-western areas of the site are no longer present.
2004	Increased ground disturbance associated with Belmont Quarry is visible in the south-western portion of the site. The access track to the north appears to be more defined. No other significant changes were observed.
2009	The minor ground disturbance previously observed has been revegetated. No other significant changes were observed.
2024	No significant changes observed from the 2009 aerial image.

5.2 Property Files

Property files for the site were obtained from HCC. The files contained a resource consent from HCC, dated June 2009, to undertake the refurbishment of the transmission towers at 580 Western Hutt Road, Lower Hutt. The refurbishment was required due to the weathering and corrosion of the towers and would include dry blasting to remove rust, painting and then galvanising the foundations.

None of the other acquired documents contained relevant information to the site history and/or potential for contamination.

5.3 Greater Wellington Regional Council Historical Information

The GWRC maintains a SLUR of properties that it knows to be either contaminated, or to have a past use or industry with a greater potential for contamination.

A review of the GWRC website[3] indicated that the site is not on the SLUR. This was confirmed via email correspondence from GWRC.

5.4 Client Provided Information

According to information supplied by the client, the site formerly operated as a working farm. It was obtained by HCC under the Public Works Act for housing but was later deemed surplus and subsequently acquired by DOC in 1989.

Information obtained from the archaeological report (Clough & Associates Ltd, 2026) produced for the proposed OBDA development identified that an archaeological site (R27/910) is recorded within the proposed OBDA which comprised a collapsed 20th century farm building. The report states that the building was possibly associated with a former piggery. Conversations with Ellen Cameron, (Clough & Associates Ltd), the archaeologist who prepared the report, on 07/08/2026 identified that this was based on anecdotal information, but that no evidence of a piggery was identified during their site walkover or in any of their information review.

6.0 Summary of Site History

A review of historical information and information provided by the client indicates that the site was originally utilised for farmland from the earliest available image in 1942 before being acquired by DOC in 1989. A small building and associated structure were present from at least 1942 until 1966; however, it is not clear what their use was. Since at least 1984 the site has been predominantly covered in varying

[3] https://mapping.gw.govt.nz/gwrc/

degrees of bush with an access track observed on the northern boundary. Minor soil disturbance was observed on the site's southern boundary between 2000 and 2009. The soil disturbance is likely associated with the neighbouring rock extraction activities at Belmont Quarry. It is considered that the likelihood of soil contamination from this activity is considered low and therefore has not been considered further.

A pylon has been present in the north-western part of the site from its first observation in 1957 to the present day.

The site is not currently listed on GWRC's SLUR.

7.0 Site Walkover

A site walkover was undertaken on 28 January 2026 and again during site works on 18 February 2026 and 4 March 2026, photographs from these visits are provided in Appendix D. Key features are shown on Figure 1, appended.

Key site features are outlined below:

- The site can be accessed by a gravel track from Hebden Crescent to the top of the ridgeline adjacent to the transmission pylon. This area is covered with long grasses turning to dense bush.
- A track leads to a roped off area to protect locally rare trees within the north-eastern portion of the site.
- Two streams run through the site, likely to be ephemeral, with steep slopes at the head of the gullies within the north-eastern portion of the site (see Figure 1 for the location of these streams).
- There is a cleared access track which runs from the gravel access road to the north of the site through to the central portion of the site.
- A pile of degraded corrugated metal sheets and a roof frame were observed in the central part of the site, understood to be from a historical farm shed from the early 1900s, located adjacent to a cleared area in the vicinity of the former dwelling.
- Abandoned farm machinery was observed in two locations, at the head of a gully and near the stream, both in the north-eastern part of the site.
- A pile of corrugated roofing material was observed in the south-western portion of the site.
- The southern portion of the site was predominately inaccessible due to dense vegetation and steep slopes.

8.0 Site Characterisation

The MfE maintains a HAIL, which is a compilation of activities and industries that are considered likely to cause land contamination resulting from hazardous substance use, storage or disposal. The HAIL is intended to identify situations in New Zealand where hazardous substances could cause, and in many cases have caused, land contamination.

The archaeological assessment produced for the site identified that the site may have possibly been a former piggery. Conversations with the author of the assessment identified that this was based on anecdotal information. A review of historical aerial images identified that a small building and an associated structure were present from at least 1942 until 1966. No evidence of stock yards, pens, effluent ponds, or other features typically associated with a piggery were observed in the aerial images. It is therefore considered unlikely that the site was operated as a commercial piggery and therefore has not been considered further in this assessment.

The abrasive blasting of the present-day transmission pylons falls within HAIL Category D1: Metal extraction, refining and reprocessing, storage and use.

Two small buildings were present onsite during the period when use of asbestos containing materials (ACM) and lead-based paints was prevalent. As such, it is possible that deteriorating and weathering of this material may have impacted site soils. The extent of contamination is expected to be limited to surface soils of the original ground level. If asbestos and lead are present in these soils at concentrations sufficient to constitute a risk to human health or the environment the affected soils could fall within Category I: Any other land that has been subject to the intentional or accidental release of a hazardous substance in *sufficient quantity* that it could be a risk to human health or the environment.

In addition, the degradation of metal products overtime has the potential for contaminants to leach into the surrounding soils. Given the age of the historical onsite structures the corrugated sheeting is likely to be galvanised steel in which the metal was coated with zinc to prevent rust. Therefore, potential contaminants in the surrounding soils from the metal sheets are zinc and cadmium (cadmium may be coexisting with zinc as a byproduct of anti-corrosion products (galvanising steel))[4]. Similar to the above, the extent of contamination is expected to be limited to surface soils in the vicinity of the historical structures/corrugated sheeting. If zinc and cadmium are present in these soils at concentrations sufficient to constitute a risk to human health or the environment the affected soils could fall within Category I: Any other land that has been subject to the intentional or accidental release of a hazardous substance in *sufficient quantity* that it could be a risk to human health or the environment.

9.0 Preliminary Conceptual Site Model

A risk to human health or the environment can only exist if there is a contaminant source (i.e. contaminated soil, dust or water), a receptor (i.e. people) and an exposure pathway between the source and the receptor. An absence of any one of these components means no risk can exist.

A preliminary conceptual site model (CSM) is set out in Table 2 below. The table presents the potential contaminant sources as per Section 8, the future receptors (i.e. users of the site associated with the development of the proposed OBDA, the receiving environment (ephemeral streams located on site) and the potential pathways whereby the receptors could be exposed directly or indirectly to soil contaminants. The likelihood of contamination, based on the site history, and the likelihood of exposure based on the proposed site use, can then be assessed to determine where a complete pathway is likely to exist.

[4] https://www.sciencedirect.com/science/article/abs/pii/S0921344912000031.

Table 2: Preliminary Conceptual Site Model – Proposed OBDA, Belmont Quarry

Source	Exposure Pathway	Possible Receptor	Pathway Linkage
Soil contamination associated with blasting of the current transmission pylon	Dermal contact, ingestion of soil, inhalation of dust/vapours	OBDA Excavation workers	**Incomplete:** Proposed OBDA design plans identify that no soil disturbance is to occur in the immediate vicinity of the transmission pylon.
Lead and asbestos soil contamination as a result of historical demolition and construction of historical structures	Dermal contact, ingestion of soil, inhalation of dust	OBDA Excavation workers	**Potentially Complete:** Should contamination exist within the underlying soils, a risk may be present to excavation and maintenance workers. This will be managed through the implementation of a contaminated site management plan/remedial action plan (CSMP/RAP) and appropriate personal protection equipment (PPE).
	Infiltration of lead to groundwater	Groundwater users	**Incomplete:** There are no bores or aquifers within the site boundary.
	Surface water runoff	Surface water runoff to downstream aquatic environments including the ephemeral streams located onsite	**Potentially Complete:** If contaminants are present in the shallow soils on site, there is potential that they may become mobile and leach into waterways. Some potential contaminant sources are close to the water ways and may periodically leach into the surface water.
Zinc and cadmium soil contamination as a results of degrading metals sheets	Dermal contact, ingestion of soil, inhalation of dust	OBDA Excavation workers	**Potentially Complete:** Should contamination exist within the underlying soils, a risk may be present to excavation and maintenance workers. This will be managed through the implementation of a contaminated site management plan (CSMP) and appropriate personal protection equipment (PPE).
	Infiltration to groundwater	Groundwater users	**Incomplete:** There are no bores or aquifers within the site boundary.
	Surface water run off	Surface water runoff to downstream aquatic environments including the ephemeral streams located onsite	**Potentially Complete:** If contaminants are present in the shallow soils on site, there is potential that they may become mobile and leach into waterways. Some potential contaminant sources are close to the water ways and may periodically leach into the surface water.

10.0 Soil Sampling Plan

The aim of the soil sampling strategy was to specifically target areas where the former structures, degrading metal sheets, and abandoned farm equipment were identified during the site walkover. The aim of sampling at these locations was to assess potential risks to site workers who may have regular contact with surface soils and to assess the risk to the ephemeral streams onsite, as well as to inform appropriate soil management and disposal requirements.

Initial soil sampling was to be undertaken immediately adjacent to the contaminant source with additional delineation sampling undertaken at approximately 1 m, 2 m, 5 m, and 10 m from the original sampling locations with samples obtained from the surface, 0.3 m bgl and 0.5 bgl to characterise the lateral and vertical extent of contamination and to confirm whether impacts were localised.

11.0 Site Investigation Activities

11.1 Intrusive Investigation

Initial soil sampling was undertaken on 18 February 2026 at six targeted locations (SS01 – SS06), with soil collected at the near-surface (0.0 m bgl) and at 0.3 m bgl to characterise soil conditions and to assess the presence of potential contaminants. Select samples were analysed for key contaminants of concern (see Table 3). Following a review of the initial analytical results (refer to Section 12), delineation sampling was undertaken 4 March 2026 at a further 16 locations positioned at regular intervals (1 m, 2 m, 5 m, and 10 m) from the original source areas. Delineation samples were collected at depths of 0.05 m bgl, 0.3 m bgl and 0.5 m bgl. Furthermore, sampling was completed at one additional location (SS07) adjacent to the former dwelling and one location adjacent to metal sheeting (SS08) at depths of 0.05 m bgl, 0.3 m bgl and 0.5 m bgl, and an additional deeper sample was collected at the at the original SS03 location at a depth of 0.5 m bgl. Additionally, one bulk material sample comprising corrugated roofing material recovered from at SS01 was collected.

A total of 69 soil samples and one bulk material sample were collected across the initiation sampling (12 samples) and delineation sampling (57 soil samples and one bulk material sample) events.

Due to time constraints and practicalities associated with the investigation scope, delineation sampling was only undertaken downgradient of the contaminant source as this was considered to be the preferential pathway for any contaminant migration. Additional sampling will be undertaken during remedial works at the site to fully delineate any associated contamination.

The rationale associated with each sampling location is presented in Table 3, below.

Table 3: Soil Sampling Rationale Summary			
Target Area Observations	**Sample Location**	**Site Walkover Photograph Reference**	**Sampling Rationale**
Corrugated roofing material	SS01	Photograph 7	One bulk material sample comprising fibrous roofing material was analysed for asbestos. Soil samples were placed on hold cold pending a review of the bulk analysis.
General coverage	SS02	NA	Samples were placed on hold cold. No analysis was undertaken due to no contaminant source.
Degraded metal sheeting	SS03	Photograph 8	Heavy metals and potential asbestos associated with historical onsite structures and activities.
	SS04		
Historical dwelling and existing roof structure	SS05	Photograph 9	
Abandoned machinery	SS06	Photograph 10	
Historical dwelling and existing roof structure	SS07	Photograph 9	
Degraded metal sheeting	SS08	N/A	
Second piece of abandoned machinery	No samples obtained	N/A	Due to time constraints no samples were obtained from this location. Additional sampling will be undertaken during remedial works at the site to determine analytical concentrations.

Sampling was completed by two PDP environmental scientists using hand excavation methods. All locations were backfilled upon completion. Quality assurance and quality control measures were implemented during the soil sampling investigation to ensure sample integrity and to minimise the potential for cross-contamination. A fresh pair of nitrile gloves were worn to transfer the material from the auger hole to a glass sample jar and plastic pottle. Sampling equipment was decontaminated between samples with a solution of Decon90 diluted in water. The jars were placed into a chilly bin containing ice and sent via courier to Hill Laboratories, an IANZ accredited laboratory, under PDP's Chain of Custody (COC) procedures.

11.1 Laboratory Analysis

The following analytical analysis was undertaken:

- Eight soil samples collected at 0.05 m bgl and 0.3 m bgl immediately adjacent to the degrading metal sheeting (SS03 and SS04), the former roof structure (SS05), and the abandoned farm equipment (SS06) were analysed for a suite of heavy metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc).
- Twenty delineation samples from SS03, SS04, SS05, and SS06 collected at depths of 0.05 m bgl and 0.3 m bgl at 1 m from the source and at 0.05 m bgl at distances of 2 m and 5 m from the source were analysed for a suite of heavy metals.
- Three soil samples were collected adjacent to historical structures or in areas where anthropogenic materials were encountered and were analysed for semi-quantitative asbestos.
- The bulk material sample comprising corrugated roofing material recovered from SS01 was analysed for asbestos presence/absence[5].
- The remaining soil samples were placed on hold at the laboratory pending review of the results.

11.2 Field Observations

The lithology across the site was generally comparable. During soil sampling, the following was observed:

- Glass fragments were observed at the surface at SS03 and SS04.
- The surface samples comprised a brown silty leaf litter, underlain by a medium brown sand at SS01 and a brown silty clay across the other sampling locations.
- Water was encountered at 0.3 m bgl in SS03 and at 0.2 m bgl in SS06. This water is interpreted to be perched surface water, likely resulting from recent rainfall, with infiltration restricted by the underlying clayey soil matrix.
- Corrugated roofing material, suspected to comprise ACM, were observed at sampling location SS01. No other suspected ACM was observed.
- No staining or olfactory evidence of contamination was noted on any soil material.

Photographs are appended in Appendix D.

12.0 Soil Sampling Results

Laboratory results of the soil analysis, along with comparison to applicable assessment criteria, for initial and delineation sampling are provided in Tables 3 and 4, respectively (see Appendix E). The laboratory reports and associated chain of custody documentation are included in Appendix F. Only results above the laboratory method detection limit have been tabulated.

12.1 Initial Sampling

The initial sampling results were generally comparable across the site for arsenic, chromium, copper and nickel.

Surface samples within the vicinity of exposed metal sheeting and the roof structure (SS03, SS04 and SS05) all contained elevated zinc and cadmium within shallow soils, with the greatest concentrations noted to be 4,100 mg/kg (SS03_0.0) and 9.1 mg/kg (SS03_0.0) respectively. Zinc concentrations generally decreased

[5] No soil samples from this location were analysed as the bulk material was confirmed to not contain asbestos (see Section 12 for further detail).

with depth with the exclusion of sampling location SS0.3_0.5, which recorded a zinc concentration of 1,520 mg/kg.

Lead was also comparably elevated in five samples, with concentrations ranging from 108 to 350 mg/kg (SS06_0.05 and SS03_0.5, respectively).

12.2 Delineation Sampling

Across most delineation locations, zinc concentrations decreased with increasing lateral distance from the contamination source material. At SS03, zinc measured 480 mg/kg at 1 m from the source (SS03a_0.05), representing an order-of-magnitude decrease compared with surface concentrations immediately adjacent to the source materials. Cadmium showed a similar trend, decreasing from 9.1 mg/kg in the surface sample (SS03_0.0) to 1.01 mg/kg at 1 m from the source (SS03a_0.05).

An exception was identified at SS08a and SS08b, where elevated zinc concentrations of 1,570 mg/kg and 1,210 mg/kg, respectively, were detected in surface soils despite being 1 m and 2 m from the original source areas, respectively. These locations are situated on a steeper downgradient slope relative to other sampling points, indicating that surface runoff, may have contributed to a wider lateral spread of contaminants.

Zinc and cadmium concentrations at 0.3 m bgl were generally also significantly lower than corresponding surface samples, indicating limited vertical migration.

Overall, the results demonstrate that zinc and cadmium contamination is predominantly shallow, with concentrations decreasing with depth and generally attenuating laterally away from source areas. This distribution is consistent with contamination arising from the long-term weathering and degradation of metal materials, rather than widespread contamination.

Slightly elevated lead was observed in SS03a_0.05, SS03b_0.05, SS05a_0.05 and SS05a_0.3 at concentrations between 210 mg/kg (SS05a_0.05) and 370 mg/kg (SS05a_0.3).

Asbestos was not detected in any of the three soil samples analysed. Asbestos was not detected in the bulk material sample obtained at SS01, therefore no additional soil sampling was undertaken within this location

13.0 Applicable Soil Criteria

In accordance with MfE's *Contaminated Land Management Guidelines No.2 – Hierarchy and Application in New Zealand of Environmental Guideline Values (MfE, 2011a),* New Zealand risk-based standards or guidelines should be used where the exposure assumptions and exposure scenarios are relevant to the site. Where New Zealand guidelines do not exist, overseas risk-based guidelines may be used.

There are soil contaminant standards (SCS) contained in MfE's *Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health* (2011b) for all heavy metals analysed, with the exception of nickel and zinc. For nickel and zinc, results have been compared to soil guidelines values (SGV) contained in the *Australian National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013* (NEPM, 2013) criteria. Samples were compared to the values associated with commercial/industrial land use.

To assess environmental risk (as well as soil disposal options), soils were compared to Class 3 waste acceptance criteria (WAC) published in Technical Guidelines for Disposal to Land (WasteMINZ, 2023).

14.0 Comparison of Results to Applicable Soil Criteria

14.1 Human Health Risk Assessment

All samples analysed for heavy metals contained concentrations below the utilised human health SCS/SGV for commercial/industrial land use and asbestos was not detected in any of the analysed samples. Therefore, soils at the site are not considered to pose an unacceptable risk to human health for commercial/industrial land use or for short term exposure for OBDA workers.

14.2 Environmental Risk Assessment

Class 3 WAC (WasteMINZ, 2023) have been used as proxy to assess whether the detected soil concentrations pose a risk to the on- or offsite environment receptors. The WasteMINZ guidelines contain WAC, which have been developed to provide confidence that materials placed within a facility do not result in an unacceptable adverse effect on human health or environmental receptors. For landfills with limited or no engineered containment, the WAC are the primary control on potential effects from the fill or waste material.

Of the five landfill classes, the WAC for Class 3 landfills is considered to be the most relevant in relation to assessing the potential discharge of contaminants from the site during earthworks at the site. This is because Class 3 landfills are assumed to have no engineering containment but engineered runoff controls exist both during the operational and post-closure phases which will also be the case during the proposed earthworks at the site. Furthermore, the Class 3 WAC have been developed to consider protection of groundwater drinking water and aquatic environment protection pathways from the leaching of contaminants within the soil via groundwater or seepage. In this way, the Class 3 WAC can be used as a proxy to assess the risk to groundwater (the groundwater pathway has been assessed as incomplete at this site) and/or surface water from soil contaminant concentrations at the site.

The soil analytical results presented in Tables 4 and 5, have been compared against the Class 3 WAC. All heavy metal concentrations, excluding zinc, returned concentrations below the Class 3 WAC.

Out of the 22 samples, a total of four samples exceed the Class 3 criteria for zinc (1,200 mg/kg) with concentrations ranging from 1,210 mg/kg to 4,100 mg/kg. However, given the observed localised sources of this contamination it is considered that these exceedances are likely to be isolated hotspots associated with the degradation of metal sheeting.

Based on the entire data set of testing undertaken at the site and observed sources it is expected that the contamination is localised to the source areas and is constrained both laterally and vertically. Generally, within 2 m, and 3 m within SS08, of the source soils comply with guideline values. With the exception of SS03, where zinc was slightly elevated above Class 3 guidelines at 0.5 m bgl, soils at 0.3 m bgl contained significantly lower zinc concentrations than 0.05 m bgl. This suggests that the impacted soils are likely limited to near the source material and are not highly mobile. Based on the source material and the current results data set further reductions in zinc concentrations are expected below 0.5m.

A Remediation Action Plan (RAP) (PDP, 2026) has been completed in conjunction with this report and should be read alongside this document. The RAP identifies “hotspots” as the material within a minimum 2 m radius from the contamination source to a minimum depth of 0.5 m bgl must be removed from site. Material associated with the “hotspots” will be subject to site validation, to demonstrate the concentration of contaminants in the material remaining on site complies with the applicable soil criteria and as such poses no environmental risk. The material that exceeds the Class 3 WAC criteria shall be removed from site and disposed of at a Class A landfill facility.

It is also assumed that all earthworks associated with the development of the OBDA will be undertaken in a manner that minimises any potential adverse effects on the environment. Erosion and sediment control

systems will be implemented during earthworks, and defined practices and procedures as detailed in the RAP (PDP, 2026) will be adhered to. This means that there is unlikely to be an unacceptable risk to the environment from zinc either on-site or off-site during earthworks.

15.0 Updated Conceptual Site Model

A preliminary CSM was developed using the information acquired in the PSI component of this report. The CSM has been updated to reflect the findings of the DSI component, as summarised below in Table 3 below.

Table 3: Updated Conceptual Site Model – Proposed OBDA, Belmont Quarry

Source	Exposure Pathway	Possible Receptor	Pathway Linkage
Soil contamination associated with blasting of the current transmission pylon	Dermal contact, ingestion of soil, inhalation of dust/vapours	OBDA Excavation workers	**Incomplete:** Proposed OBDA design plans identify that no soil disturbance is to occur in the immediate vicinity of the transmission pylon.
Lead and asbestos soil contamination as a result of historical demolition and construction of historical structures	Dermal contact, ingestion of soil, inhalation of dust	OBDA Excavation workers	**Incomplete:** Concentrations in analysed soil samples were either below the relevant SCS/SGV or below detection limits.
	Infiltration of lead to groundwater	Groundwater users	**Incomplete:** There are no bores or aquifers within the site boundary.
	Surface water runoff	Downstream aquatic environments	**Incomplete:** Lead concentrations in analysed soil samples were below environmental thresholds. Asbestos was not detected in analysed soil or bulk material samples.
Zinc and cadmium soil contamination as a results of degrading metals sheets	Dermal contact, ingestion of soil, inhalation of dust	OBDA Excavation workers	**Incomplete:** Concentrations in analysed soil samples were either below the relevant SCS/SGV or below detection limits.
	Infiltration to groundwater	Groundwater users	**Incomplete:** There are no bores or aquifers within the site boundary.
	Surface water runoff	Downstream aquatic environments (ephemeral streams located onsite. Distances from the contaminant source range between immediately adjacent to approximately ~20 m away)	**Complete but will be managed:** Soils with zinc concentrations above environmental thresholds will be remediated in accordance with the site's RAP (PDP, 2026). Controls outlined in the RAP will be followed.

16.0 Regulatory Considerations

16.1 NESCS

The NESCS seeks to control activities on contaminated land so as to protect human health. The regulations apply to a "piece of land" which is described by one of the following (regulation 5(7)):

(a) an activity or industry described in the HAIL is being undertaken on it.

(b) an activity or industry described in the HAIL has been undertaken on it.

(c) it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it.

Secondly, as HAIL land, the NESCS will apply if one or more of the regulated activities in sub-clauses (2) – (6) of regulation 5 is to take place. Given the proposed use of the site, the applicable activity that could apply is sub clauses (4).

(4) An activity is disturbing the soil of the piece of land, which—

(a) means disturbing the soil of the piece of land for a particular purpose:

(b) does not include disturbing the soil of the piece of land, whatever the purpose, if the land is land to which regulation 33(9) or 36 of the Resource Management (National Environmental Standard for Electricity Transmission Activities) Regulations 2009 applies.

Maintenance of the transmission pylon falls under the Resource Management (*National Environmental Standard for Electricity Transmission Activitie*s) Regulations. As such, the NESCS does not apply to soil disturbance associated with transmission maintenance within the vicinity of the current transmission pylon. In addition, no soil disturbance is proposed in the vicinity of the pylon as part of the development of the OBDA.

The results of the intrusive investigation indicate zinc concentrations in the delineated, immediate surrounds of the degraded metal may pose a risk to the environment and as such meet the threshold for HAIL category I.

As such, it is considered that in relation to soil disturbance, the HAIL 'piece of land' as described by the NESCS, pertains to a minimum 2 m radius area surrounding the metal and machinery and a 3 m radius around SS08[6].

The remainder of the OBDA footprint has been characterised and does not meet the definition of HAIL land.

Accordingly, the proposed activity is classified as a controlled activity under the NESCS.

16.2 GWRC NRP

The GWRC NRP has three rules relating to contaminated land. An assessment of the relevant rules is shown below.

- R81: The production of this DSI report is a permitted activity provided the report is submitted to GWRC within two months following the completion of the investigation.
- R82: The results of the DSI indicate that elevated zinc concentrations are present at the site at a quantity that may pose a risk to the environment.

[6] Noting that only one transect from each hotspot has been undertaken and additional sampling will be undertaken during the remedial work to determine the hotspot extent.

- R83: As results of the investigation do not comply with R82, the proposed development is considered a discretionary activity under rule R83. The discretionary status relates only to disturbance and remediation of the minimum 2 m radius areas surrounding the metal and machinery and 3 m surrounding SS08. General OBDA earthworks outside of these delineated areas will be managed through standard earthworks controls, RAP implementation, and an unexpected discovery protocol.

17.0 Soil Management and Disposal Assessment

It is understood that onsite topsoil is to be stripped during enabling works prior to the commencement of each stage of development, during the construction of the haulage road and during Stage 1 of the OBDA, stockpiled and reused on site during the construction of the OBDA.

The majority of the sampled soils are considered suitable for reuse onsite under a commercial/industrial land use scenario. However, soils impacted by the metal sheeting and machinery, within a lateral extent of approximately 2 m, and 3 m at SS08, and to a minimum depth of up to 0.5 m bgl, will require offsite disposal due to elevated zinc concentrations that may present an environmental risk[6].

To assess soil disposal options, laboratory results have been compared to WAC for Class A landfills (MfE, 2004).

Several samples representative of soil to be disposed of offsite exceeded the Class A WAC for lead and zinc. Subsequent toxicity characteristic leaching procedure (TCLP) analysis on samples SS03_0.5 and SS5_0.5 returned lead and zinc leachate concentrations below the MfE Class A leachate criteria. Extrapolation of the TCLP results indicates that soils from other sampling locations, which were not subject to TCLP analysis, would also fall well within the Class A landfill leachate criteria. Subsequently, all sampled material requiring offsite disposal may be disposed of a Class A landfill pending approval from the receiving facility.

18.0 Conclusions

PDP have been engaged by Winstone to undertake a PSI/DSI for the proposed OBDA at Belmont Quarry. The report has been produced in support of Winstone's substantive aspect of the Belmont Quarry Development Fast-Track FAA.

Key findings of this investigation are summarised as follows:

- A review of historical information indicates that the site was historically used for farming purposes, with two small buildings present between 1942 and 1966, followed by progressive revegetation. A transmission pylon has been present on the northern part of the site since at least 1957.
- A site walkover identified discarded, degrading sheet metal and abandoned farm machinery at several locations and as such an intrusive investigation was undertaken to assess potential impacts of leaching of heavy metals and the presence of asbestos in the shallow surface soils. The intrusive investigation identified the following:
  - Laboratory results indicate that arsenic, chromium, copper and nickel concentrations across the site are generally consistently low.
  - Comparatively elevated zinc and occasionally cadmium concentrations (above the waste acceptance criteria for Class 3 landfills which have been used as proxy to assess environmental risk) were identified in shallow surface soils in isolated areas in the vicinity of exposed metal sheeting, roof structures and machinery. Sampling to date identified zinc and cadmium concentrations generally decrease with depth and lateral spread, indicating likely limited migration.

- Asbestos was not detected in any soil or bulk material samples analysed.
- All soil samples complied with applicable human health soil contaminant standards for commercial/industrial land use, and as such soils are not considered to pose an unacceptable risk to human health, including for short-term exposure of OBDA workers.
- The results of the intrusive investigation indicate zinc concentrations in the delineated, immediate surrounds of the degraded metal may pose a risk to the ephemeral streams onsite if not managed and as such meet the threshold for HAIL category I. As such, it is considered that in relation to soil disturbance, the HAIL 'piece of land' as described by the NESCS, pertains to a minimum 2 m radius area surrounding the metal and machinery and a minimum 3 m radius at SS08. This soil will require offsite disposal at a Class A landfill. Additional delineation sampling will be required during remedial excavation work at the site to confirm the extent of the "hotspot" areas. Additional sampling will be completed during remedial works in the vicinity of the secondary piece of machinery that was unable to be sampled during the PSI/DSI. The results will be used to determine contaminant concentrations and guide the appropriate remedial management of any identified contamination.
- The identified contamination is limited to discrete, localised hotspot areas associated with the degraded metal and machinery, with no potential HAIL activities identified across the remainder of the site. Provided the recommended remediation is undertaken, the residual risk to the receiving environment will be appropriately managed, and as such the site is considered suitable for its proposed use as an OBDA.

19.0 References

Clough & Associates Ltd, 2026. *Wellington Belmont Quarry, Proposed OBDA: Archaeological Assessment.* Prepared for Winstone Aggregates A Division of Fletcher Concrete and Infrastructure Ltd.

GWRC, 2023. *Natural Resources Plan for the Wellington Region*.

MfE, 2004. *Hazardous Waste Guidelines Landfill Waste Acceptance Criteria and Landfill Classification.* Ministry for the Environment, Wellington

MfE, 2011a. *Contaminated Land Management Guidelines No. 2 – Hierarchy and Application in New Zealand of Environmental Guideline Values*. Ministry for the Environment, Wellington.

MfE, 2011b. *Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health.* Ministry for the Environment, Wellington.

MfE, 2011c. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Ministry for the Environment, Wellington.

MfE, 2021a. *Contaminated Land Management Guidelines No. 1 – Guidelines for Reporting on Contaminated Sites in New Zealand revised 2021.* Ministry for the Environment, Wellington.

MfE, 2021b. *Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils revised 2021.* Ministry for the Environment, Wellington.

NEPM, 2013. *Australian National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013*.

PDP, 2026. *Remedial Action Plan – Proposed Overburden Disposal Area*.

WasteMINZ, 2023. Technical Guidelines for Disposal to Land – *Waste Management Institute New Zealand: Revision 3.1*.

20.0 Limitations

This report has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Winstone Aggregates Limited (Winstone) and others not directly contracted by PDP for the work, including Hutt City Council, Greater Wellington Regional Council and Retrolens. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the report. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This assessment is limited to collection and analysis of soil samples from discrete sampling locations. Interpretations of subsurface conditions, including contaminant concentrations, are not guaranteed at distance away from the specific points of sampling.

The laboratory test results provide an approximation of the concentration of the tested analytes and are subject to the inherent limitations of the laboratory techniques used for the tests.

The information contained within this document applies to sampling undertaken on the dates stated in this document, or if none is stated, the date of this document. With time, the site conditions and environmental standards may change. Accordingly, the reported assessment and conclusions are not guaranteed to apply at a later date.

This report has been prepared by PDP on the specific instructions of Winstone Aggregates Limited a division of Fletcher Concrete and Infrastructure Ltd for the limited purposes described in the report. PDP acknowledges that this report may be used and relied upon by the expert panel appointed under the Fast-track Approvals Act 2024. PDP accepts no liability if the report is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk. This report has been prepared in accordance with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court's Practice Note 2023. The authors of this report agree to comply with the Code of Conduct, and confirm that unless otherwise stated, the issues addressed in this report are within the area of expertise of the authors. No material facts have been omitted that might alter or detracted from the opinions expressed in this report.

Yours faithfully

PATTLE DELAMORE PARTNERS LIMITED

Prepared by

Jess Campbell

Senior Environmental Scientist

Reviewed by

Melody Robyns

Service Leader – Contaminated Land

Approved by

Hamish Wilson

Technical Director – Contaminated Land

Appendix A: Certifying Statement

I, Hamish Wilson, of Pattle Delamore Partners certify that this preliminary/detailed site investigation meets the requirements of the Resource Management (*National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*) Regulations 2011 (the NES-CS) because it has been:

a. Completed by a suitably qualified and experienced practitioner;

b. Reported on in accordance with the current edition of *Contaminated land management guidelines No. 1 – Reporting on contaminated sites in New Zealand*; and

c. Certified by a suitably qualified and experienced practitioner.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner(s) who have done this investigation and certified this report is provided below.

This certification applies to the date of this report.

Signed,

Hamish Wilson

Technical Director – Contaminated Land

Hamish Wilson – Project Director

Hamish is an environmental engineer with over 26 years of experience in undertaking environmental and contaminated land assessments. Hamish has a BE in Civil and Resource Engineering from the University of Auckland. Hamish has experience with undertaking and managing site investigations, environmental assessments, and monitoring programmes for a range of environmental issues, across a broad range of media including soil, sediment, surface water, groundwater, and ground gas; and for a wide range of contaminants including heavy metals, petroleum hydrocarbons, and asbestos. Hamish has experience in the assessment of data (including statistical analysis) to undertake risk assessments, including Tier 2 risk assessments. He has familiarity with and understanding of the current contaminated land regulation and practice in New Zealand including assessments against the NES-CS; and in the consenting of contaminated sites.

Melody Robyns – Project Manager and PSI Report Reviewer

Melody is an Environmental Scientist with a Master of Science in Physical Geography. Melody has a background in environmental site investigations and contaminated land assessments. She is an experienced project manager with over 10 years' experience and is competent in risk identification, mitigation and problem solving. Her involvement in projects includes project management, technical input, risk assessments and liaison with stakeholders.

Jess Campbell – Author

Jess is an Environmental Geologist with over 6 years' experience in undertaking contaminated land assessments across New Zealand and the UK. She has a MESci in Geology and Physical Geography from the University of Liverpool. Jess has practical experience in undertaking and managing investigations and ongoing monitoring of soil and groundwater for industrial, commercial and residential land development projects. Jess has experience in the interpretation and implementation of the NES-CS, project management, risk assessments and liaison with stakeholders.

Appendix B: Figure 1 – Site Location Plan

N

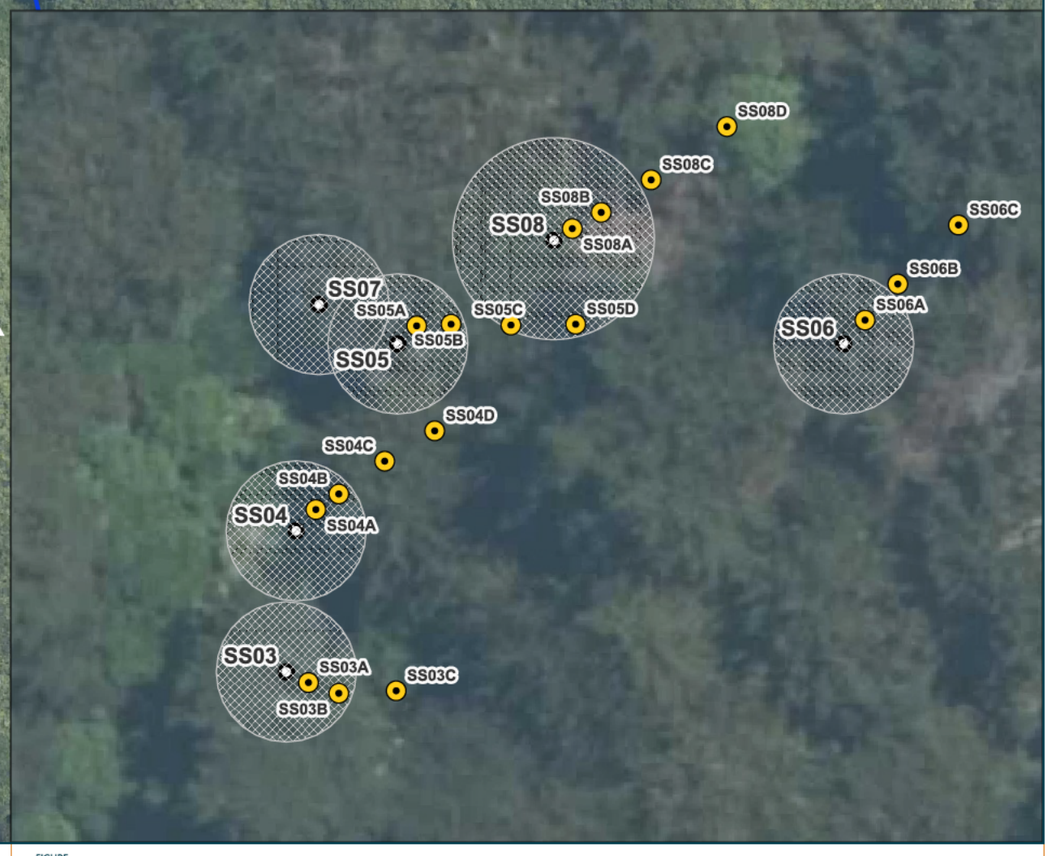
SITE AREA

METAL SHEETING AND HISTORICAL DWELLING

ABANDONED MACHINERY

METAL SHEETING

ROOFING TILES (SS01)



KEY:

- SITE BOUNDARY
- INDICATIVE REMEDIAL AREA
- SOIL SAMPLE LOCATION
- DELINEATION SAMPLE LOCATION

STREAMS

- PERENNIAL
- INTERMITENT
- EPHEMERAL

0 50 100 m

SCALE 1:3,000 (A3)

NO.	REVISION	DATE	BY
C	ISSUE 3	JUN 26	NM
B	ISSUE 2	MAY 26	NM
A	ISSUE 1	MAR 26	ZHD

SOURCE:

1. AERIAL IMAGERY (FLOWN 2025) SOURCED FROM THE LINZ DATA SERVICE.
2. INSET MAP DERIVED FROM THE LINZ DATA.
3. SPATIAL FEATURES INDICATIVE AND MAY NOT BE SPATIALLY ACCURATE.

CLIENT

WINSTONE AGGREGATES

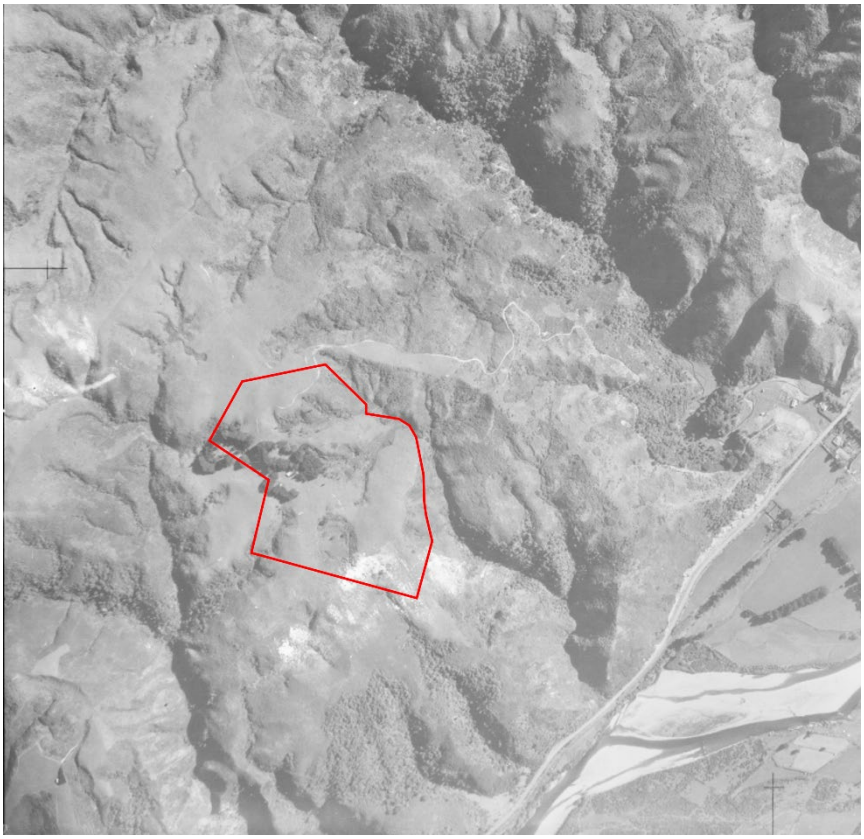
FIGURE

FIGURE 1: SITE LOCATION AND SAMPLING PLAN

PROJECT

A035680020: PRELIMINARY/DETAILED SITE INVESTIGATION - BELMONT QUARRY - PROPOSED OVERBURDEN DISPOSAL AREA

Appendix C: Historical Aerial Photographs



Historical Aerial Photograph 1: 1942 (Retrolens)

Historical Aerial Photograph 2: 1957 (Retrolens)

Historical Aerial Photograph 3: 1966 (Retrolens)

Historical Aerial Photograph 4: 1984 (Retrolens)

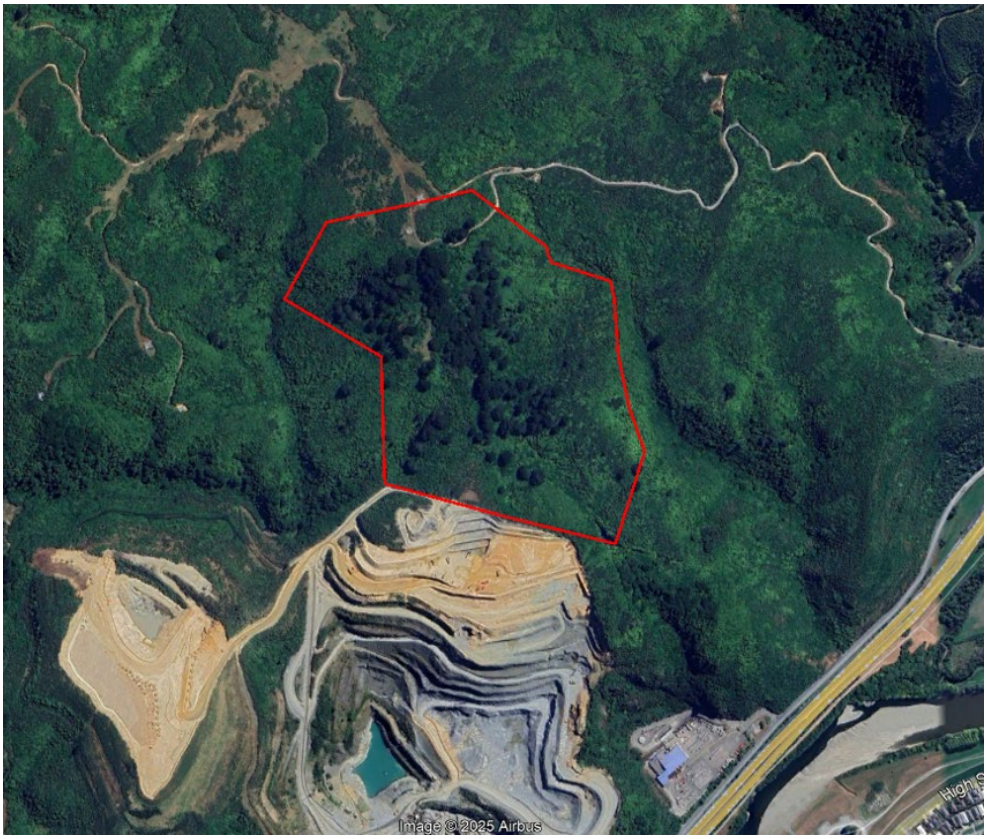
Historical Aerial Photograph 5: 2000 (Retrolens)

Historical Aerial Photograph 6: 2004 (Google Earth Pro)

Historical Aerial Photograph 7: 2009 (Google Earth Pro)

Historical Aerial Photograph 8: 2013 (Google Earth Pro)

Historical Aerial Photograph 9: 2019 (Google Earth Pro)



Historical Aerial Photograph 10: 2024 (Google Earth Pro)

Appendix D: Site Walkover Photographs

Photograph 1: View of onsite pylons, looking north.

Photograph 2: General overview of cleared area.

Photograph 3: General overview of shorter vegetation, looking south.

Photograph 4: General overview of dense vegetation, looking southwest.

Photograph 5: General overview of dense bush looking southeast.

Photograph 6: Access track to the north of the site, looking north.

Photograph 7: Photo of potential asbestos at SS01.

Photograph 8: Example of metal sheeting at SS03 and SS04.

Photograph 9: Roof structure at former dwelling (SS05).

Photograph 10: Example of abandoned machinery at SS06.

Photograph 11: General overview of lithology encountered.

Photograph 12: General overview of lithology encountered.

Appendix E: Analytical Tables

Table 4: Soil Analytical Results - Heavy Metals [1] - Commercial/Industrial LAND USE [2]

Sample Name	SS03_0.0	SS03_0.3	SS03_0.5	SS04_0.0	SS04_0.3	SS05_0.0	SS05_0.3	SS06_0.0	SS06_0.3	SS07_0.0	SS07_0.3	SS07_0.5	NES SCSs & SGVs [3]	WasteMINZ WAC [5]	
Laboratory Reference	4104589.5	4104589.6	4121793.1	4104589.7	4104589.8	4104589.9	4104589.10	4104589.11	4104589.12	4121793.43	4121793.44	4121793.45			
Date Sampled	18 Feb 2026		4 Mar 2026	18 Feb 2026						4 Mar 2026					
Property Address	Belmont Regional Park														
Sample Location	SS03	SS03	SS03	SS04	SS04	SS05	SS05	SS06	SS06	SS07	SS07	SS07	Commercial / industrial	Class A	Class 3
Contaminant Source	Discarded metal sheeting														
Sample Depth (meters below ground level)	0.0	0.3	0.5	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.5			
Heavy Metals															
Arsenic	< 4	3	4	3	2	< 4	4	4	6	2	3	3	70	100	140
Cadmium	9.1	1.5	3.5	1.73	0.13	2.2	0.47	0.43	< 0.10	1.85	2.4	0.24	1,300	20	10
Chromium	5	13	16	13	14	11	16	13	17	11	13	13	6,300 [3a]	100	150
Copper	43	29	35	14	5	15	15	17	10	10	16	6	>10,000	100	280
Lead	**191**	59	**350**	46	13.5	**151**	45	**108**	29	74	**113**	33	3,300 [3b]	100	460
Nickel	15	11	18	7	7	8	9	8	9	9	16	7	6,000 [4]	200	320
Zinc	**4,100**	**820**	**1,520**	**1,040**	101	**1,170**	**240**	100	61	**890**	**1,030**	**230**	400,000 [4]	200	1,200
TCLP															
Cadmium	0.0134	-	-	-	-	0.0026	-	-	-	-	-	-	-	1	-
Lead	0.032	-	-	-	-	0.0143	-	-	-	-	-	-		5	
Zinc	5.3	-	-	-	-	0.99	-	-	-	-	-	-		10	

100	Result exceeds Class A landfill Waste Acceptance Criteria
100	Result exceeds Class 3 Waste Acceptance Criteria
-	Parameter not tested / Guideline value not available

Notes.

1. Results in mg/kg.
2. Based on proposed future commercial/industrial land-use.
3. NES Soil Contaminant Standards (SCSs) from 'Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health' (MfE, 2011) - Commercial/industrial values adopted.

3a. SCS value is for chromium VI.

3b. SCS value is for inorganic lead.

4. Guideline values from 'Schedule B(1) Guideline on Investigation Levels for Soils and Groundwater National Environment Protection Measure' (NEPM), updated May, 2013 - Commercial/industrial values adopted.
5. Waste Acceptance Criteria (WAC) from Waste Management Institute New Zealand (WasteMINZ) 'Technical Guidelines for Disposal to Land, Revision 3.1' (WasteMINZ, 2023). Refer to references therein.

Table 5: Soil Analytical Results for Delineation - Heavy Metals [1] - Commercial/Industrial LAND USE [2]

Sample Name	SS03a_0.05	SS03a_0.3	SS03b_0.05	SS03c_0.05	SS04a_0.05	SS04a_0.3	SS04b_0.05	SS04c_0.05	SS05a_0.05	SS05a_0.3	NES SCSs & SGVs [3]	WasteMINZ WAC [5]	
Laboratory Reference	4121793.2	4121793.3	4121793.5	4121793.8	4121793.11	4121793.12	4121793.14	4121793.17	4121793.23	4121793.24			
Date Sampled	4 Mar 2026												
Property Address	Belmont Regional Park												
Contaminant Source	Discarded metal sheeting								Historical dwelling		Commercial / industrial	Class A	Class 3
Distance from orginal sample location (m)	1		2	5	1		2	5	1				
Sample Depth (meters below ground level)	0.05	0.3	0.05	0.05	0.05	0.3	0.05	0.05	0.05	0.3			
Heavy Metals													
Arsenic	3	2	4	3	3	3	2	3	5	5	70	100	140
Cadmium	1.01	0.27	0.86	0.33	0.54	0.22	0.26	0.2	0.46	0.41	1,300	20	10
Chromium	14	13	74	13	12	13	14	13	19	19	6,300 [3a]	100	150
Copper	43	12	24	29	9	8	8	8	13	13	>10,000	100	280
Lead	**230**	41	**220**	46	23	16.9	19.0	22	**210**	**370**	3,300 [3b]	100	460
Nickel	10	7	42	7	7	6	7	6	11	11	6,000 [4]	200	320
Zinc	**480**	182	**350**	150	**340**	162	180	107	**270**	**230**	400,000 [4]	200	1,200

Sample Name	SS05b_0.05	SS05c_0.05	SS06a_0.05	SS06a_0.3	SS06b_0.05	SS06c_0.05	SS08a_0.05	SS08a_0.3	SS08b_0.05	SS08c_0.05	NES SCSs & SGVs [3]	WasteMINZ WAC [6]	
Laboratory Reference	4121793.26	4121793.29	4121793.35	4121793.36	4121793.38	4121793.41	4121793.46	4121793.47	4121793.49	4121793.52			
Date Sampled	4 Mar 2026												
Property Address	Belmont Regional Park												
Source	Historical dwelling		Abandoned machinery				Discarded metal sheeting near dwelling				Commercial / industrial	Class A	Class 3
Distance from orginal sample location (m)	2	5	1		2	5	1		2	5			
Sample Depth (meters below ground level)	0.05	0.05	0.05	0.3	0.05	0.05	0.05	0.3	0.05	0.05			
Heavy Metals													
Arsenic	5	3	3	3	3	5	3	2	2	3	70	100	140
Cadmium	0.59	0.15	0.28	0.11	0.25	0.27	2.3	0.53	1.32	0.24	1,300	20	10
Chromium	17	15	16	17	15	21	11	13	11	13	6,300 [3a]	100	150
Copper	14	9	43	24	21	11	18	7	8	6	>10,000	100	280
Lead	64	77	46	26	30	29	25	16.4	24	33	3,300 [3b]	100	460
Nickel	10	9	9	9	10	11	7	7	6	7	6,000 [4]	200	320
Zinc	**270**	91	81	59	71	177	**1,570**	**410**	**1,210**	**230**	400,000 [4]	200	1,200

100	Result exceeds Class A landfill Waste Acceptance Criteria
100	Result exceeds Class 3 Waste Acceptance Criteria
-	Parameter not tested / Guideline value not available

Notes.

1. Results in mg/kg.
2. Based on proposed future commercial/industrial land-use.
3. NES Soil Contaminant Standards (SCSs) from 'Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health' (MfE, 2011) - Commercial/industrial values adopted.

3a. SCS value is for chromium VI.

3b. SCS value is for inorganic lead.

4. Guideline values from 'Schedule B(1) Guideline on Investigation Levels for Soils and Groundwater National Environment Protection Measure' (NEPM), updated May, 2013 - Commercial/industrial values adopted.
5. Waste Acceptance Criteria (WAC) from Waste Management Institute New Zealand (WasteMINZ) 'Technical Guidelines for Disposal to Land, Revision 3.1' (WasteMINZ, 2023). Refer to references therein.

Appendix F: Lab Results and Chain of Custody

Request for Analyses

PATTLE DELAMORE PARTNERS LTD

410 4589

Received by: Mary Tipactipac

From: Pattle Delamore Partners Ltd

To: HW 10-4

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill

Quote No.:

Submitted by: J Campbell Ph No.: 021653069

PDP Job No.: ~~AE~~ 103568 00020

Chain of Custody Record

Sent:

Name: J Campbell

Signature: Jde

Date and time: 18/2/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Analyses via email

Results to: ☐ lab.samples@pdp.co.nz

☒ Email submitter: jess.campbell @pdp.co.nz

☒ Email other: melody.moyns @pdp.co.nz

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS01_0.0	18/2		S	Hold Cold	
SS01_0.3					
SS02_0.0					
SS02_0.3					
SS03_0.0					
SS03_0.3					
SS04_0.0					
SS04_0.3					
SS05_0.0					
SS05_0.3					
SS06_0.0					
SS06_0.3					

Sample type: S Soil; GW Groundwater; SAL Saline; FW Freshwater; GEO Geothermal; SW Stormwater; SED Sediment; BIO Biota; WW Wastewater; P Potable; O Other:

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

PDP Auckland Tel: +64 9 523 6900
PDP Hamilton Tel: +64 7 949 7880
PDP Tauranga Tel: +64 7 985 6440
PDP Wellington Tel: +64 4 471 4130
PDP Christchurch Tel: +64 3 345 7100
PDP Invercargill Tel: +64 3 422 1690

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

0508 HILL LAB (44 555 22)
+64 7 858 2000
mail@hill-labs.co.nz
www.**hill-labs**.co.nz

Job Information Summary

Client:	Pattle Delamore Partners Limited	**Lab No:**	4104589
Contact:	Melody Robyns	**Date Registered:**	19-Feb-2026 5:00 pm
	C/- Pattle Delamore Partners Limited	**Priority:**	High
	PO Box 6136	**Quote No:**	81087
	Wellington 6141	**Order No:**	
		Client Reference:	A035680020
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	10-Mar-2026 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	SS01_0.0 18-Feb-2026	Soil	GSoil300, GSoil300	Hold Cold
2	SS01_0.3 18-Feb-2026	Soil	GSoil300, GSoil300	Hold Cold
3	SS02_0.0 18-Feb-2026	Soil	GSoil300, GSoil300	Hold Cold
4	SS02_0.3 18-Feb-2026	Soil	GSoil300, GSoil300	Hold Cold
5	SS03_0.0 18-Feb-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, TCLP Profile
6	SS03_0.3 18-Feb-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
7	SS04_0.0 18-Feb-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
8	SS04 0 3 18 Feb 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
9	SS05 0 0 18 Feb 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, TCLP Profile
10	SS05 0 3 18 Feb 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
11	SS06 0 0 18 Feb 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
12	SS06 0 3 18 Feb 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
13	SS03 0 0 [TCLP Extract]	TCLP Extract	TCLPext	Total Lead, Total Zinc
14	SS05 0 0 [TCLP Extract]	TCLP Extract	TCLPext	Total Lead, Total Zinc

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Environmental Solids Sample Drying	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	5 12
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	5-12
TCLP Profile	Extraction at 30 +/- 2 rpm for 18 +/- 2 hours, (Ratio 1g sample : 20g extraction fluid). US EPA 1311.	-	5, 9
TCLP Profile			
TCLP Weight of Sample Taken	Gravimetric. US EPA 1311.	0.1 g	5, 9
TCLP Initial Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Acid Adjusted Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Extractant Type	US EPA 1311.	-	5, 9
TCLP Extraction Fluid pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Post Extraction Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
Total Digestion of Extracted Samples	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	13-14
Total Lead	Nitric acid digestion, ICP-MS, screen level. APHA 3125 B : Online Edition.	0.0021 g/m^3	13 14
Total Zinc	Nitric acid digestion, ICP-MS, screen level. APHA 3125 B : Online Edition.	0.053 g/m^3	13 14

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Private Bag 3205
Hamilton 3240 New Zealand

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mail@hill-labs.co.nz
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Certificate of Analysis

Client:	Pattle Delamore Partners Limited	**Lab No:**	4104589 SPv4	
Contact:	Melody Robyns	**Date Received:**	19-Feb-2026	
	C/- Pattle Delamore Partners Limited	**Date Reported:**	11-Mar-2026	**(Amended)**
	PO Box 6136	**Quote No:**	81087	
	Wellington 6141	**Order No:**		
		Client Reference:	A035680020	
		Submitted By:	Jessica Campbell	

Sample Type: Soil

Sample Name:		SS03_0.0 18-Feb-2026	SS03_0.3 18-Feb-2026	SS04_0.0 18-Feb-2026	SS04_0.3 18-Feb-2026	SS05_0.0 18-Feb-2026
Lab Number:		4104589.5	4104589.6	4104589.7	4104589.8	4104589.9
Individual Tests						
TCLP Weight of Sample Taken	g	50	-	-	-	50
TCLP Initial Sample pH	pH Units	7.0	-	-	-	7.3
TCLP Acid Adjusted Sample pH	pH Units	1.6	-	-	-	1.7
TCLP Extractant Type*		NaOH/Acetic acid at pH 4.93 +/- 0.05	-	-	-	NaOH/Acetic acid at pH 4.93 +/- 0.05
TCLP Extraction Fluid pH	pH Units	4.9	-	-	-	4.9
TCLP Post Extraction Sample pH	pH Units	5.0	-	-	-	5.0
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 4	3	3	2	< 4
Total Recoverable Cadmium	mg/kg dry wt	9.1	1.50	1.73	0.13	2.2
Total Recoverable Chromium	mg/kg dry wt	5	13	13	14	11
Total Recoverable Copper	mg/kg dry wt	43	29	14	5	15
Total Recoverable Lead	mg/kg dry wt	191	59	46	13.5	151
Total Recoverable Nickel	mg/kg dry wt	15	11	7	7	8
Total Recoverable Zinc	mg/kg dry wt	4,100	820	1,040	101	1,170

Sample Name:		SS05_0.3 18-Feb-2026	SS06_0.0 18-Feb-2026	SS06_0.3 18-Feb-2026
Lab Number:		4104589.10	4104589.11	4104589.12
Heavy Metals, Screen Level				
Total Recoverable Arsenic	mg/kg dry wt	4	4	6
Total Recoverable Cadmium	mg/kg dry wt	0.47	0.43	< 0.10
Total Recoverable Chromium	mg/kg dry wt	16	13	17
Total Recoverable Copper	mg/kg dry wt	15	17	10
Total Recoverable Lead	mg/kg dry wt	45	108	29
Total Recoverable Nickel	mg/kg dry wt	9	8	9
Total Recoverable Zinc	mg/kg dry wt	240	100	61

Sample Type: Aqueous

Sample Name:		SS03_0.0 [TCLP Extract]	SS05_0.0 [TCLP Extract]
Lab Number:		4104589.13	4104589.14
Individual Tests			
Total Cadmium	g/m³	0.0134	0.0026
Total Lead	g/m³	0.032	0.0143
Total Zinc	g/m³	5.3	0.99

Analyst's Comments

Amended Report: This certificate of analysis replaces report '4104589-SPv3' issued on 10-Mar-2026 at 10:57 am.
Reason for amendment: Additional analysis added at clients request.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	5-12
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	5-12
TCLP Profile*	Extraction at 30 +/- 2 rpm for 18 +/- 2 hours, (Ratio 1g sample : 20g extraction fluid). US EPA 1311.	-	5, 9
TCLP Profile			
TCLP Weight of Sample Taken	Gravimetric. US EPA 1311.	0.1 g	5, 9
TCLP Initial Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Acid Adjusted Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Extractant Type*	US EPA 1311.	-	5, 9
TCLP Extraction Fluid pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9
TCLP Post Extraction Sample pH	pH meter. US EPA 1311.	0.1 pH Units	5, 9

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
Total Digestion of Extracted Samples*	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	13-14
Total Cadmium	Nitric acid digestion, ICP-MS, screen level. APHA 3125 B : Online Edition.	0.0011 g/m^3	13-14
Total Lead	Nitric acid digestion, ICP-MS, screen level. APHA 3125 B : Online Edition.	0.0021 g/m^3	13-14
Total Zinc	Nitric acid digestion, ICP-MS, screen level. APHA 3125 B : Online Edition.	0.053 g/m^3	13-14

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 20-Feb-2026 and 11-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

Kim Harrison MSc
Client Services Manager - Environmental

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1/17 Print Place
Middleton
Christchurch 8024 New Zealand

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www.hill-labs.co.nz

Certificate of Analysis

Client:	Pattle Delamore Partners Limited	**Lab No:**	4105834	A2Pv1
Contact:	Melody Robyns	**Date Received:**	19-Feb-2026	
	C/- Pattle Delamore Partners Limited	**Date Reported:**	26-Feb-2026	
	PO Box 6136	**Quote No:**	81087	
	Wellington 6141	**Order No:**		
		Client Reference:	A035680020	
		Submitted By:	Jessica Campbell	

Sample Type: Soil

		Sample Name:	SS04_0.0 18-Feb-2026	SS05_0.0 18-Feb-2026
		Lab Number:	4105834.6	4105834.8
Asbestos Presence / Absence			Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form			-	-
Asbestos in ACM as % of Total Sample*	% w/w		< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w		< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w		< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w		< 0.001	< 0.001
As Received Weight	g		417.7	232.8
Dry Weight	g		261.6	81.6
Moisture*	%		37	65
Sample Fraction >10mm	g dry wt		0.5	2.6
Sample Fraction <10mm to >2mm	g dry wt		121.5	13.8
Sample Fraction <2mm	g dry wt		138.3	65.0
<2mm Subsample Weight	g dry wt		50.2	51.2
Weight of Asbestos in ACM (Non-Friable)	g dry wt		< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt		< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt		< 0.00001	< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Please refer to the BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.
https://www.branz.co.nz/asbestos

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	6, 8
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	6, 8
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	6, 8
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	6, 8
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	6, 8
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	6, 8
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	6, 8
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	6, 8
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	6, 8
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	6, 8
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	6, 8
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	6, 8
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	6, 8
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	6, 8
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	6, 8

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 26-Feb-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

John Keneth Paglingayen BApSc
Laboratory Technician - Asbestos

pdp
PATTLE DELAMORE PARTNERS LTD

Request for Analyses

Job No: 410 5838
Date Recv: 19-Feb-26 17:14
Received by: Darryl Brown

From: Pattle Delamore Partners Ltd

To: HW

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill

Quote No.:

Submitted by: J Campbell

Ph No.: [redacted]

PDP Job No.: ~~A~~10356800 20

Chain of Custody Record

Sent:

Name: J Campbell

Signature: [redacted]

Date and time: 18/2/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Analyses via email

Results to: ☐ lab.samples@pdp.[redacted]
☒ Email submitter: [redacted]
☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS01_0.0	18/2		S	Hold Cold	
SS01_0.3					
SS02_0.0					
SS02_0.3					
SS03_0.0					
SS03_0.3					
SS04-0.0					
SS04-0.3					
SS05_0.0					
SS05_0.3					
SS06_0.0					
SS06_0.3					

Sample type: S Soil; GW Groundwater; SAL Saline; FW Freshwater; GEO Geothermal; SW Stormwater; SED Sediment; BIO Biota; WW Wastewater; P Potable; O Other:

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Private Bag 3205
Hamilton 3240 New Zealand

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www.**hill-labs**.co.nz

Job Information Summary

Client:	Pattle Delamore Partners Limited	**Lab No:**	4105838
Contact:	Melody Robyns	**Date Registered:**	19-Feb-2026 5:15 pm
	C/- Pattle Delamore Partners Limited	**Priority:**	High
	PO Box 6136	**Quote No:**	81087
	Wellington 6141	**Order No:**	
		Client Reference:	A035680020
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date*:	25-Feb-2026 4:30 pm

* As the samples require analysis at a Hill Labs location that is different to where they were received, the Target Date for reporting has been extended

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	SS01 Bulk 18 Feb 2026	Building Material	cpBag	Asbestos in Bulk Material

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	-	1
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	0.01 g	1
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1

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Level 3, 204 Thorndon Quay
Pipitea
Wellington 6011 New Zealand

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+64 7 858 2000
mail@hill-labs.co.nz
www.hill-labs.co.nz

Certificate of Analysis

Client:	Pattle Delamore Partners Limited	**Lab No:**	4105838	A2Pv1
Contact:	Melody Robyns	**Date Received:**	19-Feb-2026	
	C/- Pattle Delamore Partners Limited	**Date Reported:**	25-Feb-2026	
	PO Box 6136	**Quote No:**	81087	
	Wellington 6141	**Order No:**		
		Client Reference:	A035680020	
		Submitted By:	Jessica Campbell	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category*	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
SS01 Bulk 18-Feb-2026	4105838.1	Paper	166.77	Asbestos NOT detected. Organic fibres detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Analyst's Comments

Due to excessive sample size a representative sub sample was prepared from the original sample for laboratory testing.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material

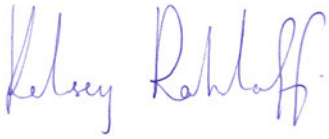
Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category*	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	-	1
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	0.01 g	1
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 24-Feb-2026 and 25-Feb-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Kelsey Rohloff BSc
Laboratory Technician - Asbestos

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.: _____

Submitted by: J Campbell Ph No.: _____ PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signatu [redacted]

Date and time: _____

Received: ☐ Room temp. ☐ Chilled Temp.: ____°C ☐ Frozen

Name: _____

Signature: _____

Date and time: _____

Additional Information

Results to: ☐ lab.samples@pdp.co.nz ☒ Email submitter: [redacted] ☐ Email other: _____

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ____ / ____ / ____

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS03a_0.05	3/3/26		S		
SS03a_0.3					
SS03a_0.5					
SS03b_0.05					
SS03b_0.3					
SS03b_0.5					
SS03c_0.05					
SS03c_0.3					
SS03c_0.5					
SS03_0.5					
SS07_0.05					
SS07_0.3					
SS07_0.5					
SS08a_0.05					
SS08a_0.3					
SS08a 0.5					
SS08b 0.05					
SS08b 0.3					
SS08b 0.5					
SS08c 0.3					
SS08d_0.5					
SS08A					

Sa 12.1

W Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

O Biota WW Wastewater P Potable O Other: _____

3141217931

Received by: Nathaniel Sue

Note: Samples may contain dangerous or hazardous substances

Page ___ of ___

Job No: 412 1793 Date Recv: 06-Mar-26 06:25

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: J Campbell Ph No [redacted] PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signature: [redacted]

Date and time: 3/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Asbestos samples

Results to: ☐ lab.samples@pdp.co ☒ Email submitter: [redacted] ☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS03a_0.05	3/3/26		S		
SS03b_0.05					
SS03c_0.05					
SS04a_0.05					
SS04b_0.05					
SS04c_0.05					
SS04d_0.05					
SS07_0.05					
SS07_0.3					
SS08a_0.05					
SS08b_0.05					
SS08c_0.05					
SS08d_0.05					
SS06a_0.05					
SS06b_0.05					
SS06c_0.05					
SS05a_0.05					
SS05b_0.05					
SS05c_0.05					
SS05d_0.05					

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

Note: Samples may contain dangerous or hazardous substances

ton 949 7880 | PDP Tauranga Tel: +64 7 985 6440 | PDP Wellington Tel: +64 4 471 4130 | PDP Christchurch Tel: +64 3 345 7100 | PDP Invercargill Tel: +64 3 422 1690

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge ... of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Lab

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: J Campbell [redacted] PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signatu[redacted]

Date and time: 5/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Results to: ☐ lab.samples@pdp.[redacted]

☒ Email submitter:

☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS06a 0.05	5/3/26		S		
SS06a 0.3	"		"		
SS06a 0.5	"		"		
SS06b 0.05	"		"		
SS06b 0.3	"		"		
SS06b 0.5	"		"		
SS06c 0.05	"		"		
SS06c 0.3	"		"		
~~SS06c 0.5~~					

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

nz **Note: Samples may contain dangerous or hazardous substances** Page ___ of ___

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☑ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: Jess C Ph No [redacted] PDP Job No.: ~~WA~~035680020

Chain of Custody Record

Sent:

Name: Jess C

Signature:

Date and time: 3/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Results to: ☐ lab.samples@pdp.c[redacted] ☐ ~~Email submitter:~~ ☑ ~~Email other:~~ [redacted]

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS04_A_0.05	3/3/26		S	Hold Cold	
SS04_A_0.3					
SS04_A_0.5					
SS04_B_0.05					
SS04_B_0.3					
SS04_B_0.5					
SS04_C_0.05					
SS04_C_0.3					
SS04_C_0.5					
SS04_D_0.05					
SS04_D_0.3					
SS04_D_0.5					
~~SS03_A_0.05~~					
~~SS03~~					

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

.nz **Note: Samples may contain dangerous or hazardous substances** Page ___ of ___

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

0508 HILL LAB (44 555 22)
+64 7 858 2000
mail@hill-labs.co.nz
www.**hill-labs**.co.nz

Job Information Summary

Client:	Pattle Delamore Partners Limited	**Lab No:**	4121793
Contact:	Melody Robyns	**Date Registered:**	06-Mar-2026 2:03 pm
	C/- Pattle Delamore Partners Limited	**Priority:**	High
	PO Box 6136	**Quote No:**	81087
	Wellington 6141	**Order No:**	
		Client Reference:	A035680020
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	10-Mar-2026 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	SS03_0.5 03-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
2	SS03a_0.05 03-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
3	SS03a_0.3 03-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
4	SS03a_0.5 03-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
5	SS03b_0.05 03-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
6	SS03b_0.3 03-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
7	SS03b_0.5 03-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
8	SS03c 0 05 03 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
9	SS03c 0 3 03 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
10	SS03c 0 5 03 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
11	SS04a 0 05 03 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
12	SS04a 0 3 03 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
13	SS04a 0 5 03 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
14	SS04b 0 05 03 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
15	SS04b_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
16	SS04b_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
17	SS04c_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
18	SS04c_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
19	SS04c_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
20	SS04d_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
21	SS04d_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
22	SS04d_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
23	SS05a 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
24	SS05a 0 3 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
25	SS05a 0 5 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
26	SS05b 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
27	SS05b 0 3 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
28	SS05b 0 5 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
29	SS05c 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
30	SS05c_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
31	SS05c_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
32	SS05d_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
33	SS05d_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
34	SS05d_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
35	SS06a_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
36	SS06a_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
37	SS06a_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
38	SS06b_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
39	SS06b_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
40	SS06b_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
41	SS06c_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
42	SS06c 0 3 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
43	SS07 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
44	SS07 0 3 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
45	SS07 0 5 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
46	SS08a 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
47	SS08a 0 3 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
48	SS08a 0 5 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold
49	SS08b 0 05 04 Mar 2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
50	SS08b_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
51	SS08b_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
52	SS08c_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level
53	SS08c_0.45 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
54	SS08c_0.5 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
55	SS08d_0.05 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
56	SS08d_0.3 04-Mar-2026	Soil	GSoil300, GSoil300	Hold Cold
57	SS08d 0 5 04 Mar 2026	Soil	GSoil300, GSoil300	Hold Cold

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1 3, 5, 8, 11 12, 14, 17, 23-24, 26, 29, 35 36, 38, 41, 43-47, 49, 52
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1 3, 5, 8, 11 12, 14, 17, 23-24, 26, 29, 35 36, 38, 41, 43-47, 49, 52

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

0508 HILL LAB (44 555 22)
+64 7 858 2000
mail@hill-labs.co.nz
www.hill-labs.co.nz

Certificate of Analysis

Client:	Pattle Delamore Partners Limited	**Lab No:**	4121793 SPv3	
Contact:	Melody Robyns	**Date Received:**	06-Mar-2026	
	C/- Pattle Delamore Partners Limited	**Date Reported:**	17-Mar-2026	**(Amended)**
	PO Box 6136	**Quote No:**	81087	
	Wellington 6141	**Order No:**		
		Client Reference:	A035680020	
		Submitted By:	Jessica Campbell	

Sample Type: Soil

	Sample Name:	SS03_0.5 04-Mar-2026	SS03a_0.05 04-Mar-2026	SS03a_0.3 04-Mar-2026	SS03b_0.05 04-Mar-2026	SS03c_0.05 04-Mar-2026
	Lab Number:	4121793.1	4121793.2	4121793.3	4121793.5	4121793.8
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	3	2	4	3
Total Recoverable Cadmium	mg/kg dry wt	3.5	1.01	0.27	0.86	0.33
Total Recoverable Chromium	mg/kg dry wt	16	14	13	74	13
Total Recoverable Copper	mg/kg dry wt	35	43	12	24	29
Total Recoverable Lead	mg/kg dry wt	350	230	41	220	46
Total Recoverable Nickel	mg/kg dry wt	18	10	7	42	7
Total Recoverable Zinc	mg/kg dry wt	1,520	480	182	350	150

	Sample Name:	SS04a_0.05 04-Mar-2026	SS04a_0.3 04-Mar-2026	SS04b_0.05 04-Mar-2026	SS04c_0.05 04-Mar-2026	SS05a_0.05 04-Mar-2026
	Lab Number:	4121793.11	4121793.12	4121793.14	4121793.17	4121793.23
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	3	3	2	3	5
Total Recoverable Cadmium	mg/kg dry wt	0.54	0.22	0.26	0.20	0.46
Total Recoverable Chromium	mg/kg dry wt	12	13	14	13	19
Total Recoverable Copper	mg/kg dry wt	9	8	8	8	13
Total Recoverable Lead	mg/kg dry wt	23	16.9	19.0	22	210
Total Recoverable Nickel	mg/kg dry wt	7	6	7	6	11
Total Recoverable Zinc	mg/kg dry wt	340	162	180	107	270

	Sample Name:	SS05a_0.3 04-Mar-2026	SS05b_0.05 04-Mar-2026	SS05c_0.05 04-Mar-2026	SS06a_0.05 04-Mar-2026	SS06a_0.3 04-Mar-2026
	Lab Number:	4121793.24	4121793.26	4121793.29	4121793.35	4121793.36
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	5	5	3	3	3
Total Recoverable Cadmium	mg/kg dry wt	0.41	0.59	0.15	0.28	0.11
Total Recoverable Chromium	mg/kg dry wt	19	17	15	16	17
Total Recoverable Copper	mg/kg dry wt	13	14	9	43	24
Total Recoverable Lead	mg/kg dry wt	370	64	77	46	26
Total Recoverable Nickel	mg/kg dry wt	11	10	9	9	9
Total Recoverable Zinc	mg/kg dry wt	230	270	91	81	59

	Sample Name:	SS06b_0.05 04-Mar-2026	SS06c_0.05 04-Mar-2026	SS07_0.05 04-Mar-2026	SS07_0.3 04-Mar-2026	SS07_0.5 04-Mar-2026
	Lab Number:	4121793.38	4121793.41	4121793.43	4121793.44	4121793.45
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	3	5	2	3	3
Total Recoverable Cadmium	mg/kg dry wt	0.25	0.27	1.85	2.4	1.47
Total Recoverable Chromium	mg/kg dry wt	15	21	11	13	16
Total Recoverable Copper	mg/kg dry wt	21	11	10	16	14

Sample Type: Soil						
Sample Name:		SS06b_0.05 04-Mar-2026	SS06c_0.05 04-Mar-2026	SS07_0.05 04-Mar-2026	SS07_0.3 04-Mar-2026	SS07_0.5 04-Mar-2026
Lab Number:		4121793.38	4121793.41	4121793.43	4121793.44	4121793.45
Heavy Metals, Screen Level						
Total Recoverable Lead	mg/kg dry wt	30	29	74	113	72
Total Recoverable Nickel	mg/kg dry wt	10	11	9	16	17
Total Recoverable Zinc	mg/kg dry wt	71	177	890	1,030	920

Sample Name:		SS08a_0.05 04-Mar-2026	SS08a_0.3 04-Mar-2026	SS08b_0.05 04-Mar-2026	SS08c_0.05 04-Mar-2026
Lab Number:		4121793.46	4121793.47	4121793.49	4121793.52
Heavy Metals, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	3	2	2	3
Total Recoverable Cadmium	mg/kg dry wt	2.3	0.53	1.32	0.24
Total Recoverable Chromium	mg/kg dry wt	11	13	11	13
Total Recoverable Copper	mg/kg dry wt	18	7	8	6
Total Recoverable Lead	mg/kg dry wt	25	16.4	24	33
Total Recoverable Nickel	mg/kg dry wt	7	7	6	7
Total Recoverable Zinc	mg/kg dry wt	1,570	410	1,210	230

Analyst's Comments

Amended Report: This certificate of analysis replaces report '4121793-SPv2' issued on 10-Mar-2026 at 4:14 pm.
Reason for amendment: Some dates amended.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-3, 5, 8, 11-12, 14, 17, 23-24, 26, 29, 35-36, 38, 41, 43-47, 49, 52
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-3, 5, 8, 11-12, 14, 17, 23-24, 26, 29, 35-36, 38, 41, 43-47, 49, 52
SPLP Profile	Extraction at 30 +/- 2 rpm for 18 +/- 2 hours, (Ratio 1g sample : 20g extraction fluid). US EPA 1312.	-	1-2, 24

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 07-Mar-2026 and 10-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

[redacted]

Client Services Manager - Environmental

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: J Campbell Ph No.: PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signatu [redacted]

Date and time:

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Results to: ☐ lab.samples@pd [redacted]

☒ Email submitter:

☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS03a_0.05	3/3/26		S		
SS03a_0.3					
SS03a_0.5					
SS03b_0.05					
SS03b_0.3					
SS03b_0.5					
SS03c_0.05					
SS03c_0.3					
SS03c_0.5					
SS03_0.5					
SS07_0.05					
SS07_0.3					
SS07_0.5					
SS08a_0.05					
SS08a_0.3					
SS08a 0.5					
SS08b 0.05					
SS08b 0.3					
SS08b 0.5					
SS08c 0.3					
SS08d_0.5					
~~SS08A~~					

Sa 3141230167 W Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

O Biota WW Wastewater P Potable O Other:

12.1

Received by: Gabriel Hazard

Note: Samples may contain dangerous or hazardous substances

PDP Tauranga Tel: +64 7 985 6440
PDP Wellington Tel: +64 4 471 4130
PDP Christchurch Tel: +64 3 345 7100
PDP Invercargill Tel: +64 3 422 1690

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: J Campbell Ph [redacted] PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signat [redacted]

Date and time: 3/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Asbestos samples

Results to: ☐ lab.samples@pdp.co[redacted]

☒ Email submitter: [redacted]

☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS03a_0.05	3/3/26		S		
SS03b_0.05					
SS03c_0.05					
SS04a_0.05					
SS04b_0.05					
SS04c_0.05					
SS04d_0.05					
SS07_0.05					
SS07_0.3					
SS08a_0.05					
SS08b_0.05					
SS08c_0.05					
SS08d_0.05					
SS06a_0.05					
SS06b_0.05					
SS06c_0.05					
SS05a_0.05					
SS05b_0.05					
SS05c_0.05					
SS05d_0.05					

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

Note: Samples may contain dangerous or hazardous substances

ton 949 7880 | PDP Tauranga Tel: +64 7 985 6440 | PDP Wellington Tel: +64 4 471 4130 | PDP Christchurch Tel: +64 3 345 7100 | PDP Invercargill Tel: +64 3 422 1690

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge . . of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hills Lab

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☒ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: J Campbell Ph No.: [redacted] PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: J Campbell

Signatur [redacted]

Date and time: 3/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Results to: ☐ lab.samples@pdp.co [redacted]

☒ Email submitter:

☒ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS06a 0.05	3/3/26		S		
SS06a 0.3	1		|		
SS06a 0.5			|		
SS06b 0.05			|		
SS06b 0.3			|		
SS06b 0.5			|		
SS06c 0.05			|		
SS06c 0.3			|		
~~SS06c 0.5~~			|		

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

nz **Note: Samples may contain dangerous or hazardous substances** Page ___ of ___

Iton 949 7880

PDP Tauranga Tel: +64 7 985 6440

PDP Wellington Tel: +64 4 471 4130

PDP Christchurch Tel: +64 3 345 7100

PDP Invercargill Tel: +64 3 422 1690

PATTLE DELAMORE PARTNERS LTD

Request for Analyses

NOTE: Please acknowledge receipt of these samples by signing this form and emailing to submitter.

From: Pattle Delamore Partners Ltd **To:** Hill Labs

Office: ☐ Auckland ☐ Hamilton ☐ Tauranga ☑ Wellington ☐ Christchurch ☐ Invercargill Quote No.:

Submitted by: Jess C Ph No.: [redacted] PDP Job No.: A035680020

Chain of Custody Record

Sent:

Name: Jess C

Signature:

Date and time: 3/3/26

Received: ☐ Room temp. ☐ Chilled Temp.: ___°C ☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Results to: ☐ lab.samples@pdp.co[redacted]

☑ Email submitter:

☑ Email other:

Priority: ☐ Normal ☐ High ☐ Urgent

Results required by: ___ / ___ / ___

Invoice to: ☐ PDP ☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
SS04_A_0.05	3/3/26		S	Hold Cold	
SS04_A_0.3					
SS04_A_0.5					
SS04_B_0.05					
SS04_B_0.3					
SS04_B_0.5					
SS04_C_0.05					
SS04_C_0.3					
SS04_C_0.5					
SS04_D_0.05					
SS04_D_0.3					
SS04_D_0.5					
~~SS03_A_0.05~~					
~~SS03~~					

GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater

BIO Biota WW Wastewater P Potable O Other:

.nz **Note: Samples may contain dangerous or hazardous substances** Page ___ of ___

ilton 949 7880 | PDP Tauranga Tel: +64 7 985 6440 | PDP Wellington Tel: +64 4 471 4130 | PDP Christchurch Tel: +64 3 345 7100 | PDP Invercargill Tel: +64 3 422 1690

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

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+64 7 858 2000
mail@hill-labs.co.nz
www.**hill-labs**.co.nz

Job Information Summary

Client:	Pattle Delamore Partners Limited	**Lab No:**	4123016
Contact:	Melody Robyns	**Date Registered:**	06-Mar-2026 2:46 pm
	C/- Pattle Delamore Partners Limited	**Priority:**	High
	PO Box 6136	**Quote No:**	81087
	Wellington 6141	**Order No:**	
		Client Reference:	A035680020
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date*:	11-Mar-2026 4:30 pm

* As the samples require analysis at a Hill Labs location that is different to where they were received, the Target Date for reporting has been extended

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	SS03a 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
2	SS03b 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
3	SS03c 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
4	SS04a 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
5	SS04b 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
6	SS04c 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
7	SS04d_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
8	SS05a_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
9	SS05b_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
10	SS05c_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
11	SS05d_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
12	SS06a_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
13	SS06b_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
14	SS06c 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
15	SS07 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
16	SS07 0 3 04 Mar 2026	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
17	SS08a 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
18	SS08b 0 05 04 Mar 2026	Soil	PSoil500Asb	Hold Cold
19	SS08c_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold
20	SS08d_0.05 04-Mar-2026	Soil	PSoil500Asb	Hold Cold

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	16
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	16
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	16
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	16

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	16
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	16
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	16
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	16
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	16
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	16
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	16
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16

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Middleton
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Certificate of Analysis

Client:	Pattle Delamore Partners Limited	**Lab No:**	4123016	A2Pv1
Contact:	Melody Robyns C/- Pattle Delamore Partners Limited PO Box 6136 Wellington 6141	**Date Received:** **Date Reported:** **Quote No:** **Order No:** **Client Reference:** **Submitted By:**	06-Mar-2026 10-Mar-2026 81087 A035680020 Jessica Campbell	

Sample Type: Soil

Sample Name:		SS07_0.3 04-Mar-2026
Lab Number:		4123016.16
Asbestos Presence / Absence		Asbestos NOT detected.
Description of Asbestos Form		-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001
As Received Weight	g	472.6
Dry Weight	g	296.3
Moisture*	%	37
Sample Fraction >10mm	g dry wt	16.6
Sample Fraction <10mm to >2mm	g dry wt	120.2
Sample Fraction <2mm	g dry wt	159.0
<2mm Subsample Weight	g dry wt	52.2
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Please refer to the BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.
https://www.branz.co.nz/asbestos

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

Summary of Methods

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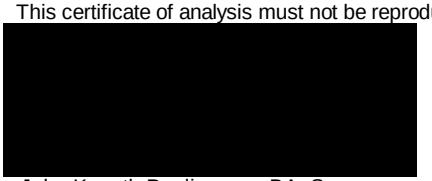
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	16
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	16

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 10-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.



John Keneth Paglingayen BApSc
Laboratory Technician - Asbestos