



Belmont Quarry Development – Part F

Substantive Application
Appendix F.1.B.13 – Land Exchange Application
- Land Contamination Reports
Winstone Aggregates

16 August 2026



5 December 2025

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Dear Phil,

PRELIMINARY SITE INVESTIGATION - BELMONT QUARRY - FIRTH BLOCK, NORTHERN GULLY AND SOUTHERN GULLY

1.0 Introduction

Winstone Aggregates Limited (Winstone; the client) owns and operates the Belmont Quarry in Lower Hutt, Wellington. Winstone has engaged Pattle Delamore Partners Limited (PDP) to undertake a preliminary site investigation (PSI) for the Belmont Quarry Parcels (Firth Block, Northern Gully and Southern Gully; 'the sites'), and a Preliminary and Detailed Site Investigation (PSI/DSI) for Dry Creek in support of Winstone's Belmont Quarry land exchange with the Department of Conservation (DoC), which in turn will support Winstone's Belmont Quarry Fast-Track Approval Application (FAA). The findings of the PSI/DSI for Dry Creek is presented in a separate report (PDP, 2025).

As part of the land exchange, Winstone proposes to exchange approximately 23.2 hectares of Belmont Regional Park land with up to 34.06 hectares of land owned by Fletcher Construction and Infrastructure Limited (FCIL; Winstone's parent company).

The FCIL land consists of four parcels of land (Dry Creek area and Belmont Quarry Parcels):

- ✦ Dry Creek (7.94 ha).
- ✦ Firth Block (9.6 ha).
- ✦ Northern Gully (12.62 ha).
- ✦ Southern Gully (3.9 ha).

The PSI 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 No. 1 – Guidelines for Reporting on contaminated Sites in New Zealand* (MfE, 2021). A certifying statement to this effect is provided in Appendix A.

Those authors confirm that, in their capacity as authors of this report, they have read and agree to abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023. A copy of the authors CV, setting out necessary qualifications is at Appendix A.



2.0 Objectives and Scope

The objectives of the PSI 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 on the Belmont Quarry Parcels;
- ✧ Conduct a preliminary assessment of the potential contaminated land risks of any identified HAIL 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) *Proposed Natural Resources Plan* (PNRP)²; and
- ✧ Provide recommendations of further investigations, if required.

The scope of work included:

- ✧ Obtaining and reviewing a selection of publicly available historical aerial imagery of the sites;
- ✧ Reviewing GWRC Selected Land Use Register (SLUR) for the sites;
- ✧ Viewing property files for the sites held by the Hutt City Council (HCC);
- ✧ Reviewing publicly available geological and hydrogeological information for the sites;
- ✧ Visiting the Belmont Quarry Parcels to undertake a site walkover;
- ✧ Interviewing people with knowledge of the sites; and
- ✧ Preparation of this report.

3.0 Property Description and Background

Belmont Quarry is located at 541 Hebden Crescent, Belmont, Wellington. The investigation in this report is limited to three parcels of Winstone's land herein referred to as Firth Block, Northern Gully and Southern Gully (the sites). A plan of the parcels is shown in Figure 1 (Appendix B).

Firth Block is broadly trapezium shaped with an irregularly shaped southern border, it covers a 9.6 ha area within the northeastern part of the land legally described as Lot 1 DP 60552. The current land use of this parcel is as a QEII Trust bush block.

Land use surrounding Firth Block is as follows:

- ✧ North: Dense bush within Belmont Regional Park.
- ✧ East: State Highway 2 (Western Hutt Road) with the Hutt River and residential properties beyond.
- ✧ South: Belmont Masonry with State Highway 2 (Western Hutt Road), Hutt River and residential properties beyond.
- ✧ West: Belmont Quarry.

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.

² While consenting under the Resource Management Act 1991 is not directly relevant to the land exchange, these consenting assessments have been undertaken to inform DoC of any potential liabilities/obligations and responsibilities arising from the land exchange.

The Northern Gully is located across a 12.62 ha, irregularly shaped area within the northwestern corner of the land legally described as Part Lot 1 DP 22561 and extending southward into Lot 5 DP 322126. The parcel in part is a QEII Trust area and comprises a terraced area of low vegetation followed by dense bush descending into the gully.

Land use surrounding the Northern Gully is as follows:

- ✧ North: Dense bush within Belmont Regional Park.
- ✧ East: Belmont Quarry.
- ✧ South: Belmont Quarry, dense bush and residential properties beyond.
- ✧ West: Dense bush with residential properties beyond.

The Southern Gully is irregularly shaped and located to the west of the wider property, covering approximately 3.9 ha. The site currently straddles Lots 4 and 5 DP 322126, which will be subdivided with the balance of the lots remaining in FCIL ownership.

Land use surrounding the Southern Gully is as follows:

- ✧ North: Belmont Quarry.
- ✧ East: Dense bush and Belmont Quarry.
- ✧ South: Residential properties on Liverton Road and dense bush.
- ✧ West: Residential properties on Liverton Road and dense bush.

4.0 Topography, Geology and Hydrology

4.1 Geology

The geological map of the region indicates that the site is underlain by undifferentiated Rakaia Terrane Triassic sandstone and mudstone (Begg and Johnson, 2000). These comprise alternating sandstone and mudstone, poorly bedded sandstone with minor coloured mudstone, conglomerate, basalt and chert.

A review of the New Zealand Geotechnical Database (NZGD) on 15 August 2025 indicated that the nearest borehole (NZGD_184772), is located approximately 230 m east of the Firth Block boundary. The associated borehole installation logs identified that fill material comprising sandy gravel is present to depths between 1.50 and 3.34 m below ground level (bgl). This is underlain by alluvium to a depth of 16.95 m bgl and Rakaia Terrane to 18 m bgl.

4.2 Hydrogeology

4.2.1 Firth Block

The nearest surface water body to Firth Block is the Hutt River, which is located approximately 65 m to the southeast of the site. This flows in a southwesterly direction discharging into Wellington Harbour.

Based on this, local groundwater in the fractured or weathered greywacke beneath the site is inferred to flow in a southeastern direction, discharging into the Hutt River.

A review of the GWRC map viewer on 15 August 2025 identified that two registered bores are situated within a 500 m radius of Firth Block, downgradient of the site and to the southwest of the site boundary. Bore depths were noted to be 19.95 m and 20 m bgl, indicating that these bores are within the Hutt Valley aquifer system rather than the weathered greywacke present at the site.

4.2.2 Northern Gully

A stream intersects the Northern Gully, running from the west through to the east of the site where it discharges off site via the adjacent quarry site into the Hutt River.

A review of the GWRC map viewer on 15 August 2025 identified no bores within a 500 m radius of Northern Gully.

4.2.1 Southern Gully

There is a stream present running in a general northeast-south-westerly direction, where it becomes culverted at the southern boundary of the site.

A review of the GWRC map viewer on 24 November 2025 identified no bores within a 500 m radius of the Southern Gully.

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

Six historical aerial photographs (dated between 1942 and 2000) were obtained from Retrolens and 12 aerial photographs were sourced from Google Earth Pro (dated between 2004 and 2025). The aerial photographs are provided in Appendix C. A summary is provided below.

Table 1: Historical Aerial Photograph Review

Date	Reference	Description
1942	Photograph 1	An aerial image only partially showing the Northern Gully was able to be obtained from Retrolens. Firth Block and the eastern area of Northern Gully are both covered by dense bush. Belmont Quarry is observed to the south of the sites. The Southern Gully is not visible in the 1942 aerial image.
1957	Photograph 2	No significant changes to Firth Block are observed. An expansion of Belmont Quarry, outside of the Firth Block site boundary towards the south, has been observed extending further to the northwest. Two tracks are observed to intersect the northwestern corner of the Northern Gully. Another track external to the site meets the eastern boundary of the Northern Gully. The Southern Gully appears to be covered with vegetation. An access track is present, running from the western corner of the site before diverging into two tracks, one linking to the Northern Gully and one exiting along the eastern boundary of the site.
1966	Photograph 3	Firth Block is depicted as bush across the centre and northeastern area of the site. The southwestern area of Firth Block comprises a terraced quarry area. The northwestern corner of the site appears to have been developed to include a track and farmland. The Northern Gully comprises an area of dense bush to the north of the site with the southern portion of the site developed into farmland with tracks.

Table 1: Historical Aerial Photograph Review

Date	Reference	Description
		The route of the access track previously identified within the Southern Gully has altered slightly. The majority of the Southern Gully appears grassed. No other significant changes to the Southern Gully are observed.
1984	Photograph 4	More vegetation is observed across the southwestern portion of Firth Block. A track across the northwest of the site is observed. A track appears to intersect the central portion of the Northern Gully from east to west. To the south of the sites, Belmont Quarry has undergone further expansion. No significant changes to the Southern Gully are observed.
2000	Photograph 5	The terraced area to the south of Firth Block now comprises bush cover, with a small, cleared area in the centre of the site. The Northern Gully comprises dense bush and what appears to be quarrying activities and access track extending northward just into the central southern area of the Northern Gully. A track and area of soil disturbance intersects across the western boundary of the Northern Gully from the road beyond the site boundary. The Southern Gully is predominately vegetated, there appears to be an access track running in a northeast-southwest direction connecting to the main quarry site.
2004	Photograph 6	Firth Block comprises dense bush cover. The track intersecting the Northern Gully has been further developed to the northwest of the site, leading from the quarry. A terraced quarry face intersects the central east of the site. The previously observed track and area of development across the western boundary of the site now comprises vegetative cover. No significant changes to the Southern Gully are observed.
2009	Photograph 7	No significant changes to Firth Block are observed. The track and terraced areas across the central north and central east of the Northern Block is observed to have more vegetative cover. No significant changes are observed in the Southern Gully, there appears to be increased vegetation cover.
2011	Photograph 8	No significant changes to Firth Block are observed. In the Northern Gully, further quarry development is observed to the southeast and further vegetative cover is observed in the central north. A road to the west of the Northern Gully slightly intersects the site boundary. No significant changes are observed in the Southern Gully.
2012	Photograph 9	No significant changes to Firth Block are observed.

Table 1: Historical Aerial Photograph Review

Date	Reference	Description
		The quarry area to the southeast of the Northern Gully has further expanded in a western direction and more vegetative cover is visible in the central north area. No significant changes are observed in the Southern Gully.
2014	Photograph 10	No significant changes to Firth Block are observed. The quarry area to the south of the Northern Gully has further expanded to the west and more vegetative cover is visible in the central north area. No significant changes are observed in the Southern Gully.
2015	Photograph 11	No significant changes to Firth Block are observed. The quarry area to the south of the Northern Gully is observed to have had soil disturbance. The central northern area comprises dense bush. Soil disturbance, associated with activities within Belmont Quarry, is visible in the northeastern portion of the site. No other significant changes observed.
2016	Photograph 12	No significant changes to Firth Block are observed. The quarry area in the southern portion of the Northern Gully is observed to be partially covered with what appears to be gravels. Soil disturbance is still visible on the northern boundary. A cleared area of vegetation, potentially paved, is visible in the sites centre southwest of the area of soil disturbance. No other significant changes observed.
2018	Photograph 13	No significant changes to Firth Block are observed. The quarry area to the south of the Northern Gully is observed to be partially covered with what appears to be covered with some vegetation in places. No earthworks are now being undertaken in the Southern Gully which is now fully covered in vegetation.
2019	Photograph 14	No significant changes to Firth Block are observed. The previous quarry area to the south of the Northern Gully comprises vegetative cover over visible terraces. No significant changes are observed in the Southern Gully.
2022	Photograph 15	No significant changes to Firth Block are observed. Dense vegetation is observed to the south of the Northern Gully. A track is observed to intersect the east of the Northern Gully with the northern portion of Belmont Quarry. No significant changes are observed in the Southern Gully.
2025	Photograph 16	No significant changes to Firth Block are observed. The quarry area has been further developed and slightly intersects the central eastern area of the Northern Gully. No significant changes are observed in the Southern Gully

5.2 Belmont Quarry Property Files

Property files for the sites were obtained from HCC. Documents relevant to the site history and/or contamination potential for site are summarised below with relevant documents attached in Appendix D.

5.2.1 Firth Block

A document titled certificate of compliance application and provided by Winstone includes a figure depicting the activity areas comprising Firth Block as predominantly general recreation with the southern area depicted as extraction.

The consent order dated October 2001 includes a figure, which depicts Firth Block as being located within a quarry extraction activity area.

5.2.2 Northern Gully

- ✧ A document titled proposed truckstop development (dated 1998) details a proposal for the installation of a truck stop facility outside of the Northern Gully boundary and within the southeast section of Belmont Quarry. This involved the removal of an existing underground 40,000 L storage tank and dispenser, and replacing it with an above ground 40,000 L diesel storage tank. The underground tank is depicted in an additional hand drawn site plan, dated August 1991, confirming its location near the office and main office block, which are situated to the southeast of the overall property, adjacent to State Highway 2 (Western Hutt Road).
- ✧ A document titled Belmont Quarry Disposal Application for Certificate of Compliance dated March 2006, states the overburden material will comprise of material overlying the mineral deposit, which itself does not contain saleable or processable minerals. Additionally, the document stated the northwest corner of the Northern Gully is to be filled with overburden disposal material.
- ✧ A Hutt City Council letter, titled certificate of compliance with city of Lower Hutt district plan to deposit overburden material within Belmont Quarry, dated September 2006 was provided by Winstone. This detailed future development of the quarry involving the removal of native vegetation from the gully and hillside, and the deposition of overburden within the gully. The overburden material is stated to amount to an approximate total of 1,500,000 m³. A provided figure depicting the location of deposited overburden shows a shaded blue area depicting the maximum extent of area upon which overburden is to be deposited; the area intersects the northern area of the Northern Gully.
- ✧ Consent to construct new overburden disposal areas (OBDA) was granted on 7 September 2006, as reported in a document detailing the decisions of hearing commissioners. The document also provides background information detailing the stream located in the Northern Gully stating that it is intermittently flowing and ceases flowing for parts of the year. It also states the stream discharges directly into the Hutt River under State Highway 2, to the southeast of Firth Block.
- ✧ A report titled Cottle Land Assessment of Ecology Values, dated March 2007 includes a figure depicting the proposed OBDA, the western corner of which intersects the Northern Gully boundary. The report also states that the deposition activities are expected to take 12 years to complete and further describes the Northern Gully as being modified in the past by farming activities, since these activities have ceased, the land was reverted back to a natural state.
- ✧ A geotechnical investigation and design advice for the proposed Cottle overburden disposal area, Belmont Quarry, by Tonkin + Taylor and dated May 2007 details the overburden material from the quarry is to be placed in layers, each approximately between 2.0 to 5.0 m in thickness. The material is to be compacted and stabilised against erosion by hydroseeding.

- ✧ Figures depicting the extent of the OBDA to be situated over the northern area of the Northern Gully are provided in a document titled Belmont Quarry Overburden Disposal Resource Consent Applications and Supporting Information (AEE), dated June 2007.
- ✧ A Resource Management Act 1991 – Section 139: Certificate of Compliance with City of Lower Hutt District Plan to Deposit Overburden Material within Belmont Quarry, dated September 2007 describes the removal of vegetation and deposition of overburden material would be brought to and from the area from other parts of the quarry.
- ✧ A figure sourced from an application by Winstone Aggregates for resource consents associated with the construction of a new OBDA on the neighbouring “Cottle Land”, Kelson, dated April 2008 depicted the approximate footprint of the OBDA and the location of the stream intersecting the northern gully from the west through to the east of the gully where it discharges off site into the Hutt River.
- ✧ A hearing commissioners document provided by GWRC, dated 2 September 2008 identified that consents were granted in relation to the construction of the OBDA for 1.3 million m³ of overburden material from Winstone Aggregates Belmont Quarry. The majority of the northern and western areas across the Northern Gully were depicted as an area on which no overburden would be placed. The OBDA was described to be situated to the south of the northern gully area (in the northwest of Lot 5, DP 322126) and set back 25 m from the quarry site boundary. Overburden is reported as being comprised of material unsuitable for aggregate production involving top soil and weathered rock.
- ✧ A consent order dated May 2009 states that Winstone Aggregates is required to undertake a fish survey and an erosion and sediment control plan will be in place for each earthworks season during the construction of the OBDA.

5.2.3 Southern Gully

No new information was identified in the obtained property files for the wider Belmont Quarry. Information relating to the OBDA discussed in section 5.2.2 is only relevant to the earthworks observed along the northern boundary of the Southern Gully.

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.

5.3.1 Firth Block

A review of the GWRC website³ confirmed that the northwestern portion of Firth Block (comprising an area of 1,925 m²) falls within the SLUR delineation for the overall property (LOT 1 DP 60552), which is currently listed under the HAIL category of:

- ✧ Mineral extraction, refining and reprocessing, storage and use - Mining industries (excluding gravel extraction) including exposure of faces or release of groundwater containing hazardous contaminants, or the storage of hazardous wastes including waste dumps or dam tailings; and
- ✧ Chemical manufacture, application and bulk storage - Storage tanks or drums for fuel, chemicals or liquid waste.

³ <https://mapping.gw.govt.nz/gwrc/>

5.3.2 Northern Gully

GWRC were contacted on 8 August 2025. Their response indicated that a portion of the Northern Gully falls within the SLUR delineation for the overall property (LOT 1 DP 60552), which is currently listed under the HAIL categories of:

- ✧ Mineral extraction, refining and reprocessing, storage and use - Mining industries (excluding gravel extraction) including exposure of faces or release of groundwater containing hazardous contaminants, or the storage of hazardous wastes including waste dumps or dam tailings; and
- ✧ Chemical manufacture, application and bulk storage - Storage tanks or drums for fuel, chemicals or liquid waste.

The file notes identify the HAIL area as pertaining to Winstone Aggregates Belmont Quarry.

It also notes that there is evidence of hydrocarbon contamination surrounding fuel drums from photos on file. Old machinery and other waste is stored at the quarry, along with one large underground storage tank (containing hydrocarbons) and smaller containers of acetylene and LPG. Information provided by GWRC (URS, 2010) shows that the underground storage tank (UST) used for storing diesel has been removed from the property and replaced with an aboveground storage tank (AST). The associated figure shows that the UST and diesel AST were located adjacent to the quarry office and outside the site boundary for Northern Gully (see Section 6.1). The report states that all analytical results for samples representative of soil remaining on the site (as defined in the report) comply with the corresponding Oil Industry Guidelines Soil Tier 1 Soil Acceptance Criteria for commercial/industrial land use.

5.3.1 Southern Gully

A review of the GWRC website confirmed that the Southern Gully has no HAIL areas identified and is not located on the SLUR.

6.0 Summary of Site History

6.1 Firth Block

Since 1942, observed changes to the site include slight variations in bush density, particularly along the ridgeline and the development of a terraced quarry. The quarry intersects the southwestern corner of the site from 1966 and appears to have vegetative cover in the next available historical aerial photograph dated 1984. Additionally, a cleared area is observed within the dense bush in the centre of the site in 2000. Property files provided figures of Firth Block showing part of the site, specifically to the south, to comprise of an extraction activity area. The northern area of Firth Block is shown to be classified as general recreation.

The northwestern portion of Firth Block falls within the SLUR delineation for the overall property, which is currently listed on the GWRC's SLUR for mining industries (quarrying activities) and the bulk storage of drums for fuel, chemicals or liquid waste.

6.2 Northern Gully

Between 1942 and 1966 the Northern Gully was observed to comprise dense bush cover. From 1966 the land appeared to have been developed into farmland with tracks across the site. By 2000, the land within the site had been reclaimed as dense bush and the quarry continued to expand into the central southern and eastern areas of the Northern Gully. This expansion and infilling occurred between 2000 and 2018, after which vegetative cover is observed across the terraces.

The historical aerial photographs depict the quarry extending into the Northern Gully, representative of the placement of overburden material within the site, which is supported by the historical information

review. These activities within the site are unlikely to involve the release of hazardous contaminants and the storage of hazardous containers was not observed through historical aerial imagery. The HAIL activities associated with the storage of hazardous materials (as listed in the GWRC's SLUR) are likely to be isolated to the area within the Belmont Quarry situated toward the centre of the property and outside of the site boundary of the Northern Gully. Historical information provided in the property files identified that the expected location of the previous underground storage tank was approximately 350 and 700 m from Firth Block and the Northern Gully, respectively. The aforementioned hydrocarbon contamination, and potential impacts of old machinery and stored waste can be considered as not relevant to either site.

The information review and associated property files identified that an OBDA was constructed within the northern portion of the Northern Gully. The OBDA comprised material overlying the mineral deposit, which involved topsoil and weathered rock, and is not considered to be an activity that falls under the MfE's HAIL.

The wider property is listed on GWRC's SLUR for mining extraction (quarrying activities) and the bulk storage of drums for fuel, chemicals or liquid waste.

6.3 Southern Gully

The Southern Gully has remained largely unchanged, with an access road to the Northern Gully present between 1957 and 2000. The gully remained unchanged until construction of the overburden along the northern boundary between 2015 and 2016.

Relevant property files pertained to the previously discussed OBDA in 5.2 indicated that the material used for this is unlikely to contribute to potential contamination within the Southern Gully.

The site is not located in on GWRC's SLUR and no other evidence of HAIL activities have been identified.

7.0 Site Walkover

A site walkover was undertaken on 13 August 2025, with an additional visit undertaken of the Southern Gully on 26 November 2025. Photographs of the site visits are provided in Appendix E. Due to the Firth Block, Northern Gully and Southern Gully predominantly comprising dense bush, there was limited access to and poor visibility of the sites.

Observations of Firth Block were made from two locations, one from the northwestern corner of the site where Firth Block meets the ridgeline at the top of Belmont Quarry. The second location was accessed through Firth Belmont Masonry and was situated at the base of the slope along the southern boundary of Firth Block.

The dense bush to the north and northeast of the Northern Gully limited access and meant that the area was unable to be closely investigated. Observations were made from four locations along the site boundary of the Northern Gully as to gain an overview of the site and the surrounding area. One location involved traversing to the base of the Northern Gully via a path on the southeastern boundary, to gain access to the stream.

7.1 Firth Block

Firth Block was observed to comprises steep, densely covered slopes with mature, bush cover in the form of mixed vegetation (Photographs 1 and 2). A line of dead trees borders the southwestern site boundary (Photograph 3).

7.2 Northern Gully

The northern area of the Northern Gully was observed to comprise dense mature bush of mixed vegetation (Photograph 4 and 5), which descends into a what appears to be a shallow stream. A walkable

path was situated within the northeastern area of the Northern Gully, leading to the stream at the gully's base (Photographs 6 and 7). The land to the western central and southwest of the Northern Gully comprises a terraced, grass covered area that descends into a gully with a cover of semi-mature dense bush comprising mixed vegetation. Residential properties are situated outside of the site boundary to the west (Photograph 8).

Communication with a member of staff on site revealed that dumping activities had not been observed to have occurred within the gully from the neighbouring properties located along the western boundary of the Northern Gully.

7.1 Southern Gully

The Southern Gully generally comprised dense vegetation. The gully is well-established through the centre of the site (Photograph 9 and 10), with steep sides covered with dense bush cover of mixed vegetation.

8.0 Site Characterisation

A risk to human health can only occur if there is a hazard (e.g. contaminated soil), a receptor (e.g. people) and an exposure pathway between the hazard and receptor. The absence of any of these components means no risk can exist.

The wider Belmont Quarry property is listed on GWRC's SLUR for mining extraction (quarrying activities) and the bulk storage of drums for fuel, chemicals or liquid waste.

However, rock quarrying for aggregate or building stone, such as Belmont Quarry, is an activity that is excluded from the MfE HAIL list as it is considered that the likelihood of soil contamination from gravel or rock materials is considered low.

The review of historical information also indicates that the bulk storage of drums for fuel, chemicals or liquid waste were within isolated areas within Belmont Quarry and situated toward the centre of the property, outside of the site boundary of the Northern Gully (and Southern Gully and Firth Block).

The activities involving the deposition of overburden disposal material within the Northern Gully and Southern Gully are related to the importation of natural material from other areas of the overall property, which are unlikely to have contributed to soil contamination within the Northern Gully and Southern Gully.

As such, it is considered that the review of historical information and site walkover indicate that it is more likely than not that no HAIL activities have been undertaken at Firth Block, Northern Gully or Southern Gully.

9.0 Regulatory Considerations

The review of historical information indicates that it is unlikely that an activity that falls within the MfE's HAIL has been undertaken on the sites. The sites are therefore not considered "a piece of land" as described in regulation 5(7) of the NESCS and therefore these regulations do not apply to Firth Block, Northern Gully and Southern Gully.

As such, it is also considered that contaminated land Rules R81 – R83 of GWRC's PNRP do not apply.

10.0 Conclusions

Pattle Delamore Partners Limited (PDP) have been engaged by Winstone Aggregates Limited (the client) to undertake a Preliminary Site Investigation (PSI) of Firth Block, Northern Gully and Southern Gully to support the land exchange with the Department of Conservation (DoC).

Key findings of this investigation are summarised as follows:

✧ Firth Block:

- Since 1942, observed changes to the site include slight variations in bush density, particularly along the ridgeline and the development of a terraced quarry. The quarry intersects the southwestern corner of the site from 1966 and appears to have vegetative cover in the next available historical aerial photograph dated 1984. Additionally, a cleared area is observed within the dense bush in the centre of the site in 2000. Property files provided figures of Firth Block showing part of the site, specifically to the south, to comprise of an extraction activity area. The northern area of Firth Block is shown to be classified as general recreation.
- The northwestern portion of Firth Block (comprising an area of 1,925 m²) falls within the SLUR delineation for the overall property (LOT 1 DP 60552).

✧ Northern Gully

- Between 1942 and 1966 the Northern Gully was observed to comprise dense bush cover. From 1966 the land appeared to have been developed into farmland with tracks across the site. To the southeast of the site, and outside the property boundary, the quarry has expanded. By 2000, the land within the site had been reclaimed as dense bush and the quarry continued to expand into the central southern and eastern areas of the Northern Gully. This expansion and infilling occurred between 2000 and 2018, after which vegetative cover is observed across the terraces.
- The wider property is listed on GWRC's SLUR for mining extraction (quarrying activities) and the bulk storage of drums for fuel, chemicals or liquid waste.
- The construction of overburden disposal areas was identified in the Northern Gully, which involved the deposition of natural materials sourced from elsewhere on the property. This material is reported to not contain saleable or processable minerals and was further described as stop soil and weathered rock. This material is unlikely to have contributed to soil contamination within the Northern Gully.

✧ Southern Gully

- The Southern Gully has remained generally unchanged, with an access road present between 1957 and 2000 to the Northern Gully.
- The site is not identified on GWRC's SLUR and no other evidence of HAIL activities have been identified.
- The northern part of the site is partially covered by an overburden disposal area. This material is reported to not contain saleable or processable minerals and was further described as stop soil and weathered rock. This material is unlikely to have contributed to soil contamination within the Southern Gully.

Rock quarrying for aggregate or building stone, such as Belmont Quarry, is an activity that is excluded from the MfE HAIL list as it is considered that the likelihood of soil contamination from gravel or rock materials is considered low. The review of historical information also indicates that the bulk storage of drums for fuel, chemicals or liquid waste were within isolated areas within Belmont Quarry and situated toward the centre of the property, outside of the site boundary of the Northern Gully (and Southern Gully and Firth Block).

As such, it is considered that the review of historical information and site walkover indicate that it is more likely than not that no HAIL activities have been undertaken at Firth Block, Northern Gully or Southern Gully. It is therefore considered that the NESCS and the contaminated land rules in GWRC's PNRP do not apply.

11.0 References

- MfE, 2021. Contaminated Land Management Guidelines No. 1 – Guidelines for Reporting on Contaminated Sites in New Zealand revised 2021. Ministry for the Environment, Wellington.
- MWH, 2007. Winstone Aggregates Cottle Land Assessment of Aquatic Ecology Values. Prepared for Winstone Aggregates Limited.
- PDP, 2025. Detailed Site Investigation – Dry Creek – Belmont Quarry. Prepared for Winstone Aggregates Limited.
- Tonkin & Taylor Ltd, 2007. Geotechnical Investigation and Design Advice for the Proposed Cottle Overburden Disposal Area, Belmont Quarry. Prepared for Prepared for Winstone Aggregates Limited.
- URS, 2010. Underground Petroleum Storage System Decommissioning at Winstone Aggregates, Belmont Quarry, Lower Hutt Tank Pull Report. Prepared for BP Oil New Zealand Limited.

12.0 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.

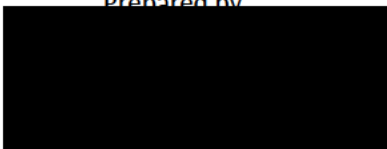
This report has been prepared by PDP on the specific instructions of Winstone for the limited purposes described in the report. PDP acknowledges that this report may be used and relied upon by the Expert Panel appointed under the Fast-track Approvals Act 2024. PDP accepts no liability if the report is 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.

© 2025 Pattle Delamore Partners Limited

Yours faithfully

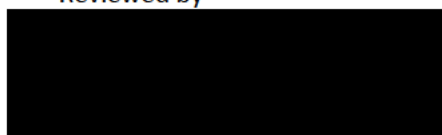
PATTLE DELAMORE PARTNERS LIMITED

Prepared by



Environmental Scientist – Contaminated Land

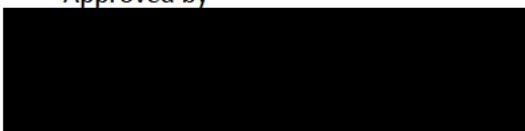
Reviewed by



Melody Robyns

Service Leader – Contaminated Land

Approved by



Hamish Wilson

Technical Director – Contaminated Land

Appendix A: Certifying Statement

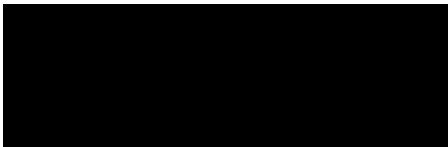
I, Hamish Wilson, of Pattle Delamore Partners certify that this preliminary site investigation meets the requirements of the Resource Management (*National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*) Regulations 2011 (the NES-CS) because it has been:

- 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.

This preliminary site investigation concludes that the NESCS does not apply as it is more likely than not that no HAIL activities have been undertaken at Firth Block, Northern Gully or Southern Gully.

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.



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.

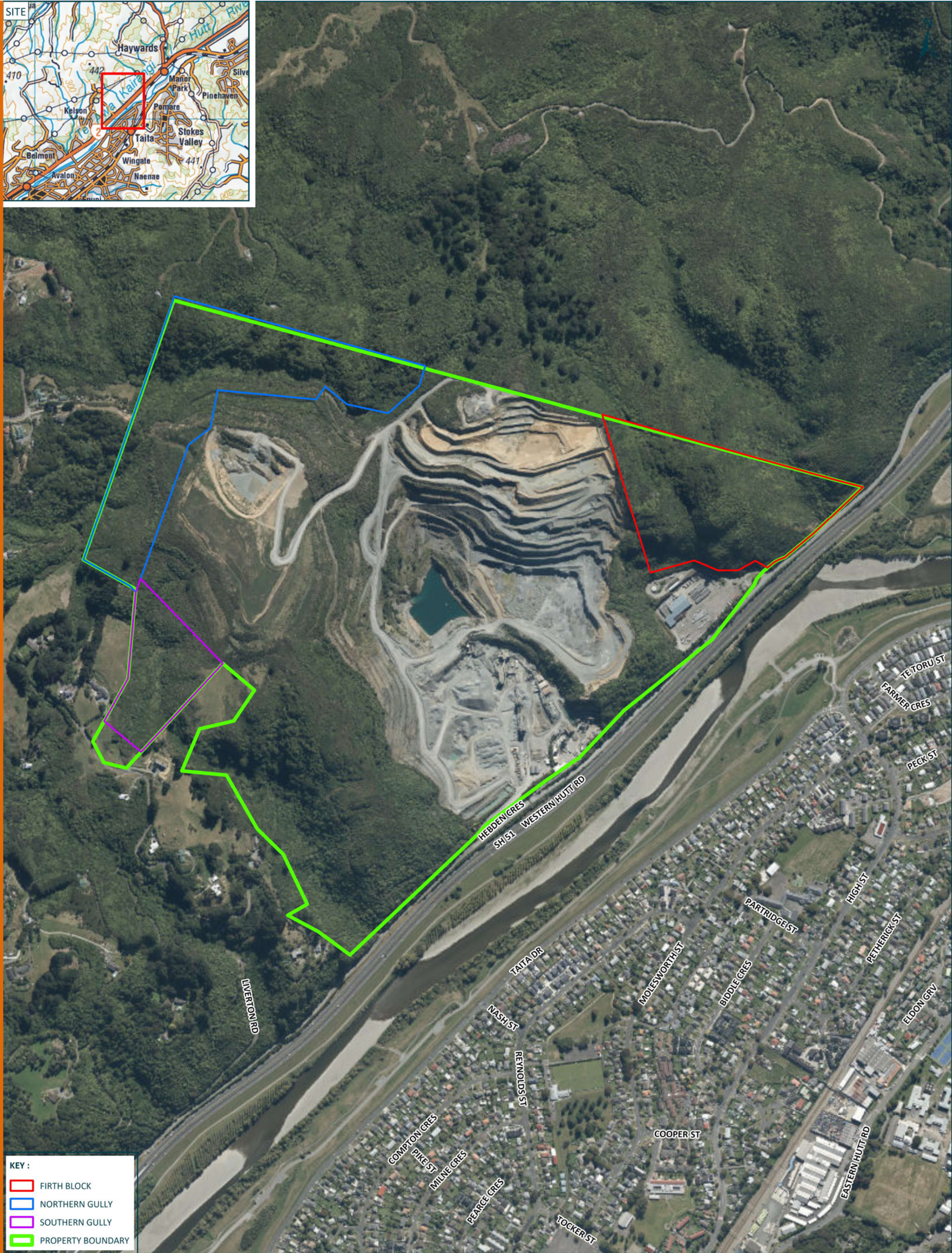
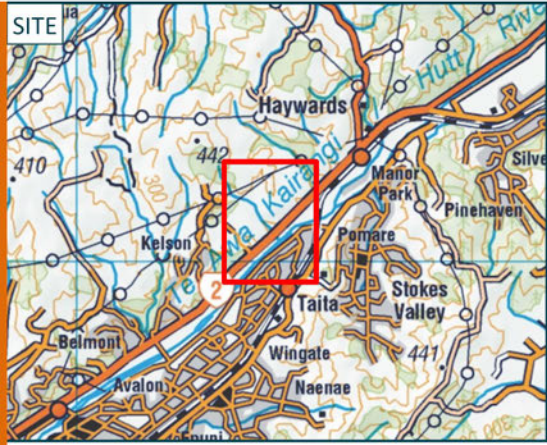
Melody Robyns – Project Manager and PSI Report Reviewer

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.

Bailey Johnson – Report Author

Bailey is an Environmental Scientist with a background in environmental site investigations and contaminated land assessments and reporting. She has carried out or contributed to a variety of soil sampling, surface water and ground water monitoring projects. Bailey has worked on a variety of contaminated site types, including service stations, oil terminals, production stations, airport complexes, commercial/industrial, residential and agricultural sites. She is skilled in the supervision of contractors and heavy machinery, including drill rigs and excavators, and the design and implementation of site-specific health and safety procedures.

Appendix B: Figure 1 – Site Location Plan



KEY :

- FIRTH BLOCK
- NORTHERN GULLY
- SOUTHERN GULLY
- PROPERTY BOUNDARY

pdp

0 100 200
METRES

SCALE : 1:7,000 (A3)

THIS DRAWING REMAINS THE PROPERTY OF PATTLE DELAMORE PARTNERS LTD AND MAY NOT BE REPRODUCED OR ALTERED WITHOUT WRITTEN PERMISSION. NO LIABILITY SHALL BE ACCEPTED FOR UNAUTHORISED USE OF THE DRAWING.

B	FINAL	DEC 25	DO
A	ISSUED FOR REVIEW	NOV 25	DO
NO. REVISION	DATE	BY	

SOURCE:
1. AERIAL IMAGERY (FLOWN 2025) SOURCED FROM THE LINZ DATA SERVICE <https://data.linz.govt.nz/> AND LICENCED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 INTERNATIONAL LICENCE.
2. CADASTRAL/TOPOGRAPHICAL INFORMATION AND INSET DERIVED FROM LINZ DATA.

CLIENT

WINSTONE
AGGREGATES

FIGURE

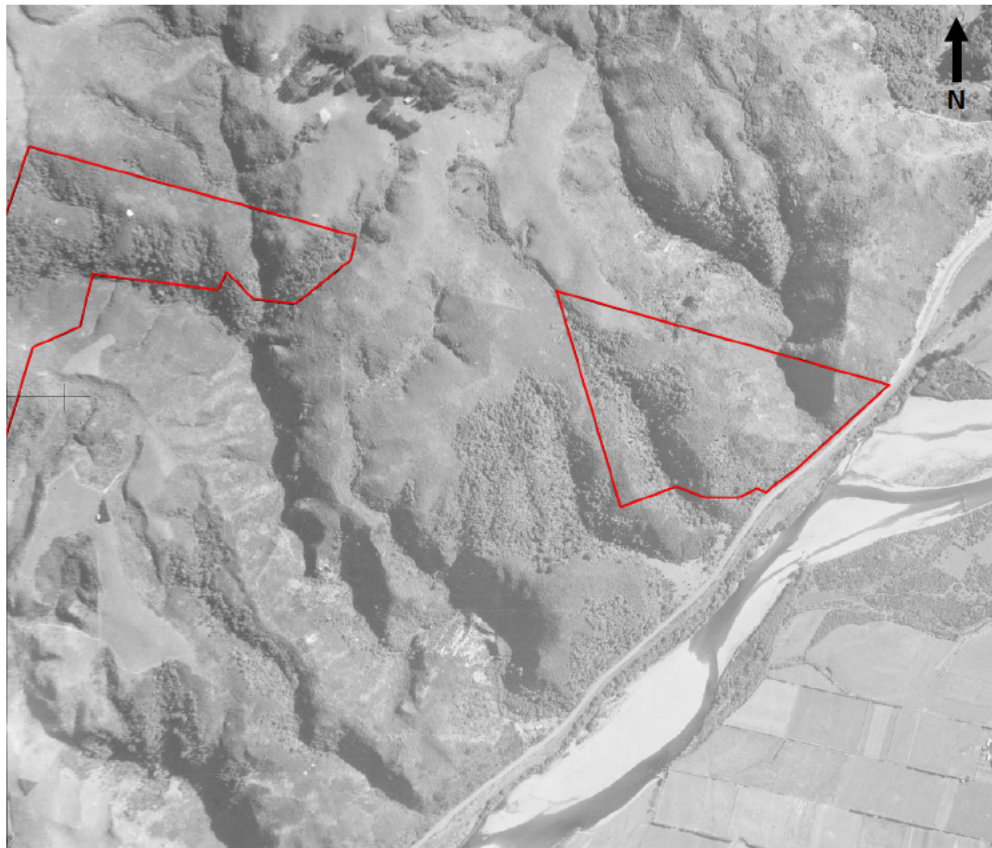
FIGURE 1: SITE LOCATION PLAN

PROJECT

PRELIMINARY SITE INVESTIGATION – BELMONT QUARRY – FIRTH BLOCK, NORTHERN GULLY, AND SOUTHERN GULLY



Appendix C: Historical Aerial Photographs



Photograph 1: 1942 sourced from Retrolens



Photograph 2: 1957 sourced from Retrolens



Photograph 3: 1966 sourced from Retrolens



Photograph 4: 1984 sourced from Retrolens



Photograph 5: 2000 sourced from Retrolens



Photograph 6: 2004 sourced from Google Earth Pro



Photograph 7: 2009 sourced from Google Earth Pro



Photograph 8: 2011 sourced from Google Earth Pro



Photograph 9: 2012 sourced from Google Earth Pro



Photograph 10: 2014 sourced from Google Earth Pro



Photograph 11: 2015 sourced from Google Earth Pro



Photograph 12: 2016 sourced from Google Earth Pro



Photograph 13: 2018 sourced from Google Earth Pro



Photograph 14: 2019 sourced from Google Earth Pro



Photograph 15: 2022 sourced from Google Earth Pro



Photograph 16: 2025 sourced from Google Earth Pro



Appendix D: Relevant Property File Documents



7 September 2006

Contact: Environmental Approvals
Group/Division: Customer Services
Telephone: [REDACTED]
Facsimile: [REDACTED]
E-Mail: [REDACTED]
Our Reference: RM20-H32-BQ

Kevin Bligh
Resource Management Advisor
Winstone Aggregates
PO Box 17-195
Auckland

Dear Kevin Bligh

RESOURCE MANAGEMENT ACT 1991 - SECTION 139: CERTIFICATE OF COMPLIANCE WITH CITY OF LOWER HUTT DISTRICT PLAN TO DEPOSIT OVERBURDEN MATERIAL WITHIN BELMONT QUARRY

DECISION

1. I refer to your application received 4 April 2006 for a Certificate of Compliance pursuant to section 139 of the Resource Management Act 1991, and the further information submitted on 3 May 2006 and 14 August 2006, to deposit overburden material and remove native vegetation within the Belmont Quarry listed at 541 Hebden Crescent, Lower Hutt (being Lot 1 DP 60552).
2. After assessing the application, I certify that the proposal as submitted is a permitted activity in terms of the City of Lower Hutt District Plan on this day, 7th September 2006, and that the application for a Certificate of Compliance is granted.

THE PROPOSAL

3. The applicant, Winstone Aggregates, has applied for a Certificate of Compliance pursuant to Section 139 of the Resource Management Act 1991 to deposit overburden material and remove native vegetation within Belmont Quarry.
4. The applicant has stated that future development of the quarry involves deposition of overburden material within a steep gully at the western end of the site as shown on the plans submitted with the application and held on Council file RM20-H35-BQ. The proposal also involves the removal of native vegetation from the gully and hillside. The material will total approximately 1,500,000m². The material will not be deposited within 25m of the any site boundaries nor will vegetation removal

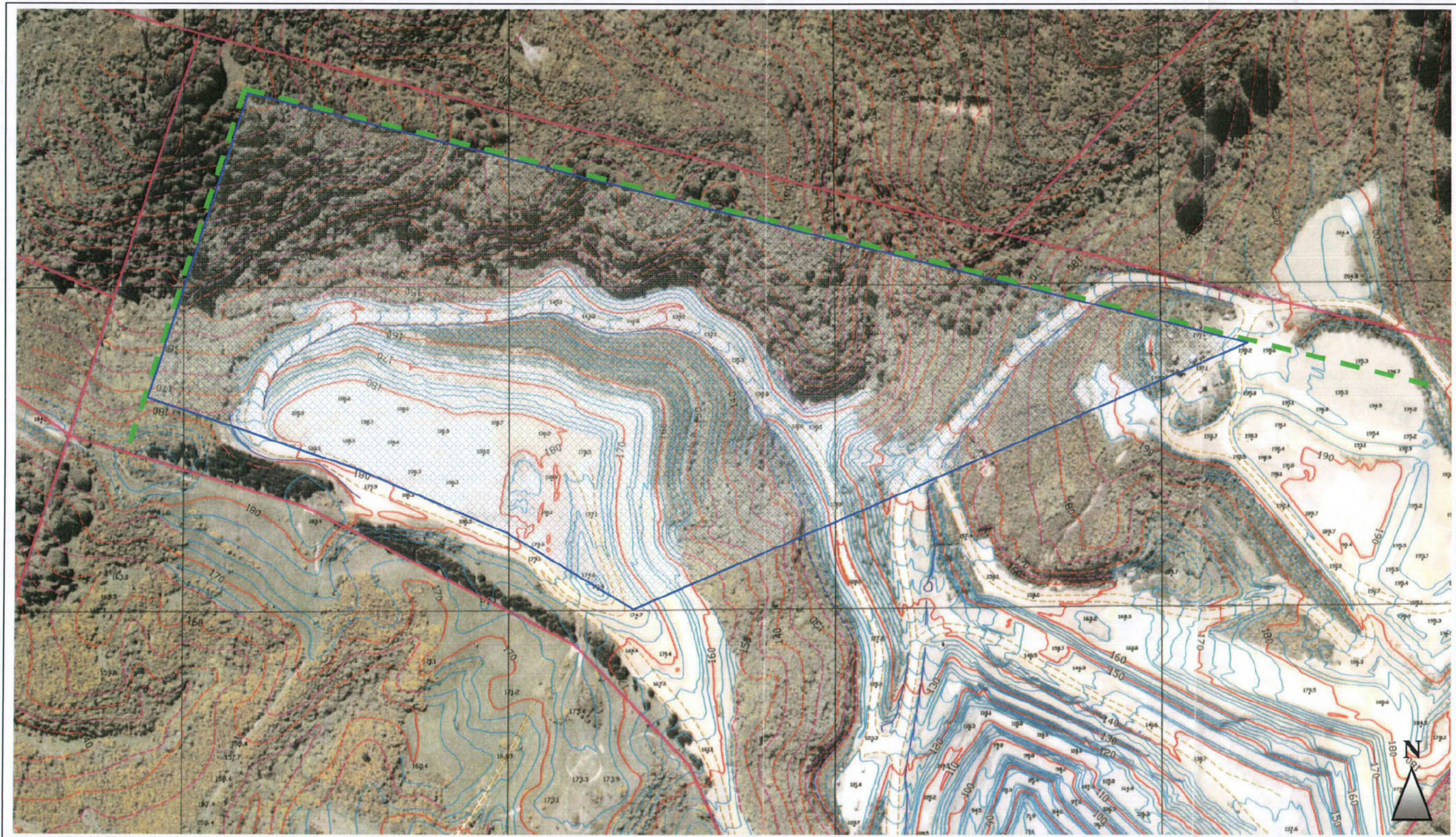


Hutt City Council, 30 Laings Road, Private Bag 31912, Lower Hutt, New Zealand
Tel: +64-4-570 6666, Fax: +64-4-569 4290, Web: www.huttcity.info

WINNER - 2002 New Zealand Performance Excellence Awards

WINNER - 2004 New Zealand Business Excellence Commendation Award - Bronze

Appendix 2 - Area Proposed to be Filled



Key:

--- Buffer Strip - 25m in accordance with Rule 6D 2.1.1 (k) of Hutt City District Plan.

 Maximum extent of area upon which overburden is to be deposited.

Scale: 
(Metres)

Overall Scale: 1:2500

Aerial Photograph Flown: March 2005

PROVED PLAN

7/09/06

AM060176

Introduction

Winstone Aggregates – a division of Fletcher Concrete and Infrastructure Limited (Winstone) operates the Belmont Quarry in the Hutt Valley. The legal description of the site is Lot 1 DP 60552. A locality plan is attached as Appendix 1. Quarrying on the site takes place in accordance with the rules set out in the Extraction Activity Area of the Hutt City District Plan, by way of existing use rights in accordance with Section 10 of the Resource Management Act 1991, and under a number of authorisations from the Wellington Regional Council.

Future development of the site will require the removal and disposal of overburden (material overlying the mineral deposit, which itself does not contain saleable or processable minerals), to facilitate ongoing access to the underlying mineral resource necessary for construction and roading activities within the Wellington region.

Winstone is currently investigating a number of options for future overburden disposal, including filling an existing bush gully in the northwest corner of the Belmont site. It is for the filling of this bush gully that Winstone hereby applies for a Certificate of Compliance in accordance with Section 139 of the RMA. The proposed area to be filled is identified in detail on the plan in Appendix 2.

Proposal

Approximately 1,500,000m³ of material is intended to be disposed of within the bush gully described above, requiring the removal of existing native vegetation.

Some of the area within which the overburden is to be deposited was formerly identified by the Hutt City Plan as being within Significant Natural Resource 3 – Boulder Hill Bush, as identified in Appendix Significant Natural, Cultural and Archaeological Resources 1 and shown on Significant Natural, Cultural and Archaeological Resources Map Appendix 1A. However, in accordance with Rule 14E 2.2 (iii), rule 14E 2.2 requiring a restricted discretionary activity consent for any activity or site development within an SNR ceased to apply at 31 December 2005 in the case of privately owned land. Copies of Map Appendix 1A and an enlarged map obtained from Council showing the previous extent of SNR 3 are included as Appendix 3.

It is important to realise, as shown on the plan in Appendix 2, that a 25 metre buffer strip of vegetation will be maintained along the northern and western boundaries of the site in accordance with the requirements of Rule 6D 2.1.1 (k) which states:

(k) Buffer Strip:

A 25m buffer strip of indigenous vegetation shall be maintained within the site along the boundaries of the Extraction Activity Area, shown in Appendix Extraction 1A and 1B.

The applicable appendix (Extraction 1A) from the District Plan, is included as Appendix 4 of this application.

On this basis, and applying the permissive presumption pertaining to Section 9 of the Act with regards to Chapter 14E: Significant Natural, Cultural & Archaeological Resources, Winstone consider that disposing of overburden in the area shown in



Figure 1: Location of Cottle Land and the proposed overburden disposal area.

3 Existing Aquatic Ecology Values

The four gullies that lie within the footprint of the proposed overburden disposal area are ephemeral watercourses which are dry for much of the summer, but which carry stormwater during heavy rainfall and probably remain wet through the winter. These are marginal aquatic habitats which have very limited life supporting capacity and which are not a significant component of the stream ecosystem.

The middle and lower reaches of the stream constitute a minor but permanent water course with a stony bed and dense overhanging vegetation. Field observations confirm that the lower stream supports an abundant macroinvertebrate fauna dominated by mayflies (*Deleatidium* and *Nesameletus*). The freshwater crayfish (*Paranephrops*) was also identified in the lower stream.

No fish were observed in the unnamed stream during the walkover. If a fish population has established it would likely be very limited, consisting of just one or two non-migratory species. The principal reasons for this are the small size of the stream and the very difficult (if not impossible) upstream access from the Hutt River. Beginning at the Hutt River confluence access barriers include the following (refer also to photographs in Appendix 1):

- Upstream access to the unnamed stream from the Hutt River is obstructed by a steep rise through rock rip-rap to a pool on the riverbank
- Access from the riverbank pool into the stream proper is obstructed by a 100m long culvert
- Access from the upstream end of the culvert into the unnamed stream is obstructed by an overhanging concrete base to a debris arrest structure
- Access through the gorge section of the lower stream is restricted by a series of "chutes".

4 Effects of Proposed Overburden Operations

4.1 Proposed Activity

Winstone seeks to dispose of approximately 1.3 million m³ of overburden material on the Cottle land in the disposal area indicated in Figure 1. The operation will be undertaken progressively over several seasons and is expected to take 12 years to complete, followed by contouring and rehabilitation.

At the outset of this operation it will be necessary to progressively clear much of the scrub and forest cover from the site prior to the placement of the overburden material. Winstone proposes to remove only enough vegetation at any one time to facilitate the immediate placement of overburden, the construction of internal access and other site preparation. These areas will be progressively stripped of top soil. Drainage, including subsurface field drains will be installed progressively in each gully prior to the placement of overburden.

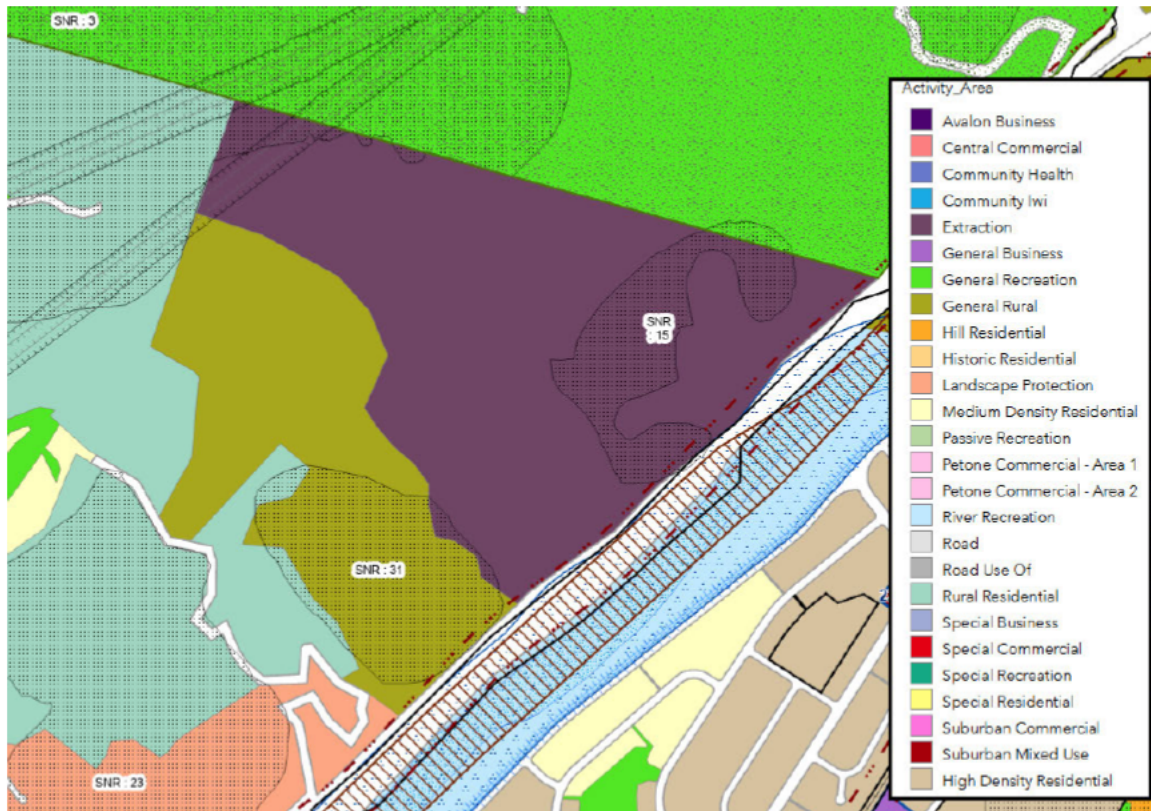


Figure 1: Hutt City District Plan

1.2.1 Description of Activity

The activity for which this Certificate of Compliance is sought pertains to the transportation of aggregate and associated materials from Belmont Quarry. The quarry's operations play a pivotal role in supplying high-grade aggregates for construction and infrastructure projects across the Wellington region.

2 Scope of the Activity:

- **Transportation:**
 - Daily truck movements to transport extracted greywacke aggregate and overburden materials via designated routes.
 - Utilisation of the quarry's existing access points and road network for vehicle ingress and egress.
- **Vehicle Movements:**
 - Heavy vehicles operate within approved timeframes to ensure minimal impact on local traffic.

1. Introduction

Pursuant to Section 88 of the Resource Management Act 1991 (the Act) Winstone Aggregates, a division of Fletcher Concrete and Infrastructure Limited applied for resource consent to construct a new overburden disposal area (OBDA) to dispose of 1.3 million m³ of overburden material from Winstone Aggregates Belmont Quarry located on an area of land formerly known as the 'Cottle Land' in Kelson, Lower Hutt at 176 and 178 Liverton Road.

The applicant requires consent from Wellington Regional Council (WRC) for three discretionary activities and one restricted discretionary activity under the Regional Freshwater Plan (RFP) and Regional Soil Plan (RSP) respectively. The consents are required for two land use consents and two discharge permits covering activities including the placement of structures in, and the draining and reclamation of sections of, the beds of watercourses, soil disturbance, the discharge of sediment laden water and the discharge of dust to air.

The proposal also requires consent from Hutt City Council as a discretionary activity under the City of Lower Hutt District Plan (DP).

The application was jointly notified and was jointly heard by a panel comprising the three commissioners listed on the cover sheet of this decision. Commissioners Baber, Bruce and Foster were delegated the authority by WRC to determine a decision on the WRC consents. Commissioner Foster was delegated sole authority by HCC to determine a decision on the HCC consent.

The commissioners visited the site and viewed the site from surrounding areas, including Liverton Road, Drummond Crescent, Kelson and Kaitangata Crescent, Kelson prior to the hearing.

The hearing commenced on Monday 12 May 2008 and was closed following the applicant's right of reply on Tuesday 24 June 2008. Commissioners made an additional site visit prior to the applicant's right of reply to assess impacts on views and noise from residences of five submitters located on Liverton Road and Kaitangata Crescent, Kelson. At the request of the commissioners the applicant's machinery undertook mock disposal activities similar to those proposed at the location of the current OBDA within the quarry site at the time of these site visits.

In addition to the evidence provided at the hearing, oral submissions, including visual aids (such as power point presentations), videos and photos were tabled at the hearing, the commissioners took into account all of the documentation provided with the application, the WRC and HCC officer's S42A report, and the comprehensive summary of the written submissions prepared by WRC and HCC officers. Full copies of all submissions lodged in regard to the application were available to the commissioners.

All consents applied for are **GRANTED** as detailed in Section 15 of this decision.

2. Background

2.1 Site description

The site comprises three properties (collectively known as the 'Cottle land'). They are numbers 176 and 178 Liverton Road and 401-405 Hebden Crescent (being legally described as Lots 3, 4 and 100 DP 322126).

176 and 178 Liverton Road and 401-405 Hebden Crescent are vacant sites owned by the applicant that are 9.4ha, 9.9ha and 19 ha in area respectively. 176 and 178 Liverton Road are moderately sloping (west to northwest) with a defined broad spur which runs in a south westerly aspect. On either side of the spur are incised gullies, each containing watercourses.

The watercourses through the site are tributaries to the Hutt River. Two main tributaries traverse the site along the northern and southern boundaries of the site. The tributary along the northern boundary is intermittently flowing (ceases flowing for portions of a year). The tributary along the southern boundary is permanently flowing. Both watercourses discharge directly to the Hutt River under State Highway 2. The tributary along the northern boundary also flows through a section of adjoining private property before flowing back the site near Hebden Crescent and then on to the Hutt River (also under State Highway 2).

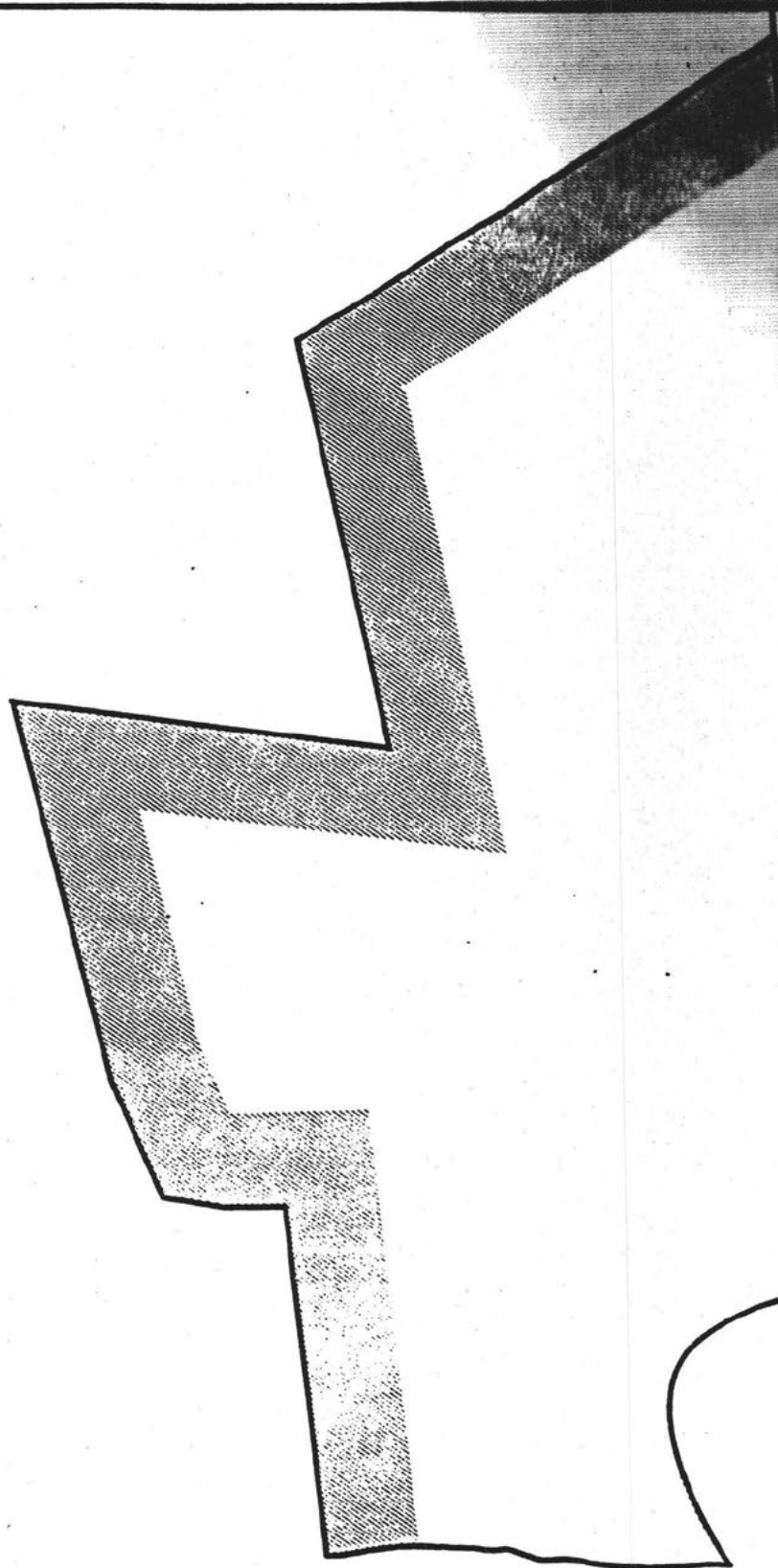
Watercourses in the gullies on the site drain to these two tributaries. Generally, these watercourses are ephemeral (may flow during and following storm events) or intermittently flowing in nature. However, some of the lower reaches of some of these watercourses are permanently flowing in nature. There are also isolated areas of wetland along some sections of the streams on site.

The site has been modified in the past by farming activities, however, those activities have since ceased and the site is reverting back to a natural state. The upper flatter parts of the site (primarily within 176 and 178 Liverton Road) are dominated by a mix of gorse, grass, broom and regenerating native vegetation. The gullies there, however, are covered in more mature and dense regenerating native vegetation (predominantly mahoe).

The lower parts of the site near Hebden Crescent contain semi mature and mature native vegetation. An area of this type of vegetation located in the south eastern part of the site is within the identified Significant Natural Resource known as "Liverton Road Bush" and is protected by a consent notice registered on the Certificate of Title for the site.

The site can be accessed from Liverton Road to the south east or through the existing quarry.

To the immediate north of the site is the existing Belmont Quarry (which is owned and operated by the applicant). Quarrying activities have highly modified that site. The quarry's current OBDA is located at the top (west) of the site. While the site is significantly modified, there are several remnant areas



HUTT
WESTERN

Hutt River

QUARRY ZONE NEAR LIVERTON RD.
LOCATION OF 75 METRE BUFFER STRIP
SEE ORDINANCE II CLAUSE O

SCALE 1:6336



- (b) The proposed text for this amendment is, which is to be reflected in the appropriate resource consent condition is:

Winstone Aggregates shall undertake a fish survey in the tributaries to be covered by overburden plus the main stem tributary in the Cottle land prior to commencement of works for the first earthworks season. The results of that survey are to be taken into account in the Erosion and Sediment Control Plan for each earthworks season, and in the reporting of water quality monitoring results at the end of each earthworks season.

SIGNED by:

Rachael Ford

Martha Swanepoel

Chris & Sera Solomon

Stephen Arthur

Western Hills Environment Foundation
Incorporated

Authorised Signatory

Winstone Aggregates (a division of
Fletcher Concrete and Infrastructure
Limited)

Authorised Signatory



Figure 2: Aerial View of Stage 1 of Proposed OBDA (Looking East Towards Existing Quarry)

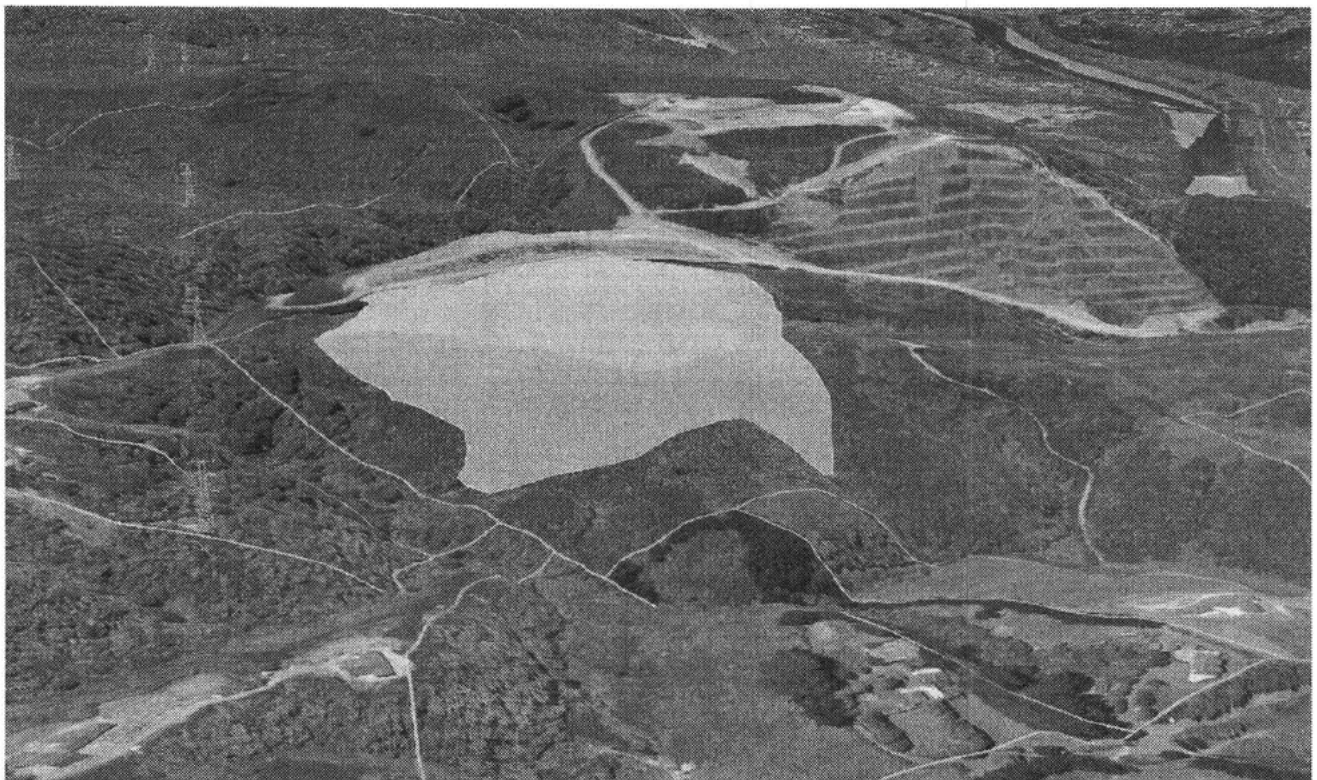


Figure 3: Aerial View of Stage 2 of Proposed OBDA (Looking East Towards Existing Quarry)

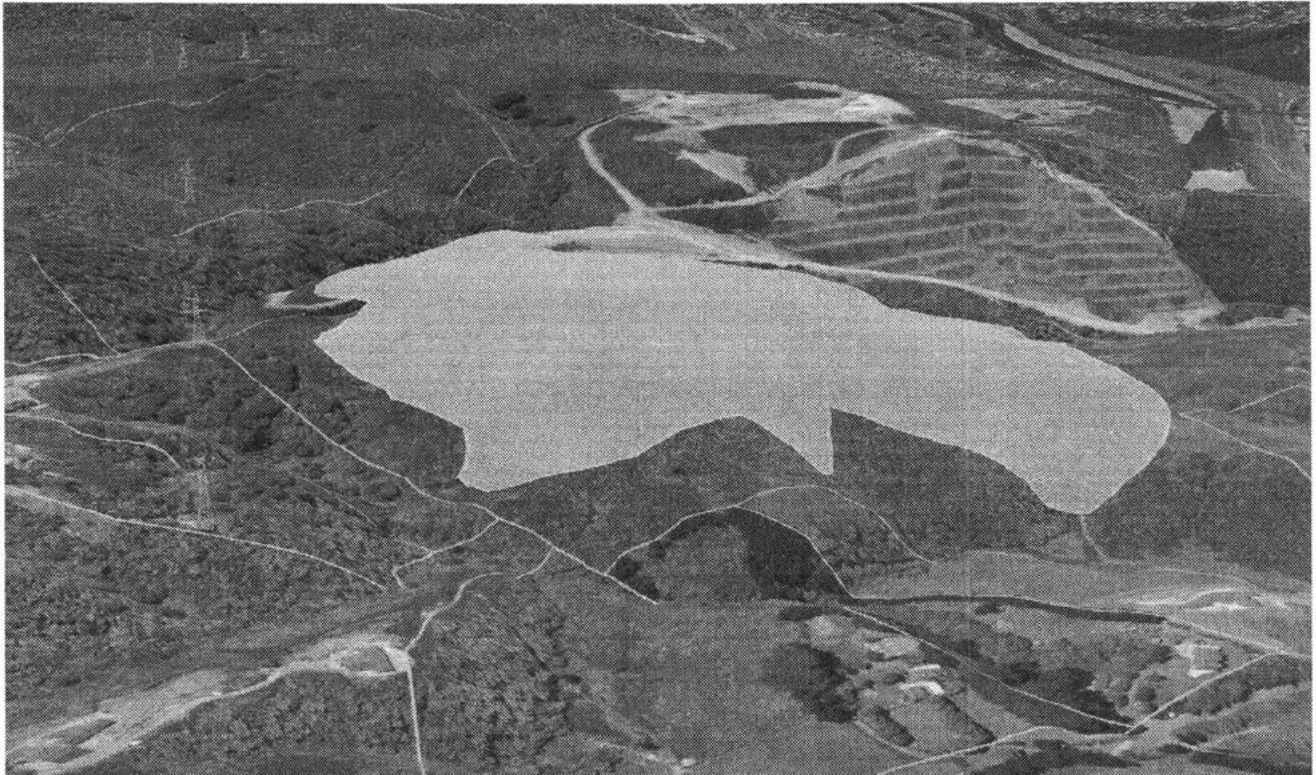


Figure 4: Aerial View of Stage 3 of Proposed OBDA (Looking East Towards Existing Quarry)

It is proposed that the OBDA would be constructed over a maximum of seven earthworks seasons, each lasting no more than 6 months, typically between October and April. Intermittent works outside these months will be necessary in order to facilitate day to day operation of the quarry, such as to remove slips from the quarry face, or dispose of material that is unsuitable for processing, however, these works will be limited to small volumes. It should also be noted that the earthworks seasons necessary to strip the overburden from the quarry may not be in consecutive years, and the applicant is therefore proposing a maximum time period for the complete construction of the OBDA of twelve years (once deposition actually starts). The proposed hours of operation would be 7 am to 6 pm Monday to Friday and 7 am to 1 pm Saturday.

Overburden deposition would typically include the following sequence of works:

1. Vegetation removal

Vegetation needs to be removed from the footprint of the area to be covered by the OBDA. Initially only enough vegetation will be removed to allow the construction of internal access tracks and other site works. From then on vegetation will be cleared incrementally to keep pace with the deposition of overburden, with no more vegetation being cleared than necessary.

2. Top soil stripping and storage

To ensure stability, the top soil in the footprint area of the OBDA also needs to be removed. Similar to the vegetation removal, only enough top soil will be removed to allow the immediate development of the OBDA. Top soil will be temporarily stored in mounds towards the rear of the working area, and then used for reinstating

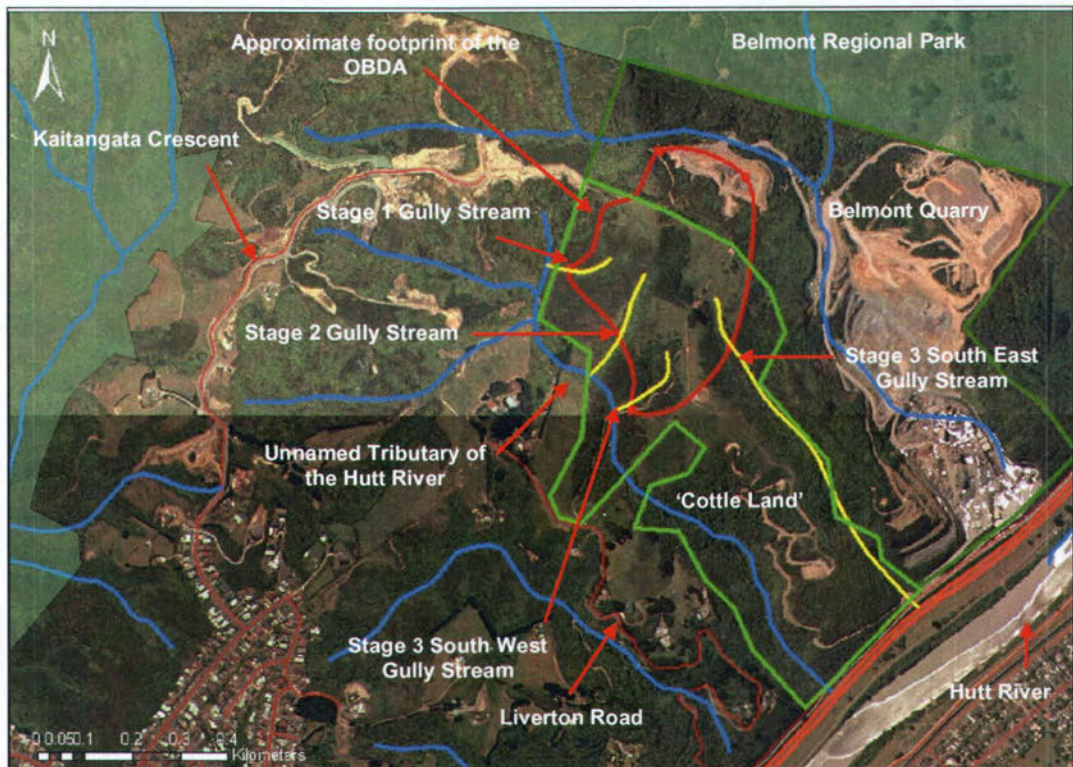


Figure 1: The application site is located in the foothills along the western side of the Hutt Valley (on the north western side of State Highway 2). The 'Cottle Land' property boundary is outlined in bright green. The OBDA will have a footprint of 14.6ha (as indicated approximately in red) and will be located at the north western end of the 'Cottle Land'. The permanently flowing unnamed tributary of the Hutt River is indicated in blue and is located in the south western side of the property. Four ephemeral streams are indicated in yellow.

The legal description of the property is Lots 4, 5 and 100 DP 322126. The land is held in Certificate of Title WN31B/40. The OBDA is spread across Lots 4, 5 and 100 DP 322126.

The approximate location of the application site is shown in Figure 1, including the approximate flow paths of the four ephemeral streams gullies (Stage 1, 2, 3 south west (SW) and 3 south east (SE)) and the unnamed tributary of the Hutt River as thick yellow and blue lines respectively.

3. Background

The applicant owns and operates Belmont Quarry on the adjacent block of land. The quarry has been operating since the early 1900s and is a regionally significant source of aggregate within the Wellington Region and produces a range of products necessary for construction and roading activities. The applicant envisages that there will be an ongoing demand for aggregate to be supplied within the region, and in order to satisfy that demand the applicant will need to continue to provide aggregate products from Belmont Quarry.

In the case of this application, overburden is the material which is unsuitable for aggregate production and includes top soil and weathered rock. This overburden material would be sourced from the existing working faces of the

Topsoil stripping

Areas where earthworks are to be undertaken or overburden is to be placed will be stripped of topsoil progressively with only enough topsoil being stripped at any one time to facilitate immediate development.

Topsoil will be stored in mounds adjacent to the earthworks for subsequent placement on the final batter faces.

Site development works

Works include construction of an access road, installation of drainage within the gully inverts and forming sediment retention ponding areas and other silt control measures, such as bunds, contour drains and soakage pits.

A bund of granular overburden will be formed at the toe of each gully and granular overburden will be used to construct the face of the overburden batter slope. Soft material in the gully invert beneath the toe of the overburden batter slope may be excavated and a shear key of granular material placed as required to ensure the stability of the batter slope.

Overburden Placement

Overburden material from the quarry will be placed in layers (lifts), each being approximately 2.0 to 5.0 metres thick.

As the material is placed on the earthworks surface, it will be bladed and compacted using a bulldozer or wheeled compactor. A bulldozer or excavator will be used to shape the batter slope to its final profile.

Once the overburden works for each season are completed, the batter slopes will be stabilised against erosion by hydroseeding. Topsoil will be placed on the final batter slopes and mulch may be applied if available or deemed appropriate.

Reinstatement and Revegetation

Reinstatement works will be undertaken on an ongoing basis. Once the overburden works for each season are completed the batter slopes visible to adjacent dwellings will be hydroseed with a grass mix. Final batter slopes will be top soiled and vegetated as outlined in this document.

Water Management Activities

Suitable water management practices will be used to manage the potential effects of project work activities on surface water run off and slope stability. These are described in the Sediment Control Management Plan prepared as part of the consent application.

Site Water Requirements and Discharges

Water required for dust suppression will be sourced from within Belmont Quarry.

Stormwater runoff from the earthworks and seepages from the gully inverts will be discharged at the toe of the overburden batter slopes following appropriate treatment to remove sediment.

Stages of the Project

In order to assist understanding of the sequence of change to the overburden landform over time the project is described as three stages, as shown in Figures 2 and 3, and summarised below.

Stage 1	Stage 1 Footprint: 2.65ha Max height: RL 180m	Overburden placement will begin in the base of the gully near the western boundary of the site.
Stage 2	Total Footprint: 6.90ha Max height: RL 180m	Filling will progressively move southeast into the second gully to the south, which be filled from the base up.

1. Introduction

Pursuant to Section 88 of the Resource Management Act 1991 (the Act) Winstone Aggregates, a division of Fletcher Concrete and Infrastructure Limited applied for resource consent to construct a new overburden disposal area (OBDA) to dispose of 1.3 million m³ of overburden material from Winstone Aggregates Belmont Quarry located on an area of land formerly known as the 'Cottle Land' in Kelson, Lower Hutt at 176 and 178 Liverton Road.

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In addition to the evidence provided at the hearing, oral submissions, including visual aids (such as power point presentations), videos and photos were tabled at the hearing, the commissioners took into account all of the documentation provided with the application, the WRC and HCC officer's S42A report, and the comprehensive summary of the written submissions prepared by WRC and HCC officers. Full copies of all submissions lodged in regard to the application were available to the commissioners.

All consents applied for are **GRANTED** as detailed in Section 15 of this decision.

2. Background

2.1 Site description

The site comprises three properties (collectively known as the 'Cottle land'). They are numbers 176 and 178 Liverton Road and 401-405 Hebden Crescent (being legally described as Lots 3, 4 and 100 DP 322126).

176 and 178 Liverton Road and 401-405 Hebden Crescent are vacant sites owned by the applicant that are 9.4ha, 9.9ha and 19 ha in area respectively. 176 and 178 Liverton Road are moderately sloping (west to northwest) with a defined broad spur which runs in a south westerly aspect. On either side of the spur are incised gullies, each containing watercourses.

The watercourses through the site are tributaries to the Hutt River. Two main tributaries traverse the site along the northern and southern boundaries of the site. The tributary along the northern boundary is intermittently flowing (ceases flowing for portions of a year). The tributary along the southern boundary is permanently flowing. Both watercourses discharge directly to the Hutt River under State Highway 2. The tributary along the northern boundary also flows through a section of adjoining private property before flowing back the site near Hebden Crescent and then on to the Hutt River (also under State Highway 2).

Watercourses in the gullies on the site drain to these two tributaries. Generally, these watercourses are ephemeral (may flow during and following storm events) or intermittently flowing in nature. However, some of the lower reaches of some of these watercourses are permanently flowing in nature. There are also isolated areas of wetland along some sections of the streams on site.

The site has been modified in the past by farming activities, however, those activities have since ceased and the site is reverting back to a natural state. The upper flatter parts of the site (primarily within 176 and 178 Liverton Road) are dominated by a mix of gorse, grass, broom and regenerating native vegetation. The gullies there, however, are covered in more mature and dense regenerating native vegetation (predominantly mahoe).

The lower parts of the site near Hebden Crescent contain semi mature and mature native vegetation. An area of this type of vegetation located in the south eastern part of the site is within the identified Significant Natural Resource known as "Liverton Road Bush" and is protected by a consent notice registered on the Certificate of Title for the site.

The site can be accessed from Liverton Road to the south east or through the existing quarry.

To the immediate north of the site is the existing Belmont Quarry (which is owned and operated by the applicant). Quarrying activities have highly modified that site. The quarry's current OBDA is located at the top (west) of the site. While the site is significantly modified, there are several remnant areas

**PROPOSED TRUCKSTOP DEVELOPMENT
WINSTONE AGGREGATES
HEBDEN CRESCENT, LOWER HUTT**

1 INTRODUCTION

- 1.1 This report is submitted in support of the application lodged on behalf of Fuelquip Services Limited ("Fuelquip") seeking land use consent to install and operate a truckstop facility at Winstone Aggregates, Hebden Crescent, Lower Hutt.
- 1.2 This report is prepared in accordance with the requirements of Section 88 and the Fourth Schedule of the Resource Management Act 1991. It is intended to provide the information necessary for a full understanding of the proposal and any actual or potential effects that the proposed activity may have on the environment.
- 1.3 This report contains the following information:
- A description of the site and the surrounding locality;
 - A description of the proposed activity;
 - An assessment of the effects of the proposal on the environment;
 - An analysis of the provisions of the Transitional and Proposed District Plans which are relevant to the application; and
 - A statement regarding the written approval requirements.

2 SITE AND LOCATION

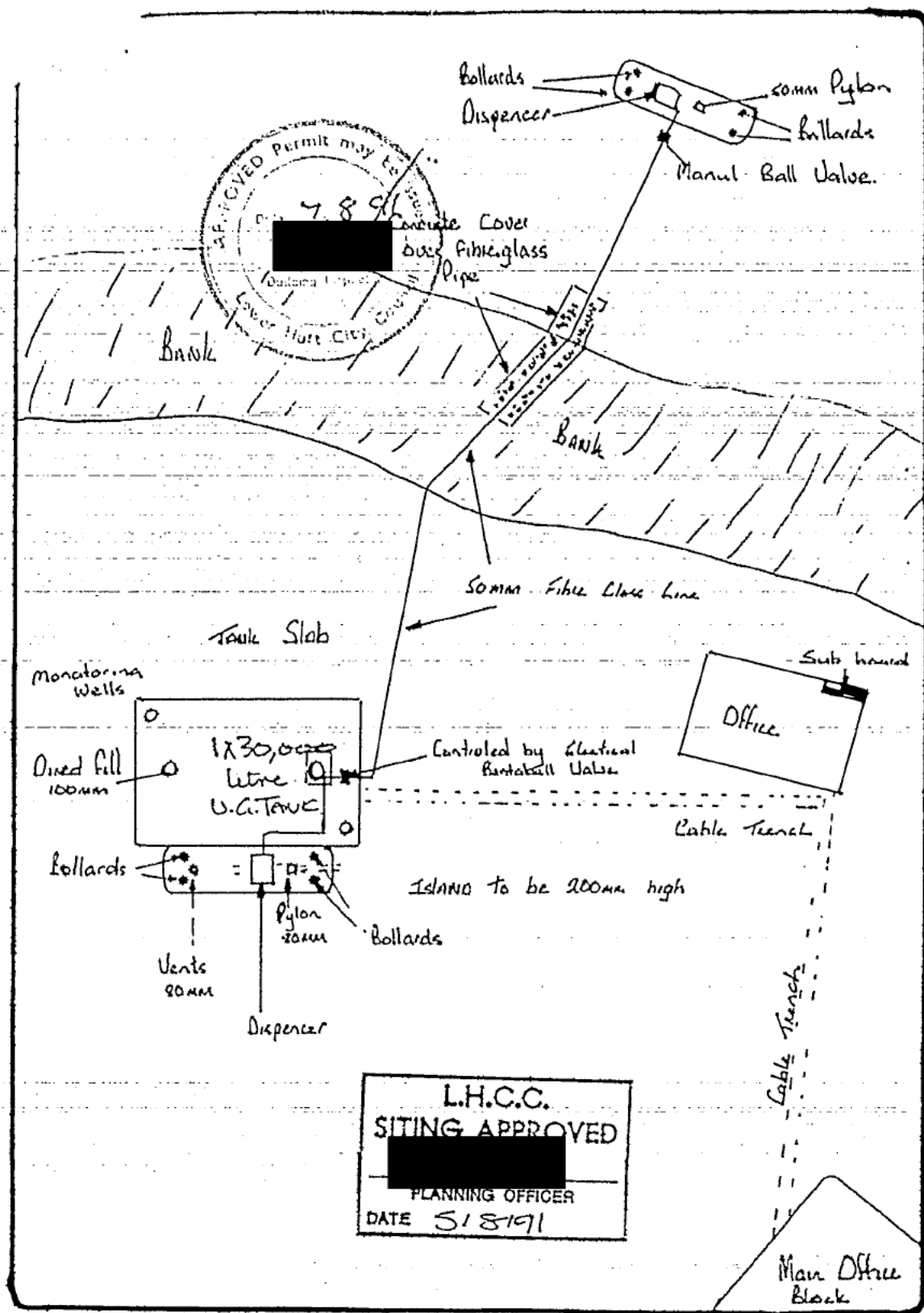
- 2.1 The subject site is located in the Belmont Quarry within the western hills overlooking Lower Hutt. Access to the site is obtained via Hebden Crescent.
- 2.2 The subject site has the legal description of Lot 1, DP 60552. The Certificate of Title that relates to the subject site is attached as Appendix 2 to this report.
- 2.3 An existing quarry operated by Winstone Aggregates is located on the subject site. The quarry comprises workshop, office buildings and other buildings and structures associated with the operation of the quarry.
- 2.4 The subject site is surrounded by hills covered in vegetation to the north, west and the east. State Highway 2 and the Hutt River are located to the south of the site with areas of residential properties located beyond both the road and the river.

3 THE PROPOSAL

- 3.1 Fuelquip proposes to install a truckstop facility within the Belmont Quarry. The proposal would involve the removal of an existing underground 40,000 litre storage tank with dispenser island which is currently located towards the front of the subject site in the position shown on the site plan attached as Appendix 1 to this report.
- 3.2 The proposed replacement tank would comprise an above ground 40,000 litre diesel portable fuelling facility with three dispensers connected via above ground and underground pipelines. The proposed installation would be located in the position above the existing underground tank. The base of the proposed tank would be approximately 12m by 2.5m.
- 3.3 The three dispensers connected to the above ground tank would be located in three separate positions. The first dispenser would be installed on a specifically constructed concrete dispenser island approximately 16 metres north of the proposed tank installation. Fuel to the dispenser island would be supplied via an underground pipe. The second dispenser would be mounted at the northern end of the above ground tank with all pipe work running above ground. The third dispenser would be installed on a dispenser island, approximately 25 metres east of the above ground tank. Fuel to the third dispenser would be supplied via an underground pipe.
- 3.4 The proposed truckstop facility would be primarily for the filling of quarry vehicles, such as loaders, trucks and general earthmoving machinery. The facility would also be available for the refuelling of commercial trucks visiting the quarry to procure quarry materials.
- 3.5 The installation would be unstaffed with the exception of the driver filling his or her vehicle. Fuel from the truckstop facility would be accessed via a card reading system.
- 3.6 The installation of the truckstop facility would meet all relevant Occupational Safety and Health requirements and Dangerous Goods Class 3 requirements. Tank installation would be carried out by an experienced Fuelquip installation team.

4 DISTRICT PLAN PROVISIONS

- 4.1 Under the Transitional District Plan (Western Hills Section) the subject site is situated within the *Quarry Zone*, whereas under the Proposed District Plan the site is located within the *Extraction Activity Area*.
- 4.2 Under the Transitional District Plan, buildings accessory to the *winning and processing of materials occurring naturally in the vicinity* is a Permitted Activity (Section O(4)(e)). The proposed above ground tank is a replacement of an existing underground tank. Both the existing facility and the proposed replacement facility is primarily for the use of refueling quarry vehicles and is therefore considered to be accessory to and an important component to the operation of the Belmont Quarry. In addition, the proposed above ground tank would fully comply with the bulk and location requirements set out in Section O(6) of the Transitional District Plan. The proposed truckstop is therefore deemed a Permitted Activity under the Transitional District Plan.



FILE No.....

PERMIT No. 57103.....

DATE 20/8/91.....

ADDRESS HEBDEN CRES.....



Appendix E: Photolog



Photograph 1: Firth Block (in the background) from Firth Belmont Masonry, looking north.



Photograph 2: Firth Block (in the background) from Firth Belmont Masonry, looking northeast.



Photograph 3: Firth Block overview from northwestern corner of the site boundary, looking southeast.



Photograph 4: Overview of Northern Gully, looking north.



Photograph 5: Northern Gully, looking north.



Photograph 6: Track descending to a stream within Northern Gully, looking northeast.



Photograph 7: Stream within Northern Gully, looking north.



Photograph 8: Northern Gully, looking west.



Photograph 9: Southern Gully, looking north.



Photograph 10: Southern Gully, looking south.



5 December 2025

Phil Heffernan
Project Manager
Winstone Aggregates Limited
PO Box 17195
Greenlane
AUCKLAND 1051

Kia ora Phil,

PRELIMINARY AND DETAILED SITE INVESTIGATION - DRY CREEK - BELMONT QUARRY

1.0 Introduction

Winstone Aggregates Limited (Winstone - the client) owns and operates the Belmont Quarry in Lower Hutt, Wellington. Pattle Delamore Partners Limited (PDP) has been engaged by Winstone to undertake a preliminary site investigation (PSI) for the Belmont Quarry Parcels (Firth Block and Northern Gully) and a preliminary and detailed site investigation (PSI/DSI) of a portion of Dry Creek Quarry ('the site') in support of Winstone's Belmont Quarry land exchange with the Department of Conservation (DoC), which in turn will support Winstone's Belmont Quarry Fast-Track Approval Application (FAA).

This report pertains to the Dry Creek Quarry only. The findings of the PSI for the Belmont Quarry Parcels are presented in a separate report (PDP, 2025).

As part of the FAA, Winstone proposes to exchange approximately 23.2 hectares of Belmont Regional Park land with up to 34.06 hectares of land owned by Fletcher Construction and Infrastructure Limited (FCIL, Winstone's parent company). We understand that the FCIL land consists of four parcels of Winstone's land (Dry Creek area and Belmont Quarry Parcels). Dry Creek comprises approximately 7.94 ha of the land to be exchanged and will form part of the conservation estate.

This PSI/DSI has been undertaken at the direction of and supervised by a Suitably Qualified and Experienced Practitioner (a SQEP) for Contaminated Land and has been undertaken in accordance with the Ministry for the Environment (MfE) Contaminated Land Management Guidelines No.1 (CLMG No.1) - *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.

Those authors confirm that, in their capacity as authors of this report, they have read and agree to abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023. A copy of the authors CV, setting out necessary qualifications is at Appendix A.

2.0 Objectives and Scope

The objectives of this 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 at Dry Creek.
- ✧ 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.
- ✧ Identify any consenting requirements under 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) *Proposed Natural Resources Plan* (PNRP)².
- ✧ Provide recommendations of further investigations, if required.

The scope of work included:

- ✧ Undertaking a detailed review of information provided by the client and publicly available historical information to identify any actual or potential HAIL land use from current or historical land use.
- ✧ Undertaking a site walkover.
- ✧ Soil sampling at ground surface level and 0.3 m below ground level (bgl) with surface soil samples analysed for heavy metals, polycyclic aromatic hydrocarbons (PAHs) and selectively for presence/absence asbestos in soil (P/A AsbInS).
- ✧ Comparison of the results against the relevant criteria.
- ✧ Assessing the requirements of the NESCS and the contaminated land rules within the GWRC's PNRP².
- ✧ Assessing whether any further investigation work is necessary to inform site management and/or consenting and/or soil disturbance requirements.
- ✧ Preparation of this report.

3.0 Site Description and Background

The property, legally described as Part Lot 1 DP 28205 F2/1438 is located within Dry Creek Quarry, owned by Winstone. Part of the property is to be exchanged with the Department of Conservation (DoC) and is outlined in Figure 1, herein referred to as the site, comprising approximately 7.94 ha.

The site is zoned as 'Extraction' under Hutt City Council's (HCC) District Plan.

The surrounding land use is as follows:

- ✧ North: Dense bush within Belmont Regional Park.
- ✧ East: Dense bush within Belmont Regional Park.

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.

² While consenting under the Resource Management Act 1991 is not directly relevant to the land exchange, these consenting assessments have been undertaken to inform DoC of any potential liabilities/obligations and responsibilities arising from the land exchange.

- ✦ South: Hebden Crescent then State Highway 2 (Western Hutt Road).
- ✦ West: Dense bush within Belmont Regional Park, including Dry Creek campsite.

Site photographs showing the current layout/conditions of the site are provided in Appendix C.

4.0 Geology and Hydrogeology

The geological map of the area (Begg and Johnson, 2000) indicates that the site is underlain by undifferentiated Rakaia Terrane Triassic sandstone and mudstone, comprising alternating sandstone and mudstone, poorly bedded sandstone with minor coloured mudstone, conglomerate, basalt, chert and limestone.

The nearest active fault is the Wellington Fault approximately 200 m south of the site.

An onsite surface water body is present in the northeastern corner of the site and flows in a southeasterly direction. The surface water body becomes culverted shortly after entering the site.

Based on this, local groundwater in the fractured or weathered greywacke beneath the site is inferred to flow in a southeastern direction, discharging into the Hutt River.

A search was undertaken of the GWRC map viewer on 15 August 2025 identified several bores with 500 m. However, the search did not identify any information relating to groundwater depth of use. No water take consents were noted within 500 m of the site. A map is provided in Appendix D.

5.0 Information Review

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

A review was taken of the available historical aerial photographs for the site, which are located in Appendix E. A total of five images were obtained from Retrolens³, one from the HCC GIS Portal⁴ and eight from Google Earth Images. A summary is provided below:

Table 1: Historical Aerial Photograph Review		
Date	Reference	Description
1947	Historical Aerial Photograph 1	The site is undeveloped and appears to be vegetated with a stream in the northern area of the site. The wider property appears to have an access track present, entering the site from Hebden Crescent to the south.
1957	Historical Aerial Photograph 2	The site remains undeveloped with some access tracks present bisecting the northern corner of the site. Quarrying has begun on the wider property.
1967	Historical Aerial Photograph 3	There is now an established access track around the northwestern area of the site. The majority of the site is still covered with vegetation.

³ <https://retrolens.co.nz/>

⁴ <https://maps.huttcity.govt.nz/HistoricAerials/index.html>

Table 1: Historical Aerial Photograph Review

		Quarrying activities are now present across the majority of the wider property.
1979	Historical Aerial Photograph 4	There is minor soil disturbance around the central northern boundary. The access track observed in 1967 is no longer visible. The areas along the northern, eastern and western boundaries are still vegetated.
1988	Historical Aerial Photograph 5	An established access road is present between the quarried portion of the property and the centre of the northwestern site boundary. No other significant changes observed from the previous aerial image.
1995	Historical Aerial Photograph 6	There is increased soil disturbance within the northwestern portion of the site, with the access road reestablished.
2005	Historical Aerial Photograph 7	Most of the site is now revegetated with no soil disturbance taking place. An access road within the northwestern area of the site is still visible. Some parts of the quarry/cleanfill in the wider property have been revegetated.
2009	Historical Aerial Photograph 8	The gully towards the northern corner of the site has been partially cleared. No other significant changes observed from the previous aerial image.
2013	Historical Aerial Photograph 9	The northern area of the site has been excavated and possible filling is evident and a circular pit observed in the northern corner of the site, the exact use of the circular pit is not clear. The access road in the western area of the site is still present. More parts of the cleanfill in the wider property have been revegetated with the earlier revegetation becoming denser/established.
2014	Historical Aerial Photograph 10	The pit, present in 2013 is no longer visible. No other significant changes observed from the previous aerial image.
2016	Historical Aerial Photograph 11	The northern corner of the site appears to have been revegetated and recontoured with some bare, exposed areas and access ways.
2017	Historical Aerial Photograph 12	The majority of the site has been revegetated. The access tracks in the western portion of the site no longer appear accessible.
2019	Historical Aerial Photograph 13	Increased revegetation is present across the site, no other significant changes observed from the previous aerial image.
2022	Historical Aerial Photograph 14	The site is predominately covered with vegetation, the access track to in the northern portion of the site appears to have been reestablished. The cleanfill operation in the wider property appear to have been scaled back and started to be revegetated.
2024	Historical Aerial Photograph 15	The site is predominantly covered in vegetation, the access road present within the central northern area of the site appears to be overgrown. The cleanfill operation in the wider property appear to have ceased completely with the exception of the southeast corner, which appears to be still used for commercial/industrial purposes.

5.2 Greater Wellington Regional Council

A review of the GWRC Selected Land Use Register (SLUR) map viewer showed no record of HAIL activities at the site. Email correspondence dated 19 August 2025 confirmed there is no evidence of contamination at the site. The email from GWRC went on to state that *“this does not mean the site is not contaminated and part of the wider property may be classified as HAIL Category E – 4: Commercial concrete manufacture or commercial cement storage”*.

5.3 Hutt City City Council

An information request was made to HCC pertaining to contaminated land. HCC had no record of potential contamination at the site.

The property files for the wider property were also obtained from HCC. A summary of the pertinent points are outlined below with relevant documents included in Appendix F.

Table 2: Property File Summary

Document	Date	Comments
Cleanfill Management Plan	2020	Pg 5 outlines the consents associated with the property in regard to land use, groundwater takes, discharge to air, discharge to land and stormwater discharge. Pg 9 outlines acceptable materials to the cleanfill are clay, soil (non-contaminated), rock, asphalt (no evidence of hydrocarbons) and bricks. Pg 10 outlines the unacceptable materials for the clean fill.
Cleanfill Management Plan	1999	Winstone intend to establish and operate a cleanfill at Dry Creek. Material to be accepted at the cleanfill is restricted to clay, soil, rock, asphalt, brick or concrete (including reinforcing steel). Waste material from service stations, timber treatment sites, chemical industry sites, dry cleaning sites, gaswork sites, electrical substations or railway yards must be tested prior to being disposed of. Material is to be visually screened by the cleanfill controller to ensure that unsuitable material (including stained material, hydrocarbon impacted material, putrescible material or asbestos) is not disposed of at the cleanfill.
APPLICATION-Vol 2 - Part 4	1998	Pg 14 outlines that the proposed cleanfill will have an approximate capacity of 500,000 m ³ .
APPLICATION-Vol 2 - Part 5	1998	Pg 11 discusses ecological effects. It is noted that the cleanfill will not adversely affect ecosystem/water quality and may provide increased flora and fauna.
APPLICATION-Vol 2 - Part 9	1998	Certificates of Title: dated 1967 pertaining to 40 acres comprising the site and wider quarry. The site originally belonging to J.E Feast Holdings Limited with the mortgage transferred to Union Oil Company Limited 1974 and then to UDC Finance Limited in 1985. The lease was transferred in 1987 to Construction Service Company. The registered proprietor was listed as Dry Creek Properties in 1993 and was transferred to DHL Resources Limited later that year with the mortgage

Table 2: Property File Summary

Document	Date	Comments
		to Dry Creek Holdings Limited. This was transferred to Winstone Aggregated Limited in 1997.
APPLICATION-Vol 2 - Part 15	1998	Part of the file contains information pertaining to the Resource Consent Application, to “establish, maintain, operate and manage a 500,000 m ³ clean fill at Dry Creek Quarry”. It also outlines concerns raised by Transpower regarding dust control.

5.4 Site Reconnaissance

A site walkover was undertaken on 13 August 2025, photographs from this visit are provided in Appendix C. The site was reflective of the most recent aerial photograph (Historical Aerial Photograph 15) and comprised steep, vegetated slopes.

The site was accessed via Hebden Crescent and then following the road through Holcom Concrete Plant (outside of the site boundary), exiting through the northeast corner. PDP followed the road to the furthest accessible point and then continued on foot. The northern most point accessed was the tip of the cleanfill area, within the northern gully at the site. A small onsite stream is present at the head of the gully, which becomes culverted running in a southern direction. The general coverage of the area is densely vegetated, with the access track surrounded by steep slopes to the north, east and west.

The western portion of the site where previous access roads were present was mostly inaccessible with visual observations made from the available access roads, which were made of compacted gravel. The slopes across the site were very steep and covered in dense vegetation, predominantly gorse.

The eastern and southern boundaries were inaccessible due to steep slopes and dense vegetation. A visual assessment was made of these areas from the access track adjacent to the eastern boundary, which noted the dense vegetation to be predominantly gorse with some areas of exposed rock face.

There was no visual evidence of historical filling activities due to the relandscaping of the site and dense vegetation.

No evidence of HAIL activities was present.

A Winstone site representative during the site visit did not hold any pertinent information relating to the site.

6.0 Summary of Information

The review of historical information identified that the wider property has been used for quarrying from at least 1947 to the late 1990s. The site however has remained largely unchanged until 1967 when an access track was present in the northwestern area of the site, by 1979 minor soil disturbance was noted around the central area of the site until 1995. By 2005 the site was predominantly revegetated. The 2009 historical aerial photograph indicates soil clearance in the gully located in the northern corner of the site followed by periodic infilling from 2013 (where a circular pit is visible from 2013 until 2014) to 2019 after which the site appears to be revegetated.

Two cleanfill management plans, dated 1999 and 2020, have been produced for the wider property.

The site is not listed on GWRC's SLUR.

7.0 Potential Contaminants of Concern

HAIL Category E7 pertains to mineral extraction, refining and reprocessing, storage and use which can include quarrying. However, rock quarrying for aggregate or building stone, such as Dry Creek Quarry, is an activity that is excluded from the MfE HAIL as the likelihood of soil contamination from gravel or rock materials is considered low.

Class 5 landfills (cleanfills) are also excluded from the MfE HAIL as long as they comply with the requirements of the *Technical Guidelines for Disposal to Land* (WasteMINZ, 2022). However, should inappropriate materials have been disposed of at the cleanfill there is the potential for soil contaminants to include heavy metals, polycyclic aromatic hydrocarbons and asbestos. (It should be noted that the consent and clean fill management plan specifically excluded fill materials which could contain these)

8.0 Preliminary Conceptual Site Model

A risk to human health can only occur if there is a hazard (e.g. contaminated soil), a receptor (e.g. people) and an exposure pathway between the hazard and receptor. The absence of any of these components means no risk can exist.

A preliminary conceptual site model (CSM) is set out in Table 3 below. The table presents the potential contaminant sources at the site (determined by the historical information review), the future receptors (such as future site users and maintenance workers) and potential pathways whereby the receptors could be exposed either directly or indirectly to soil contaminants. The likelihood of soil contamination based on the history, and the likelihood of exposure based on the proposed site use can then be assessed to determine whether a complete exposure pathway is likely to exist.

The ability for this contaminant pathway to negatively impact the receptor can be assessed by qualitative assessment (when the proposed site use is well understood) and/or comparison of the source with appropriate guideline values and/or standards.

Table 3: Preliminary Conceptual Site Model

Source	Pathway	Receptor	Pathway Linkage
Heavy Metals and Polycyclic Aromatic Hydrocarbons (PAH) if present in fill material	Dermal contact with soil and dust	Site workers (DoC workers installing footpaths ⁵)	Potentially Complete: Short term exposure may occur during soil disturbance works if contaminants are present at concentrations that could pose a risk to human health and are accessible following the land exchange.
	Inhalation and ingestion of soil and dust	Future site users	
	Run off to surface water	Surface water receptors	Potentially Complete: If contaminants are present in shallow soils there is potential for run off to enter the onsite stream in the northern corner of the site, prior to it becoming culverted.
	Infiltration to groundwater	Down gradient groundwater users	Likely Incomplete: Depending on the potential contaminants present and their mobility and the depth to groundwater, it is possible that downward migration of contaminants may occur. However, groundwater in the area is not in potable use and the large dilution factor

⁵ No tracks are currently proposed; however, it may be a future activity.

Table 3: Preliminary Conceptual Site Model

Source	Pathway	Receptor	Pathway Linkage
			associated with the Hutt River and Wellington Harbour would mitigate any potential contaminants.
Asbestos if present in fill material	Inhalation of asbestos fibres in the air mobilised during soil disturbance	Site workers (DoC workers installing footpaths) Future Users	Potentially Complete: Short term exposure may occur during soil disturbance works if contaminants are present at concentrations that could pose a risk to human health and are accessible following the land exchange. Asbestos containing material (ACM) may have been deposited into the cleanfill and may be present in exposed soils.
	Inhalation and ingestion of soil and dust		

9.0 Soil Sampling Plan

The sampling strategy was designed to assess the risk to maintenance workers (for example DoC workers installing walking tracks in the future) and future site users (e.g. hikers) for recreational use from potentially contaminated cleanfill material.

The original sampling plan intended to sample across a broad grid. However, due to the steep topography and dense vegetation the sampling plan was adapted. The adapted plan was undertaken to target accessible areas of the site where filling activities were undertaken, identified in the historical aerial photographs. Therefore, targeted soil sampling was undertaken along the periphery of the observed cleanfill boundary with the Belmont Regional Park to determine the presence of heavy metals, PAHs and asbestos associated with fill material. The sampling locations are outlined in Figure 1 (Appendix B).

Due to the nature of the site, there are some areas of the site that were unable to be accessed, such as the northwestern area of the site, which was previously occupied by access roads. However, a review of historical information⁶ indicates that this area was unlikely to be subject to cleanfill operations and therefore the risk of contamination is considered to be low.

Samples were not taken along the southern boundary of the site due to accessibility issues, and it should also be noted that this part of the site appears to have been undisturbed throughout the site history.

10.0 Site Investigation Activities

10.1 Intrusive Investigation

Soil sampling was undertaken on 13 August 2025 by two PDP environmental scientists using hand excavation methods. All locations were backfilled upon completion.

Sampling was undertaken at six targeted locations at surface level (0.0 m bgl) and to 0.3 m bgl to investigate potential contaminants associated with historical cleanfill and to characterise the soils.

A fresh pair of nitrile gloves were worn to transfer the material from the test pit/drill core to a glass sample jar and plastic pottle. The jars were placed into a chilly bin containing ice and sent via courier to Hill Laboratories under PDP's Chain of Custody (COC) procedures.

⁶ Including the *Geotechnical Appraisal Report – Land Exchange Belmont Quarry Development Project* (Baseline Geotechnical [BG], 2025) provided by Harbour Chambers.

10.2 Field Observations

The lithology across the site was generally comparable and photographs are located in Appendix C. The topsoil encountered at TP1 (0.0 m and 0.3 m bgl) comprised a brown sandy gravel (Fill), the gravel was medium, angular to sub angular. A brown silty slightly gravelly clay was encountered within TP2 (0.0 m and 0.3 m bgl), TP3 (0.0 m bgl) and TP4 (0.0 m and 0.3 m bgl). TP3_0.3 encountered a dark grey gravelly sandy clay with occasional brick fragments observed. TP5 (0.0 m and 0.3 m bgl) comprised a brown silty sandy clay matrix with large bricks and asphalt noted. TP6 comprised a grey silty clayey gravel, the gravel was noted to be hardfill overlying weathered rock at 0.3 m bgl.

During soil sampling, the following were observed:

- ✧ No staining or olfactory evidence of contamination was noted on any soil material.
- ✧ No ACM or fragments of asbestos.
- ✧ No specific evidence of material unsuitable for the cleanfill – the asphalt and bricks that were encountered are acceptable cleanfill material (in accordance with the Cleanfill Management Plan as indicated in Section 5.3). Groundwater was not encountered within any of the test pits.

10.3 Laboratory Analysis

All surface soil samples were submitted for laboratory analysis and were analysed for a suite of heavy metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc) and polycyclic aromatic hydrocarbons (PAHs). In addition, three soil samples where brick fragments were identified (see Section 10.2) were analysed for presence/absence asbestos to determine if any of the surface soils contain ACM.

The remaining soil samples were placed on hold at the laboratory pending review of the initial results.

11.0 Soil Sampling Results

The laboratory results of the soil analyses, and comparison to applicable assessment criteria, are presented in Table 4 (Appendix G). The laboratory reports and associated chain of custody documentation are included in Appendix H. Only results above the laboratory method detection limit have been tabulated.

Generally, the results across the sampling area were consistent for heavy metals.

- ✧ Arsenic was present between 4 mg/kg (TP1_0.0) and 7 mg/kg (TP5_0.0 and TP6_0.0).
- ✧ Cadmium was below the laboratory detection limit in all samples.
- ✧ Chromium was present between 17 mg/kg (TP2_0.0) and 20 mg/kg (TP6_0.0).
- ✧ Copper was present between 12 mg/kg (TP1_0.0 and TP2_0.0) and 25 mg/kg (TP5_0.0).
- ✧ Lead was present between 16.3 mg/kg (TP1_0.0) and 29 mg/kg (TP5_0.0 and TP6_0.0).
- ✧ Nickel was present between 12 mg/kg (TP5_0.0) and 15 mg/kg (TP6_0.0).
- ✧ Zinc was present between 61 mg/kg (TP1_0.0 and TP2_0.0) and 80 mg/kg (TP3_0.0).

Various PAH compounds were reported at low concentrations in four of the analysed soil samples above the laboratory's level of detection (LOD). Based on the visual presence of asphalt at some test pit locations it is possible that the low level detections of PAHs are attributed to the asphalt.

Asbestos was not detected in any of the analysed soil samples.

12.0 Applicable Soil Acceptance 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, the results have been compared to soil guidelines 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 Recreational land use.

13.0 Comparison of Results to Applicable Criteria and Human Health Risk Assessment

All samples analysed for heavy metals and PAH contained concentrations below the utilised human health SCS for recreational land use. No asbestos was detected in any of the analysed samples. Therefore, soils at the site are not considered to pose an unacceptable risk to human health for recreational use or for short term exposure for DoC workers installing footpaths. On this basis the potentially complete pathways identified in the CSM are subsequently incomplete.

14.0 Environmental Risk Assessment

The ecological risk is also considered to be low due to the generally low concentrations of metals and PAHs identified in the analysed samples. Additionally, the culverted nature of the surface water and the potential for groundwater to be relatively deep will mitigate any potential impacts from run off or infiltration.

15.0 Consideration of the NESCS and GWRC PNRP Assessment⁷

15.1 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.*

The review of historical information and analytical results indicates that it is unlikely that an activity which falls within the MfE's Hazardous Activities and Industries List has been undertaken on the site. It is therefore not considered "a piece of land" as described in regulation 5(7) of the NESCS, and therefore these regulations do not apply to the proposed change in land use.

⁷ While consenting under the Resource Management Act 1991 is not directly relevant to the land exchange, these consenting assessments have been undertaken to inform DoC of any potential liabilities/obligations and responsibilities arising from the land exchange.

15.2 GWRC PNRP Assessment

The GWRC PNRP has three rules relating to contaminated land. An assessment of the two 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 contaminant concentrations are not significantly elevated and do not present a human health or environmental risk.

16.0 Conclusions

Pattle Delamore Partners Limited (PDP) have been engaged by Winstone Aggregates Limited (the client) to undertake a Preliminary and Detailed Site Investigation (PSI/DSI) of a portion of Dry Creek Quarry in support of the land exchange with the Department of Conservation (DoC).

Key findings of this investigation are summarised as follows:

- ✧ A review of historical information indicated that the site was predominantly vacant, vegetated land with some access roads through the northwestern area until 1979 after which minor soil disturbance is noted along the central northern boundary of the site. The next significant change to the site is the revegetation of the site in 2005 followed by excavations in the gully in the northern corner of the site in 2009. The gully is then periodically infilled until 2019. The site is then revegetated and has remained so to the present day.
- ✧ Property file records indicated that the site was part of a consented cleanfill from the late 1990's to around 2019. A Cleanfill Management Plan (CMP) on the file allowed for the filling of clay, soil, rock, asphalt, brick or concrete (including reinforcing steel).
- ✧ Based on the resource consent to operate a cleanfill, the presence of a CMP and review of historical aerial photographs, a limited DSI soil sampling investigation was undertaken.
- ✧ The site walkover identified that much of the site was inaccessible due to steep slopes and covered in dense vegetation, primarily gorse.
- ✧ During the soil sampling the underlying shallow soils were noted to comprise predominantly of silty and clayey matrix with some large bricks and asphalt (Fill) noted, consistent with materials allowed for in the CMP.
- ✧ No groundwater was encountered.
- ✧ Analytical results were generally comparable across the site with no exceedances against the applicable criteria. Low level detections of selected polycyclic aromatic hydrocarbons may be consistent with observations of asphalt within the fill material.
- ✧ No asbestos was identified in the analysed samples.

The information review and soil testing did not identify evidence that HAIL activities have occurred at the site and therefore the NESCS does not apply. The limited site investigation work undertaken did not identify the presence of material beyond that allowed for in the CMP.

As per Rule 81 of the Greater Wellington Regional Council's Protection Natural Resources Plan, this DSI must be provided to the council within two months following completion of the investigation.

An area of historically disturbed land related to site access tracks in the northwest area of the site was unable to be sampled due to access constraints associated with topography and thick vegetation cover. However, review of the available information suggests that the risk of contamination in this area is considered to be low.

17.0 References

- BG, 2025. *Geotechnical Appraisal Report – Land Exchange Belmont Quarry Development Project*. Baseline Geotechnical Limited.
- 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, 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* (NEPM, 2013)
- PDP, 2025. *Preliminary Site Investigation – Belmont Quarry – Firth Block and Northern Gully*. Pattle Delamore Partners Limited.

18.0 Limitations

This report has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Winstone Aggregates Limited (Winstone) and Hill Laboratories and others not directly contracted by PDP for the work including Hutt City Council, Greater Wellington Regional Council, Retrolens and Harbour Chambers. 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.

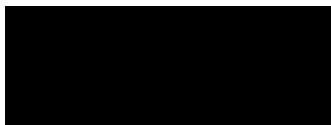
This report has been prepared by PDP on the specific instructions of Winstone for the limited purposes described in the report. PDP acknowledges that this report may be used and relied upon by the Expert Panel appointed under the Fast-track Approvals Act 2024. PDP accepts no liability if the report is 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.

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Yours faithfully

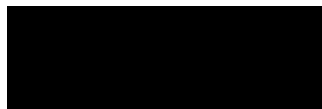
PATTLE DELAMORE PARTNERS LIMITED

Prepared by



Senior Environmental Scientist - Geology

Reviewed by



Melody Robyns

Service Leader – Contaminated Land

Approved by



Hamish Wilson

Technical Director – Contaminated Land

Appendix A: Certifying Statement

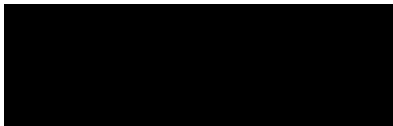
I, Hamish Wilson, of Pattle Delamore Partners certify that:

1. This combined preliminary and 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 NESCS) because it has been:
 - a. Completed by a suitably qualified and experienced practitioner;
 - b. Completed in accordance with the current edition of *Contaminated land management guidelines No. 5 – Site investigation and analysis of soils*;
 - c. Reported on in accordance with the current edition of *Contaminated land management guidelines No. 1 – Reporting on contaminated sites in New Zealand*; and
 - d. Certified by a suitably qualified and experienced practitioner.
2. This combined preliminary and detailed site investigation concludes that the NESCS does not apply as it is more likely than not that no HAIL activities have been undertaken at the site and that the proposed change in land use is highly unlikely to be a risk to human health as they do not exceed the applicable standard in Regulation 7 of the NESCS.

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 - Approver

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 – Reviewer

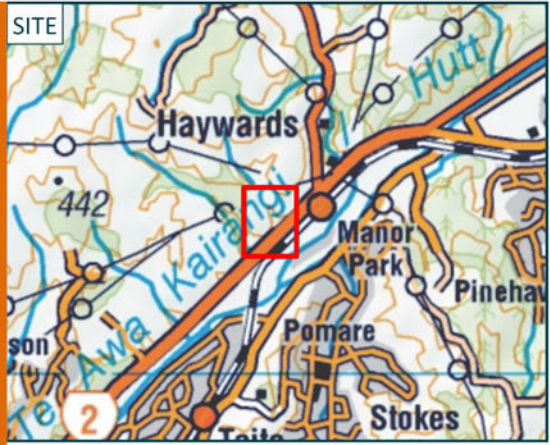
Melody is an Environmental Scientist with a Master of Science in Physical Geography. Melody has a background in environmental site investigations and contaminated land assessments. She is an experienced project manager with over 10 years' experience and is competent in risk identification, mitigation 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 6 years' experience in undertaking contaminated land assessments across New Zealand and the UK. She has a MSc 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



KEY :

● SAMPLING LOCATION

▭ SITE BOUNDARY



0 30 60
METRES
SCALE : 1:2,500 (A3)

THIS DRAWING REMAINS THE PROPERTY OF PATTLE
DELAMORE PARTNERS LTD AND MAY NOT BE
REPRODUCED OR ALTERED WITHOUT WRITTEN
PERMISSION. NO LIABILITY SHALL BE ACCEPTED FOR
UNAUTHORISED USE OF THE DRAWING.

FOR DISCUSSION
28/08/2025

A	ISSUED FOR REVIEW	AUG 25	CI
NO.	REVISION	DATE	BY

SOURCE:
1. AERIAL IMAGERY (HUTT CITY 0.075M URBAN AERIAL PHOTOS
(2025)) SOURCED FROM THE LINZ DATA SERVICE
WWW.LINZ.GOV.TZ/ AND LICENCED FOR RE-USE UNDER THE
CREATIVE COMMONS ATTRIBUTION 4.0 INTERNATIONAL LICENCE.
2. CADASTRAL/TOPOGRAPHICAL INFORMATION AND INSET
DERIVED FROM LINZ DATA.
3. SPATIAL FEATURES MAY NOT BE SPATIALLY ACCURATE

CLIENT



FIGURE

**FIGURE 1: DETAILED SITE INVESTIGATION - DRY
CREEK- BELMONT QUARRY**

PROJECT

Detailed Site Investigation – Dry Creek Quarry



Appendix C: Site Photographs



Photograph 1: Overview of slope and vegetation from TP1.



Photograph 2: General overview of the site looking east from central site boundary.



Photograph 3: Overview of the site looking west from central site boundary.



Photograph 4: General overview of soil conditions.



Photograph 5: Example of brick encountered.



Photograph 6: Overview of an access track looking north towards TP1 – TP4.



Appendix D: Bore Search



Haywards

Manor, Park St

Hutt River, a

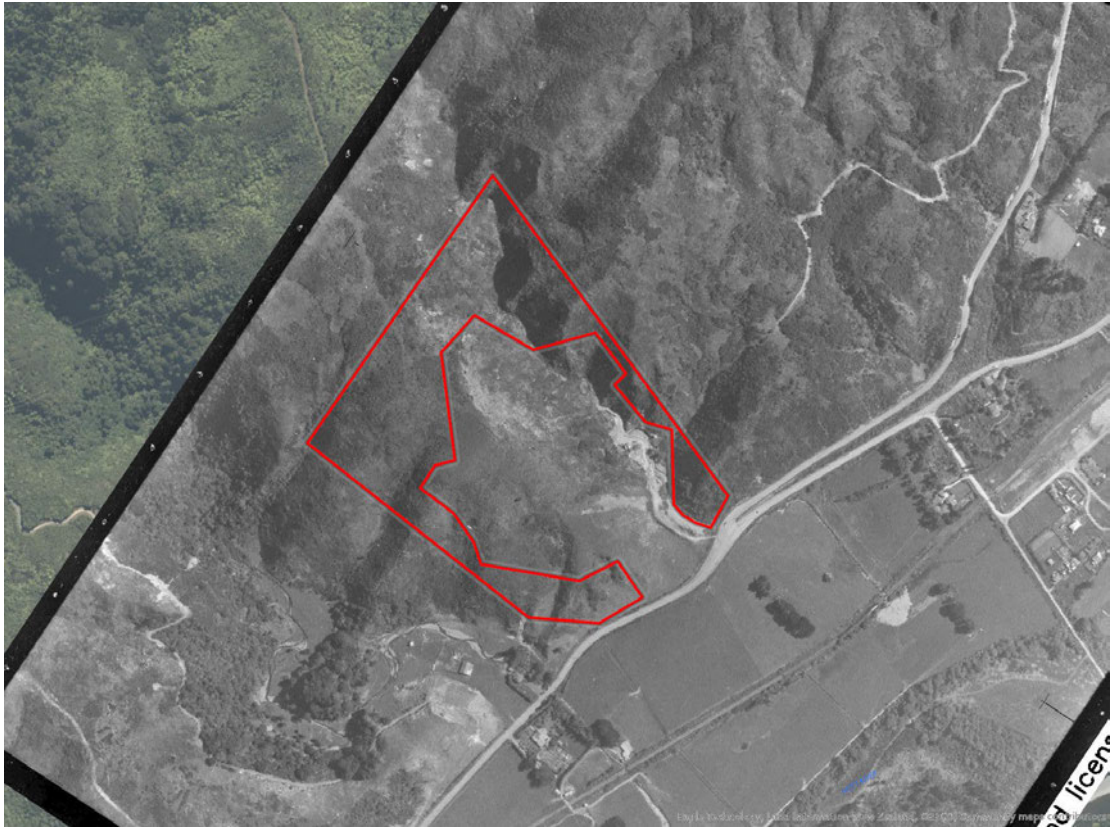
Manor Park

Stokes

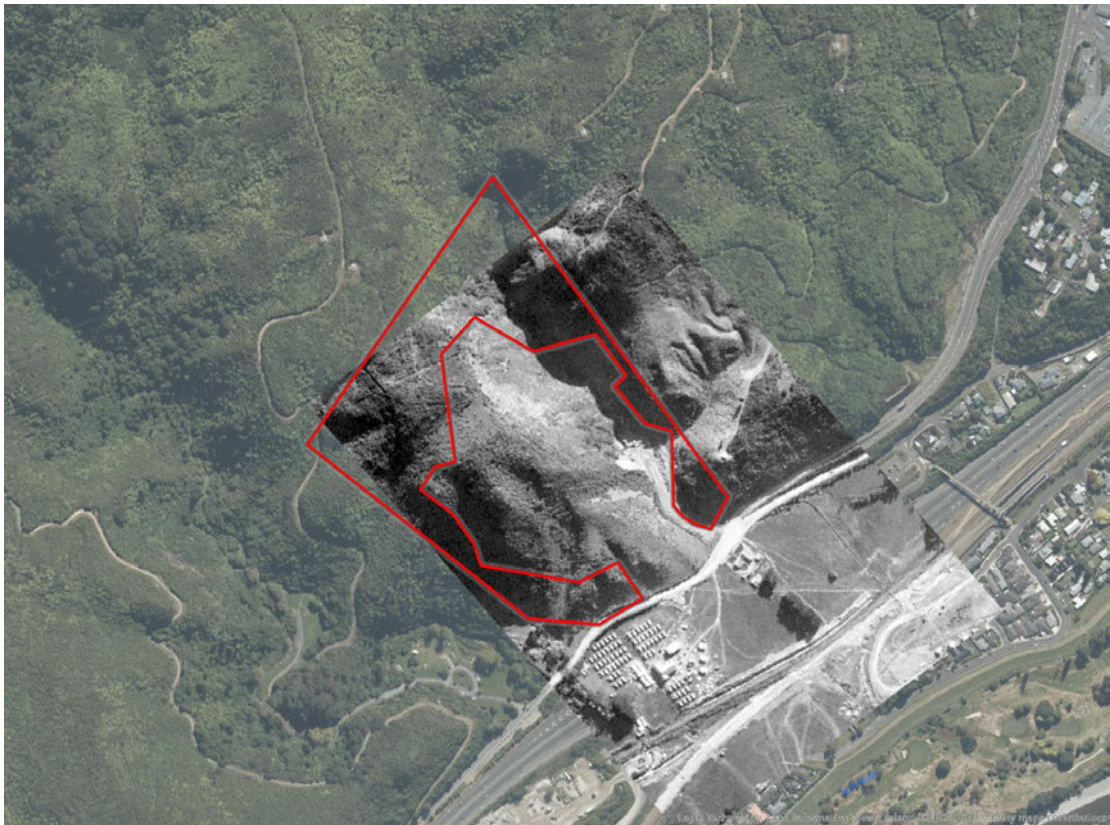
Hutt River at



Appendix E: Historical Aerial Images



Historical Aerial Photograph 1 (Retrolens): 1947



Historical Aerial Photograph 2 (Retrolens): 1957



Historical Aerial Photograph 3 (Hutt City Council: 1967



Historical Aerial Photograph 4 (Retrolens): 1979



Historical Aerial Photograph 5 (Retrolens): 1988



Historical Aerial Photograph 6 (Retrolens): 1995



Historical Aerial Photograph 7 (Google Earth): 2005



Historical Aerial Photograph 8 (Google Earth): 2009



Historical Aerial Photograph 9 (Google Earth): 2013



Historical Aerial Photograph 10 (Google Earth): 2014



Historical Aerial Photograph 11 (Google Earth): 2016



Historical Aerial Photograph 12 (Google Earth): 2017



Historical Aerial Photograph 13 (Google Earth): 2019



Historical Aerial Photograph 14 (Google Earth): 2022



Historical Aerial Photograph 15 (Google Earth): 2024



Appendix F: Property Files

Submission on an Application for Resource Consent under Section 96 of the Resource Management Act 1991

1. **To:**
Hutt City Council
2. **From:**
Winstone Aggregates Ltd
3. **Address for Service:**
Montgomery Watson New Zealand Ltd
PO Box 9624,
Wellington.
Attn: Kerry Geange

HUTT CITY COUNCIL

- 4 JUL 1998

REFERRED TO	Date	Initials	Action
J. Stevens			
	09/07/98	K. Geange	
FILE	RECALL		

4. **Legal Description of subject land:**
More or less situated in Block IV of the Belmont Survey District being part Section 200 Hutt District and also Lot 1 on DP 28205
5. **Description of Activity to which the application relates:**
To establish, maintain, operate and manage a 500,000m³ cleanfill at Dry Creek quarry.
6. **Transpower New Zealand Limited does not oppose the above-mentioned application but requires certain conditions be imposed on the consent before it is granted:**

The reason for this is that there are two high voltage transmission lines, the Oteranga Bay - Haywards A 350 kV DC Double Circuit Line and the Haywards - Khandallah A 110 kV AC, traversing the subject land. The Oteranga Bay - Haywards A line is extremely important as it is part of the only DC transmission line which connects the North and South Islands. The security of this line is therefore a priority for Transpower.

7. **The main reasons why this raises concerns for Transpower:**
- A. The activities associated with cleanfill operations near or underneath the conductors or supporting structures could:
- result in the loosening of the surrounding soils and subsequently the stability of the supporting structures
 - cause vibration to loosen the soils and subsequently the stability of the supporting structures
 - result in the stockpiling of materials underneath conductors on which earth moving / processing equipment can be situated and lead to possible breaches of safety clearance distances
- B. The activities associated with cleanfill operations cause dust to rise that can stick to insulators on the transmission lines which can lead to shorting of electrical current across the insulators resulting in unsafe conditions and power shut-downs. Recent examples of this have occurred in North Canterbury on Main Power 66 kV lines. This effect can be accelerated by the presence of diesel or diesel fumes.

- C. The location of haul routes can cause equipment to breach the electrical safety distances required by the NZECP34:1993 that may result in the risk of "flash-overs". A flash-over is the leaping of electrical current across a gap between live conductors and nearby physical objects. This Code of Practice outlines clearances for equipment which must be observed to protect the people from the risk of electrocution and the integrity of electricity supply through transmission lines. In this case it particularly applies to over height loads and gravel trucks traveling with their decks in a raised position.
- D. It is noted that there is a proposal to plant trees around the cleanfill. The requirements to keep physical objects clear of live conductors also apply to any trees which are planted in the vicinity of the line.

Transpower wishes to point out to the applicant that any tree planting which is likely to infringe the safety clearance distances around live overhead conductors and thereby pose a flash-over risk will need to be kept trimmed by the landowner.

If trees are not kept adequately trimmed, then the transmission line Maintenance Contractor will have to arrange to remove or trim them, under statutory authority. If trees have to be felled, compensation will be paid only if they were planted before the line was built.

8. Transpower wishes Hutt City Council to make the following decisions;
- A. That a condition be attached to the land use consent which requires that any excavation or interference within 20 metres of any part of a pylon owned by Transpower shall not commence without consultation with the Transpower Environmental Planning Manager.
- B. That a condition be attached to the land use consent which requires compliance with the Code of Practice for Electrical Safety Distances, NZECP34:1993 for any works or activities associated with the cleanfill.
9. Transpower does not wish to be heard in support of this submission.



26 May 1998

To the Consents Manager
Wellington Regional Council
PO Box 11-646
Wellington

REFERRED TO SHELDON	Original Approved	RM
Manager		RM-150-WM
Regional Council		
FILE	RECEIVED	HUNT CITY COUNCIL
		27 MAY 1998
Manager		
ncil		

To the Consents Manager
Hutt City Council
Private Bag 31912
Lower Hutt

In the matter of the Resource Management Act 1991 and an application by Winstone Aggregates Ltd to operate a cleanfill operation at Dry Creek Quarry (approx 500m up SH58 from the intersection with SH2).

RM20-W30-WRM
WGN980178(01)
WGN980178(02)

This submission is on behalf of the Central Office of the Society and is in addition to any local branch submissions. It is not intended to negate or replace any branch submissions. The Royal Forest and Bird Protection Society of New Zealand Inc would like to make the following comments concerning this proposal.

1. Fish passage

Although the section of the unnamed tributary running through the proposed site has been identified as providing few habitat values for native fauna, it is not uncommon for such tributaries to play a role in providing migratory and feeding routes for a variety of native fish. This passage can be impeded through certain methods of stream piping. We therefore request that any culverts are placed at stream bed level and should avoid overhangs and freefalls so as to allow for the passage of fish.

2. Revegetation

The revegetation programme proposed by the applicant is supported with the following amendment. Eucalypts are replaced with appropriate indigenous species.

Given the proximity of the site to two sites identified in the Hutt City Proposed District Plan as Significant Natural Resources - Belmont Bush and Haywards Shrubland the use of Eucalypts is opposed as these are exotic species and their use is inappropriate when there are fast growing New Zealand native plants available.

ROYAL FOREST AND
BIRD PROTECTION
SOCIETY OF
NEW ZEALAND INC.

CENTRAL OFFICE
172 TAMANAKI ST
P O BOX 631
WELLINGTON
PH 04 385 7374
FAX 04 385 7373
E M A I L
OFFICE@NW.FOREST
-8155.085.NZ

2014/03/21

Moreover, eucalypts are renowned for their demands on water supply, thereby creating the potential to deprive the other species planted as part of the revegetation project of water.

In addition, there would be significant adverse landscape effects associated with the planting of eucalypts on this highly visible site. The eucalypts would not blend in with the rest of the surrounding vegetation.

There are a number of indigenous plants which grow well in the Wellington region and are more appropriate than eucalypts. These include:

- Akeake (fast growing and suitable for erosion control)
- Poroporo (fast growing and attracts birds)
- Hebe stricta (Koromiko - very fast growing in Wellington region and possum hardy)
- Manuka (fast growing and suitable for erosion control)
- Kanuka (fast growing and suitable for erosion control)
- Pittosporums (all species are fast growing to at least 6 metres, they are wind tolerant, possum hardy, and suitable for erosion control)
- Olearia species (fast growing and suitable for erosion control)

We submit that it would be more appropriate to use the above mentioned species and other locally sourced indigenous plant species instead of the proposed eucalypts. Thank you.

We do not wish to be heard in support of this submission.


Helen Fraser
Environmental Planner
for Conservation Director

Reference:
Prior C.T. 489/101

Transfer No. 701268
N/C. Order No.

Search Copy

DATE 18 FEB 1988



49

Land and Deeds 69

REGISTER

No. F2/1438

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 6th day of March one thousand nine hundred and sixty-seven under the seal of the District Land Registrar of the Land Registration District of WELLINGTON

WITNESSETH that J.E. PEAST HOLDINGS LIMITED at Wellington

is sold of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurement a little more or less, that is to say: All that parcel of land containing 40 ACRES more or less situate in Block IV of the Belmont Survey District being part Section 200 Hutt District and being also Lot 1 on Deposited Plan 28205



Subject as to the part shown coloured yellow on plan 28205 to a right of way appurtenant to part Section 200 Hutt District (C.T. F2/1439) see Easement Certificate 701267.

Mortgage 701269 to George Eben Scott and George Francis MacMorran - 6.3.1967
Produced 11/1969

Mortgage 702207 to Atlantic Union Oil Company (N.Z.) Limited - 24.7.1964 at 2.52 p.m.

Mortgage 1048695 to Atlantic Union Oil Company (N.Z.) Limited - 17.7.1974 at 2.47 p.m.

No. 189067. Compensation Certificate affecting part under Section 17 of the Public Works Amendment Act 1948 - 13.12.1977 at 2.12 p.m.

No. 332420.1 Gazette Notice taking part (120362) of the within land (hatched black hereon) for road - 22.6.1979 at 10.55 a.m.

726183.2 Mortgage to UIC Finance Limited - 7.11.1985 at 2.00 p.m.

EQUIVALENT METRIC
AREA IS 16.1874 ha

Scale: 1 inch = 8 chains.

No. F2/1438

XX
 XXX

838904.1 Mortgage to Dry Creek Limited
 - 13.3.1987 at 10.00 a.m.

W000000

A.L.R.

869899.1 Lease to Construction Service
 Company Limited for the term computed
 from the 1st day of April 1987
 and expiring on the 31st day of
 March 1990 17.8.1987 at 10.00 a.m.

A.L.R.

8.065325.2 Variation of the terms of
 Mortgage 726183.2 - 26.2.1990 at 2.36
 p.m.

A.L.R.

8.298873.1 Notice of the Change of Name
 of the registered proprietor to Dry Creek
 Properties Limited - 7.7.1993 at 2.26
 p.m.

A.L.R.

8.313946.2 Transfer to DNL Resources
 Limited at Auckland - 13.10.1993 at
 12.16 p.m.

A.L.R.

8.313946.3 Mortgage to Dry Creek
 Holdings Limited - 13.10.1993 at 12.16
 p.m.

A.L.R.

8.554436.1 Transfer to Winstone
 Aggregates Limited at Auckland -
 16.1.1997 at 10.59 a.m.

A.L.R.

The principal objectives to be met by the Dry Creek Cleanfill Management Plan are as follows;

1. PRINCIPAL OBJECTIVES

- For Winstone Aggregates Limited (WAL) to establish and operate a cleanfill in accordance with all requirements of the Resource Management Act 1991 (RMA) & the Health & Safety Act 1993 (HAS), and the Hutt City and Wellington Regional Council's.
- The Wellington Regional Council has issued three Resource Consents for Cleanfill development as listed below and appended;
 - consent no. WGN 980178(01) Land Use (Streambed culverts)
 - consent no. WGN 980178(02) Land Use (Cleanfill)
 - consent no. WGN 980178(03) Discharge to Air

The Hutt City Council Planning Decision for Land Use consent, which imposes additional requirements to those of the Wellington Regional Council, is also appended.

- To allow WAL to rehabilitate the worked areas of Dry Creek Quarry to a high standard, acceptable to WAL and Hutt City Council.

This plan is divided into three sections:

1. management – organisational and general issues
2. operations - day to day operational issues, and
3. development - preparatory works and staged developments.

3. OPERATIONS

3.1 CONTROL OF FILL QUALITY

3.1.1 Unacceptable Waste Types

Material disposed of in the Cleanfill is restricted to clay, soil, rock, asphalt, brick or concrete including reinforcing steel (with no more than 5% of attached timber). None of the following materials are to be disposed of in the cleanfill:

- combustible and organic material,
- organic or hazardous wastes,
- materials subject to biological, physical or chemical breakdown,
- glass,
- metals,
- pesticides,
- vegetation,
- plastics,
- drums,
- rubber tyres,
- exposed reinforcing steel,
- household refuse,
- asbestos, and
- any hazardous materials.

The Cleanfill manager must only accept cleanfill from commercial operators who are generally aware of site requirements.

3.1.2 Assessing Cleanfill Suitability

(a) Identification Of Source:

All trucks are to report in the first instance to the site office. The carrier is required to describe the contents of the load and its place of origin.

Wastes from the following types of sites are unacceptable without testing:

- Service station site re-developments
- Timber treatment sites
- Chemical industry sites
- Dry-cleaning sites
- Gasworks sites

3 Operations – Control of Fill Quality

3.1 Acceptable materials

Cleanfill is defined in the Regional Plan for Discharges to Land and the Regional Air Quality Management Plan as:

Materials such as clay, soil, rock, concrete, or brick, that are free of combustible or putrescible components or hazardous substances or materials likely to create a hazardous leachate by means of biological or chemical breakdown.

In general terms cleanfill brought onto the Dry Creek site will be limited to:

9

- Clay
- Soil – excluding soils from sites contaminated by site activities including horticultural activity;
- Rock
- Asphalt – which has no visible or olfactory evidence of volatile hydrocarbons;
- Bricks, and concrete including encased reinforcing steel (with no more than 5 % of attached timber)

NOTE: - Some materials used in the construction of the cleanfill infrastructure, such as asphalt planings for cleanfill roads and hardstands, will be subject to the approval of the Dry Creek Site Manager.

3.2 Unacceptable Waste Types

The following is a list of materials that are considered unacceptable at Dry Creek Cleanfill. Such materials should be disposed of at a landfill authorised to accept that material.

- Combustible and organic material
- Organic and hazardous wastes
- Materials subject to biological, physical or chemical breakdown
- Metals
- Glass
- Pesticides
- Vegetation
- Plastic
- Drums
- Rubber Tyres
- Exposed reinforcing steel
- Household refuse
- Asbestos
- Any hazardous materials

If a substance or waste is not included in this list it does not imply it is suitable for acceptance at Dry Creek Cleanfill.

The Site Manager will only accept cleanfill from commercial operators who are aware of site requirements.

Ecosystem/Water Quality Effects

- 8.12 The applicant commissioned an ecological site assessment to be undertaken. The results were that the water in the area is of a reasonably high quality, and inhabited by a number of invertebrate species. The site also has lowland forest vegetation, but its habitat value is not considered to be regionally significant. The cleanfill will not have any adverse effects on these qualities, but rather, will provide a complementary increase in habitat for native flora and fauna, and potentially an improvement in biological diversity.
- 8.13 The proposed stormwater system will improve water quality and decrease overland runoff. Again any potential effects on water bodies have been worked through in the pre-hearing processes and appropriate conditions have been agreed upon between the Regional Council, submitters, and the applicant. Issue raised with respect to ecology were related to the species of trees to be used and possible restriction of fish passage up the creek after it is piped. Both of these matters have been worked through with the applicant to use native species for landscaping on site, and the culvert to be installed at the current level of the stream bed. This will ensure that any effect will be no more than minor.

western Hutt hills. The proposed cleanfill will assist in providing managed space for the deposition of cleanfill material in the Hutt Valley, simultaneously remedying the actual and potential adverse effects of the worked quarry. The approximate capacity of the proposed cleanfill is 500,000m³. A Landscape Plan has been prepared as part of the proposal, which will assist in the mitigation of many of the potential adverse effects generally associated with cleanfill activities.

1 Introduction and Principal Objectives

This Cleanfill Management Plan has been prepared in accordance with resource consent requirements for the deposition of cleanfill at Winstone Aggregates Dry Creek site.

This plan records all management, monitoring and operational procedures necessary to comply with the following consents:

District Council Consents currently held:

Consent Ref:	Activity	Expiry Date
Land Use (RM20-W30-WRM)	To operate a cleanfill.	Unlimited as to duration.

Regional Council Consents currently held:

Consent Ref:	Activity	Expiry Date
Groundwater Take WGN120077 [31406]	To take and use groundwater from a spring for dust suppression and quarry activities.	12 October 2021
Discharge to Air WGN200272 [36912]	Discharge permit to discharge dust to air associated with the ongoing operation of a cleanfill site.	23 July 2030
Discharge to Land and Stormwater Discharge WGN200272 [36801]	Discharge permit to discharge cleanfill material and sediment laden stormwater to land where it may enter an unnamed tributary of the Hutt River.	23 July 2030
Land Use 980178(02)	To deposit cleanfill in the bed of an unnamed tributary of the Hutt River.	23 July 2033
Land Use 980178(01)	For works in, on, under or over the stream bed of an unnamed tributary of the Hutt River in association with placing of a culvert.	23 July 2033

The objective of the cleanfill operation is to allow Winstone Aggregates to rehabilitate the worked areas of Dry Creek Quarry to a high standard, acceptable to Winstone Aggregates and Hutt City Council.

This plan is divided into three sections:

1. Management – organisational and general issues
2. Operations – day to day operational issues, and
3. Development – preparatory works and staged developments

A copy of this management plan will be kept on site and will be available for use by site personnel at all times.



Appendix G: Table

Table 4: Soil Analytical Results - Heavy Metals ¹, Polycyclic Aromatic Hydrocarbons (PAHs) ¹ and Asbestos ² - RECREATIONAL LAND USE ³

Sample Name	TP1_0.0	TP2_0.0	TP3_0.0	TP4_0.0	TP5_0.0	TP6_0.0	NES SCSs & SGVs ⁴
Laboratory Reference	3960758.1	3960758.3	3960758.5	3960758.7	3960758.9	3960758.11	
Date Sampled	13 Aug 2025						
Site Location	Dry Creek Quarry						Recreational
Soil Type - Field	Topsoil	Silty Clay	Silty Clay	Silty Topsoil	Sandy Clay	Clayey Gravel	
Soil Type - MfE (2011)	Sandy Silt	Silty Clay	Silty Clay	Sandy Silt	Silty Clay	Sand	
Sample Depth (meters below ground level)	0.0	0.0	0.0	0.0	0.0	0.0	
Heavy Metals							
Arsenic	4	6	6	5	7	7	80
Cadmium	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	400
Chromium	18	17	18	18	18	20	2,700 ^{4a}
Copper	12	12	20	16	25	18	>10,000
Lead	16.3	23.0	29	30	29	29	880 ^{4b}
Nickel	12	12	14	13	12	15	1,200 ⁵
Zinc	61	61	80	75	76	70	30,000 ⁵
Polycyclic Aromatic Hydrocarbons (PAHs)							
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES ⁶	ND	ND	< 0.031	< 0.030	0.066	0.59	40
Naphthalene	ND	ND	< 0.07	< 0.07	< 0.07	< 0.06	NA ⁷
Pyrene	ND	ND	0.021	0.013	0.073	0.29	NA ⁷
Asbestos [Presence / Absence]							
Sample Name	-	-	TP3_0.0	-	TP5_0.0	TP6_0.0	NZGAMAS SGVs
Laboratory Reference			3961581.5		3961581.9	3961581.11	
Present (Y/N) ⁸						Not Detected	

ND	Result below the laboratory limit of detection
-	Analyte not tested for

Notes.

- Results in mg/kg.
- Results in w/w%.
- Based on proposed future, recreational land-use.
- NES Soil Contaminant Standards (SCSs) from 'Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health' (MfE, 2011) - Recreational values adopted.
- SCS value is for chromium VI.
- SCS value is for inorganic lead.
- Guideline values from 'Schedule B(1) Guideline on Investigation Levels for Soils and Groundwater National Environment Protection Measure' (NEPM), updated May, 2013 - Recreational values adopted.
- BaP Potency Equivalence calculated as the sum of each of the detected concentrations of nine carcinogenic PAHs multiplied by the respective potency equivalency factors.
- NA indicates contaminant not limiting as estimated health-based criterion is significantly higher than that likely to be encountered on site.
- Asbestos presence/absence from analytical testing ('Y' = yes or 'N' = no).



Appendix H: Laboratory Results and Chain of Custody

From: Pattle Delamore Partners Ltd

To: Hill Lab

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

Quote No.: 139695

Submitted by: Jess Campbell

Ph No.: [Redacted]

PDP Job No.: A055680009

Chain of Custody Record

Additional Information

Sent:

Name: Jess Campbell

Signature: [Redacted]

Date and time:

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

Name:

Signature:

Date and time:

2x Chilly Bins

Results to: ☐ lab.samples@pdp.co.nz

☒ Email submitter: [Redacted]@pdp.co.nz

☒ Email other: [Redacted]@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: ____ / ____ / ____

Invoice to: ☒ PDP

☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
TP1-0.0	13/8		S	Analysis via email	
TP2-0.3				Hold Cold	
TP2-0.0					
TP2-0.3					
TP3-0.0					
TP3-0.3					
TP4-0.0					
TP4-0.3					
TP5-0.0					
TP5-0.3					
TP6-0.0					
TP6-0.3					
TP7-0.0					
TP7-0.3					
TP8-0.0					
TP8-0.3					
TP9-0.0					
TP9-0.3					
TP10-0.0					
TP10-0.2					

Sai

4.4



Groundwater

SAL Saline

FW Freshwater

GEO Geothermal

SW Stormwater

Biota

WW Wastewater

P Potable

O Other:

Received by: David Manson

Note: Samples may contain dangerous or hazardous substances

Page ____ of ____

8960758
Job No: 97880
Date Recv: 14-Aug-25 08:51

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

Job Information Summary

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3960758
Contact:	Melody Robyns	Date Registered:	14-Aug-2025 1:51 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 6136	Quote No:	139695
	Wellington 6141	Order No:	
		Client Reference:	A035680009
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	18-Aug-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	TP1_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
2	TP1_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
3	TP2_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
4	TP2_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
5	TP3_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
6	TP3_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
7	TP4_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
8	TP4_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
9	TP5_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
10	TP5_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
11	TP6_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
12	TP6_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
13	TP7_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
14	TP7_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
15	TP8_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
16	TP8_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
17	TP9_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
18	TP9_0.3 13-Aug-2025	Soil	cGSoil, cGSoil	Hold Cold
19	TP10_0.0 13-Aug-2025	Soil	cGSoil, cGSoil	Heavy Metals, Screen Level, Polycyclic Aromatic Hydrocarbons Screening in Soil
20	TP10_0.2 13-Aug-2025	Soil	cGSoil, cGSoil	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, 7, 9, 11, 13, 15, 17, 19

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	1, 3, 5, 7, 9, 11, 13, 15, 17, 19
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, 7, 9, 11, 13, 15, 17, 19
Polycyclic Aromatic Hydrocarbons Screening in Soil	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	1, 3, 5, 7, 9, 11, 13, 15, 17, 19
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1, 3, 5, 7, 9, 11, 13, 15, 17, 19
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	1, 3, 5, 7, 9, 11, 13, 15, 17, 19
Benzo[a]pyrene Toxic Equivalence (TEF)	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	1, 3, 5, 7, 9, 11, 13, 15, 17, 19

Certificate of Analysis

Page 1 of 3

Client:	Pattle Delamore Partners Limited	Lab No:	3960758	SPV1.1
Contact:	Melody Robyns	Date Received:	14-Aug-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	27-Aug-2025	
	PO Box 6136	Quote No:	139695	
	Wellington 6141	Order No:		
		Client Reference:	A035680009	
		Submitted By:	Jessica Campbell	

Sample Type: Soil

Sample Name:	TP1_0.0 13-Aug-2025	TP2_0.0 13-Aug-2025	TP3_0.0 13-Aug-2025	TP4_0.0 13-Aug-2025	TP5_0.0 13-Aug-2025
Lab Number:	3960758.1	3960758.3	3960758.5	3960758.7	3960758.9
Individual Tests					
Dry Matter	g/100g as rcvd	73	67	76	79
Heavy Metals, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	4	6	6	5
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	18	17	18	18
Total Recoverable Copper	mg/kg dry wt	12	12	20	16
Total Recoverable Lead	mg/kg dry wt	16.3	23	29	30
Total Recoverable Nickel	mg/kg dry wt	12	12	14	13
Total Recoverable Zinc	mg/kg dry wt	61	61	80	75
Polycyclic Aromatic Hydrocarbons Screening in Soil*					
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.4	< 0.4	< 0.4	< 0.3
1-Methylnaphthalene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
2-Methylnaphthalene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Acenaphthylene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Acenaphthene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Anthracene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Benzo[a]anthracene	mg/kg dry wt	< 0.014	< 0.015	0.013	< 0.013
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.014	< 0.015	0.019	< 0.013
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.033	< 0.036	< 0.031	< 0.030
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.033	< 0.036	< 0.031	< 0.030
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.014	< 0.015	0.024	< 0.013
Benzo[e]pyrene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.014	< 0.015	0.014	< 0.013
Benzo[k]fluoranthene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Chrysene	mg/kg dry wt	< 0.014	< 0.015	0.013	< 0.013
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Fluoranthene	mg/kg dry wt	< 0.014	< 0.015	0.021	< 0.013
Fluorene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.014	< 0.015	0.014	< 0.013
Naphthalene	mg/kg dry wt	< 0.07	< 0.08	< 0.07	< 0.07
Perylene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Phenanthrene	mg/kg dry wt	< 0.014	< 0.015	< 0.013	< 0.013
Pyrene	mg/kg dry wt	< 0.014	< 0.015	0.021	0.013



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil		
Sample Name:		TP6_0.0 13-Aug-2025
Lab Number:		3960758.11
Individual Tests		
Dry Matter	g/100g as rcvd	90
Heavy Metals, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	7
Total Recoverable Cadmium	mg/kg dry wt	< 0.10
Total Recoverable Chromium	mg/kg dry wt	20
Total Recoverable Copper	mg/kg dry wt	18
Total Recoverable Lead	mg/kg dry wt	29
Total Recoverable Nickel	mg/kg dry wt	15
Total Recoverable Zinc	mg/kg dry wt	70
Polycyclic Aromatic Hydrocarbons Screening in Soil*		
Total of Reported PAHs in Soil	mg/kg dry wt	3.3
1-Methylnaphthalene	mg/kg dry wt	< 0.011
2-Methylnaphthalene	mg/kg dry wt	< 0.011
Acenaphthylene	mg/kg dry wt	0.046
Acenaphthene	mg/kg dry wt	0.012
Anthracene	mg/kg dry wt	0.061
Benzo[a]anthracene	mg/kg dry wt	0.174
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.41
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	0.59
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	0.59
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	0.43
Benzo[e]pyrene	mg/kg dry wt	0.29
Benzo[g,h,i]perylene	mg/kg dry wt	0.32
Benzo[k]fluoranthene	mg/kg dry wt	0.176
Chrysene	mg/kg dry wt	0.163
Dibenzo[a,h]anthracene	mg/kg dry wt	0.063
Fluoranthene	mg/kg dry wt	0.30
Fluorene	mg/kg dry wt	0.014
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	0.34
Naphthalene	mg/kg dry wt	< 0.06
Perylene	mg/kg dry wt	0.107
Phenanthrene	mg/kg dry wt	0.119
Pyrene	mg/kg dry wt	0.29

Analyst's Comments

This certificate of analysis contains information extracted from 3960758-SPv1 issued on 18-Aug-2025 at 4:22 pm.

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, 7, 9, 11
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	1, 3, 5, 7, 9, 11
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, 7, 9, 11

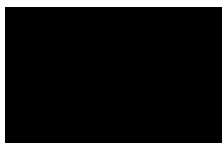
Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	1, 3, 5, 7, 9, 11
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1, 3, 5, 7, 9, 11
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	1, 3, 5, 7, 9, 11
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	1, 3, 5, 7, 9, 11

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

Testing was completed between 15-Aug-2025 and 18-Aug-2025. 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.



Ara Heron BSc (Tech)
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 Lab

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

Quote No.: 139695

Submitted by: Jess Campbell

Ph No. [REDACTED]

PDP Job No.: A035680009

Chain of Custody Record

Additional Information

Sent:

Name: Jess Campbell

Signature: [REDACTED]

Date and time:

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

Name:

Signature:

Date and time:

2x Chilly Rins

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

@pdp.co.nz

☒ Email other: [REDACTED]

@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: ____ / ____ / ____

Invoice to: ☒ PDP☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
TP1-0.0	13/8		S	Analysis via email	
TP2-0.3				Hold Cold	
TP2-0.0					
TP2-0.3					
TP3-0.0					
TP3-0.3					
TP4-0.0					
TP4-0.3					
TP5-0.0					
TP5-0.3					
TP6-0.0					
TP6-0.3					
TP7-0.0					
TP7-0.3					
TP8-0.0					
TP8-0.3					
TP9-0.0					
TP9-0.3					
TP10-0.0					
TP10-0.2					



Received by: Priyanka Rath

Groundwater

SAL Saline

FW Freshwater

GEO Geothermal

SW Stormwater

Biota

WW Wastewater

P Potable

O Other:

Note: Samples may contain dangerous or hazardous substances

Page ____ of ____

1581 963

Job No: 97880
Date Recv: 14-Aug-25 13:57PDP Tauranga
Tel: +64 7 985 6440PDP Wellington
Tel: +64 4 471 4130PDP Christchurch
Tel: +64 3 345 7100PDP Invercargill
Tel: +64 3 422 1690

Job Information Summary

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3961581
Contact:	Melody Robyns	Date Registered:	14-Aug-2025 2:02 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 6136	Quote No:	139695
	Wellington 6141	Order No:	
		Client Reference:	A035680009
		Add. Client Ref:	
		Submitted By:	Jessica Campbell
		Charge To:	Pattle Delamore Partners Limited
		Target Date*:	19-Aug-2025 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	TP1 0 0 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
2	TP1 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
3	TP2 0 0 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
4	TP2 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
5	TP3 0 0 13 Aug 2025	Soil	cPSoil125Asb	Asbestos in Soil
6	TP3 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
7	TP4_0 0 13-Aug-2025	Soil	cPSoil125Asb	Hold Cold
8	TP4_0 3 13-Aug-2025	Soil	cPSoil125Asb	Hold Cold
9	TP5_0 0 13-Aug-2025	Soil	cPSoil125Asb	Asbestos in Soil
10	TP5_0 3 13-Aug-2025	Soil	cPSoil125Asb	Hold Cold
11	TP6_0 0 13-Aug-2025	Soil	cPSoil125Asb	Asbestos in Soil
12	TP6_0 3 13-Aug-2025	Soil	cPSoil125Asb	Hold Cold
13	TP7_0 0 13-Aug-2025	Soil	cPSoil125Asb	Asbestos in Soil
14	TP7 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
15	TP8 0 0 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
16	TP8 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
17	TP9 0 0 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
18	TP9 0 3 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
19	TP10 0 0 13 Aug 2025	Soil	cPSoil125Asb	Hold Cold
20	TP10 0 2 13 Aug 2025	Soil	cPSoil125Asb	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
Asbestos in Soil			
As Received Weight Presence / Absence Testing	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	5, 9, 11, 13
Dry Weight Presence / Absence Testing	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	5, 9, 11, 13
<2mm Subsample Weight Presence / Absence Testing	Sample dried at 100 to 105°C, weight of <2mm sample fraction taken for asbestos identification if less than entire fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	-	5, 9, 11, 13

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Asbestos Presence / Absence from Presence / Absence Testing	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%	5, 9, 11, 13
Description of Asbestos Form Presence / Absence Testing	Description of asbestos form and/or shape if present.	-	5, 9, 11, 13

Certificate of Analysis

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3961581	A2Pv1
Contact:	Melody Robyns	Date Received:	14-Aug-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	19-Aug-2025	
	PO Box 6136	Quote No:	139695	
	Wellington 6141	Order No:		
		Client Reference:	A035680009	
		Submitted By:	Jessica Campbell	

Sample Type: Soil						
Sample Name	Lab Number	As Received Weight Presence / Absence Testing (g)	Dry Weight Presence / Absence Testing (g)	<2mm Subsample Weight Presence / Absence Testing (g dry wt)	Asbestos Presence / Absence from Presence / Absence Testing	Description of Asbestos Form Presence / Absence Testing
TP3_0.0	3961581.5	235.0	203.0	27.9	Asbestos NOT detected.	-
TP5_0.0	3961581.9	190.3	156.2	27.5	Asbestos NOT detected.	-
TP6_0.0	3961581.11	156.0	140.6	17.1	Asbestos NOT detected.	-
TP7_0.0	3961581.13	140.1	119.8	32.8	Asbestos NOT detected.	-

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.

Summary of Methods

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Test	Method Description	Default Detection Limit	Sample No
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<2mm Subsample Weight Presence / Absence Testing	Sample dried at 100 to 105°C, weight of <2mm sample fraction taken for asbestos identification if less than entire fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	-	5, 9, 11, 13
Asbestos Presence / Absence from Presence / Absence Testing	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%	5, 9, 11, 13
Description of Asbestos Form Presence / Absence Testing	Description of asbestos form and/or shape if present.	-	5, 9, 11, 13



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

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

Testing was completed on 19-Aug-2025. 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.



John Keneth Paglingayen BApSc
Laboratory Technician - Asbestos