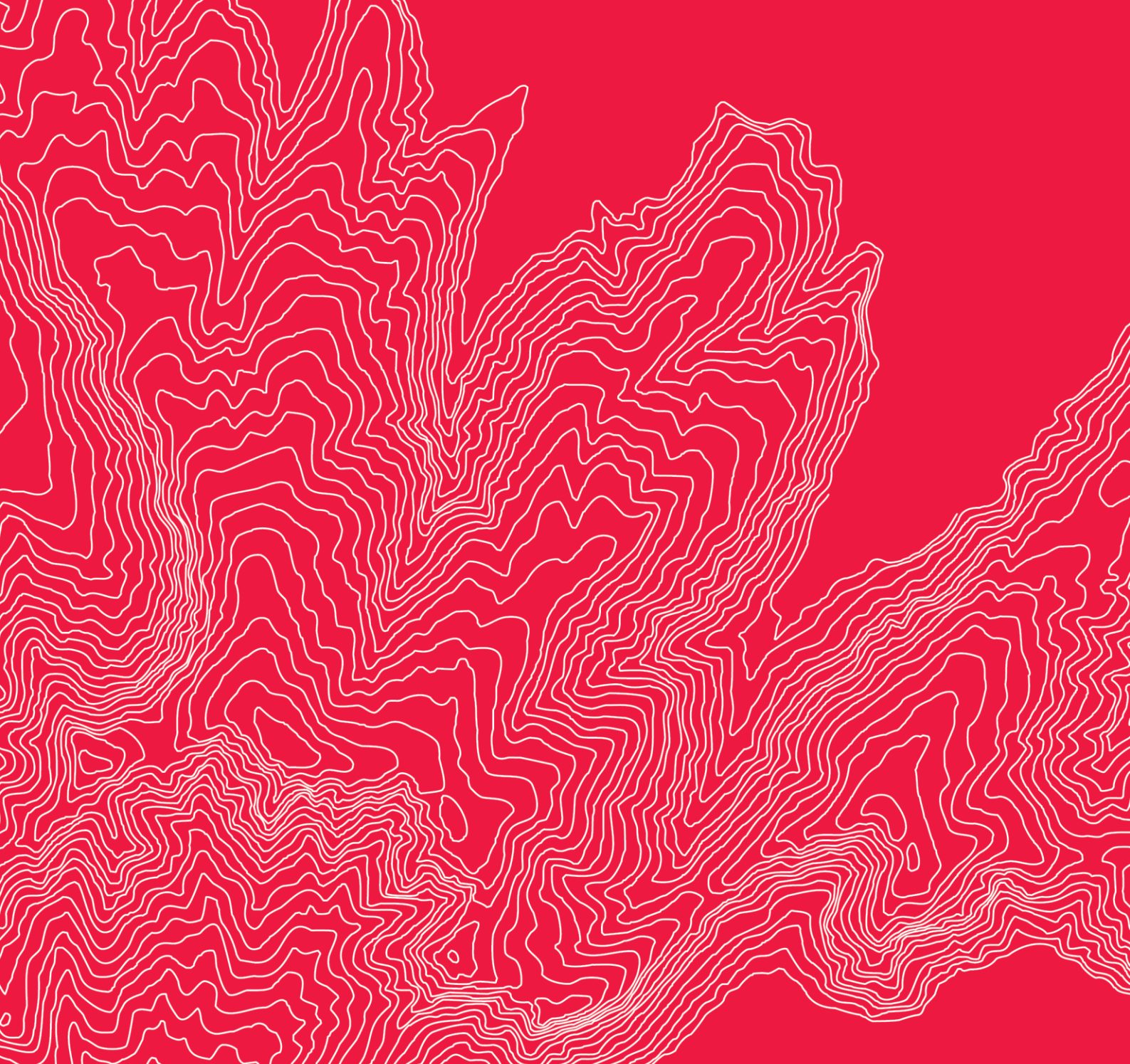




Subdivision Consent Application

Version A

17 Hickory Place

Prepared for Foodstuffs (South Island) Properties
Limited
600011

**eliot
sinclair**

Subdivision Consent Application

17 Hickory Place

Prepared for Foodstuffs (South Island) Properties Limited

600011

Quality Control Certificate

Eliot Sinclair & Partners Limited

eliotsinclair.co.nz

Action	Name	Signature	Date
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Status:	Version A		
Release date:	12 September 2025		
Distributed to:	Foodstuffs (South Island) Properties Limited Christchurch City Council		

Version History

Status	Description	Author	Release Date
A	First issue of document	IPH	11 September 2025

Status	Description	Author	Release Date
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Form 9

Section 88 Resource Management Act 1991

To Resource Consents Unit
Christchurch City Council
PO Box 73013
Christchurch Mail Centre
Christchurch 8154

From Foodstuffs (South Island) Properties
Limited
Private Bag 4705 Christchurch
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PO Box 9339
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1. Foodstuffs (South Island) Properties Limited apply for the following resource consent:

RMA Section	Activity	Period Sought
Section 11	Resource consent is required for the subdivision in the Industrial Heavy zone. The proposal has been assessed as a Restricted Discretionary Activity.	Unlimited
Section 241(3)	Cancellation of an amalgamation condition	

2. A description of the activity to which the application relates is:

The applicant proposes to undertake a subdivision consent at 17 Hickory Place, Islington. Resource consent under the Christchurch District Plan is required for the application due to the proposal not meeting access design, servicing requirements, and minimum net site area as a result of the limited servicing.

A detailed description of the proposal is contained in the attached Assessment of Environmental Effects.

Pursuant to s.241(3) of the RMA Council's approval is sought for the cancellation of the existing amalgamation condition that holds Lot 51 DP 572509, Lot 2 DP 436436 and Lot 3 DP 318553 together,

on the basis that a new amalgamation condition be imposed that holds Lot 4, Lot 2 DP 436436 and Lot 3 DP 318553 in its place.

3. The site at which the proposed activity is to occur is as follows:

Application Site: 17 Hickory Place

Legal Description: Lot 51 DP 572509, Lot 2 DP 436436 & Lot 3 DP 318553 comprised in Record of Title 1039965.

4. The following additional resource consents are needed for the proposal to which this application relates and have been applied for:

Land use consent for remediation of contaminated land has been applied for under RMA/2025/2972.

5. Attached is an assessment of the proposed activity's effect on the environment that —

- (a) includes the information required by clause 6 of Schedule 4 of the Resource Management Act 1991; and
- (b) addresses the matters specified in clause 7 of Schedule 4 of the Resource Management Act 1991; and
- (c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

6. Attached is an assessment of the proposed activity against the matters set out in Part 2 of the Resource Management Act 1991.

7. Attached is an assessment of the proposed activity against any relevant provisions of a document referred to in Section 88 of the Resource Management Act 1991, including the information required by Schedule 4 of that Act.

8. Attached is an assessment of the proposed activity against the resource management matters set out in Christchurch District Plan.

9. Attached is information that adequately defines the following

- (a) the position of all new boundaries; and
- (b) the areas of all new allotments; and

10. Attached is further information required to be included in this application by the district plan, the regional plan, the Resource Management Act 1991, or any regulations made under that Act.



Signature of Foodstuffs (South Island)
Properties Limited (or person authorised to
sign on behalf of the applicant)

12 September 2025

Date

Contents

1. Introduction	1
2. Site Description	1
3. Proposal Description	2
3.1. Description of the Proposed Site Layout	3
3.2. Natural Hazards	4
3.3. Development Contributions	4
3.4. Proposed Amalgamation Cancellation	5
4. Consultation	5
4.1. New Zealand Transport Agency Waka Kotahi (NZTA)	5
5. Statutory Assessment	6
5.1. Resource Management Act 1991	6
5.2. National Policy Statement	6
5.3. National Environmental Standards	6
5.4. Christchurch District Plan	7
6. Assessment of Actual and Potential Effects on the Environment	8
6.1. Subdivision Design	8
6.2. Servicing	8
6.3. Access	8
7. Assessment of Relevant Objectives and Policies	9
8. Part 2 of the RMA	9
9. Notification	9
10. Section 104, 104C of the RMA	10
11. Conclusion	11
12. Disclaimer	12

- Appendix A. Application Plan**
- Appendix B. Record of Title**
- Appendix C. ECan Consent Decision**
- Appendix D. Soil Sampling Investigation (PDP)**
- Appendix E. Natural Hazards Risk Assessment (ES)**
- Appendix F. Email Correspondence with CCC (DC's)**
- Appendix G. Draft Right of Way Easement Document**
- Appendix H. Iota Report on Wastewater**
- Appendix I. Correspondence with CCC regarding Water Supply**
- Appendix J. Stantec Memorandum**
- Appendix K. Rule Assessment**

1. Introduction

1. Foodstuffs (South Island) Properties Limited ('the Applicant') is proposing to undertake a subdivision at 17 Hickory Place (application site).
2. Resource consent is required for the subdivision in the Industrial Heavy zone. The proposal does not comply with access design, servicing requirements, and the minimum net site area of one of the proposed allotments due to the proposed servicing constraints. The proposal has been assessed as a restricted discretionary activity as per 8.5.1.3 (RD2) and 7.4.2.3 (RD1) in the Christchurch District Plan.
3. The application has been prepared in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991 (RMA). It provides a description of the site and the proposal, an assessment of actual and potential effects that may arise from the proposal as well as an assessment of the proposal against the Christchurch District Plan.
4. The following appendices are attached in support of, and form part of, the application:
 - Appendix A: Application Plan
 - Appendix B: Record of Title
 - Appendix C: ECan Consent
 - Appendix D: Soil Sampling Investigation (PDP)
 - Appendix E: Natural Hazards Risk Assessment (ES)
 - Appendix F: Email Correspondence with CCC (DC's)
 - Appendix G: Draft Right of Way Easement Document
 - Appendix H: Iota report regarding wastewater
 - Appendix I: Correspondence with CCC regarding Water supply
 - Appendix J: Stantec Memorandum
 - Appendix K: Rule Assessment

2. Site Description

5. The site is located at 17 Hickory Place, Islington, made up of three parcels of land legally described as Lot 51 DP 572509, Lot 2 DP 436436 & Lot 3 DP 318553, which are comprised in Record of Title 1039965. The site has a total site area of 38.4534 ha.
6. The Record of Title lists two consent notices as follows;
 - i) Consent Notice 12576700.15 which affects Lot 51 DP 572509, relates to a wastewater discharge restriction to limit the site to 0.09 litres per second per hectare daily average sewage flow into the adjoining local pressure sewer system that discharges into Quadrant Drive. The consent notice indicates that a new connection may be required to Council infrastructure in Main South Road in accordance with IDS at owner expense.
 - ii) Consent Notice 11957339.3 affects Lot 2 DP 549428 (which has been subsequently subdivided to become Lot 51 DP and requires that access to the Lot and any works or development shall be undertaken in accordance with an approved Contaminated Site Management Plan.
7. The site is subject to the following zone and overlays:
 - Industrial Heavy Zone
 - Christchurch International Airport Protection Surfaces

■ 33kV Electricity Distribution Lines

8. Access to the site is via Hickory Place, Quadrant Drive and Aruhe Road. Lot 1 has sufficient legal access by means of Right of Way off Aruhe Road. Lot 1 does not have legal frontage to State Highway No 1 as it is a Limited Access Road. Lots 2 & 3 have access to Aruhe Road and Lot 4 together with Lot 2 DP 436436 and Lot 23 DP 318553 has frontage to Hickory Place and Quadrant Drive.
9. Surrounding the site is a variety of different sized land parcels within both the Industrial Heavy Zone to the east, west and south, and Industrial General Zone to the north and further east. Further to the West, before Marshes Road, there is a pocket of Rural Urban Fringe Zone land.
10. At 38.4534 ha, the site is one of the largest in the industrial area. As seen in Figure 1 below, the surrounding environment consists of a lot of vacant undeveloped land as well occupied industrial land.
11. There is one Environment Canterbury (ECan) consent at Lot 1. This requires the installation of one upgradient and two downgradient wells around the bund. This is CRC241361.
12. The site is identified as being subject to 33KV Electricity Distribution Lines on the planning maps overlays. The only underground 33KV cable, is located adjacent the Quadrant Drive frontage and extends approximately 25m into proposed Lot 4.
13. The site is generally flat in topography.
14. The site can be found in Figure 1 below:

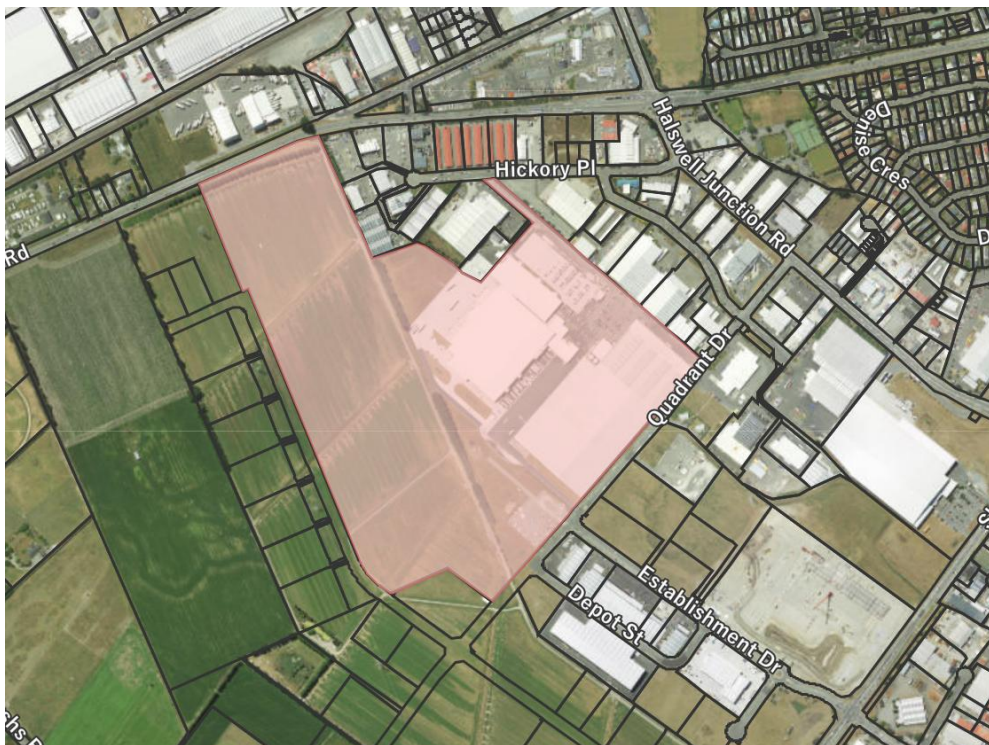


Figure 1. Application site outlined in red. (Source: Canterbury Maps Viewer).

3. Proposal Description

15. It is proposed to subdivide proposed Lots 1-3 from the Record of Title 1039965. The proposed subdivision can be seen in the application plan in **Appendix A**. The Record of Title and relevant consent notices are attached in **Appendix B**.

16. Lot 1 will not be used for industrial land uses as it fully comprises a Contamination Containment cell which is subject to terms and conditions stated in ECan Consent CRC 241361. This consent authorises the discharge of contaminants to land associated with the placement of contaminated material for the purpose of forming a landscape bund. A copy of the discharge consent is included in **Appendix C**.
17. Lots 2 and 3 are proposed to be sold as large vacant industrial sections.
18. Lot 4 (being the balance of Lot 51 DP 572509) is to be amalgamated to Lot 2 DP 436436 and Lot 3 DP 318553 as land to be used in conjunction with the Foodstuffs Hornby Distribution Centre already established on the other two existing allotments. A new amalgamation condition is requested as part of the application so that the amalgamation condition can be imposed as part of the subdivision consent conditions.
19. The proposed amalgamation condition is that:

That Lot 4 and Lot 2 DP 436436 and Lot 3 DP 318553 be held in the same record of title (See LINZ request ...)
20. Earthworks for the removal of on-site contamination is the subject of a separate NESCS consent application being prepared by Pattle Delamore Partners (PDP). The details of this application are contained in RMA/2025/2972. No earthworks are therefore needed (or proposed) as part of the application.
21. A detailed Application Plan is attached as **Appendix A** and a full description is provided below.

3.1. Description of the Proposed Site Layout

22. As State Highway 1 – Main South Road is a limited access road Lot 1 is reliant on a proposed Right of Way off of Aruhe Road for legal frontage.
23. Access to Lot 1 will be by an unformed Right of Way (ROW). The applicant does not wish to encumber Lot 2 with a 'non-residential' standard of ROW width and construction as a condition of subdivision consent. Instead the applicant offers to provide Council with the draft ROW easement document when it becomes available and a condition of consent is requested to require this to be provided in due course.
24. Given the proposed continued use of Lot 1 for storing contaminant in the form of a landscaped bund it is not proposed that the ROW be formed except in conjunction with future site development works on Lot 2. The use of the right of way will be primarily for the on-going maintenance obligations to maintain the bund with mowing and to comply with the conditions of the ECan consent. The applicant further proposes as a condition of the easement document to allow the relocation of the ROW easement to better suit the traffic movements on development of Lot 2 subject to costs for the relocation of this easement being met by the owner of Lot 2.
25. The proposed ROW over Lot 2 in favour of Lot 1 is proposed to be 3 metres in width.
26. Access to Lots 2 & 3 will be via Aruhe Road and access to Lot 4 together with Lot 2 DP 436436 and Lot 23 DP 318553 will continue to be accessed off Hickory Place, Aruhe Road and Quadrant Drive.

3.1.1. Servicing

27. The proposed vacant allotments will not be serviced as part of this consent application. Services water supply, electricity and fibre will be installed as part of any building consent. This will be

secured by consent notice, which the Applicant is happy to work with Council on in regard to appropriate consent notice wording.

28. Lot 1 is proposed to not be serviced for reasons that it is only a contaminant containment cell. A consent notice to this effect is also required.
29. In regard to wastewater servicing, the underlying parcel, Lot 51 DP 572509 has a consent notice referring to the wastewater restriction for the Aruhe Road low pressure wastewater system installed by the previous development and wider area flow restriction constraints. The existing consent notice identifies that the wastewater connection may need to be installed to connect to the Council reticulation in Main South Road. The proposal intends to retain this option, and an easement over Lot 2 is proposed for wastewater disposal for the benefit of Lots 3 and 4 in case it is needed it is needed in the future.
30. The existing consent notice regarding the wastewater capacity constraints and options for disposal outfall will automatically come down on the new titles of Lots 1-4 as part of this subdivision.
31. Stormwater disposal from the sites will be via soakage at the time of building consent and future development requirements.
32. Therefore no physical connections are proposed at this time to Lots 2, 3 or 4 as part of the subdivision. It is more appropriate that connections are made at building consent stage for future development when the demand for proposed Industrial activities on each site are known.
33. Orion has been consulted to confirm the capacity for the site. At the time of consent lodgement a response has not been forthcoming. However, as the land is zoned industrial heavy and the recently completed industrial subdivision of Aruhe Road bordering the site, we expect that Orion may have infrastructure suitable for the proposed development.

3.2. Natural Hazards

34. A Natural Hazards Risk Assessment has been undertaken by Eliot Sinclair (ES), and is contained in **Appendix E**. This report considers the risk associated with natural hazards as required by RMA section 106. It has been concluded that either the risk and consequence of potential natural hazards is either acceptable or tolerable, or providing the recommendations of the report are followed, will be acceptable or tolerable. The report concludes that no significant risks were found from natural hazards that would prevent the granting of this consent.

3.3. Development Contributions

35. The applicant has undertaken early consultations with the Council's Development Contribution Team. This can be found in **Appendix F**. In Rosa Ruri email of 28 August 2025 she confirms as follows:
 - The proposed development would trigger development contributions for three additional lots.
 - Given the intended use of Lot 1 the DC Team be supportive of a postponement of development contributions for that Lot until the condition specified in the consent notice is cancelled. This postponement would need to be secured by way of an encumbrance agreement, which is registered on the title at the developer's (applicant's) cost.
 - Sections 221 and 241 of the Resource Management Act 1991 don't provide Council with a mechanism to charge development contributions, which is why they are required under the subdivision consent instead.

- Rosa Ruri confirmed that she had conducted a quick estimate under the Development Contributions Policy and the value of 1 HUE, after factoring in a 96% reduction against the stormwater and flood protection activity, to conclude approximately \$30,740.24 incl GST under the DC Policy 2025
36. The applicant confirms it is receptive to the postponement of a DC for Lot 1 on the basis that an encumbrance agreement is entered into with Council to be registered on the title for Lot 1.

3.4. Proposed Amalgamation Cancellation

37. The subject site is made up of three parcels of land held together by an existing amalgamation condition that was imposed on the subdivision consent RMA/2022/163; (condition 31.1). In order to further subdivide Lot 51 DP 572509, first the existing amalgamation condition needs to be cancelled (with Council approval) subject to s.241(3) of the RMA.
38. The applicant wishes to retain proposed Lot 4 and re-amalgamate the parcel with the adjoining allotments; Lot 2 436436 and Lot 3 DP 318553. The net effect of this releases Lots 1, 2 and 3 for sale as part of the subdivision and Foodstuffs retains Lot 4 and existing Foodstuffs buildings on Lots 2 DP 436436 and Lot 3 DP 318553.

4. Consultation

4.1. New Zealand Transport Agency Waka Kotahi (NZTA)

39. The applicant sought preliminary feedback from NZTA with a view to securing authorisation for a conditional access off State Highway 1- Main South Road sufficient only to maintain the landscape mound on Lot 1 and to satisfy the conditions in CRC241361.
40. NZTA provided the following advice in response to a request to provide a new crossing onto State Highway 1.
41. Feedback was internally requested from NZTA's Safety and Network teams on this request for a new vehicle crossing onto State Highway 1. They advised that it was their preference that access to Lot 1 be obtained via a right of way legal easement over proposed Lot 2, and subsequent connection onto the local road, Aruhe Road. Underpinning this preference is the fact that SH1 has been declared a Limited Access Road (LAR) in this location, with the intention of its LAR status being to restrict the number of vehicle crossings onto the highway in order to maintain or enhance safety and traffic flows.
42. They further advised that Section 90 of the Government Rounding Powers Act 1989 (GRPA) states that a crossing place is permitted in the case where a site does not have reasonably practicable alternative legal access. NZTA considered that reasonably practicable alternative legal access could be provided to proposed Lot 1 by way of a Right of Way over Proposed Lot 2, gaining access via Aruhe Road.
43. They went on to state, for completeness, that under Section 93 of the GRPA, when a road has been declared a Limited Access Road, that road shall not be deemed as legal road for the purpose of subdivision. Approval for a subdivision to gain access to a LAR needs to also be obtained from NZTA. NZTA was not in favour of Lot 1 obtaining direct access to SH1 and so were not minded to provide approval per Section 93 of the GRPA.

Accordingly the applicant elected to provide a ROW to Lot 1 over Lot 2. It follows that NZTA is not an affected party to this consent.

5. Statutory Assessment

5.1. Resource Management Act 1991

44. Section 11 (restrictions on subdivision of Land) of the RMA states that:
- (1) No person may subdivide land, within the meaning of section 218, unless the subdivision is –*
- (a) both, first, expressly allowed by a national environmental standard, a rule in a district plan as well as a rule in a proposed district plan for the same district (if there is one), or a resource consent and, second, shown on one of the following:*
- (i) a survey plan, as defined in paragraph (a)(i) of the definition of survey plan in section 2(1), deposited under Part 10 by the Registrar-General of Land; or*
- (ii) a survey plan, as defined in paragraph (a)(ii) of the definition of survey plan in section 2(1), approved as described in section 228 by the Chief Surveyor; or*
- (iii) a survey plan, as defined in paragraph (b) of the definition of survey plan in section 2(1), deposited under Part 10 by the Registrar-General of Land;*
45. The proposal contradicts a rule in the Christchurch District Plan, therefore a resource consent is required under Section 11.

5.2. National Policy Statement

46. There are eight National Policy Statements (NPS) which are currently operative. These are:
- (a) New Zealand Coastal Policy Statement
 - (b) Electricity Transmission
 - (c) Renewable Electricity Generation
 - (d) Freshwater Management
 - (e) Urban Development
 - (f) Highly Productive Land
 - (g) Indigenous Biodiversity
 - (h) Greenhouse Gas Emissions
47. It is considered that there are no National Policy Statements relevant to this application.

5.3. National Environmental Standards

48. The following National Environmental Standards (NES) are currently operative:
- (a) Air Quality
 - (b) Sources of Drinking Water
 - (c) Telecommunication Facilities
 - (d) Electricity Transmission Activities
 - (e) Assessing and Managing Contaminants in Soil to Protect Human Health
 - (f) Plantation Forestry
 - (g) Freshwater
 - (h) Marine Aquaculture
 - (i) Storing Tyres Outdoors
 - (j) Greenhouse Gas Emissions

49. The NES for Assessing and Managing Contaminants in Soil to Protect Human Health is considered relevant to this application.
50. It is considered that there are no National Environmental Standards relevant to this application.

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health

51. It is considered that the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) is the only relevant Environmental Standard for this proposal. The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) came into effect on 1 January 2012.
52. The site is located in an industrial zone and has been previously used for rural activities.
53. As explained in the background section of the Remedial Action Plan (RAP) by PDP, (appended to the AEE by PDP), following on from earlier investigations, PDP has also undertaken a number of soil sampling investigations across the site. Please refer to this information in **Appendix D**.
54. PDP have applied for resource consent under the NES-CS for soil disturbance activities associated with the asbestos remedial works on proposed Lots and 3. Their application proposes to provide a Site Validation report at the completion of remedial works.
55. At the time that the Site Validation Report is complete, the existing consent notice that requires the underlying site to be managed in accordance with the existing Contaminated Site Management Plan will no longer need to apply to Lots 2 or 3. It will still apply to Lots 1 and 4. IN due course, the consent notice could be cancelled and removed (as part of a separate RMA consent under S.221(3) in respect of Lots 2 and 3.
56. It is noted that the proposed remedial works are intended to be undertaken prior to this proposed subdivision.
57. Due to the NES-CS consent being applied for under RMA/2025/2972, it is considered that no further assessment is required in this application report.

5.4. Christchurch District Plan

58. The proposal has been assessed against the Christchurch District Plan.
59. A detailed assessment of the proposal against the provisions of the Christchurch District Plan is contained in **Appendix K**.
60. The assessment demonstrates that the proposal does not comply with Rule 8.5.1.3 (C10) and (C5) in the Christchurch District Plan.
61. The proposed (ROW) also does not comply with the permitted activity rule 7.4.2.1 (P7) regarding access design due to only being a proposed width of 3 metres.
62. The following standards can not be complied with as part of this application:
- 8.6.1 – Minimum net site area and dimension
 - 8.6.3 – Access
 - 8.6.7 – Water supply
 - 8.6.8 – Wastewater disposal
 - 8.6.9 – Stormwater disposal
 - 8.6.10 – Additional Standards for South West Hornby

- 7.4.3.7 – Access Design

63. Overall, the proposal has been assessed as a Restricted Discretionary activity (under 8.5.1.3 RD2) under the Christchurch District Plan.

6. Assessment of Actual and Potential Effects on the Environment

64. The proposal has been assessed as a Restricted Discretionary Activity and as such the relevant matters of discretion have been assessed as per Rule 7.4.4.9, 8.8.1.1, 8.8.2, 8.8.6, 8.7.4 and 8.8.3.

65. The following actual and potential effects have been considered:

- Subdivision Design
- Servicing
- Access

66. These are discussed below.

6.1. Subdivision Design

67. In terms of allotment size and dimensions proposed, as it currently stands, proposed Lot 3 will not meet the minimum net site area for the Industrial Heavy Zone of 4ha when it is not connected to septic wastewater servicing.
68. However, being 3.858ha, the site is only marginally below the minimum threshold of 4ha. Proposed Lot 3 will also exceed the minimum of 500m² when connected to the septic wastewater service which will be in the future, when its industrial use and wastewater capacity needs are known at the time of building consent.
69. the existing consent notice will still be required to this effect that the connection will be made at a later building stage.

6.2. Servicing

70. As part of this proposed subdivision, the deferment for connecting services for water, electricity and fibre to proposed Lots 2-3 until the time of future site development is consistent with the proposed consistent notice.
71. Servicing will be able to be installed in the future, particularly with the neighbouring developments implementing servicing connections for the proposal to connect to.
72. As stated in the description of the proposal, a consent notice will be offered to this effect.
73. Therefore, it is considered that the effects will be less than minor.

6.3. Access

74. Although the ROW will be only 3m in width and unsealed, its use will be limited to 6 monthly grass mowing and will not be frequently travelled on. Therefore, the effects are considered to be less than minor.
75. The access for Lot 1 will not be metalled nor formed.
76. The site is subject to the South West Hornby Industrial ODP. It is noted that the formed roads differ to the ODP.

77. A Memorandum has been provided by Stantec (**Appendix J**) providing advice for access to proposed Lot 2 and notes the position of Aruhe Road within the South West Hornby Industrial Area ODP.

7. Assessment of Relevant Objectives and Policies

78. The proposal has been assessed against the relevant objectives and policies of the Christchurch District Plan. The following objectives and policies are considered relevant to this application:
- Objective 8.2.2 seeks to ensure an integrated pattern of development and urban form is maintained through subdivision, which provides allotments for the anticipated or existing land uses for the zone.
 - Policy 8.2.2.2 seeks to ensure that subdivision incorporates the distinctive characteristics of the place's context and setting and promotes the health and wellbeing of residents and communities.
 - Policy 8.2.2.3 ensures that the layouts, sizes and dimensions of allotments created by subdivision are appropriate for the anticipated or existing land uses.
 - Policy 8.2.3.2 seeks to ensure the management of subdivision so that there is adequate servicing and capacity.
 - The proposed subdivision is consistent with the above objective and policies. The subdivision continues to provide for a future integrated pattern of development and form for the anticipated land uses across the site.
 - The size and shape of the allotments are appropriate for the Industrial Heavy Zone and future activities that are anticipated within the area.
 - Although development of the sites will be established at a later stage, it is anticipated that this will be integrated with the surrounding industrial environment.
 - Although the sites will not be serviced at this stage, they can be serviced at a later building stage.
79. Therefore, it is considered that the proposal is consistent with the relevant objectives and policies of the Christchurch District Plan.

8. Part 2 of the RMA

80. Part 2 of the RMA contains the purpose and principles of the Act. When considering an application for resource consent, a consent authority must take into consideration the purpose and principles of the RMA.
81. The proposal is considered to achieve the sustainable management of resources and is therefore consistent with Section 5.
82. It is considered that the proposal is consistent with any matters listed in Section 6 (matters of national importance) and Section 7 (other matters).
83. Section 8 requires that the principles of the Treaty of Waitangi are to be taken into account. It is considered that the application does not offend against any Treaty principles.
84. Based on the above, it is considered that the proposal is consistent with Part 2 of the Act.

9. Notification

85. The applicant is not requesting public notification, and it is considered that public notification is not mandatory, and no special circumstances apply (s95A). Notification is not precluded under s95A (4) – (5). It is considered that the application does not need to be publicly notified as

notification is not mandatory, no rule requires notification, and any potential effects will be less than minor.

86. The application does not meet the criteria listed in s95B for limited notification and no special circumstances apply; therefore, limited notification is not required.
87. It is further noted under Rule 8.4.1.1(a)(i) in the district plan, that the application shall not be publicly or limited notified.
88. Based upon this assessment, it is considered that the application be processed on a non-notified basis.

10. Section 104, 104C of the RMA

Section 104 of the RMA

89. Section 104 states that:

104(1) When considering an application for resource consent ... the consent authority must, subject to Part 2, have regard to:

(a) Any actual or potential effects on the environment of allowing the activity; and

(b) Any relevant provisions of –

(i) A national environmental standard;

(ii) Other regulations;

(iii) A national policy statement;

(iv) A New Zealand Coastal Policy Statement;

(v) A regional policy statement or proposed policy statement;

(vi) A plan or proposed plan; and

(c) Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

90. The actual and potential effects on the environment of allowing the activity have been demonstrated in Section 6 of this report.
91. It is considered that relevant national environmental standards, other regulations, and national policy statements have been addressed in Section 5.
92. The operative Christchurch District Plan has been considered throughout this application.

Section 104C of the RMA

93. Section 104C states that ...

104C Determination of applications for restricted discretionary activities.

(1) When considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which –

(a) a discretion is restricted in national environmental standards or other regulations;

(b) it has restricted the exercise of its discretion in its plan or proposed plan.

(2) The consent authority may grant or refuse the application.

(3) However, if it grants the application, the consent authority may impose conditions under section 108 only for those matters over which –

(a) a discretion is restricted in national environmental standards or other regulations:

(b) it has restricted the exercise of its discretion in its plan or proposed plan.

94. The proposal has been assessed as a restricted discretionary activity.
95. On this basis, it is considered that the application for resource consent can be granted under Section 104C, subject to appropriate conditions of consent.

11. Conclusion

96. Foodstuffs (South Island) Properties Limited is applying for resource consent to subdivide the land at 17 Hickory Place.
97. The application has been assessed as a restricted discretionary activity due to non-compliances with the access to Lot 1, the minimum net site area for Lot 3 and the limited servicing proposed for the proposed allotments.
98. On the basis of this report, it is concluded that the application for resource consent can be granted under Section 104C of the Resource Management Act 1991.
99. The applicant requests the opportunity to comment on any draft conditions of consent that the Council intends to impose when granting consent.

12. Disclaimer

This report has been prepared by Eliot Sinclair & Partners Limited ("Eliot Sinclair") only for the intended purpose as a resource consent application.

The report is based on:

- Canterbury Maps Viewer
- Christchurch District Plan
- AEE by PDP for NES-CS Consent (RMA/2025/72)
- Soil Sampling Investigation (PDP)
- Application Plan (ES)
- Correspondence with CCC
- Correspondence with Orion
- Correspondence with Iota
- Stantec Memorandum

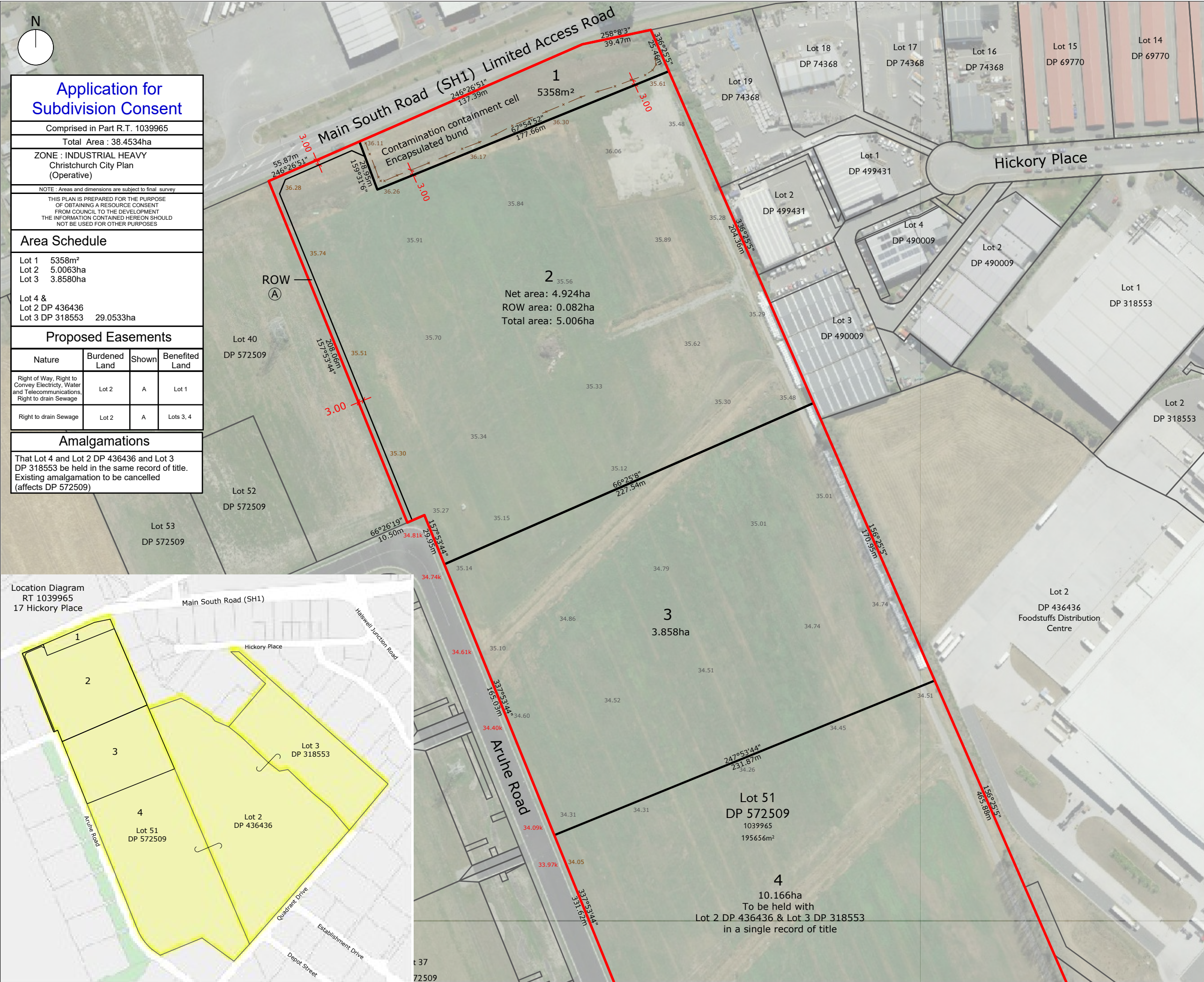
Where data supplied by Foodstuffs (South Island) Properties Limited or other external sources, including previously issued resource consents, drawings, or reports have been relied upon, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Eliot Sinclair for incomplete or inaccurate data supplied by other parties.

Whilst every care has been taken during our investigation and interpretation of available data to ensure that the conclusions drawn, and the opinions and recommendations expressed, are correct at the time of reporting, Eliot Sinclair has not performed an assessment of all possible conditions or circumstances that may exist at the site. Variations in conditions may occur between data sources and Eliot Sinclair has provided conclusions in this report based on the best available information at the time of writing. Eliot Sinclair does not provide any warranty, either express or implied, that all conditions will conform exactly to the assessments contained in this report.

The exposure of conditions or materials that vary from those described in this report may require a review of our recommendations. Eliot Sinclair should be contacted to confirm the validity of this report should any of these occur.

This report has been prepared for the benefit of Foodstuffs (South Island) Properties Limited and the Christchurch City Council for the purposes as stated above. No liability is accepted by Eliot Sinclair or any of their employees with respect to the use of this report, in whole or in part, for any other purpose or by any other party.

Appendix A. Application Plan



Appendix B. Record of Title



RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy



R.W. Muir
Registrar-General
of Land

Identifier **1039965**
Land Registration District **Canterbury**
Date Issued 25 January 2023

Prior References
944686

Estate Fee Simple
Area 38.4534 hectares more or less
Legal Description Lot 2 Deposited Plan 436436 and Lot 3
Deposited Plan 318553 and Lot 51
Deposited Plan 572509

Registered Owners
Foodstuffs (South Island) Properties Limited

Interests

677874 Gazette Notice declaring No.1 State Highway (Awanui-Bluff) fronting the within land to be limited access road - 28.3.1966 at 3.00 pm (affects Lot 51 DP 572509)

Appurtenant to part Lot 3 DP 318553 formerly Lot 3 DP 59249 contained in CT CB35A/492 herein is a right to convey electric power specified in Easement Certificate 961911.7 - 25.10.1991 at 11:16 am

The easement specified in Easement Certificate 961911.7 is subject to Section 309 (1) (a) Local Government Act 1974
Land Covenant in Transfer A72884.7 - 24.9.1993 at 11:53 am (Affects Lot 3 DP 318553)

Appurtenant to Lot 3 DP 318553 are rights of way, rights to drain sewage and rights to convey water, telephonic communications, electric power and data cabling specified in Easement Certificate A72884.13 - 24.9.1993 at 11:53 am

The easements specified in Easement Certificate A72884.13 are subject to Section 309 (1) (a) Local Government Act 1974
Appurtenant to Lot 3 DP 318553 is a right to drain water created by Transfer A95305.4 - 4.2.1994 at 11:17 am

Subject to a right to convey electric power in gross over part Lot 3 DP 318553 marked B on DP 318553 in favour of Southpower Limited created by Transfer A205072.2 - 15.11.1995 at 11:32 am

Subject to a right of way over part Lot 3 DP 318553 marked A on DP 318553 created by Easement Instrument 5569073.5 - 30.4.2003 at 9:00 am

The easement created by Easement Instrument 5569073.5 is subject to Section 243 (a) Resource Management Act 1991
Subject to Section 241(2) and Sections 242(1) and (2) Resource Management Act 1991(affects DP 436436)

Land Covenant in Easement Instrument 8728416.7 - 4.4.2011 at 9:24 am (Affects Lot 2 DP 436436)

Land Covenant in Easement Instrument 8728416.8 - 4.4.2011 at 9:24 am (Affects Lot 2 DP 436436)

Land Covenant in Easement Instrument 8728416.9 - 4.4.2011 at 9:24 am (Affects Lot 2 DP 436436)

9141854.1 CERTIFICATE PURSUANT TO SECTION 77 BUILDING ACT 2004 THAT THIS COMPUTER REGISTER IS SUBJECT TO THE CONDITION IMPOSED UNDER SECTION 75(2) (AFFECTS LOT 2 DP 436436 AND LOT 3 DP 318553) - 31.7.2012 at 2:48 pm

Appurtenant to Lot 2 DP 436436 and Lot 3 DP 318553 is a right of way and a right to drain water and sewage and a right to convey water, electricity, telecommunications and computer media created by Easement Instrument 10509696.11 - 4.8.2016 at 9:41 am

10860780.1 Surrender of Land Covenant 8728416.8 over Lots 19, 20, 21 DP 486661 as appurtenant to Lot 2 DP 436436 - 19.9.2017 at 9:32 am

10860780.2 Surrender of Land Covenant 8728416.9 as appurtenant to Lots 19 - 21 DP 486661 - 19.9.2017 at 9:32 am (affects Lot 2 DP 436436 and Lot 3 DP 318533)

10757354.6 Surrender of Land Covenant 8728416.8 over Lot 8 DP 501353 as appurtenant to Lot 2 DP 436436 - 30.10.2017 at 12:06 pm

10757354.7 Surrender of Land Covenant 8728416.9 as appurtenant to Lot 8 DP 501353 - 30.10.2017 at 12:06 pm (affects Lot 2 DP 436436 and Lot 3 DP 318533)

Fencing Covenant in Transfer 10992635.1 - 20.12.2017 at 4:07 pm (affects Lot 51 DP 572509)

Subject to a right (in gross) to convey electricity over part Lot 3 DP 318553 marked B on DP 522802 in favour of Orion New Zealand Limited created by Easement Instrument 11166190.2 - 7.9.2018 at 2:52 pm

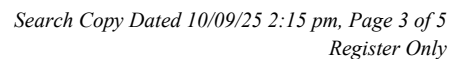
Subject to Section 241(2) Resource Management Act 1991 (affects DP 549428)

11957339.3 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 21.12.2020 at 3:29 pm (affects Lot 51 DP 572509)

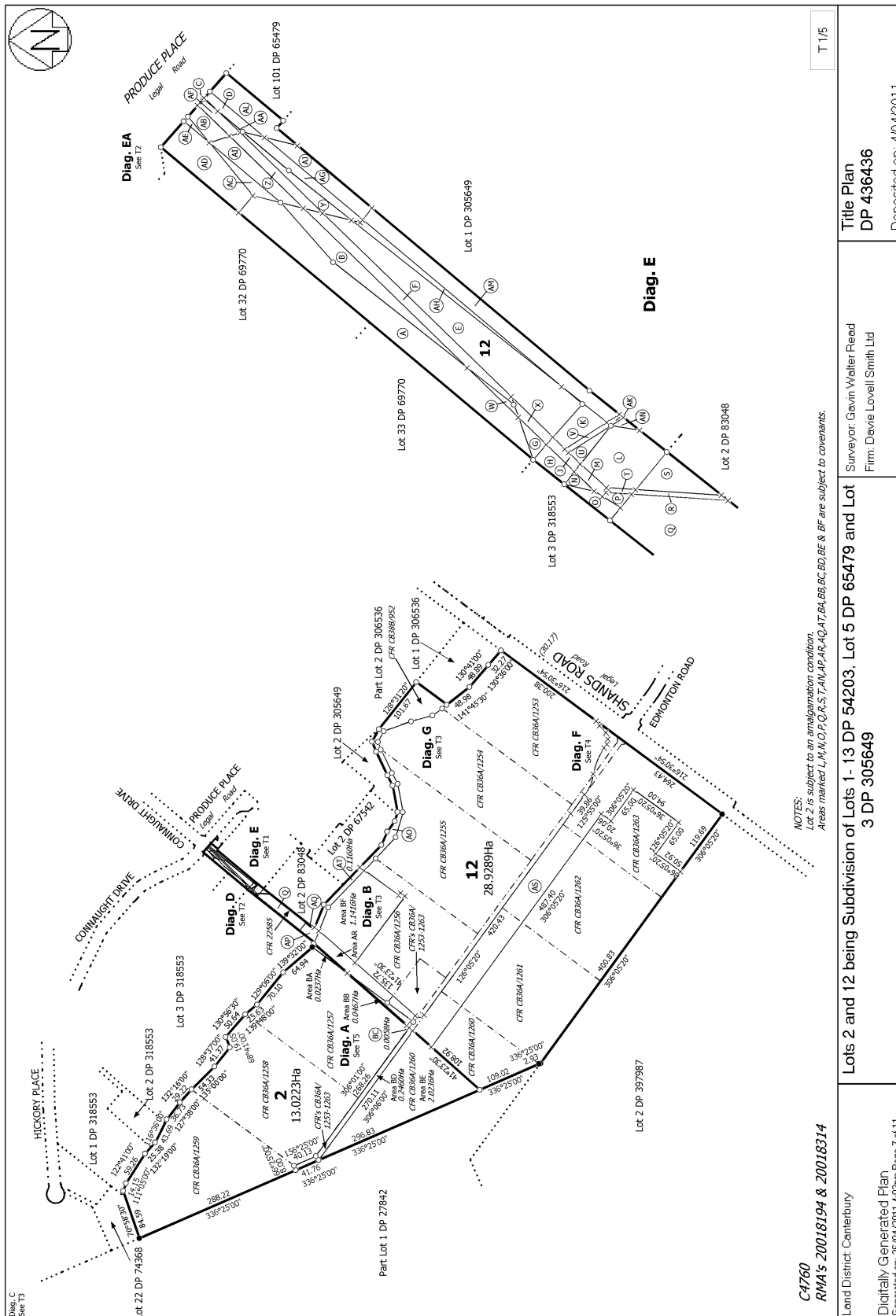
Subject to Section 241(2) Resource Management Act 1991 (affects DP 572509)

12576700.15 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 25.1.2023 at 4:59 pm (affects Lot 51 DP 572509)

12842583.1 Surrender of Land Covenant 8728416.9 appurtenant to Lot 46 DP 538147 - 20.11.2023 at 4:15 pm







View Instrument Details



Instrument No	12576700.15
Status	Registered
Date & Time Lodged	25 January 2023 16:59
Lodged By	Rushton, Brooke Renee
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991



Affected Records of Title	Land District
1039965	Canterbury

Annexure Schedule Contains 1 Pages.

Signature

Signed by Liam Ross Glubb as Territorial Authority Representative on 26/10/2022 12:17 PM

***** End of Report *****



IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF DP 572509 and Subdivision Consent RMA/2022/163

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: The Registrar-General of Land
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land described below is subject to conditions in relation to a subdivision consent as follows:

Sewer - Lot 51

This property shall comply with the wastewater discharge restrictions as directed by Christchurch District Plan and shall be limited to a daily average sewage flow of no more than 0.09 litres per second per hectare.

Limited capacity is available to service this site into the local pressure sewer system established for the surrounding development and which discharges into Quadrant Drive. Wastewater capacity approval shall be obtained before a sewer connection will be accepted for this site and may require a new connection to be made to Council infrastructure in Main South Road in accordance with Council's Infrastructure Design Standards, at the property owner's cost.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND AFFECTED

ALL THAT piece of land comprising:

- Lot 51 DP 572509 comprised in Record of Title 1039965

DATED this 5th day of October 2022

SIGNED for and on behalf of
CHRISTCHURCH CITY COUNCIL

A handwritten signature in black ink, appearing to read "M. Regnault", written over a faint circular stamp.

Marilyn Regnault

Principal Advisor Resource Consents

Authorised Officer (for the purposes of Section 221 Resource Management Act 1991)

View Instrument Details



Instrument No	11957339.3
Status	Registered
Date & Time Lodged	21 December 2020 15:29
Lodged By	Henderson, Fiona Maire Keall
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991



Affected Records of Title	Land District
944686	Canterbury

Annexure Schedule Contains 1 Pages.

Signature

Signed by Michael Wayne Kerr as Territorial Authority Representative on 21/12/2020 12:12 PM

***** End of Report *****



IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF DP 549428 and Subdivision Consent RMA/2020/625

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: The Registrar-General of Land
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land described below is subject to conditions in relation to a subdivision consent as follows:

Health of Land

All access to the lot and any works or development of the lot shall be undertaken in accordance with the approved Contaminated Site Management Plan (CSMP). The CSMP is located in Council Records TRIM 20/1149640.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND AFFECTED

ALL THAT piece of land comprising:

- Lot 2 DP 549428 comprised in Record of Title 944686

DATED this 16th day of September 2020

SIGNED for and on behalf of
CHRISTCHURCH CITY COUNCIL

A handwritten signature in black ink, appearing to read "M. Regnault", written over a faint circular stamp.

Marilyn Regnault
Team Leader Planning

Authorised Officer (for the purposes of Section 221 Resource Management Act 1991)

Appendix C. ECan Consent Decision

6 May 2024



Foodstuffs South Island Limited
Attn To: Rebecca Jayne Parish
Private Bag 4705
Christchurch 8140

Customer Services
P. 03 353 9007 or 0800 324 636
200 Tuam Street
PO Box 345
Christchurch 8140
E. ecinfo@ecan.govt.nz
www.ecan.govt.nz

Dear Rebecca

Correction to Resource Consent Decision

Record Number: CRC241361
Applicant Name: Foodstuffs South Island Limited
Activity Description: To discharge construction phase stormwater and contaminants to land.

It has come to our attention that there was an error in the above consent. As such, please destroy the document(s) currently in your possession and replace it with the enclosed corrected decision documents.

Error identified

Condition (15) currently reads:

The discharges authorised under this resource consent must occur in accordance with an ESCP. The ESCP must:

- a. Detail best practicable sediment control measures that will be implemented to ensure compliance with the conditions of this resource consent;
- b. Be prepared by a suitably qualified person with experience in erosion and sediment control in accordance with:
 - i. Canterbury Regional Council's *Erosion and Sediment Control Toolbox for the Canterbury Region* (ESCT), which can be accessed under <http://esccanterbury.co.nz/>; or
 - ii. An equivalent industry guideline. If an alternative guideline is used, the ESCP must provide details of the relevant alternative methods used and an explanation of why they are more appropriate than the ESCT; and
- c. Be signed by an engineer or suitably qualified person with experience in erosion and sediment control, confirming that the erosion and sediment control measures for the site are appropriately sized and located in accordance with the ESCT or alternative guideline.

Condition (15) has been amended to read:

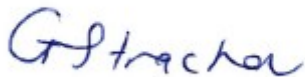
All practicable measures must be taken to:

- a. Minimise soil disturbance to that necessary to minimise the potential for sediment-laden stormwater runoff to be generated;
- b. Prevent soil erosion as a result of stormwater runoff generated from the works area; and
- c. Avoid placing excavated material in a position where it may become entrained in stormwater runoff and discharged to:
 - i. any surface water body;
 - ii. any neighbouring site; and
 - iii. the Christchurch City Council's reticulated stormwater network.

Queries

For all queries please contact our Advisory Team quoting your CRC number above.

Yours sincerely



Georgina Strachan
Regulatory Support Officer

cc:
Aurecon New Zealand Limited
Attn To: Jess Bould
PO Box 1061
8140
Christchurch 8140

RESOURCE CONSENT CRC241361

Under Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Foodstuffs South Island Limited
A DISCHARGE PERMIT (S15):	To discharge construction phase stormwater and contaminants to land.
COMMENCEMENT DATE:	02 May 2024
DATE CONSENT NUMBER ISSUED:	02 May 2024
EXPIRY DATE:	02 May 2059
LOCATION:	17 Hickory Place, Hornby

SUBJECT TO THE FOLLOWING CONDITIONS:

Limits

- 1 The activities authorised by this consent shall only be the discharge of contaminants to land associated with the placement of contaminated material for the purpose of forming a landscaping bund within the site at 17 Hickory Place, Lot 51 DP 572509 as shown on the attached Plan CRC241361A, attached to and forming part of this resource consent.

Advice Note: Any soil that is shown to have concentrations of analytes, below the relevant Canterbury Regional Background Concentrations is not considered contaminated.

- 2 Sediment laden stormwater shall be discharged:
 - a. In accordance with the Erosion and Sediment Control Plan (ESCP) required by Condition (9) of this resource consent; and
 - b. Onto and/or into land within the boundaries of the site as shown on the attached Plan CRC241361A, which forms part of this resource consent.
- 3 The discharge authorised in accordance with Condition (1) shall only be contaminated material sourced from:
 - a. 171 Main North Road, Northcote,
 - b. 175 Durham Street; and
 - c. Other Foodstuffs sites within the Canterbury region, where a Detailed Site Investigation has been completed and soils to be disposed of at the Site do not exceed commercial/industrial land use criteria, based on the completion of a UCL95% assessment.

- 4 The contaminated soil shall:
- a. Be placed within a landscape bund, as shown on Plan CRC241361B and Plan CRC241361C attached to and forming part of this resource consent. The landscape bund shall be no greater than:
 - i. 5 m below ground level (maximum excavation depth);
 - ii. 4 metres in height above ground level, excluding any plants established on the bund;
 - iii. 60 m in length;
 - iv. 25 m in width; and
 - v. 7,800 m³ in volume.
 - b. Be fully encapsulated within a welded polyethylene liner with a minimum thickness of 1.5 millimetres laid in strips to isolate the imported soils/material from the surrounding and underlying strata;
 - c. Upon completion of the deposition of contaminated material, the HDPE liner shall be welded shut; and
 - d. Be covered by at least 0.3 metres of cleanfill materials such as topsoil and or virgin quarry aggregate which shall be uniformly grassed or vegetated.
- 5 The integrity of the bund (structure) and the capping designed to contain the material shall be maintained to a standard where it will continue to function as designed for the duration of the consent, including:
- a. Maintaining the polyethylene liner to a standard where it continues to ensure the continued containment of the contaminated soils, and repairing any damage or ripping of the polyethylene liner within 10 working days of being identified; and
 - b. Maintaining a minimum of 0.3 metres of clean soil above the contaminated soils; and
 - c. Maintaining vegetation/grass in a healthy and uniform state, with the exception of seasonal browning off.

Prior to Commencement of Work

- 6 Prior to the commencement of the activities described in Condition (2), all personnel working on the site must be made aware of and have access to:
- a. The contents of this resource consent document and all associated erosion and sediment control plans and other discharge treatment methodologies; and
 - b. The Site Management Plan.
- 7 All erosion and sediment control measures detailed in the ESCP required by Conditions (9-14) of this resource consent must be installed prior to the commencement of any earthworks or stripping of vegetation and topsoil occurring on the site.
- 8 At least 10 working days prior to the commencement of works on site, the Canterbury Regional Council, Attention: Regional Leader –Compliance Monitoring (via ECInfo@ECan.govt.nz) must be informed of the commencement of works.

Erosion and Sediment Control

- 9 The discharges authorised under this resource consent must occur in accordance with an ESCP. The ESCP must:
- a. Detail best practicable sediment control measures that will be implemented to ensure compliance with the conditions of this resource consent.
 - b. Be prepared by a suitably qualified person with experience in erosion and sediment control in accordance with:
 - i. canterbury regional council's *Erosion and Sediment Control Toolbox for the Canterbury Region* (ESCT), which can be accessed under <http://esccanterbury.co.nz/>; or
 - ii. an equivalent industry guideline. If an alternative guideline is used, the ESCP must provide details of the relevant alternative methods used and an explanation of why they are more appropriate than the ESCT; and
 - c. Be signed by an engineer or suitably qualified person with experience in erosion and sediment control, confirming that the erosion and sediment control measures for the site are appropriately sized and located in accordance with the ESCT or alternative guideline.
- 10 The ESCP must:
- a. Include a map showing the location of all works;
 - b. Detailed plans showing the location of sediment control measures, on-site catchment boundaries, and sources of runoff;
 - c. Detail how best practicable measures are taken to minimise discharges of sediment-laden stormwater run-off beyond the boundaries of the site;
 - d. Include drawings and specifications of designated sediment control measures, if these are not designed and installed in accordance with the ESCT;
 - e. Detail the methodology for stabilising the site entrance and exit points and any measures employed to prevent off-site tracking of sediment and other materials from the site;;
 - f. Include a confirmation that the erosion and sediment control devices have been sized appropriately in accordance with the ESCT;
 - g. Include a programme of works, including a proposed timeframe for each stage of the works and the earthworks methodology;
 - h. Detail the management of any stockpiled material;
 - i. Detail inspection and maintenance of the sediment control measures;
 - j. Detail sampling procedures and protocols, if sampling is required;
 - k. Define the discharge points where stormwater is discharged onto land / infiltrates into land;

- l. Include a description of dust mitigation to be used and details of best practicable options to be applied to mitigate dust and sediment discharge beyond the site boundary;
 - m. Detail the methodology for stabilising the site if works are paused for more than five working days or abandoned;
 - n. Detail the methodology for stabilising the site and appropriate decommissioning of all erosion and sediment control measures after works have been completed.
- 11
- a. The ESCP must be submitted to the Canterbury Regional Council, Attention: Regional Leader – Compliance Monitoring, after the commencement of the resource consent and at least 10 working days prior to works commencing, for approval that it complies with the ESCT and the conditions of this resource consent.
 - b. The discharge must not commence until approval has been received from the Canterbury Regional Council that the ESCP is consistent with the ESCT or equivalent industry guideline as per the requirements under Condition (9)(b)(ii), and the conditions of this resource consent.
 - c. Notwithstanding Condition (11)(a), if the ESCP has not been reviewed and/or approved within ten working days of the Regional Leader – Compliance Monitoring receiving the ESCP, the discharge may commence.
- 12
- The ESCP may be amended at any time. Any amendments must be:
- a. Only for the purpose of improving the efficacy of the erosion and sediment control measures and must not result in reduced discharge quality; and
 - b. For the purpose of applying best practicable measures to mitigate dust and sediment transport off-site;
 - c. Consistent with the conditions of this resource consent; and
 - d. Submitted in writing to the Canterbury Regional Council, Attention: Regional Leader Compliance Monitoring, prior to any amendment being implemented.
- 13
- Erosion and sediment control measures must be inspected at least once per day, as well as following any rainfall event that results in more than five millimetres of rainfall at the site. Any accumulated sediment must be removed, and repairs made, as necessary, to ensure effective functioning of measures and devices. Records of any inspections must be kept and provided to the Canterbury Regional Council on request.
- 14
- If the consent holder abandons work on-site, or pauses works for more than five working days, adequate preventative and remedial measures must be taken to control sediment discharged from exposed or unconsolidated surfaces. These measures must be maintained for so long as necessary to prevent sediment discharges from the earth worked areas.

During Works

- 15
- All practicable measures must be taken to:
- a. Minimise soil disturbance to that necessary to minimise the potential for sediment-laden stormwater runoff to be generated;

- b. Prevent soil erosion as a result of stormwater runoff generated from the works area; and
- c. Avoid placing excavated material in a position where it may become entrained in stormwater runoff and discharged to:
 - i. any surface water body;
 - ii. any neighbouring site; and
 - iii. the Christchurch City Council's reticulated stormwater network.

- 16
- a. Tracking of material off-site during the works must be avoided at all times.
 - b. In the event that material is tracked off-site, the tracked material must be removed as soon as practicable.

Monitoring

- 17
- a. During works and when a discharge of construction-phase stormwater is occurring, the stormwater runoff generated during the rainfall and flowing towards the discharge points into land must be visually assessed for:
 - i. any sheen of oil or grease or discoloration (other than discolouration from sediment); and
 - ii. any sludge or emulsion; and
 - b. Observations must be photographed and recorded; and
 - c. Records of visual assessments including photographs must be kept and provided to Canterbury Regional Council on request.
- 18
- A suite of three groundwater monitoring wells will be installed at the site, one up-hydraulic gradient and two down-hydraulic gradient of the buried and stockpiled material, as shown on Plan CRC241361B, attached to this consent. The wells shall be installed and screened to intercept groundwater during the likely seasonal variations.
- 19
- The new monitoring bores required by Condition (18) shall be:
- a. For the purpose of facilitating groundwater monitoring;
 - b. Have a screen at least 20m below ground level; and
 - c. Included in all future SMPs.
- 20
- Sampling shall commence within one year of the consent being granted.
- 21
- Samples shall be collected at four-month intervals for the first two years after the installation of the monitoring bore(s) and thereafter at least once annually in June or July.
- 22
- The samples shall be analysed for:
- a. Total petroleum hydrocarbons and polycyclic aromatic hydrocarbons (grams per cubic metre);
 - b. Volatile organic compounds (US-EPA method 8260 or equivalent) (grams per cubic metre); and

- c. Dissolved Arsenic, Cadmium, Chromium, Copper, Lead, Nickel and Zinc (grams per cubic metre).

- 23 The results from up and down gradient samples collected in accordance with Condition (22) above, shall be compared and assessed against Schedule 8 Groundwater limits set in Canterbury Land and Water Regional Plan. The results shall be recorded and made available upon request to Canterbury Regional Council.
- 24 Where contaminant levels in a downgradient bore exceed Schedule 8 Groundwater limits following three consecutive rounds of sampling required by Condition (21), the results of up and down gradient samples shall be compared. If contaminant levels measured in a downgradient bore exceeds the contaminant level in the up gradient bore by 15 percent or greater, the Consent Holder shall:
- a. Undertake all reasonably and practicable measures to identify the source of the contamination and investigate whether the encapsulated buried and stockpiled soils are the likely cause of the exceedance;
 - b. If the source is identified, the Consent Holder shall undertake all reasonably and practicable measures to remove, remedy or mitigate the source of contamination as soon as practicable; and
 - c. Notify the Canterbury Regional Council, Attention: Regional Leader – Compliance Monitoring of the contaminant level exceedances, actions taken to identify and address the source of contamination, including a timeline for the implementation of correction and/or remediation options (if necessary).
- 25 All sampling required under this resource consent shall be undertaken by a suitably qualified person using the most appropriate scientifically recognised and accredited groundwater sampling methods.
- 26 The laboratory carrying out analysis for the purpose of Condition (22), shall be certified for the relevant analysis methods by an accreditation authority such as International Accreditation New Zealand or equivalent.
- 27 Results of analysis from samples taken in accordance with Condition (22), shall be sent directly the Canterbury Regional Council in electronic form.

Discovery and Stockpiling of Contaminated Material

- 28 In the event that any unexpected contaminated soil or material is uncovered by the works, a contamination discovery protocol must be implemented, including but not limited to the following steps:
- a. Earthworks within ten metres of discovered contaminant soil or material must cease immediately;
 - b. All practicable steps must be taken to prevent the contaminated material becoming entrained in stormwater. Immediate steps must include, where practicable;
 - i. diverting any stormwater runoff from surrounding areas away from the contaminated material; and
 - ii. minimising the exposure of the contaminated material, including covering the contaminants with an impervious cover;
 - c. Notification of the Canterbury Regional Council, Attention: Contaminated Sites Manager, within 24 hours of the discovery;

- d. Earthworks within ten metres of discovered contaminant soil or material must not recommence until a suitably qualified and experienced contaminated land practitioner (SQEP) confirms to Canterbury Regional Council, Attention: Regional Leader - Compliance Monitoring that continuing works does not represent a significant risk to the environment; and
- e. All records and documentation associated with the discovery must be kept and copies must be provided to the Canterbury Regional Council upon request.

29 Stockpiling of any excavated contaminated material or soils that are encountered onsite must be avoided where possible. In the event that temporary stockpiling of suspected contaminated or contaminated material is required, then the contaminated material stockpiles must be managed as below:

- a. Stockpiled contaminated material or soils must be kept separate from uncontaminated excavated soils stockpiles and any virgin aggregate or other material also stockpiled on-site; and
- b. Stockpiled contaminated material must be placed on polythene sheeting or similar impervious material to prevent contamination of underlying material; and
- c. Stockpiled contaminated material must include a perimeter bund or berm installed to prevent runoff leaving the area and stormwater from other areas entering the stockpile area; and
- d. Stockpiled material must be covered or dampened during dry and windy conditions so as to prevent wind erosion; and
- e. If any rainfall is forecasted that has the potential to cause runoff from the stockpiles, or if the stockpiles are left overnight, over the weekend or over public holidays, the stockpiled material must be covered with plastic sheeting or a suitable material such as clean topsoil, or otherwise stabilised, to prevent stormwater runoff coming into contact with contaminated material.

Advice Note: For the purpose of this condition, temporary stockpiling means material being stockpiled for no longer than the overall construction period or the stage of construction if construction occurs in stages, whichever is the shorter period, and only for as long as reasonably necessary. The overall requirement to avoid, where possible, the stockpiling of contaminated material or soils prevails.

Spills

30 All practicable measures must be taken to avoid spills of fuel or any other hazardous substances within the site. These measures must include:

- a. Refuelling of machinery and vehicles must not occur within 20 metres of:
 - i. open excavations;
 - ii. exposed groundwater;
 - iii. surface water bodies; or
 - iv. stormwater devices.
- b. A spill kit must be kept on site at all times that is capable of absorbing the quantity of oil and petroleum products that may be spilt on site at any one time;

- c. In the event of a spill of fuel or any other hazardous substance, the spill must be cleaned up as soon as practicable, the stormwater system must be inspected and cleaned, and measures taken to prevent a recurrence;
- d. The Canterbury Regional Council, Attention: Regional Leader – Compliance Monitoring, must be informed within 24 hours of a spill event exceeding five litres and the following information provided:
 - i. the date, time, location and estimated volume of the spill;
 - ii. the cause of the spill;
 - iii. the type of hazardous substance(s) spilled;
 - iv. clean up procedures undertaken;
 - v. details of the steps taken to control and remediate the effects of the spill on the receiving environment;
 - vi. an assessment of any potential effects of the spill; and
 - vii. measures to be undertaken to prevent a recurrence.

Upon Completion of Works

- 31 Erosion and sediment control measures must not be decommissioned until the site is stabilised and the stormwater system for the developed site is functioning. Decommissioning of the measures must be undertaken in the following order:
- a. All disturbed areas must be stabilised and/or re-vegetated as soon as practicable following completion of the works;
 - b. Any visible debris, litter, sediment and hydrocarbons must be removed from all sediment control measures and disposed at a suitable facility; and
 - c. Erosion and sediment control measures must be removed.

Advice Note: *The use of polymers for site stabilisation purposes, including those forming a component of hydro-seeding formulas, may require separate authorisations under the Resource Management Act 1991. Further, polymers are not considered a long-term or permanent stabilisation technique and may require repeated application to ensure the site remains stabilised.*

- 32 Upon completion of works and the removal of erosion and sediment control measures, any visible sediment accumulated on impervious surfaces within or immediately adjacent to the works site must be removed to minimise the risk of sediment becoming entrained in stormwater. All sediment removed must be disposed of at a suitable facility.

Administration

- 33 The Canterbury Regional Council may, once per year, on any of the last five days of May or November, serve notice of its intension to review the conditions of this consent for the purposes of:
- a. Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or

- b. Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

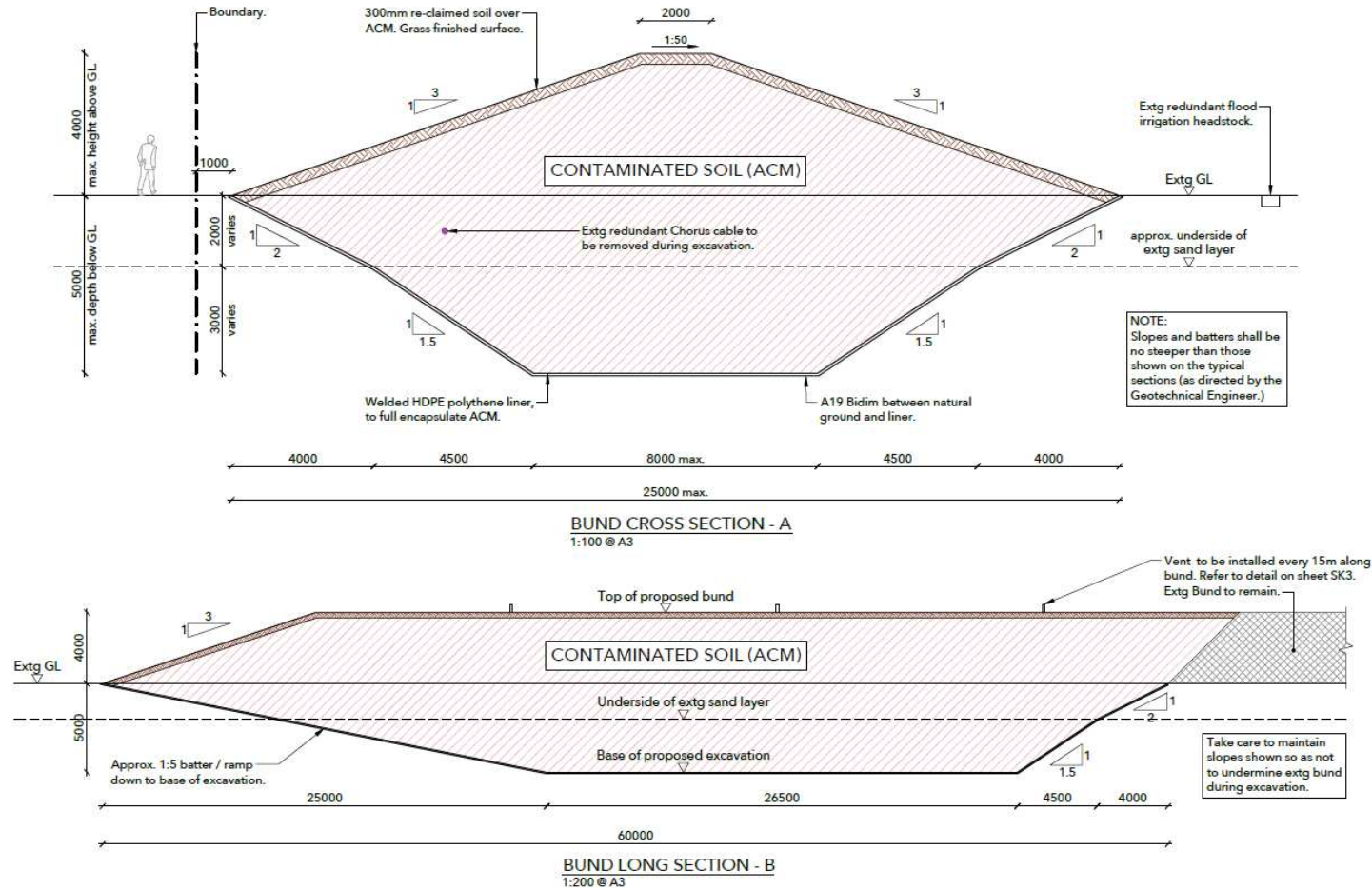
- 34 If this consent is not exercised before 30 June 2029, the consent shall lapse in accordance with Section 125 of the Resource Management Act.

Issued at Christchurch on 6 May 2024

Canterbury Regional Council



Plan CRC241361C



Exercising of Resource Consent CRC241361

It is important that you notify Environment Canterbury when you first start using your consent.

GRANTED TO:	Foodstuffs South Island Limited
A DISCHARGE PERMIT (S15):	To discharge construction phase stormwater and contaminants to land.
LOCATION:	17 Hickory Place, Hornby

Even if the consent is replacing a previous consent for the same activity, you need to complete and return this page.

A consent can only be made active after the activity has commenced and all pre-requisite conditions have been fulfilled e.g. installation of water meter and/or fish screen. If you require further advice, please contact our Advisory Team on 0800 324 636 or by email at ecinfo@ecan.govt.nz.

Providing this information will:

- Validate your consent through to its expiry date
- Minimise compliance monitoring charges
- Help provide an accurate picture of the state of the environment.

If consent CRC241361 is not used before 30 June 2029 this consent will lapse and no longer be valid.

Declaration:

I have started using this resource consent.

Action taken (e.g. pasture irrigated, discharge from septic tank/boiler/spray booth etc):

Date I started using this resource consent (Note: this date cannot be in the future): _____

Signed: _____ **Date:** _____

Full name of person signing (please print): _____

Please return to:

Environment Canterbury
PO Box 345
Christchurch 8140

Fax: (03) 365 3194
Email: ecinfo@ecan.govt.nz

File: CRC241361
Customer No: EC112628

Appendix D. Soil Sampling Investigation (PDP)



27 August 2025

Rebecca Parish
Senior Property Development Manager
Foodstuffs South Island Limited
167 Main North Road,
CHRISTCHURCH 8051

Dear Rebecca

SOIL SAMPLING INVESTIGATION – PADDOCK AREAS, 17 HICKORY PLACE, ISLINGTON, CHRISTCHURCH

1.0 Introduction

Pattle Delamore Partners Limited (PDP) has been engaged by Foodstuffs South Island Limited (Foodstuffs) to undertake surficial soil sampling over the northern paddock areas located to the rear of the current operational Foodstuffs Distribution Centre, 17 Hickory Place, Islington, Christchurch (i.e. the site). The site investigation area covers approximately 9.4 ha, as shown on Figure 1. The assessment has been undertaken to characterise the soil contamination status within the investigation site prior to potential subdivision and divestment. This letter includes a brief site history review, a test pit soil sampling investigation and consideration of soil disposal options as part of any future site redevelopment following subdivision.

The site formed part of wider paddock areas that were previously used by Heinz-Wattie's for the discharge by border-dyke flood irrigation of vegetable process water. Detailed Site Investigations (DSIs) carried out by Aurecon¹ (2019) and Eliot Sinclair² (2021/2022) undertaken over the wider property (within and adjacent to the current site) concluded that the surface organic detritus within and bordering the irrigation ditches was contaminated with asbestos fines (AF) and friable asbestos (FA) at concentrations that could pose a risk to human health. It is understood that the asbestos likely manifested through the degradation of the asbestos pipes that fed the bubble-up valves/concrete headstocks located in a general north-east to south-west orientation at four locations over the site.

The results of these previous soil sampling investigations show that the asbestos fines/friable asbestos are more likely to be present closer to the bubble-up valves/concrete headstocks. However, investigations undertaken on adjacent similar land to the west (owned and developed by Ngāi Tahu) have recorded detectable but acceptably low soil asbestos concentrations outside of these areas in isolated pockets.

¹ *Hornby Bottling Plant – Balance of Site, Preliminary and Detailed Site Investigation*, dated December 2019, Aurecon.

² *Remedial Action Plan, Mánia, 320 Shands Road and 637 Main South Road, Hornby*, dated March 2021, Eliot Sinclair. *Site Validation Report, 320 Shands Road, Hornby*, dated May 2022, Eliot Sinclair.

1.1 Proposed Subdivision

It is proposed for the site investigation area to be subdivided into three Lots with Lot 1 (approximate area of 5,358 m²), fronting State Highway 1, to be retained by Foodstuffs. The remaining two Lots located to the immediate south (Lot 2; approximate area of 5.01 ha and Lot 3; approximate area of 3.86 ha) will be divested and developed for commercial/industrial land use. A proposed subdivision plan has been provided by Eliot Sinclair Limited (attached) indicating an approximate 5,358 m² Lot 1 that will be retained by Foodstuffs.

2.0 Previous PDP Soil Sampling Investigation

As part of the previous works to relocate surplus soils from other Foodstuffs supermarket development sites within Christchurch at the site (refer to Section 6.3), PDP has previously undertaken a number of soil contaminant investigations within the northern part of the site (Block 1). The purpose of these earlier PDP soil sampling investigations was to aid in the final burial of relocated contaminated soils to a depth of approximately 5 m below ground level (bgl) and within an overlying bund to a maximum height of approximately 4 m above ground level, extending over a length of approximately 170 m and a width of up to approximately 25 m. These relocated soils were fully encapsulated in seam welded HDPE polyethylene sheeting and capped with topsoil in order to provide an effective barrier.

Taking into consideration the soil disturbance activities associated with the burial of the contaminated soils and bund creation, it is considered that the previously collected soil samples located within the south-eastern part of Block 1 (refer to blue box on Figure 1) are still representative of current site conditions in this part of the site. The results from these soil samples are presented in Section 5.4.

3.0 Current Soil Sampling Investigations

Two additional soil sampling investigations have been undertaken over the site to better characterise the extent of asbestos in site soils as a result of previous site activities. In addition to establishing the extent of asbestos, the first of the two additional investigations included an assessment of heavy metals and organochlorine pesticides (OCP), being general indicator contaminants.

3.1 March and April 2025 Investigation

PDP environmental geologists/scientists attended the site on 20 March, and 2 and 3 April 2025 to carry out the first phase of additional soil sampling, which included the collection of samples from the surface soils and at a depth of 0.2 m bgl from a series of sampling points over the site. The sampling plan was based on the findings of the previous investigations and to assess the lateral and vertical extent asbestos fines friable asbestos likely to be present away from the bubble-up valves/concrete headstocks. Samples were also collected from the general paddock areas away from the 'upstream' bubble-up valves/concrete headstocks in order to provide soil contamination information over the wider site.

Each soil sample was placed directly into a glass jar with a food grade plastic sealed lid for heavy metals and organochlorine pesticides (OCP) (general indicator contaminants) supplied by Hill Laboratories (Hills). Soil collected for asbestos in soil analysis was placed into 500 mL asbestos tubs. A fresh pair of nitrile gloves was used at each sample location to prevent cross contamination of the soils and to protect the PDP site worker during sample collection.

Following collection, samples were placed immediately into chilly-bins containing frozen ice packs. The chilly-bins were sent with chain of custody documentation to Hills in Christchurch on the same day as collection.

A total of 47 selected samples were analysed for the presence of asbestos (semi-quantitative laboratory analysis), 26 samples for heavy metals analysis and one sample for OCP. It is noted that OCP analysis was

undertaken as part of the previous 2019 Aurecon investigation over the current investigation site and wider area, and individual compounds were not recorded above the laboratory limits of reporting.

3.2 August 2025 Investigation

A PDP environmental scientist attended the site on 7 and 8 August 2025 to carry out the second phase of additional soil sampling, which included the collection of samples from the surface soils and at a depth of 0.2 m bgl from a series of sampling points over the site for the presence of asbestos only. The sampling plan was based on the findings of the March and April investigations. Samples were also collected from within the north-western corner of the site adjacent to State Highway 1 (SH1) for completeness.

The soil samples were collected in the same manner as detailed in Section 3.1 and submitted with chain of custody documentation to Hills in Christchurch on the same day as collection.

A total of 54 selected samples were analysed for the presence of asbestos (semi-quantitative laboratory analysis).

A plan showing the sampling locations is attached as Figure 1 together with site photographs taken during the soil sampling investigations.

3.3 Field Observations

In general, each soil sample location in Block 1 and Block 2 comprised grass and roots underlain by moist, silty topsoil to 0.2 m bgl. Soil sample locations in Block 1, immediately adjacent to the encapsulated bund area, comprised compacted silty sand soils with some gravels evident as a result of the bund formation, with some locations having a sandier composition.

In addition, the following was also noted:

- ✧ Two stockpiles were noted within the north-eastern and central parts of Block 1 (refer to Section 6.5 for more detail); and
- ✧ Two small glass fragments and one piece of brick fragment were observed in BLK1_SS8 at 0.2 m bgl.

4.0 Offsite Soil Disposal Criteria

Following discussions with Foodstuffs, and based on the previously identified presence of asbestos within site soils, they have indicated that subsequent to the results of the additional soil sampling detailed in Section 3.0, their preferred remedial approach is to remove soils containing asbestos above BRANZ (2024), *New Zealand Guidelines for Assessing and Managing Asbestos in Soil* for all land uses including for commercial/industrial land use.

There are a number of different disposal facilities located within the Canterbury regional that are able to accept soils containing asbestos. It should be noted that the offsite disposal location for soils that contain asbestos will also be determined that the concentration of other contaminants, in this case heavy metals and OCP. Table 2 also provides the soil acceptance criteria for heavy metals for the landfills that are able to accept asbestos containing soils. The asbestos approved disposal facilities include:

- ✧ Protranz Earthmoving Limited, managed landfill, Leggett Road, Templeton, Christchurch;
- ✧ Frews Quarry Limited (Frews), managed landfill, Plantation Road, Hororata;
- ✧ Taiko Road, managed landfill, Cave, South Canterbury; and
- ✧ Kate Valley Regional Landfill, Waipara, North Canterbury.

For completeness, the soil sample results have also been compared to the following commercial/industrial land use standards/guidelines:

- ✧ *Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health* (MfE, 2011);
- ✧ *Guideline on the Investigation Levels for Soil and Groundwater* (National Environmental Protection Council) (NEPC, 2013); and
- ✧ BRANZ, 2024. *New Zealand Guidelines for Assessing and Managing Asbestos in Soil*.

5.0 Soil Sampling Results and Comparison to Guideline Criteria

The soil sample test results are displayed on Table 1 (asbestos) and Table 2 (heavy metals). Copies of the laboratory reports and the chain of custody documentation are also attached. A summary of results is as follows:

5.1 Asbestos

A total of 101 soil samples were collected and analysed at the laboratory using the semi-quantitative analytical method, with the following results noted. Note that only results that recorded the positive presence of asbestos have been tabulated.

Block 1:

- ✧ Of the 47 samples collected from Block 1, 20 soil samples analysed using the semi-quantitative analytical method did not record the presence of asbestos.
- ✧ The remaining 27 samples recorded asbestos in the soil as ACM (asbestos containing material) debris and/or loose fibres. In all cases ACM was not measured above the laboratory limit of detection (0.001% w/w) in all soil samples. Asbestos as fibrous asbestos/asbestos fines was measured above the laboratory limit of detection in nine of the 27 samples up to 0.013% w/w (BLK1_SS1_0.05).
- ✧ Based on the semi-quantitative method, all 27 soil samples recording detectable asbestos contained asbestos as ACM below the BRANZ (2024) soil guideline value of 0.05% w/w for commercial/industrial land use.
- ✧ Based on the semi-quantitative method, nine of the 27 asbestos detectable soil samples contained fibrous asbestos/asbestos fines above the BRANZ (2024) soil guideline value of 0.001% w/w for all land uses.

Block 2:

- ✧ Of the 54 samples collected from Block 2, 37 soil samples analysed using the semi-quantitative analytical method did not record the presence of asbestos.
- ✧ The remaining 17 samples recorded asbestos in the soil as ACM (asbestos containing material) debris and/or loose fibres. In all cases ACM was not measured above the laboratory limit of detection (0.001% w/w) in all soil samples. Asbestos as fibrous asbestos/asbestos fines was measured above the laboratory limit of detection in ten of the 17 samples at 0.007% w/w (BLK2_SS12_0.05).
- ✧ Based on the semi-quantitative method, all 17 soil samples contained asbestos as ACM below the BRANZ (2024) soil guideline value of 0.05% w/w for commercial/industrial land use.

- Based on the semi-quantitative method, ten of the 17 asbestos detectable soil samples contained fibrous asbestos/asbestos fines above the BRANZ (2024) soil guideline value of 0.001% w/w for all land uses.

No suspected ACM fragments were observed on site during the site inspection and soil sampling investigations.

5.2 Heavy Metals

Heavy metal concentrations were generally measured at or around the Environment Canterbury (ECan; 2007) background concentrations for the local soil type (Regional – Recent) over both Blocks 1 and 2. However, slight exceedances of cadmium (six samples), lead (one sample) and zinc (19 samples) were recorded of the total of the 26 samples analysed.

For comparison purposes, all heavy metal concentrations were measured below the human health soil contaminant standards/guideline values in the context of commercial/industrial land use.

5.3 Organochlorine Pesticides

The single sample analysed for OCP compounds (BLK2_SS7_0.05) did not record any of the individual compounds above the laboratory limit of detection. As such, the sample recorded Σ DDT below the adopted ECan background concentration and in the context of a commercial/industrial land use setting. This sample result has not been tabulated.

5.4 Previous Soil Sampling Investigation (PDP; April 2022³)

A total of 13 samples were collected from nine locations within the south-eastern part of Block 1 (refer to blue box on Figure 1) and analysed for a suite of seven heavy metals and asbestos (semi-quantitative analysis). Samples were collected between the ground surface and 0.3 m bgl. In summary, asbestos was not measured in any of the 13 samples and individual heavy metal concentrations were all measured below the ECan (2007) background concentrations for the local soil type (Regional – Recent).

6.0 Offsite Soil Disposal Options

6.1 Asbestos Soil Containing Areas

As discussed in Section 4.0, the objective is to remediate soils that contain asbestos above the BRANZ (2024) acceptance criteria for all land uses, including commercial/industrial and dispose of at an approved disposal facility (excluding the buried and encapsulated bund soils).

Where asbestos has been recorded in soils over parts of the site, but below the laboratory level of detection, it meets the BRANZ (2024) acceptance criteria for all land uses including for commercial/industrial purposes. Therefore, these soils do not need to be removed from the site from a protection of human health perspective, even though they contain very low levels of asbestos.

Figure 1 has been annotated to show the proposed remedial areas based on the soil sampling undertaken to date at the site. It is important to note that additional soil sampling could be undertaken over parts of the site to better define the lateral and vertical extents of the non-complying soil asbestos concentrations. However, the expected non-complying soil asbestos areas, as shown on Figure 1, are likely to be well defined based on the current data, including how the asbestos fines were likely deposited over the site from the headstocks, and following a review of previous investigations undertaken on the neighbouring commercial/industrial development located to the immediate west, which is located over similarly contaminated land.

³ Soil Sampling Investigation at 17 Hickory Place, Islington, Christchurch, dated 10 May 2022.

The approximate volume of soils requiring offsite disposal to an approved facility are:

- ✧ **Block 1** (approx. 3,850 m²) – 962 m³, based on an average excavation depth of 0.25 m
- ✧ **Block 2** (approx. 2,900 m²) – 725 m³, based on an average excavation depth of 0.25 m

Furthermore, any remaining non-complying soil asbestos areas will be identified during the required validation soil sampling programme and remediated accordingly (refer to Section 7.0).

The bulk remedial earthworks will be undertaken in accordance with a Remedial Action Plan.

6.2 Offsite Soil Disposal Options

Accounting for the slight exceedance of heavy metals within the tested soils compared with the Regional Recent soil type, the asbestos containing soils would not be deemed acceptable for disposal at the Protranz Leggett Road facility, which is able to accept asbestos containing soils. However, these soils would be deemed acceptable for disposal at the Frews Hororata managed fill facility, subject to their approval.

In addition, based on the soil sampling results the asbestos containing soils would also be deemed acceptable for disposal at the Taiko Road, managed landfill, Cave, South Canterbury, subject to their approval. It is noted that ECan consent CRC224661 authorises the deposition of hazardous waste to land at the Taiko landfill facility. Table 1 of the consent's Waste Acceptance Criteria notes that if soil asbestos concentrations exceed all land uses (i.e. 0.05 % w/w bonded and 0.001 % w/w asbestos fines/fibrous asbestos) then additional controls will be required at the landfill during disposal including ensuring asbestos air monitoring results do not exceed 0.1 f/mL.

6.3 Encapsulated Bund and Buried Material

As noted in Section 2.0, the contaminated soils located in the current engineered bund along the site's northern boundary and beneath the bund have come from two Foodstuffs development sites (Pak'nSave Papanui and Durham St New World). These soils invariably contain asbestos and other contaminants, including heavy metals, petroleum hydrocarbon-based compounds and a range of volatile and semi-volatile compounds. It is possible that through the handling processes between the source site and final encapsulation the contaminants have been well mixed, therefore providing a degree of uniformity.

It is proposed for the engineered bund and associated buried soils to be contained within proposed Lot 1, to be retained under the ownership of Foodstuffs, as per the attached plan provided by Eliot Sinclair Limited. It is understood that there will be a minimum 3 m wide level strip of land to the immediate south of the bund extent to permit access for tractors and similar to maintain the current grassed surface capping of the bund. Access to the bund will be via a right of way extending around the western and northern perimeter of Lot 2 from Aruhe Road to the immediate west.

6.4 Non-Complying Asbestos Soil Containing Areas

Outside of the non-complying asbestos containing areas, the remaining soils do not need to be removed offsite from a human health protection perspective.

However, as part of any future commercial/industrial development, it is most likely that the topsoil/organic soils will need to be removed and disposed of at an approved facility. Due to several exceedances of the Regional Recent soil type background concentrations, which are the typical adopted cleanfill criteria within the greater Christchurch area, the soils would on the whole not be acceptable for general cleanfill disposal.

There are some areas over both Blocks that do contain heavy metals below the Regional Recent cleanfill acceptance criteria and further soil sampling could be undertaken to better define these extents to permit soils to be disposed of as cleanfill.

However, the option for disposal at the Fulton Hogan Roberts Road cleanfill⁴ could be considered, although it is noted that based on the sampling to date two soil samples collected from the wider area outside of the asbestos containing areas contain cadmium marginally above their disposal acceptance criteria. Whilst noting this, taking into consideration the mixing processes that would occur in bulk site excavation, placement onto trucks and final placement within the cleanfill then suitable dilution and mixing would occur to meet the cleanfill disposal acceptance criteria. Acceptance of non-asbestos containing soils at the Roberts Road cleanfill would need to be discussed with Fulton Hogan in the first instance.

Furthermore, it would be considered prudent to carry out confirmatory asbestos soil testing outside of the proposed remediated areas to ensure the absence of acceptably low asbestos soil concentrations prior to offsite disposal of surplus soils.

6.5 Offsite Disposal of Other Materials – North-East Part of Block 1

It is noted that a stockpile of soils, concrete blocks and a small volume of waste materials including plastic sheeting is located in the north-eastern corner of the site (refer to red box on Figure 1) and are surplus contaminated soils that were unable to be accommodated into the encapsulated bund. Information provided by Protranz has estimated the combined tonnage of this stockpile, accounting for the different materials, to be approximately 580 tonnes.

Laboratory testing of this material by PDP in July 2024 recorded a low-level detect of asbestos (one sample). In addition, low-level heavy metals and/or poly-cyclic aromatic hydrocarbon (PAH) concentrations were recorded in some samples above the ECan (2007) background concentrations for the local soil type (Regional – Recent) for cleanfill disposal.

We understand that Foodstuffs has received a separate costing from Protranz (email dated 6 September 2024) to remove this material from the site to approved disposal facilities.

An additional smaller stockpile of waste material is located in the central part of Block 1, including an empty 210 L drum, fencing wire, timber posts, etc. Noting the contents of this material it will need to be disposed of at the regional Kate Valley Landfill.

7.0 Validation Soil Sampling

Following the completion of the remedial earthworks, a validation soil sampling programme will be undertaken over the remaining exposed soils. Validation samples will be collected in a similar manner to the current investigation works and analysed for asbestos only, being the identified contaminant of concern.

As noted in Section 6.1, based on the soil sampling undertaken to date, there may be isolated areas in proximity to the headstocks that are not fully remediated, based on the current remedial works plan shown on Figure 1. However, it is anticipated that this will be captured through the validation process and non-complying soils remediated accordingly in order to meet commercial/industrial lands use.

⁴ Roberts Road cleanfill is able to accept slightly higher heavy metal concentrations compared with other traditional cleanfills located in the wider area, typically west of Christchurch Airport.

8.0 Other Considerations

We note that resource consent is currently being applied for from CCC in accordance with the *Resource Management (National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011* for the disturbance of soil as part of the remedial earthworks.

For those areas of the site that contain asbestos, and in particular above the guideline acceptance criteria in the context of commercial/industrial land use, the BRANZ (2024) and Health and Safety at Work (Asbestos) Regulations 2016 will need to be adhered to with regards to the bulk remedial earthworks.

9.0 Summary

Two soil sampling investigations have been conducted over an approximate 9.4 ha area of the Foodstuffs Distribution Centre paddock areas, 17 Hickory Place, Islington, Christchurch to characterise the soil contamination status prior to potential subdivision and divestment for commercial/industrial development.

The site history information has identified asbestos fines present in surficial site soils resulting from the historical discharge, via border-dyke flood irrigation, from the former neighbouring Heinz-Wattie's production facility. The recent soil sampling investigations aimed to better establish the lateral and vertical extent of asbestos and heavy metals over the site because of this former activity and to remove soils containing asbestos above BRANZ (2024) guidelines for all land uses to an approved waste disposal facility.

Based on the findings of the additional sampling investigations, remedial areas have been defined, as shown on Figure 1, together with landfill disposal options for the non-complying soils. Following the removal of the non-complying asbestos soils, and to ensure that remaining soils comply with BRANZ (2024) guidelines for all land uses, including commercial/industrial, a validation soil sampling programme will be completed. Should the validation sampling record remaining non-complying asbestos soil concentrations, then further remedial earthworks will be completed and the validation sampling programme completed.

In addition to the removal of the asbestos soil impacted areas over the site, there are two separate soil/waste stockpiles located within Block 1, which will also need to be disposed of to approved disposal facilities, as detailed in Section 6.5.

10.0 Limitations

This document has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Foodstuffs South Island Limited and others including Aurecon and Eliot Sinclair. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the document. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This document has been prepared by PDP on the specific instructions of Foodstuffs South Island Limited for the limited purposes described in the document. PDP accepts no liability if the document is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

This document has been prepared based on: a review of site history information, field data gathered by PDP and the results from laboratory analyses of up to 101 soil samples. The site conditions as described in this document have been interpreted from, and are subject to, this information and its limitations and accordingly PDP does not represent that its interpretation accurately represents the full site conditions.

The advice and opinions expressed in this document are based on the observation and sampling of soils at the site. The geological and associated environmental conditions interpolated between the test holes are not guaranteed to be accurate.

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.

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.

If contaminants have been found at the site, it is possible that the contaminants could extend off-site, or that any contaminants existing on neighbouring sites might have contributed to the contamination that exists at the site. The presence or absence of contaminants off-site, and risks associated with any off-site contaminants, are not considered by this document.

The information contained within this document applies to sampling undertaken on the date 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.

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Yours faithfully

PATTLE DELAMORE PARTNERS LIMITED

Prepared by



Finn Seeds

Environmental Scientist

Reviewed and Approved by

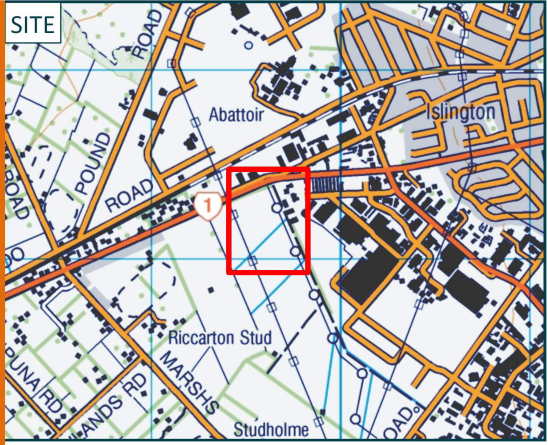


Guy Knoyle

Technical Director - Contaminated Land



Figures



0 20 40
METRES
SCALE : 1:1,500 (A3)

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

SOURCE:
1. AERIAL IMAGERY (FLOWN 2024) SOURCED FROM THE LINZ
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INTERNATIONAL LICENCE.
2. SITE INVESTIGATION LOCATIONS SURVEYED USING TRIMBLE
CATALYST EQUIPMENT
3. SITE MAP LOCATION NZ TOPO 50K DERIVED FROM LINZ DATA
SERVICE

CLIENT



FIGURE

FIGURE 1: SITE PLAN, SOIL SAMPLING LOCATIONS
AND PROPOSED REMEDIAL AREAS

PROJECT

C038120001 - FOODSTUFFS ISLINGTON REMEDIATION



Application for Subdivision Consent

Comprised in Part R.T. 1039965

Total Area : 38.4534ha

ZONE : INDUSTRIAL HEAVY
Christchurch City Plan
(Operative)

NOTE : Areas and dimensions are subject to final survey

THIS PLAN IS PREPARED FOR THE PURPOSE
OF OBTAINING A RESOURCE CONSENT
FROM COUNCIL TO THE DEVELOPMENT
THE INFORMATION CONTAINED HEREON SHOULD
NOT BE USED FOR OTHER PURPOSES

Area Schedule

Lot 1 5358m²
Lot 2 5.0063ha
Lot 3 3.8580ha

Lot 4 &
Lot 2 DP 436436
Lot 3 DP 318553 29.0533ha

Proposed Easements

Nature	Burdened Land	Shown	Benefited Land
Right of Way, Right to Convey Electricity, Water and Telecommunications, Right to drain Sewage	Lot 2	A	Lot 1

Main South Road (SH1) Limited Access Road

Contamination containment cell
Encapsulated bund

1

Net area: 4.924ha
ROW area: 0.082ha
Total area: 5.006ha

2

3

3.858ha

4

10.166ha
To be held with
Lot 2 DP 436436 & Lot 3 DP 318553
in a single record of title

Location Diagram
RT 1039965
17 Hickory Place



DISCLAIMER
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SURVEY INFORMATION

SURVEYED	RWT
SURVEY DATE	12.08.2025
COORD SYSTEM	NZGD2000
CIRCUIT	Mt Pleasant
DATUM	NZVD2016
ORIGIN OF LEVELS	887T 32.816m

NOTES

A	RWT	25.08.2025	First Issue
REV.	DRAWN	DATE	NOTE

CLIENT

**FOODSTUFFS (SOUTH ISLAND)
PROPERTIES LTD.**

DESIGNED	RWT
DRAWN	WJH
REVIEWED	WJH
APPROVED	WJH

STATUS	FOR INFORMATION
SCALE	1:2000 [A3]

**Lot 51 DP 572509
PROPOSED SUBDIVISION**

17 HICKORY PLACE, HORNBY
CHRISTCHURCH

**SUBDIVISION APPLICATION
PART RT 1039965**

PROJECT	SET	SHEET	REV.
600011	V3	V100	A

**eliot
sinclair**



Site Photographs



Photograph 1: View of Block 2 looking north-west (March/April 2025 Investigation).



Photograph 2: The soil profile of BLK2_SS2 consisting of grass underlain by silty topsoil to 0.2 m bgl. (March/April 2025 Investigation).



Photograph 3: View of the northern end of Block 1 looking north-east, showing the remaining headstocks in the western corner and the encapsulated bund centre picture. (March/April 2025 Investigation).



Photograph 4: A remaining headstock in Block 1. (March/April 2025 Investigation).



Photograph 5: Soil profile of BLK1_SS4 (next to encapsulated bund area) consisting of silty soils with sand down to 0.2 m bgl. (March/April 2025 Investigation).



Photograph 6: Two small pieces of glass and one brick fragment were encountered in BLK1_SS8. (March/April 2025 Investigation).



Photograph 7: Soil sample location BLK1_SS8 comprising of silty with sand soil to 0.2 m bgl. A brick fragment was observed at 0.2 m bgl. (March/April 2025 Investigation).



Photograph 8: View of the encapsulated bund looking east. (March/April 2025 Investigation)



Photograph 9: Southern headstocks Block 2 looking west. (August 2025 Investigation).



Photograph 10: Stockpile in north-eastern part of the site (Block 1), viewed looking west. (August 2025 Investigation).



Photograph11: Stockpile in north-eastern part of the site (Block 1), viewed looking south. (August 2025 Investigation).



Photograph 12: Stockpile in north-eastern part of the site (Block 1), viewed looking east. (August 2025 Investigation).



Results Tables

	BU111 001 0 0	BU111 001 0 0	BU111 000 0 0
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Sample Name	BLK2_SS35_0.05		BRANZ Commercial and Industrial ¹	ProtranZ Leg Managed L
Laboratory Reference	3957537.15			
Sample Location	Block 2			
Sample Depth (m bgl)	0.05			
Asbestos in Soil				
Asbestos type	Y - Chrysotile			

Table 2: Soil Analytical Results - Heavy Metals - Foodstuffs DC, 17 Hickory Place, Islington, Christchurch

Sample Name	BLK1_SS1_0.05	BLK1_SS2_0.2	BLK1_SS3_0.05	BLK1_SS4_0.2	BLK1_SS5_0.05	BLK1_SS7_0.05	BLK1_SS7_0.2	BLK1_SS8_0.2	Human Health Contaminant Commercial/Industrial Outdoor Worker
Laboratory Reference	3843459.1	3843459.2	3843459.3	3843459.4	3843459.5	3843459.6	3843459.7	3843459.8	
Sample Location	Block 1								
Sample Depth (m bgl)	0.05	0.2	0.05	0.2	0.05	0.05	0.2	0.2	
Heavy Metals (Total)									
Arsenic	3	3	4	4	3	4	4	4	
Cadmium	0.10	0.21	0.22	0.15	0.22	0.13	0.14	0.15	
Chromium	12	15	15	13	18	15	14	14	
Copper	10	13	11	9	15	12	12	10	>10,000
Lead	11.1	18.3	20	67	23	29	32	37	
Manganese	162	210	240	240	210	260	240	250	40,000
Nickel	8	11	11	10	12	10	11	11	
Zinc	56	95	113	99	100	84	78	98	7,000

Sample Name	BLK1_SS9_0.05	BLK1_SS11_0.05	BLK1_SS13_0.05	BLK1_SS14_0.05					Human Health Contaminant Commercial/Industrial Outdoor Worker
Laboratory Reference	3843459.9	3843459.10	3843459.11	3843459.12					
Sample Location	Block 1								
Sample Depth (m bgl)	0.05	0.05	0.05	0.05					
Heavy Metals (Total)									
Arsenic	3	3	4	4					
Cadmium	0.13	0.19	0.15	0.14					
Chromium	17	15	14	14					
Copper	16	11	9	9					>10,000
Lead	19.2	22	26	19.5					
Manganese	172	230	260	270					40,000
Nickel	11	11	11	11					
Zinc	69	113	104	95					7,000

Sample Name	BLK2_SS1_0.05	BLK2_SS3_0.05	BLK2_SS4_0.05	BLK2_SS5_0.05	BLK2_SS8_0.05	BLK2_SS12_0.05	BLK2_SS12_0.2	BLK2_SS14_0.05	Human Health Contaminant Commercial/Industrial Outdoor Worker
Laboratory Reference	3822455.1	3822455.2	3822455.3	3822455.4	3822455.6	3841985.1	3841985.2	3841985.3	
Sample Location	Block 2								
Sample Depth (m bgl)	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	
Heavy Metals (Total)									
Arsenic	4	3	4	3	3	3	4	4	
Cadmium	0.17	0.15	0.18	0.16	0.14	0.19	0.20	0.19	
Chromium	16	14	15	14	14	18	16	17	
Copper	11	9	12	10	10	14	12	14	>10,000
Lead	27	15.9	37	15.1	15.3	26	30	30	
Manganese	290	210	360	270	230	240	260	280	40,000
Nickel	12	10	13	10	10	12	12	13	
Zinc	113	95	115	95	91	116	112	121	7,000

Sample Name	BLK2_SS16_0.05	BLK2_SS16_0.2	BLK2_SS18_0.05	BLK2_SS18_0.2	BLK2_SS19_0.2	BLK2_SS20_0.05			Human Health Contaminant Commercial/Industrial Outdoor Worker
Laboratory Reference	3841985.4	3841985.5	3841985.60	3841985.7	3841985.8	3841985.9			
Sample Location	Block 2								
Sample Depth (m bgl)	0.05	0.2	0.05	0.2	0.2	0.05			
Heavy Metals (Total)									
Arsenic	3	4	3	4	3	3			
Cadmium	0.21	0.14	0.18	0.19	0.17	0.20			
Chromium	18	15	17	16	16	16			
Copper	13	9	12	11	11	10			>10,000
Lead	18.0	14.7	19.4	26	19.3	17.0			
Manganese	230	240	185	220	210	210			40,000
Nickel	12	11	10	12	11	11			
Zinc	113	81	93	110	108	105			7,000

95

Concentration above Typical Christchurch Cleanfill Acceptance Criteria - i.e. for Protranz Leggett Rd disposal option.

- Notes**
- All results in mg/kg.
- Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health (MfE, 2011) - Commercial/Industrial Outdoor Worker (Unpaved)
 - Guideline on Investigation Levels for Soil and Groundwater (Assessment of Site Contamination Amendment Measure 2013) (NEPC, 2013) - Residential A Land Use.
 - Acceptance Criteria for typical Christchurch Cleanfills (western Christchurch) based on Environment Canterbury Regional Background Concentrations for Regional - Recent soil type. Background concentration value based on recent data.
 - Based on a default pH of 5.
 - Soil contaminant standard for Cr VI used as a conservative approach.



Laboratory Reports

Certificate of Analysis

Page 1 of 3

Client:	Pattle Delamore Partners Limited	Lab No:	3822454	A2Pv1.1
Contact:	Mr G Knoyle	Date Received:	20-Mar-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	22-Aug-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:	C03812100	
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK2_SS1_0.05 20-Mar-2025	BLK2_SS1_0.2 20-Mar-2025	BLK2_SS2_0.05 20-Mar-2025	BLK2_SS2_0.2 20-Mar-2025	BLK2_SS3_0.05 20-Mar-2025
Lab Number:	3822454.1	3822454.2	3822454.3	3822454.4	3822454.5
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
As Received Weight	g 703.9	g 815.9	g 666.7	g 783.0	g 702.7
Dry Weight	g 532.0	g 659.5	g 499.7	g 633.3	g 573.7
Moisture*	% 24	% 19	% 25	% 19	% 18
Sample Fraction >10mm	g dry wt 0.4	g dry wt < 0.1	g dry wt 0.6	g dry wt < 0.1	g dry wt 0.6
Sample Fraction <10mm to >2mm	g dry wt 5.3	g dry wt 8.9	g dry wt 11.1	g dry wt 2.8	g dry wt 12.1
Sample Fraction <2mm	g dry wt 524.9	g dry wt 649.3	g dry wt 486.8	g dry wt 629.5	g dry wt 559.9
<2mm Subsample Weight	g dry wt 50.2	g dry wt 51.0	g dry wt 51.9	g dry wt 51.1	g dry wt 50.2
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001

Sample Name:	BLK2_SS3_0.2 20-Mar-2025	BLK2_SS4_0.05 20-Mar-2025	BLK2_SS5_0.05 20-Mar-2025	BLK2_SS6_0.05 20-Mar-2025	BLK2_SS7_0.05 20-Mar-2025
Lab Number:	3822454.6	3822454.7	3822454.8	3822454.9	3822454.10
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
As Received Weight	g 776.6	g 670.7	g 703.6	g 677.8	g 695.7
Dry Weight	g 646.4	g 500.6	g 484.5	g 522.0	g 515.0
Moisture*	% 17	% 25	% 31	% 23	% 26



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:		BLK2_SS3_0.2 20-Mar-2025	BLK2_SS4_0.05 20-Mar-2025	BLK2_SS5_0.05 20-Mar-2025	BLK2_SS6_0.05 20-Mar-2025	BLK2_SS7_0.05 20-Mar-2025
Lab Number:		3822454.6	3822454.7	3822454.8	3822454.9	3822454.10
Sample Fraction >10mm	g dry wt	0.1	1.6	< 0.1	0.7	1.0
Sample Fraction <10mm to >2mm	g dry wt	0.8	30.0	5.6	8.6	15.3
Sample Fraction <2mm	g dry wt	644.4	467.7	478.1	511.8	497.5
<2mm Subsample Weight	g dry wt	53.0	50.2	50.7	53.4	51.4
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:		BLK2_SS8_0.05 20-Mar-2025				
Lab Number:		3822454.11				
Asbestos Presence / Absence		Asbestos NOT detected.				
Description of Asbestos Form		-				
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001				
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001				
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001				
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001				
As Received Weight	g	635.4				
Dry Weight	g	468.6				
Moisture*	%	26				
Sample Fraction >10mm	g dry wt	0.8				
Sample Fraction <10mm to >2mm	g dry wt	9.7				
Sample Fraction <2mm	g dry wt	457.1				
<2mm Subsample Weight	g dry wt	50.3				
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001				
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001				
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001				

Glossary of Terms

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

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

The following assumptions have been made:

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

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

Analyst's Comments
This certificate of analysis contains information extracted from 3822454-A2Pv1 issued on 25-Mar-2025 at 1:39 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
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-11
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-11
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-11
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-11
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-11
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-11
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-11
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-11
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-11
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-11
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-11
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-11
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-11
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-11
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-11

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

Testing was completed on 25-Mar-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 Paglingayan BAPSc
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 4

Client:	Pattle Delamore Partners Limited	Lab No:	3842103	A2Pv1.1
Contact:	Mr G Knoyle C/- Pattle Delamore Partners Limited PO Box 389 Christchurch 8140	Date Received:	02-Apr-2025	
		Date Reported:	22-Aug-2025	
		Quote No:	81087	
		Order No:		
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK2_SS12_0.05	BLK2_SS12_0.2	BLK2_SS13_0.05	BLK2_SS13_0.2	BLK2_SS14_0.05
	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025
Lab Number:	3842103.1	3842103.2	3842103.3	3842103.4	3842103.5
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	ACM debris and Loose fibres	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w 0.007	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w 0.007	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g 613.6	605.8	501.0	634.9	593.0
Dry Weight	g 518.1	516.0	409.0	532.8	471.6
Moisture*	% 16	15	18	16	20
Sample Fraction >10mm	g dry wt < 0.1	8.5	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt 0.4	2.1	0.4	1.6	0.2
Sample Fraction <2mm	g dry wt 516.4	503.7	407.0	529.5	470.3
<2mm Subsample Weight	g dry wt 51.7	53.5	58.0	55.3	54.1
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt 0.03414	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:	BLK2_SS15_0.05	BLK2_SS15_0.2	BLK2_SS16_0.05	BLK2_SS16_0.2	BLK2_SS17_0.05
	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025
Lab Number:	3842103.6	3842103.7	3842103.8	3842103.9	3842103.10
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	Loose fibres	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g 566.7	641.7	585.3	787.7	460.0
Dry Weight	g 461.7	528.1	473.5	676.4	366.8



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Sample Type: Soil						
Sample Name:		BLK2_SS15_0.05 02-Apr-2025	BLK2_SS15_0.2 02-Apr-2025	BLK2_SS16_0.05 02-Apr-2025	BLK2_SS16_0.2 02-Apr-2025	BLK2_SS17_0.05 02-Apr-2025
Lab Number:		3842103.6	3842103.7	3842103.8	3842103.9	3842103.10
Moisture*	%	19	18	19	14	20
Sample Fraction >10mm	g dry wt	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	0.2	0.1	10.2	< 0.1	0.6
Sample Fraction <2mm	g dry wt	459.7	526.9	461.4	674.9	365.2
<2mm Subsample Weight	g dry wt	54.9	51.4	58.8	57.5	54.5
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.00084	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:		BLK2_SS18_0.05 02-Apr-2025	BLK2_SS18_0.2 02-Apr-2025	BLK2_SS19_0.05 02-Apr-2025	BLK2_SS19_0.2 02-Apr-2025	BLK2_SS20_0.05 02-Apr-2025
Lab Number:		3842103.11	3842103.12	3842103.13	3842103.14	3842103.15
Asbestos Presence / Absence		Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		ACM debris and Loose fibres	Loose fibres	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	666.3	700.0	559.5	627.1	631.6
Dry Weight	g	551.3	597.6	446.7	520.0	534.8
Moisture*	%	17	15	20	17	15
Sample Fraction >10mm	g dry wt	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	0.3	8.1	< 0.1	0.2	0.6
Sample Fraction <2mm	g dry wt	549.4	587.6	445.4	518.5	533.1
<2mm Subsample Weight	g dry wt	58.6	53.7	51.1	58.4	59.8
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.00418	0.00055	< 0.00001	< 0.00001	< 0.00001

Glossary of Terms

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

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

The following assumptions have been made:

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

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

Analyst's Comments

This certificate of analysis contains information extracted from 3842103-A2Pv1 issued on 07-Apr-2025 at 3:13 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
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-15
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-15
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-15
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-15
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-15
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-15
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-15
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-15
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-15
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-15
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-15
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-15
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-15
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-15
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-15

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

Testing was completed between 04-Apr-2025 and 07-Apr-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.

A handwritten signature in blue ink, appearing to read 'John Keneth Paglingayen', with a stylized flourish at the end.

John Keneth Paglingayen BApSc
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 4

Client:	Pattle Delamore Partners Limited	Lab No:	3843460	A2Pv1
Contact:	Mr G Knoyle	Date Received:	03-Apr-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	08-Apr-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:		
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK1_SS1_0.05 03-Apr-2025	BLK1_SS1_0.2 03-Apr-2025	BLK1_SS2_0.05 03-Apr-2025	BLK1_SS2_0.2 03-Apr-2025	BLK1_SS3_0.05 03-Apr-2025
Lab Number:	3843460.1	3843460.3	3843460.4	3843460.5	3843460.6
Asbestos Presence / Absence	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Asbestos NOT detected.
Description of Asbestos Form	ACM debris and Loose fibres	ACM debris and Loose fibres	Loose fibres	Loose fibres	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	0.013	0.006	0.004	0.002
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	0.013	0.006	0.004	0.002
As Received Weight	g	651.2	752.3	604.0	643.3
Dry Weight	g	485.1	605.5	534.5	547.6
Moisture*	%	26	20	12	15
Sample Fraction >10mm	g dry wt	10.2	42.7	4.4	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	37.7	87.0	64.3	55.4
Sample Fraction <2mm	g dry wt	435.0	473.1	463.2	489.2
<2mm Subsample Weight	g dry wt	56.0	51.7	52.4	56.9
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.06231	0.03730	0.02312	0.01206

Sample Name:	BLK1_SS4_0.05 03-Apr-2025	BLK1_SS4_0.2 03-Apr-2025	BLK1_SS5_0.05 03-Apr-2025	BLK1_SS5_0.2 03-Apr-2025	BLK1_SS6_0.05 03-Apr-2025
Lab Number:	3843460.7	3843460.8	3843460.9	3843460.10	3843460.11
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	Loose fibres	Loose fibres	Loose fibres	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001



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:		BLK1_SS4_0.05 03-Apr-2025	BLK1_SS4_0.2 03-Apr-2025	BLK1_SS5_0.05 03-Apr-2025	BLK1_SS5_0.2 03-Apr-2025	BLK1_SS6_0.05 03-Apr-2025
Lab Number:		3843460.7	3843460.8	3843460.9	3843460.10	3843460.11
As Received Weight	g	838.4	751.9	643.5	710.7	557.6
Dry Weight	g	664.3	643.7	516.4	593.3	453.2
Moisture*	%	21	14	20	17	19
Sample Fraction >10mm	g dry wt	7.4	4.1	5.5	5.4	21.3
Sample Fraction <10mm to >2mm	g dry wt	122.3	18.4	135.2	122.8	82.3
Sample Fraction <2mm	g dry wt	532.5	619.9	372.4	463.1	348.7
<2mm Subsample Weight	g dry wt	57.1	52.6	58.9	52.3	57.5
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.00563	0.00020	0.00020	< 0.00001	< 0.00001
Sample Name:		BLK1_SS7_0.05 03-Apr-2025	BLK1_SS7_0.2 03-Apr-2025	BLK1_SS8_0.05 03-Apr-2025	BLK1_SS8_0.2 03-Apr-2025	BLK1_SS9_0.05 03-Apr-2025
Lab Number:		3843460.12	3843460.13	3843460.14	3843460.15	3843460.16
Asbestos Presence / Absence		Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.
Description of Asbestos Form		Loose fibres	Loose fibres	ACM debris and Loose fibres	-	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	0.010
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	0.010
As Received Weight	g	644.0	745.2	782.9	836.6	590.8
Dry Weight	g	535.5	658.0	643.6	746.0	449.0
Moisture*	%	17	12	18	11	24
Sample Fraction >10mm	g dry wt	120.4	88.0	42.4	< 0.1	2.6
Sample Fraction <10mm to >2mm	g dry wt	178.0	108.7	178.8	77.4	86.2
Sample Fraction <2mm	g dry wt	236.3	459.8	421.2	667.1	359.0
<2mm Subsample Weight	g dry wt	52.3	54.7	51.1	51.8	53.3
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.00404	0.00010	0.00252	< 0.00001	0.04584
Sample Name:		BLK1_SS10_0.05 03-Apr-2025	BLK1_SS11_0.05 03-Apr-2025	BLK1_SS12_0.05 03-Apr-2025	BLK1_SS13_0.05 03-Apr-2025	BLK1_SS14_0.05 03-Apr-2025
Lab Number:		3843460.17	3843460.18	3843460.19	3843460.20	3843460.21
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	512.3	666.9	515.7	655.2	663.0
Dry Weight	g	417.3	517.3	390.3	502.2	511.3

Sample Type: Soil					
Sample Name:		BLK1_SS10_0.05	BLK1_SS11_0.05	BLK1_SS12_0.05	BLK1_SS13_0.05
Lab Number:		03-Apr-2025	03-Apr-2025	03-Apr-2025	03-Apr-2025
Lab Number:		3843460.17	3843460.18	3843460.19	3843460.20
Lab Number:		3843460.21			
Moisture*	%	19	22	24	23
Sample Fraction >10mm	g dry wt	3.3	< 0.1	0.2	2.7
Sample Fraction <10mm to >2mm	g dry wt	35.9	19.0	12.5	79.9
Sample Fraction <2mm	g dry wt	376.7	496.9	376.8	418.4
<2mm Subsample Weight	g dry wt	58.9	51.2	52.0	55.6
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:		BLK1_SS15_0.05 03-Apr-2025			
Lab Number:		3843460.22			
Asbestos Presence / Absence		Asbestos NOT detected.			
Description of Asbestos Form		-			
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001			
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001			
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001			
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001			
As Received Weight	g	580.2			
Dry Weight	g	455.8			
Moisture*	%	21			
Sample Fraction >10mm	g dry wt	0.5			
Sample Fraction <10mm to >2mm	g dry wt	66.7			
Sample Fraction <2mm	g dry wt	387.4			
<2mm Subsample Weight	g dry wt	52.6			
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001			
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001			
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001			

Glossary of Terms

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

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

The following assumptions have been made:

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

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

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1, 3-22
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1, 3-22
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1, 3-22
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1, 3-22
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1, 3-22
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22

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

Testing was completed between 07-Apr-2025 and 08-Apr-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.



Dexter Paguirigan Dip Chem Engineering Tech
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 5

Client:	Pattle Delamore Partners Limited	Lab No:	3956642	A2Pv1
Contact:	Mr G Knoyle	Date Received:	07-Aug-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	12-Aug-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:		
		Client Reference:	C038120001	
		Submitted By:	Finn Seeds	

Sample Type: Soil

Sample Name:	BLK1_SS40_0.05	BLK1_SS30_0.05	BLK1_SS33_0.05	BLK1_SS39_0.05	BLK1_SS32_0.05
	07-Aug-2025	07-Aug-2025	07-Aug-2025	07-Aug-2025	07-Aug-2025
Lab Number:	3956642.1	3956642.2	3956642.3	3956642.4	3956642.5
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Asbestos NOT detected.
Description of Asbestos Form	Loose fibres	-	-	Loose fibres	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g 718.8	819.2	721.3	755.2	665.0
Dry Weight	g 587.8	693.9	547.3	606.9	543.2
Moisture*	% 18	15	24	20	18
Sample Fraction >10mm	g dry wt 7.5	5.1	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt 9.4	41.0	23.4	5.8	30.4
Sample Fraction <2mm	g dry wt 568.4	645.6	521.3	598.7	510.8
<2mm Subsample Weight	g dry wt 55.5	53.6	54.0	57.8	56.7
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt 0.00007	< 0.00001	< 0.00001	0.00346	< 0.00001

Sample Name:	BLK1_SS34_0.05	BLK1_SS34_0.2	BLK1_SS31_0.05	BLK1_SS35_0.05	BLK1_SS29_0.05
	07-Aug-2025	07-Aug-2025	07-Aug-2025	07-Aug-2025	07-Aug-2025
Lab Number:	3956642.6	3956642.7	3956642.8	3956642.9	3956642.10
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-	Loose fibres	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g 553.2	658.4	800.6	577.3	702.1



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Sample Type: Soil						
Sample Name:		BLK1_SS34_0.05 07-Aug-2025	BLK1_SS34_0.2 07-Aug-2025	BLK1_SS31_0.05 07-Aug-2025	BLK1_SS35_0.05 07-Aug-2025	BLK1_SS29_0.05 07-Aug-2025
Lab Number:		3956642.6	3956642.7	3956642.8	3956642.9	3956642.10
Dry Weight	g	370.1	498.3	686.0	409.3	568.5
Moisture*	%	33	24	14	29	19
Sample Fraction >10mm	g dry wt	< 0.1	< 0.1	20.8	< 0.1	15.6
Sample Fraction <10mm to >2mm	g dry wt	5.0	2.2	89.4	15.5	62.7
Sample Fraction <2mm	g dry wt	363.3	494.4	573.0	391.6	487.6
<2mm Subsample Weight	g dry wt	52.0	57.9	56.6	50.8	52.0
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	0.00031	< 0.00001
Sample Name:		BLK1_SS26_0.05 07-Aug-2025	BLK1_SS29_0.2 07-Aug-2025	BLK1_SS1_0.2 07-Aug-2025	BLK1_SS27_0.05 07-Aug-2025	BLK1_SS27_0.2 07-Aug-2025
Lab Number:		3956642.11	3956642.12	3956642.13	3956642.14	3956642.15
Asbestos Presence / Absence		Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.
Description of Asbestos Form		-	Loose fibres	Loose fibres	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	0.002
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	0.002
As Received Weight	g	591.6	649.1	679.2	753.3	698.6
Dry Weight	g	433.7	525.8	504.8	585.3	548.6
Moisture*	%	27	19	26	22	21
Sample Fraction >10mm	g dry wt	< 0.1	8.4	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	0.3	56.3	6.6	1.8	12.8
Sample Fraction <2mm	g dry wt	432.0	458.9	496.2	581.6	533.5
<2mm Subsample Weight	g dry wt	50.1	59.6	56.7	54.1	58.6
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	0.00010	0.00067	0.00257	0.01081
Sample Name:		BLK1_SS28_0.2 07-Aug-2025	BLK1_SS28_0.05 07-Aug-2025	BLK1_SS25_0.05 07-Aug-2025	BLK1_SS22_0.05 07-Aug-2025	BLK1_SS16_0.05 07-Aug-2025
Lab Number:		3956642.16	3956642.17	3956642.18	3956642.19	3956642.20
Asbestos Presence / Absence		Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.
Description of Asbestos Form		Loose fibres	Loose fibres	Loose fibres	Loose fibres	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	0.001	< 0.001	< 0.001
As Received Weight	g	716.6	704.9	602.3	619.5	763.8
Dry Weight	g	587.3	563.0	443.4	454.2	637.5
Moisture*	%	18	20	26	27	17

Sample Type: Soil						
Sample Name:		BLK1_SS28_0.2 07-Aug-2025	BLK1_SS28_0.05 07-Aug-2025	BLK1_SS25_0.05 07-Aug-2025	BLK1_SS22_0.05 07-Aug-2025	BLK1_SS16_0.05 07-Aug-2025
Lab Number:		3956642.16	3956642.17	3956642.18	3956642.19	3956642.20
Sample Fraction >10mm	g dry wt	10.1	15.6	< 0.1	< 0.1	7.2
Sample Fraction <10mm to >2mm	g dry wt	114.1	27.0	0.6	4.6	67.0
Sample Fraction <2mm	g dry wt	460.9	518.0	441.0	448.5	560.4
<2mm Subsample Weight	g dry wt	56.1	58.2	51.3	54.6	58.4
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.00026	0.00089	0.00510	0.00009	< 0.00001

Sample Name:		BLK1_SS18_0.05 07-Aug-2025	BLK1_SS21_0.05 07-Aug-2025	BLK1_SS19_0.05 07-Aug-2025	BLK1_SS23_0.05 07-Aug-2025	BLK1_SS24_0.05 07-Aug-2025
Lab Number:		3956642.21	3956642.22	3956642.23	3956642.24	3956642.25
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	783.7	556.3	749.1	596.5	588.2
Dry Weight	g	644.7	410.3	620.0	475.8	447.3
Moisture*	%	18	26	17	20	24
Sample Fraction >10mm	g dry wt	115.1	28.8	96.6	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	183.0	67.1	175.4	25.0	48.4
Sample Fraction <2mm	g dry wt	345.6	313.6	346.9	450.1	397.8
<2mm Subsample Weight	g dry wt	55.1	56.6	54.5	53.4	52.1
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:		BLK1_SS17_0.05 07-Aug-2025		BLK1_SS20_0.05 07-Aug-2025	
Lab Number:		3956642.26		3956642.27	
Asbestos Presence / Absence		Asbestos NOT detected.		Asbestos NOT detected.	
Description of Asbestos Form		-		-	
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001		< 0.001	
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001		< 0.001	
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001		< 0.001	
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001		< 0.001	
As Received Weight	g	783.0		767.2	
Dry Weight	g	673.5		660.7	
Moisture*	%	14		14	
Sample Fraction >10mm	g dry wt	92.4		60.3	
Sample Fraction <10mm to >2mm	g dry wt	182.5		67.4	
Sample Fraction <2mm	g dry wt	396.6		531.5	
<2mm Subsample Weight	g dry wt	51.0		51.2	
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001		< 0.00001	

Sample Type: Soil			
Sample Name:		BLK1_SS17_0.05 07-Aug-2025	BLK1_SS20_0.05 07-Aug-2025
Lab Number:		3956642.26	3956642.27
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001

Glossary of Terms

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

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil**.

<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

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

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

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-27
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-27
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-27
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

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

Testing was completed between 11-Aug-2025 and 12-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.



Dexter Paguirigan Dip Chem Engineering Tech
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 5

Client:	Pattle Delamore Partners Limited	Lab No:	3957537	A2Pv1
Contact:	Mr G Knoyle	Date Received:	08-Aug-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	13-Aug-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:		
		Client Reference:	C038120001	
		Submitted By:	Finn Seeds	

Sample Type: Soil

Sample Name:	BLK2_SS21_0.05	BLK2_SS22_0.05	BLK2_SS23_0.05	BLK2_SS24_0.05	BLK2_SS25_0.05
	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:	3957537.1	3957537.2	3957537.3	3957537.4	3957537.5
Asbestos Presence / Absence	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.
Description of Asbestos Form	Loose fibres	Loose fibres	Loose fibres	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w 0.004	% w/w 0.009	% w/w < 0.001	% w/w < 0.001	% w/w 0.004
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w 0.004	% w/w 0.009	% w/w < 0.001	% w/w < 0.001	% w/w 0.004
As Received Weight	g 635.3	g 625.8	g 695.8	g 654.7	g 674.0
Dry Weight	g 470.5	g 466.3	g 527.0	g 498.3	g 492.6
Moisture*	% 26	% 25	% 24	% 24	% 27
Sample Fraction >10mm	g dry wt < 0.1	g dry wt < 0.1	g dry wt < 0.1	g dry wt 2.3	g dry wt < 0.1
Sample Fraction <10mm to >2mm	g dry wt 54.8	g dry wt 95.3	g dry wt 87.3	g dry wt 98.3	g dry wt 109.1
Sample Fraction <2mm	g dry wt 414.5	g dry wt 369.5	g dry wt 438.5	g dry wt 396.9	g dry wt 382.4
<2mm Subsample Weight	g dry wt 53.9	g dry wt 53.5	g dry wt 58.2	g dry wt 55.0	g dry wt 56.9
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt 0.01941	g dry wt 0.04374	g dry wt 0.00401	g dry wt 0.00010	g dry wt 0.01945

Sample Name:	BLK2_SS26_0.05	BLK2_SS27_0.05	BLK2_SS28_0.05	BLK2_SS29_0.05	BLK2_SS30_0.05
	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:	3957537.6	3957537.7	3957537.8	3957537.9	3957537.10
Asbestos Presence / Absence	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.
Description of Asbestos Form	Loose fibres	Loose fibres	ACM debris and Loose fibres	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w 0.018	% w/w 0.056	% w/w 0.042	% w/w < 0.001	% w/w 0.007
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001



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Sample Type: Soil						
Sample Name:		BLK2_SS26_0.05	BLK2_SS27_0.05	BLK2_SS28_0.05	BLK2_SS29_0.05	BLK2_SS30_0.05
		08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:		3957537.6	3957537.7	3957537.8	3957537.9	3957537.10
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	0.018	0.056	0.042	< 0.001	0.007
As Received Weight	g	640.8	625.7	594.0	601.7	650.5
Dry Weight	g	493.8	436.3	435.8	417.2	472.4
Moisture*	%	23	30	27	31	27
Sample Fraction >10mm	g dry wt	4.8	0.6	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	28.6	4.6	6.4	5.2	7.6
Sample Fraction <2mm	g dry wt	459.4	429.6	428.0	410.1	463.2
<2mm Subsample Weight	g dry wt	59.6	59.1	58.0	59.4	57.6
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.08706	0.2464	0.18215	0.00123	0.03435
Sample Name:		BLK2_SS31_0.05	BLK2_SS32_0.05	BLK2_SS33_0.05	BLK2_SS34_0.05	BLK2_SS35_0.05
		08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:		3957537.11	3957537.12	3957537.13	3957537.14	3957537.15
Asbestos Presence / Absence		Asbestos NOT detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.
Description of Asbestos Form		-	ACM debris and Loose fibres	-	ACM debris and Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	0.004	< 0.001	0.005	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	0.004	< 0.001	0.005	< 0.001
As Received Weight	g	600.0	632.6	578.7	621.7	696.6
Dry Weight	g	404.7	461.2	428.0	454.6	489.2
Moisture*	%	33	27	26	27	30
Sample Fraction >10mm	g dry wt	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	0.4	3.4	0.8	3.5	1.9
Sample Fraction <2mm	g dry wt	403.1	456.5	426.0	449.7	485.1
<2mm Subsample Weight	g dry wt	53.9	59.2	53.3	56.8	59.7
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	0.01786	< 0.00001	0.02183	0.00092
Sample Name:		BLK1_SS36_0.05	BLK1_SS37_0.05	BLK1_SS38_0.05	BLK1_SS41_0.05	BLK1_SS42_0.05
		08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:		3957537.16	3957537.17	3957537.18	3957537.19	3957537.20
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.
Description of Asbestos Form		-	-	-	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	0.003	0.010
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Sample Type: Soil						
Sample Name:		BLK1_SS36_0.05	BLK1_SS37_0.05	BLK1_SS38_0.05	BLK1_SS41_0.05	BLK1_SS42_0.05
		08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:		3957537.16	3957537.17	3957537.18	3957537.19	3957537.20
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	0.003	0.010
As Received Weight	g	736.4	692.0	778.4	765.8	723.5
Dry Weight	g	659.3	576.8	676.3	605.1	565.7
Moisture*	%	10	17	13	21	22
Sample Fraction >10mm	g dry wt	29.7	27.1	27.1	8.6	1.9
Sample Fraction <10mm to >2mm	g dry wt	284.2	166.0	64.3	34.4	48.6
Sample Fraction <2mm	g dry wt	342.2	382.5	583.8	559.6	512.6
<2mm Subsample Weight	g dry wt	54.8	56.0	53.3	56.0	56.3
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	0.01552	0.05570

Sample Name:		BLK1_SS43_0.05	BLK1_SS44_0.05	BLK1_SS45_0.05	BLK1_SS46_0.05	BLK1_SS47_0.05
		08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025	08-Aug-2025
Lab Number:		3957537.21	3957537.22	3957537.23	3957537.24	3957537.25
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.
Description of Asbestos Form		-	-	Loose fibres	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	0.003	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	0.003	< 0.001
As Received Weight	g	768.0	745.0	782.4	684.9	682.2
Dry Weight	g	627.3	612.7	660.2	550.0	539.1
Moisture*	%	18	18	16	20	21
Sample Fraction >10mm	g dry wt	3.1	1.6	7.2	3.6	2.0
Sample Fraction <10mm to >2mm	g dry wt	75.6	4.2	46.7	23.9	55.1
Sample Fraction <2mm	g dry wt	546.2	604.1	604.6	520.4	478.6
<2mm Subsample Weight	g dry wt	55.3	53.5	54.6	53.2	55.2
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	0.00049	0.01614	0.00060

Sample Name:		BLK1_SS48_0.05 08-Aug-2025	BLK1_SS49_0.05 08-Aug-2025
Lab Number:		3957537.26	3957537.27
Asbestos Presence / Absence		Chrysotile (White Asbestos) detected.	Asbestos NOT detected.
Description of Asbestos Form		Loose fibres	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001
As Received Weight	g	701.8	804.9
Dry Weight	g	546.1	694.9

Sample Type: Soil			
Sample Name:		BLK1_SS48_0.05 08-Aug-2025	BLK1_SS49_0.05 08-Aug-2025
Lab Number:		3957537.26	3957537.27
Moisture*	%	22	14
Sample Fraction >10mm		20.5	4.0
Sample Fraction <10mm to >2mm		49.0	86.2
Sample Fraction <2mm		473.8	601.8
<2mm Subsample Weight		55.8	54.0
Weight of Asbestos in ACM (Non-Friable)		< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)		< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*		0.00264	< 0.00001

Glossary of Terms

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

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

The following assumptions have been made:

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

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

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-27
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-27
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-27

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

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

Testing was completed between 12-Aug-2025 and 13-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.

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Dexter Paguirigan Dip Chem Engineering Tech
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3822455	SPV2.2
Contact:	Mr G Knoyle	Date Received:	20-Mar-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	26-Aug-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:	C03812100	
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK2_SS1_0.05	BLK2_SS3_0.05	BLK2_SS4_0.05	BLK2_SS5_0.05	BLK2_SS7_0.05
	20-Mar-2025	20-Mar-2025	20-Mar-2025	20-Mar-2025	20-Mar-2025
Lab Number:	3822455.1	3822455.2	3822455.3	3822455.4	3822455.5

Individual Tests

Dry Matter	g/100g as rcvd	-	-	-	-	73
Total Recoverable Manganese	mg/kg dry wt	290	210	360	270	-

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	4	3	4	3	-
Total Recoverable Cadmium	mg/kg dry wt	0.17	0.15	0.18	0.16	-
Total Recoverable Chromium	mg/kg dry wt	16	14	15	14	-
Total Recoverable Copper	mg/kg dry wt	11	9	12	10	-
Total Recoverable Lead	mg/kg dry wt	27	15.9	37	15.1	-
Total Recoverable Nickel	mg/kg dry wt	12	10	13	10	-
Total Recoverable Zinc	mg/kg dry wt	113	95	115	95	-

Organochlorine Pesticides Screening in Soil

Aldrin	mg/kg dry wt	-	-	-	-	< 0.014
alpha-BHC	mg/kg dry wt	-	-	-	-	< 0.014
beta-BHC	mg/kg dry wt	-	-	-	-	< 0.014
delta-BHC	mg/kg dry wt	-	-	-	-	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	-	-	-	-	< 0.014
cis-Chlordane	mg/kg dry wt	-	-	-	-	< 0.014
trans-Chlordane	mg/kg dry wt	-	-	-	-	< 0.014
2,4'-DDD	mg/kg dry wt	-	-	-	-	< 0.014
4,4'-DDD	mg/kg dry wt	-	-	-	-	< 0.014
2,4'-DDE	mg/kg dry wt	-	-	-	-	< 0.014
4,4'-DDE	mg/kg dry wt	-	-	-	-	< 0.014
2,4'-DDT	mg/kg dry wt	-	-	-	-	< 0.014
4,4'-DDT	mg/kg dry wt	-	-	-	-	< 0.014
Total DDT Isomers	mg/kg dry wt	-	-	-	-	< 0.09
Dieldrin	mg/kg dry wt	-	-	-	-	< 0.014
Endosulfan I	mg/kg dry wt	-	-	-	-	< 0.014
Endosulfan II	mg/kg dry wt	-	-	-	-	< 0.014
Endosulfan sulphate	mg/kg dry wt	-	-	-	-	< 0.014
Endrin	mg/kg dry wt	-	-	-	-	< 0.014
Endrin aldehyde	mg/kg dry wt	-	-	-	-	< 0.014
Endrin ketone	mg/kg dry wt	-	-	-	-	< 0.014
Heptachlor	mg/kg dry wt	-	-	-	-	< 0.014
Heptachlor epoxide	mg/kg dry wt	-	-	-	-	< 0.014
Hexachlorobenzene	mg/kg dry wt	-	-	-	-	< 0.014
Methoxychlor	mg/kg dry wt	-	-	-	-	< 0.014



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:		BLK2_SS8_0.05 20-Mar-2025
Lab Number:		3822455.6
Individual Tests		
Total Recoverable Manganese	mg/kg dry wt	230
Heavy Metals, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	3
Total Recoverable Cadmium	mg/kg dry wt	0.14
Total Recoverable Chromium	mg/kg dry wt	14
Total Recoverable Copper	mg/kg dry wt	10
Total Recoverable Lead	mg/kg dry wt	15.3
Total Recoverable Nickel	mg/kg dry wt	10
Total Recoverable Zinc	mg/kg dry wt	91

Analyst's Comments

This certificate of analysis contains information extracted from 3822455-SPv2 issued on 25-Aug-2025 at 4:44 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).	-	1-4, 6
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	1-4, 6
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	5
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	5
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-4, 6

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

Testing was completed between 21-Mar-2025 and 25-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.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3841985	SPV2.3
Contact:	Mr G Knoyle	Date Received:	02-Apr-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	26-Aug-2025	
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:		
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK2_SS12_0.05	BLK2_SS12_0.2	BLK2_SS14_0.05	BLK2_SS16_0.05	BLK2_SS16_0.2
	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025
Lab Number:	3841985.1	3841985.2	3841985.3	3841985.4	3841985.5

Individual Tests

Total Recoverable Manganese	mg/kg dry wt	240	260	280	230	240
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Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	3	4	4	3	4
Total Recoverable Cadmium	mg/kg dry wt	0.19	0.20	0.19	0.21	0.14
Total Recoverable Chromium	mg/kg dry wt	18	16	17	18	15
Total Recoverable Copper	mg/kg dry wt	14	12	14	13	9
Total Recoverable Lead	mg/kg dry wt	26	30	30	18.0	14.7
Total Recoverable Nickel	mg/kg dry wt	12	12	13	12	11
Total Recoverable Zinc	mg/kg dry wt	116	112	121	113	81

Sample Name:	BLK2_SS18_0.05	BLK2_SS18_0.2	BLK2_SS19_0.2	BLK2_SS20_0.05
	02-Apr-2025	02-Apr-2025	02-Apr-2025	02-Apr-2025
Lab Number:	3841985.6	3841985.7	3841985.8	3841985.9

Individual Tests

Total Recoverable Manganese	mg/kg dry wt	185	220	210	210
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Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	3	4	3	3
Total Recoverable Cadmium	mg/kg dry wt	0.18	0.19	0.17	0.20
Total Recoverable Chromium	mg/kg dry wt	17	16	16	16
Total Recoverable Copper	mg/kg dry wt	12	11	11	10
Total Recoverable Lead	mg/kg dry wt	19.4	26	19.3	17.0
Total Recoverable Nickel	mg/kg dry wt	10	12	11	11
Total Recoverable Zinc	mg/kg dry wt	93	110	108	105

Analyst's Comments

This certificate of analysis contains information extracted from 3841985-SPV2 issued on 26-Aug-2025 at 11:39 am.

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).	-	1-9



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			
Test	Method Description	Default Detection Limit	Sample No
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	1-9
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-9

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

Testing was completed between 03-Apr-2025 and 26-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.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3843459	SPV2
Contact:	Mr G Knoyle	Date Received:	03-Apr-2025	
	C/- Pattle Delamore Partners Limited	Date Reported:	25-Aug-2025	(Amended)
	PO Box 389	Quote No:	81087	
	Christchurch 8140	Order No:		
		Client Reference:	C03812100	
		Submitted By:	Miriam Clark	

Sample Type: Soil

Sample Name:	BLK1_SS1_0.05	BLK1_SS2_0.2	BLK1_SS3_0.05	BLK1_SS4_0.2	BLK1_SS5_0.05
	03-Apr-2025	03-Apr-2025	03-Apr-2025	03-Apr-2025	03-Apr-2025
Lab Number:	3843459.1	3843459.2	3843459.3	3843459.4	3843459.5

Individual Tests

Total Recoverable Manganese	mg/kg dry wt	162	210	240	240	210
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Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	3	3	4	4	3
Total Recoverable Cadmium	mg/kg dry wt	0.10	0.21	0.22	0.15	0.22
Total Recoverable Chromium	mg/kg dry wt	12	15	15	13	18
Total Recoverable Copper	mg/kg dry wt	10	13	11	9	15
Total Recoverable Lead	mg/kg dry wt	11.1	18.3	20	67	23
Total Recoverable Nickel	mg/kg dry wt	8	11	11	10	12
Total Recoverable Zinc	mg/kg dry wt	56	95	113	99	100

Sample Name:	BLK1_SS7_0.05	BLK1_SS7_0.2	BLK1_SS8_0.2	BLK1_SS9_0.05	BLK1_SS11_0.05
	03-Apr-2025	03-Apr-2025	03-Apr-2025	03-Apr-2025	03-Apr-2025
Lab Number:	3843459.6	3843459.7	3843459.8	3843459.9	3843459.10

Individual Tests

Total Recoverable Manganese	mg/kg dry wt	260	240	250	172	230
-----------------------------	--------------	-----	-----	-----	-----	-----

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	4	4	4	3	3
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.14	0.15	0.13	0.19
Total Recoverable Chromium	mg/kg dry wt	15	14	14	17	15
Total Recoverable Copper	mg/kg dry wt	12	12	10	16	11
Total Recoverable Lead	mg/kg dry wt	29	32	37	19.2	22
Total Recoverable Nickel	mg/kg dry wt	10	11	11	11	11
Total Recoverable Zinc	mg/kg dry wt	84	78	98	69	113

Sample Name:	BLK1_SS13_0.05 03-Apr-2025	BLK1_SS14_0.05 03-Apr-2025
Lab Number:	3843459.11	3843459.12

Individual Tests

Total Recoverable Manganese	mg/kg dry wt	260	270
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Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	4	4
Total Recoverable Cadmium	mg/kg dry wt	0.15	0.14
Total Recoverable Chromium	mg/kg dry wt	14	14
Total Recoverable Copper	mg/kg dry wt	9	9
Total Recoverable Lead	mg/kg dry wt	26	19.5
Total Recoverable Nickel	mg/kg dry wt	11	11
Total Recoverable Zinc	mg/kg dry wt	104	95



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.

Analyst's Comments

Amended Report: This certificate of analysis replaces report '3843459-SPv1' issued on 08-Apr-2025 at 4:00 pm.
Reason for amendment: Manganese added.

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).	-	1-12
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-12
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-12

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

Testing was completed between 04-Apr-2025 and 25-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.



Martin Cowell - BSc
Client Services Manager - Environmental



Chain of Custody Documentation

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

To: Hill Labs
Quote No.:
PDP Job No.: C03812100

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ Christchurch
Submitted by: Miriam Clark Ph No.: 0224519662

Quote No.: _____
PDP Job No.: C03812100

Additional Information

Sent:

Name: Miriam Clark

Signature: _____

Date and time: 014:30 20/3/25

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

Name: _____

Signature: _____

Date and time: _____

Job No: _____ Date Recv: 20-Mar-25 14:38

382 2454

Received by: Brianna McLachlan



Results to: ☐ lab.samples@pdp.co.nz
☒ Email submitter: miriam.clark @pdp.co.nz
☒ Email other: guy.knoyle @pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to: ☒ PDP ☐ Other:

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

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

PDP Auckland
Tel: +64 9 523 6900

PDP Tauranga
Tel: +64 7 985 6440

PDP Wellington
Tel: +64 4 471 4130

PDP Christchurch
Tel: +64 3 345 7100

Page 1 of 1

Job Information Summary

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3822454
Contact:	Mr G Knoyle	Date Registered:	20-Mar-2025 3:58 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	C03812100
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	24-Mar-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK2_SS1_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
2	BLK2_SS1_0.2 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
3	BLK2_SS2_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
4	BLK2_SS2_0.2 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
5	BLK2_SS3_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
6	BLK2_SS3_0.2 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
7	BLK2_SS4_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
8	BLK2_SS5_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
9	BLK2_SS6_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
10	BLK2_SS7_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
11	BLK2_SS8_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
12	BLK2_SS9_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
13	BLK2_SS10_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
14	BLK2_SS11_0.05 20-Mar-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-14
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-14
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-14

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-14
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-14
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-14
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-14
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-14
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-14
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-14
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-14
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-14
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-14
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-14
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-14



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

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ ChristchurchSubmitted by: Miriam Clark Ph No.: 0224519662To: Hill LabsQuote No.: PDP Job No.: C03812100

Chain of Custody Record

Sent:

Name: Miriam ClarkSignature: [Signature]Date and time: 12/4/25Received: ☐ Room temp. ☐ Chilled Temp.: °C
☐ FrozenName: Signature: Date and time: Addit Job No: Date Recv: 02-Apr-25 16:07**384 2103**Received by: Kate Sullivan

3138421039

Results to:

☐ lab.samples@pdp.co.nz☒ Email submitter: miriam.clark

@pdp.co.nz

☒ Email other: guy-knoyle

@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ UrgentResults required by: / /

Invoice to:

☒ PDP☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
BLK2-SS12-0.05	2/4/25		S	"semi-quant asbestos"	
-0.2					
BLK2-SS13-0.05					
-0.2					
BLK2-SS14-0.05					
BLK2-SS15-0.05					
-0.2					
BLK2-SS16-0.05					
-0.2					
BLK2-SS17-0.05					
BLK2-SS18-0.05					
-0.2					
BLK2-SS19-0.05					
-0.2					
BLK2-SS20-0.05					
BLK2-SS10A-0.05					
-0.2					
BLK2-SS10B-0.05					
BLK2-SS10C-0.05					
-0.2					
BLK2-SS10D-0.05					

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

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 1 of 2PDP Auckland
Tel: +64 9 523 6900PDP Tauranga
Tel: +64 7 985 6440PDP Wellington
Tel: +64 4 471 4130PDP Christchurch
Tel: +64 3 345 7100

Request for Analyses

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

From: Pattle Delamore Partners Ltd

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ Christchurch

Submitted by: Miriam Clark

Ph No.:

To: Bill Lab5

Quote No.:

PDP Job No.: 003812100

Chain of Custody Record

Additional Information

Sent:

Name: Miriam Clark

Signature: [Signature]

Date and time: 12/4/25

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

Name: _____

Signature: _____

Date and time: _____

Results to:

☐ lab.samples@pdp.co.nz

☒ Email submitter: mingim.clark

@pdp.co.nz

☒ Email other: AM. KNOWLE

_pd@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to:☒ PDP☐ Other: _____[illegible]

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

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 2 of 2

PDP Auckland
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PDP Tauranga
Tel: +64 7 985 6440

PDP Wellington
Tel: +64 4 471 4130

PDP Christchurch
Tel: +64 3 345 7100

Job Information Summary

Page 1 of 3

Client:	Pattle Delamore Partners Limited	Lab No:	3842103
Contact:	Mr G Knoyle	Date Registered:	02-Apr-2025 4:27 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	04-Apr-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK2_SS12_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
2	BLK2_SS12_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
3	BLK2_SS13_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
4	BLK2_SS13_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
5	BLK2_SS14_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
6	BLK2_SS15_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
7	BLK2_SS15_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
8	BLK2_SS16_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
9	BLK2_SS16_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
10	BLK2_SS17_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
11	BLK2_SS18_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
12	BLK2_SS18_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
13	BLK2_SS19_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
14	BLK2_SS19_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
15	BLK2_SS20_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
16	BLK2_SS10A_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
17	BLK2_SS10A_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
18	BLK2_SS10B_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
19	BLK2_SS10C_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
20	BLK2_SS10C_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
21	BLK2_SS10D_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
22	BLK2_SS10E_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Samples				
No	Sample Name	Sample Type	Containers	Tests Requested
23	BLK2_SS10E_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
24	BLK2_SS10F_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
25	BLK2_SS10G_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
26	BLK2_SS10G_0.2 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
27	BLK2_SS10H_0.05 02-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
28	BLK2_SS10B_0.2 02-Apr-2025	Soil	PSoil500Asb	Hold Cold
29	BLK2_SS10D_0.2 02-Apr-2025	Soil	PSoil500Asb	Hold Cold
30	BLK2_SS10F_0.2 02-Apr-2025	Soil	PSoil500Asb	Hold Cold
31	BLK2_SS10H_0.2 02-Apr-2025	Soil	PSoil500Asb	Hold Cold

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-27
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-27
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-27
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27



PATTLE DELAMORE PARTNERS LTD

Request for Analyses

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

From: Pattle Delamore Partners Ltd

To: Hill Labs

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ Christchurch

Quote No.:

Submitted by: Miriam Clark Ph No.: 0224519662

PDP Job No.: C03812100

Chain of Custody Record

Additional Job No: Date Recv: 03-Apr-25 14:34

Sent:

Name: Miriam Clark

Signature: [Signature]

Date and time: 3/4/25

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

Name:

Signature:

Date and time:

384 3460

Received by: Findabair Joynes



3138434606

Results to:

☐ lab.samples@pdp.co.nz☒ Email submitter:

miriam.clark

@pdp.co.nz

☒ Email other:

guy.knoyie

@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to:

☒ PDP☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
BLK1-SS1-0.05	3/4/25		S	"semi-quant asbestos"	
-0.1				"hold cold"	
-0.2				"semi-quant asbestos"	
BLK1-SS2-0.05					
-0.2					
BLK1-SS3-0.05					
BLK1-SS4-0.05					
-0.2					
BLK1-SS5-0.05					
-0.2					
BLK1-SS6-0.05					
BLK1-SS7-0.05					
-0.2					
BLK1-SS8-0.05					
-0.2					
BLK1-SS9-0.05					
BLK1-SS10-0.05					
BLK1-SS11-0.05					
BLK1-SS12-0.05					
BLK1-SS13-0.05					
BLK1-SS14-0.05					
BLK1-SS15-0.05					

Sample type:

☒ Soil

GW Groundwater

SAL Saline

FW Freshwater

GEO Geothermal

SW Stormwater

SED Sediment

BIO Biota

WW Wastewater

P Potable

O Other:

Job Information Summary

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3843460
Contact:	Mr G Knoyle	Date Registered:	03-Apr-2025 3:28 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	07-Apr-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK1_SS1_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
2	BLK1_SS1_0.1 03-Apr-2025	Soil	PSoil500Asb	Hold Cold
3	BLK1_SS1_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
4	BLK1_SS2_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
5	BLK1_SS2_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
6	BLK1_SS3_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
7	BLK1_SS4_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
8	BLK1_SS4_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
9	BLK1_SS5_0.05 03-Apr-2025	Soil	cPSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
10	BLK1_SS5_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
11	BLK1_SS6_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
12	BLK1_SS7_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
13	BLK1_SS7_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
14	BLK1_SS8_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
15	BLK1_SS8_0.2 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
16	BLK1_SS9_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
17	BLK1_SS10_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
18	BLK1_SS11_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
19	BLK1_SS12_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
20	BLK1_SS13_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
21	BLK1_SS14_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
22	BLK1_SS15_0.05 03-Apr-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1, 3-22
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1, 3-22
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1, 3-22
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1, 3-22
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1, 3-22
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1, 3-22
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1, 3-22
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1, 3-22



PATTLE DELAMORE PARTNERS LTD

Request for Analyses

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

From: Pattle Delamore Partners Ltd

To: Hill Labs

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

Quote No.:

Submitted by: Finn Seeds

Ph No.: 021 812 962

PDP Job No.: C038120001

Chain of Custody Record

Sent:

Name: Finn Seeds

Signature: F. Seeds

Date and time: 7/8/25

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

Name:

Signature:

Date and time:

Ad Job No:

Date Recv: 07-Aug-25 16:57

395 6642

Received by: Danielle McNeilly



3139566420

16.4

Results to: ☐ lab.samples@pdp.co.nz☒ Email submitter: Finn.Seeds@pdp.co.nz☒ Email other: guy.knoyle@pdp.co.nzPriority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to: ☒ PDP☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
Blk1-SS40-0.05	7/8/25		S	"semi-quant asbestos"	
Blk1-SS30-0.05					
Blk1-SS33-0.05					
Blk1-SS39-0.05					
Blk1-SS32-0.05					
Blk1-SS34-0.05					
-0.2					
Blk1-SS31-0.05					
Blk1-SS35-0.05					
Blk1-SS29-0.05					
Blk1-SS26-0.05					
Blk1-SS29-0.05					
Blk1-SS1-0.2					
Blk1-SS27-0.05					
-0.2					
Blk1-SS28-0.2					
-0.05					
Blk1-SS25-0.05					
Blk1-SS22-0.05					
Blk1-SS16-0.05					
Blk1-SS18-0.05					
Sample type: ☒ S Soil ☐ GW Groundwater ☐ SAL Saline ☐ FW Freshwater ☐ GEO Geothermal ☐ SW Stormwater					
☐ SED Sediment ☐ BIO Biota ☐ WW Wastewater ☐ P Potable ☐ O Other:					

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 1 of 2

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

Request for Analyses

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

From: Pattle Delamore Partners Ltd

To: Hill Labs

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

Quote No.:

Submitted by: Finn Seeds

Ph No.: 021 812 962

PDP Job No.: CC38120001

Chain of Custody Record

Additional Information

Sent:

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

Name: Finn Seeds

Name: _____

Signature: J. [Signature]

Signature: _____

Date and time: 7/8/25

Date and time: _____

Results to: ☐ lab.samples@pdp.co.nz

☒ Email submitter: finn.seeds @pdp.co.nz

☒ Email other: guy.knoyle @pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to: ☒ PDP ☐ Other:

[illegible]

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

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 2 of 2

PDP Auckland
Tel: +64 9 523 6900

PDP Hamilton
Tel: +64 7 949 7880

PDP Tauranga
Tel: +64 7 985 6440

PDP Wellington
Tel: +64 4 471 4130

PDP Christchurch
Tel: +64 3 345 7100

PDP Invercargill
Tel: +64 3 422 1690

Job Information Summary

Page 1 of 3

Client:	Pattle Delamore Partners Limited	Lab No:	3956642
Contact:	Mr G Knoyle	Date Registered:	08-Aug-2025 9:51 am
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C038120001
		Add. Client Ref:	
		Submitted By:	Finn Seeds
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	12-Aug-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK1_SS40_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
2	BLK1_SS30_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
3	BLK1_SS33_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
4	BLK1_SS39_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
5	BLK1_SS32_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
6	BLK1_SS34_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
7	BLK1_SS34_0.2 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
8	BLK1_SS31_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
9	BLK1_SS35_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
10	BLK1_SS29_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
11	BLK1_SS26_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
12	BLK1_SS29_0.2 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
13	BLK1_SS1_0.2 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
14	BLK1_SS27_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
15	BLK1_SS27_0.2 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
16	BLK1_SS28_0.2 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
17	BLK1_SS28_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
18	BLK1_SS25_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
19	BLK1_SS22_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
20	BLK1_SS16_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
21	BLK1_SS18_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
22	BLK1_SS21_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Samples				
No	Sample Name	Sample Type	Containers	Tests Requested
23	BLK1_SS19_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
24	BLK1_SS23_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
25	BLK1_SS24_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
26	BLK1_SS17_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
27	BLK1_SS20_0.05 07-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-27
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-27
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-27
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

Request for Analyses

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

From: Pattle Delamore Partners Ltd

To: Hill Labs

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

Quote No.:

Submitted by: Finn Seeds

Ph No.: 021 812 962

PDP Job No.: C038120001

Chain of Custody Record

Additional Information

Sent:

Name: Finn Seeds

Signature: *[Signature]*

Date and time: 8/8/25 15:15

Received:

☐ Room temp. ☐ Chilled Temp.: ____ °C

☐ Frozen

Name:

Signature:

Date and time:

Please email
cec + summary to
submitter + other.

Results to:

☐ lab.samples@pdp.co.nz

☒ Email submitter: finn.seeds

@pdp.co.nz

☒ Email other: guy.knoyle

@pdp.co.nz

Priority:

☐ Normal

☒ High

☐ Urgent

Results required by: ____ / ____ / ____

Invoice to:

☒ PDP

☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
Blk2-SS21-0.05	8/8/25		S	"Semi-quant asbestos"	
Blk2-SS22-0.05					
Blk2-SS23-0.05					
Blk2-SS24-0.05					
Blk2-SS25-0.05					
Blk2-SS26-0.05					
Blk2-SS27-0.05					
Blk2-SS28-0.05					
Blk2-SS29-0.05					
Blk2-SS30-0.05					
Blk2-SS31-0.05					
Blk2-SS32-0.05					
Blk2-SS33-0.05					
Blk2-SS34-0.05					
Blk2-SS35-0.05					
Blk1-SS36-0.05					
Blk1-SS37-0.05					
Blk1-SS38-0.05					
Blk1-SS41-0.05					
Blk1-SS42-0.05					
Blk1-SS43-0.05					
Job No: 395 7537 Date Recv: 08-Aug-25 15:20 Received by: Ella-Rose Jones 3139575379					
Sample type: S Soil GW Groundwater SAL Saline FW Freshwater GEO Geothermal SW Stormwater SED Sediment BIO Biota WW Wastewater P Potable O Other:					

Job Information Summary

Page 1 of 3

Client:	Pattle Delamore Partners Limited	Lab No:	3957537
Contact:	Mr G Knoyle	Date Registered:	08-Aug-2025 3:45 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C038120001
		Add. Client Ref:	
		Submitted By:	Finn Seeds
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	12-Aug-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK2_SS21_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
2	BLK2_SS22_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
3	BLK2_SS23_0.05 08-Aug-2025	Soil	cPSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
4	BLK2_SS24_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
5	BLK2_SS25_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
6	BLK2_SS26_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
7	BLK2_SS27_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
8	BLK2_SS28_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
9	BLK2_SS29_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
10	BLK2_SS30_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
11	BLK2_SS31_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
12	BLK2_SS32_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
13	BLK2_SS33_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
14	BLK2_SS34_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
15	BLK2_SS35_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
16	BLK1_SS36_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
17	BLK1_SS37_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
18	BLK1_SS38_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
19	BLK1_SS41_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
20	BLK1_SS42_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
21	BLK1_SS43_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
22	BLK1_SS44_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Samples				
No	Sample Name	Sample Type	Containers	Tests Requested
23	BLK1_SS45_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
24	BLK1_SS46_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
25	BLK1_SS47_0.05 08-Aug-2025	Soil	cPSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
26	BLK1_SS48_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil
27	BLK1_SS49_0.05 08-Aug-2025	Soil	PSoil500Asb	New Zealand Guidelines Semi Quantitative Asbestos in Soil

Summary of Methods

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

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-27
Moisture	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-27
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-27
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-27
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-27
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos in ACM as % of Total Sample	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Fibrous Asbestos as % of Total Sample	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27
Weight of Asbestos as Asbestos Fines (Friable)	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-27
Asbestos as Asbestos Fines as % of Total Sample	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-27

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

From: Pattle Delamore Partners Ltd

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ Christchurch

Submitted by: Miriam Clark Ph No.: 0224519662

To: Hill Labs

Quote No.:

PDP Job No.: C03812100

Chain of Custody Record

Sent:

Name: Miriam Clark

Signature: _____

Date and time: 14:30 20/3/25

Received: ☐ Room temp. ☐ Chilled Temp.: 20 °C
☐ Frozen

Name: _____

Signature:

Date and time:

Additional Information

Job No: Date Recv: 20-Mar-25 14:38

382 2455

Received by: **Brianna McLachlan**



3138224551

Results to: ☐ lab.samples@pdp.co.nz

☒ Email submitter: miriam.clark

☒ Email other: guy. knoyle

...@pdp.co.nz

@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: / /

Invoice to: ☒ PDP ☐ Other:

[illegible]

or physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 1 of 1

DP Auckland
☎: +64 9 523 6900

PDP Tauranga
Tel: +64 7 985 6440

PDP Wellington
Tel: +64 4 471 4130

PDP Christchurch
Tel: +64 3 345 7100

Job Information Summary

Page 1 of 1

Client:	Pattle Delamore Partners Limited	Lab No:	3822455
Contact:	Mr G Knoyle	Date Registered:	20-Mar-2025 3:47 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	C03812100
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	25-Aug-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK2_SS1_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
2	BLK2_SS3_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
3	BLK2_SS4_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
4	BLK2_SS5_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
5	BLK2_SS7_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Organochlorine Pesticides Screening in Soil
6	BLK2_SS8_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
7	BLK2_SS10_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
8	BLK2_SS11_0.05 20-Mar-2025	Soil	GSoil300, GSoil300	Organochlorine Pesticides Screening in Soil

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).	-	1-4, 6-7
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	1-4, 6-7
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	5, 8
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	5, 8
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-4, 6-7



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

Office: ☐ Auckland ☐ Tauranga ☐ Wellington ☒ ChristchurchSubmitted by: Miriam Clark Ph No.: 0224519662To: Hill Labs

Quote No.:

PDP Job No.: C03812100

Chain of Custody Record

Sent:

Name: Miriam ClarkSignature: [Signature]Date and time: 12/4/25Received: ☐ Room temp. ☐ Chilled Temp.: ____ °C
☐ Frozen

Name:

Signature:

Date and time:

Additional Information

Job No. Date Recv: 02-Apr-25 15:34

384 1985Received by: Kate Sullivan

3138419858

17.8

Results to:

☐ lab.samples@pdp.co.nz☒ Email submitter: miriam.clark

@pdp.co.nz

☒ Email other: guy.knoyle

@pdp.co.nz

Priority: ☐ Normal ☒ High ☐ Urgent

Results required by: ____ / ____ / ____

Invoice to:

☒ PDP☐ Other:

Sample ID	Date	Time	Sample type	Analyses Requested	Notes
BLK2-SS12-0.05	2/4/25		S	FHM	
-0.2					
BLK2-SS14-0.05					
BLK2-SS16-0.05					
-0.2					
BLK2-SS18-0.05					
-0.2					
BLK2-SS19-0.2					
BLK2-SS20-0.05					
BLK2-SS10A-0.05					
-0.2					
BLK2-SS10C-0.2					
BLK2-SS10D-0.05					
BLK2-SS10E-0.05					
-0.2					
BLK2-SS10G-0.2					
BLK2-SS10H-0.05					

Sample type:

S Soil

GW Groundwater

SAL Saline

FW Freshwater

GEO Geothermal

SW Stormwater

SED Sediment

BIO Biota

WW Wastewater

P Potable

O Other:

For physical address see www.pdp.co.nz

Note: Samples may contain dangerous or hazardous substances

Page 1 of 1

PDP Auckland
Tel: +64 9 523 6900PDP Tauranga
Tel: +64 7 985 6440PDP Wellington
Tel: +64 4 471 4130PDP Christchurch
Tel: +64 3 345 7100

Job Information Summary

Page 1 of 2

Client:	Pattle Delamore Partners Limited	Lab No:	3841985
Contact:	Mr G Knoyle	Date Registered:	02-Apr-2025 4:18 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	25-Aug-2025 4:30 pm

Samples

No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK2_SS12_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
2	BLK2_SS12_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
3	BLK2_SS14_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
4	BLK2_SS16_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
5	BLK2_SS16_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
6	BLK2_SS18_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
7	BLK2_SS18_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
8	BLK2_SS19_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
9	BLK2_SS20_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
10	BLK2_SS10A_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
11	BLK2_SS10A_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
12	BLK2_SS10C_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
13	BLK2_SS10D_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
14	BLK2_SS10E_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
15	BLK2_SS10E_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
16	BLK2_SS10G_0.2 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
17	BLK2_SS10H_0.05 02-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese

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

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).	-	1-17
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	1-17
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-17



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

To: All Labs

Quote No.: _____

PDP Job No.: C03812100

Additional Information

Job No: 001 Date Recv: 03-Apr-25 14:33

Name: _____

Signature: _____

Date and time: _____

Received by: Findabair Joynes



313843459

Priority: ☐ Normal ☒ High

Results required by: / /

Results Required by: _____

☒ PDP ☐ Other:

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

Page 4

PDP Christchurch

Tel: +64 9 345 3100

Job Information Summary

Page 1 of 1

Client:	Pattle Delamore Partners Limited	Lab No:	3843459
Contact:	Mr G Knoyle	Date Registered:	03-Apr-2025 3:06 pm
	C/- Pattle Delamore Partners Limited	Priority:	High
	PO Box 389	Quote No:	81087
	Christchurch 8140	Order No:	
		Client Reference:	C03812100
		Add. Client Ref:	
		Submitted By:	Miriam Clark
		Charge To:	Pattle Delamore Partners Limited
		Target Date:	25-Aug-2025 4:30 pm

Samples

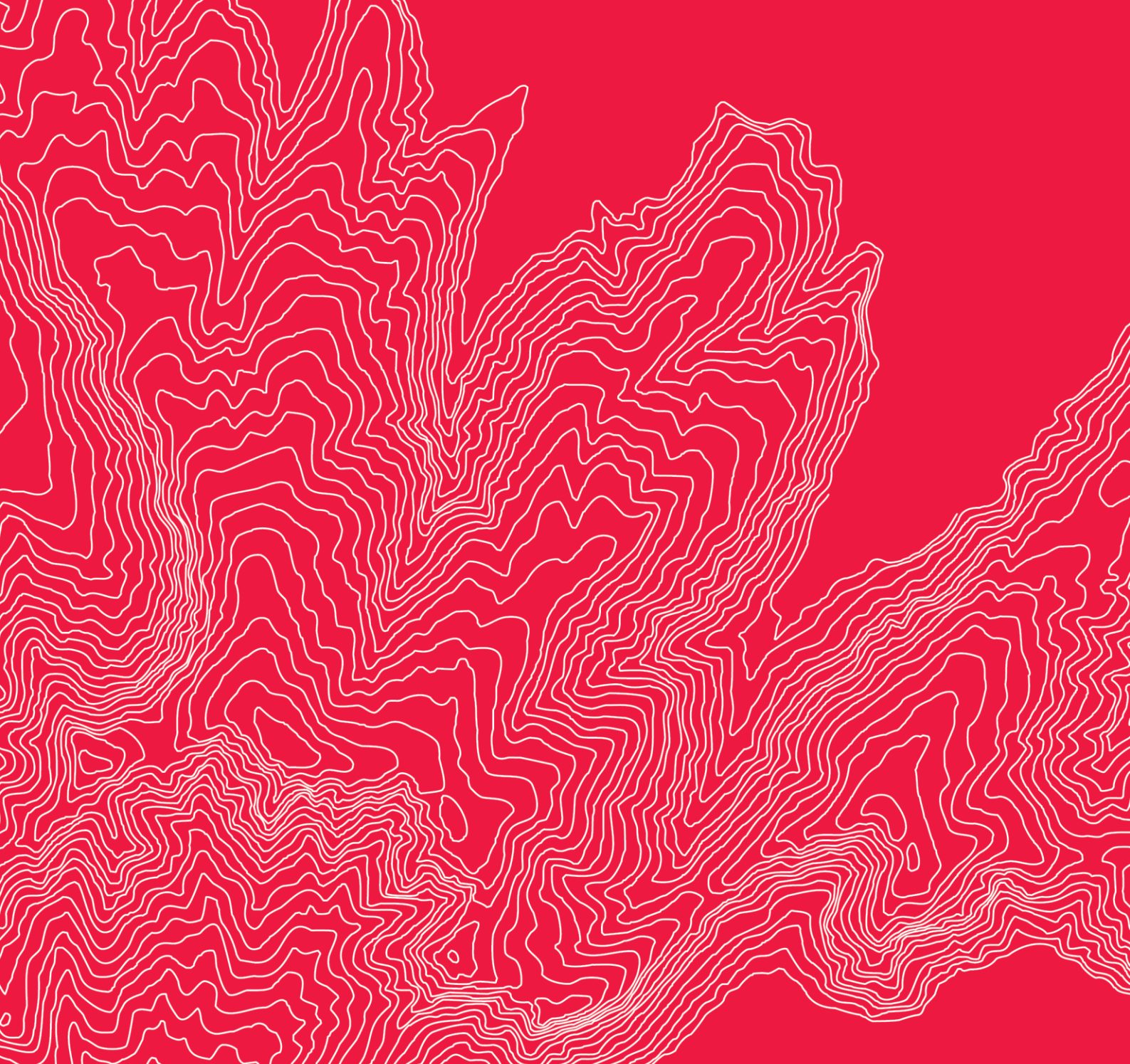
No	Sample Name	Sample Type	Containers	Tests Requested
1	BLK1_SS1_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
2	BLK1_SS2_0.2 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
3	BLK1_SS3_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
4	BLK1_SS4_0.2 03-Apr-2025	Soil	GSoil300, cGSoil	Heavy Metals, Screen Level, Total Recoverable Manganese
5	BLK1_SS5_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
6	BLK1_SS7_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
7	BLK1_SS7_0.2 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
8	BLK1_SS8_0.2 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
9	BLK1_SS9_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
10	BLK1_SS11_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
11	BLK1_SS13_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese
12	BLK1_SS14_0.05 03-Apr-2025	Soil	GSoil300, GSoil300	Heavy Metals, Screen Level, Total Recoverable Manganese

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).	-	1-12
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-12
Total Recoverable Manganese	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	1.0 mg/kg dry wt	1-12

Appendix E. Natural Hazards Risk Assessment (ES)



Natural Hazards Risk Assessment

A

**eliot
sinclair**

17 Hickory Place, Hornby

Prepared for Foodstuffs (South Island) Properties Ltd
600011

Natural Hazards Risk Assessment

17 Hickory Place, Hornby

Prepared for Foodstuffs (South Island) Properties
Ltd

600011

Quality Control Certificate

Eliot Sinclair & Partners Limited

eliotsinclair.co.nz

Action	Name	Signature	Date
Prepared by:	Paul Sykes Geotechnical Engineer BE(Hons) Mining MEngNZ		11 September 2025
Reviewed by:	Andrei Cotiga Geotechnical Engineer BE (Hons) Civil ME CPEng		11 September 2025
Directed and approved for release by:	Andrei Cotiga Geotechnical Engineer BE (Hons) Civil ME CPEng		11 September 2025
Status:	A		
Release date:	11 September 2025		
Distributed to:	Foodstuffs (South Island) Properties Ltd		

Version History

Status	Description	Author	Release Date
A	First issue of document	Paul Sykes	11 September 2025

Contents

1. Introduction	1
2. Reporting Requirements	1
3. Scope of Work	1
4. Subdivision Proposal	2
5. Site Description	3
5.1. General	3
5.2. Topography	4
5.3. Engineering Geology	4
5.4. Land Classification	4
6. Existing Geotechnical Information	5
7. Natural Hazards Risk Assessment	7
7.1. Introduction	7
7.2. Seismic Hazards	7
7.3. Erosion and Sedimentation	8
7.4. Land Slippage	8
7.5. Flooding	8
7.6. Subsidence	8
8. Discussion	8
8.1. Foundations	8
8.2. Retaining Walls	9
8.3. Access	9
8.4. Services	9
8.5. Statement of Professional Opinion	9
9. Recommendations	9
10. Conclusions	10
11. Disclaimer	10

Appendix A. Subdivision Scheme Plan

Appendix B. Existing Soil Test Information

Appendix C. Statement of Professional Opinion

1. Introduction

Eliot Sinclair & Partners Ltd were engaged by Foodstuffs (South Island) Properties Ltd to assess the risk of natural hazards affecting the land at 17 Hickory Place, Hornby ('The Site') and to report on the risk from natural hazards.

This report addresses the risk of natural hazards as they relate to the proposed subdivision in terms of section 106 of the Resource Management Act (RMA), 1991.

The report is intended to be used as technical supporting documentation for an application for subdivision consent.

2. Reporting Requirements

The scope of the report is governed by the need to address the relevant requirements of the following documents:

- Resource Management Act, 1991; Section 106 – Natural Hazards¹
- Ministry of Business, Innovation and Employment (MBIE), 2012: Repairing and Rebuilding Houses Affected by the Canterbury Earthquakes – Part D: Subdivisions²
- EQC / MBIE / Ministry for the Environment (MfE), 2017: Planning and Engineering Guidance for Potentially Liquefaction Prone Land³
- MfE, 2017: New matters to consider for resource consents and designations - Fact Sheet 10 re natural hazards⁴
- Christchurch City Council District Plan – Chapter 5: Natural Hazards⁵

3. Scope of Work

The scope of work for this assessment comprised:

- Review available data from the New Zealand Geotechnical Database⁶ (NZGD), Canterbury Maps⁷ and the Institute of Geological & Nuclear Sciences' (GNS) Active Faults Database⁸,
- Assess the risk of material damage from potential natural hazards.
- Prepare a Natural Hazards Risk Assessment report to comment on the hazards relevant to Section 106 of the Resource Management Act 1991, to summarise the general geotechnical conditions encountered across the site and to provide geotechnical recommendations that should be addressed at time of subdivision consent.

¹ NZ Legislation - <https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM234389.html>

² MBIE - <https://www.building.govt.nz/building-code-compliance/canterbury-rebuild/repairing-and-rebuilding-houses-affected-by-the-canterbury-earthquakes/>

³ EQC / MBIE / MfE - <https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/planning-engineering-liquefaction-land/>

⁴ MfE - <https://www.mfe.govt.nz/publications/rma/resource-legislation-amendments-2017-fact-sheet-series>

⁵ CCC - <https://districtplan.ccc.govt.nz/pages/plan/book.aspx?exhibit=DistrictPlan>

⁶ New Zealand Geotechnical Database (NZGD) - <https://www.nzgd.org.nz/>

⁷ Canterbury Maps - <https://mapviewer.canterburymaps.govt.nz>

⁸ GNS Active Faults Database - <http://maps.gns.cri.nz/website/af/viewer.htm>

4. Subdivision Proposal

It is proposed to subdivide Lots 1-3 from Record of Title 1039965.

The existing title 1039965 (Lot 2, Lot 3 and Lot 51) covers 384,543m² and is shown in Figure 1:

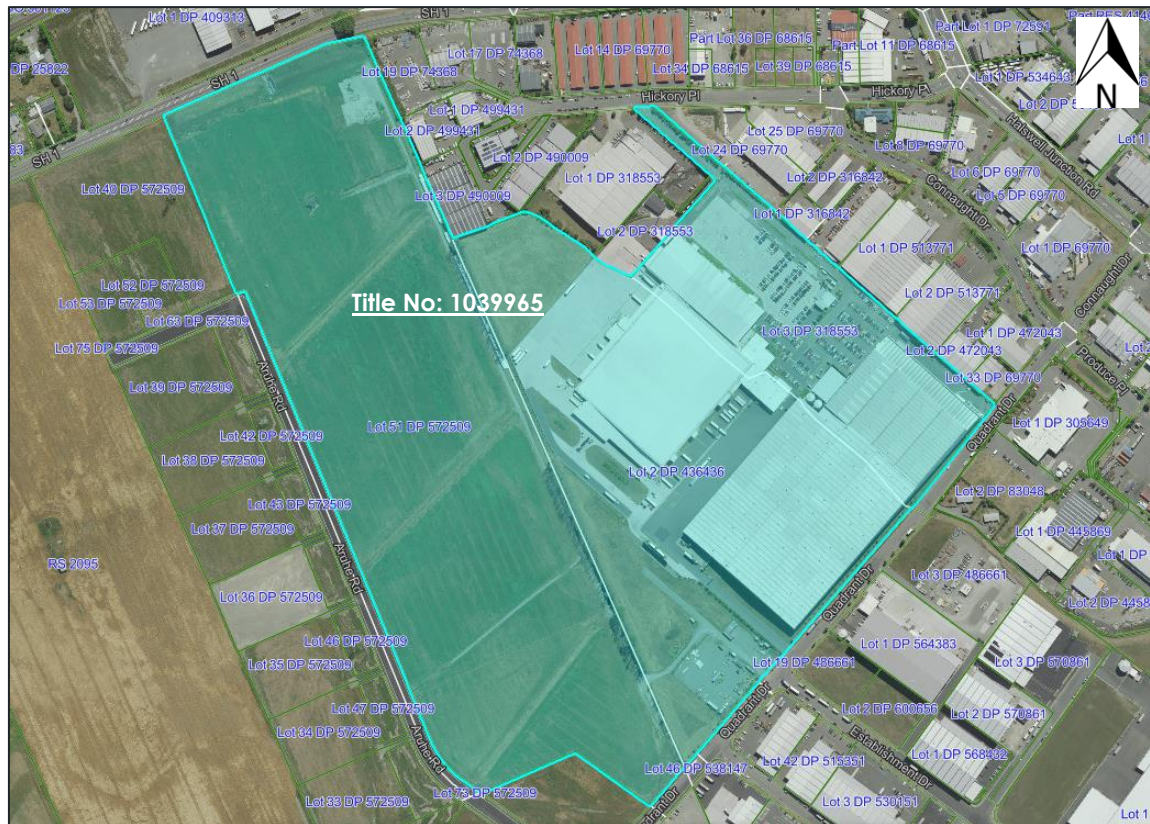
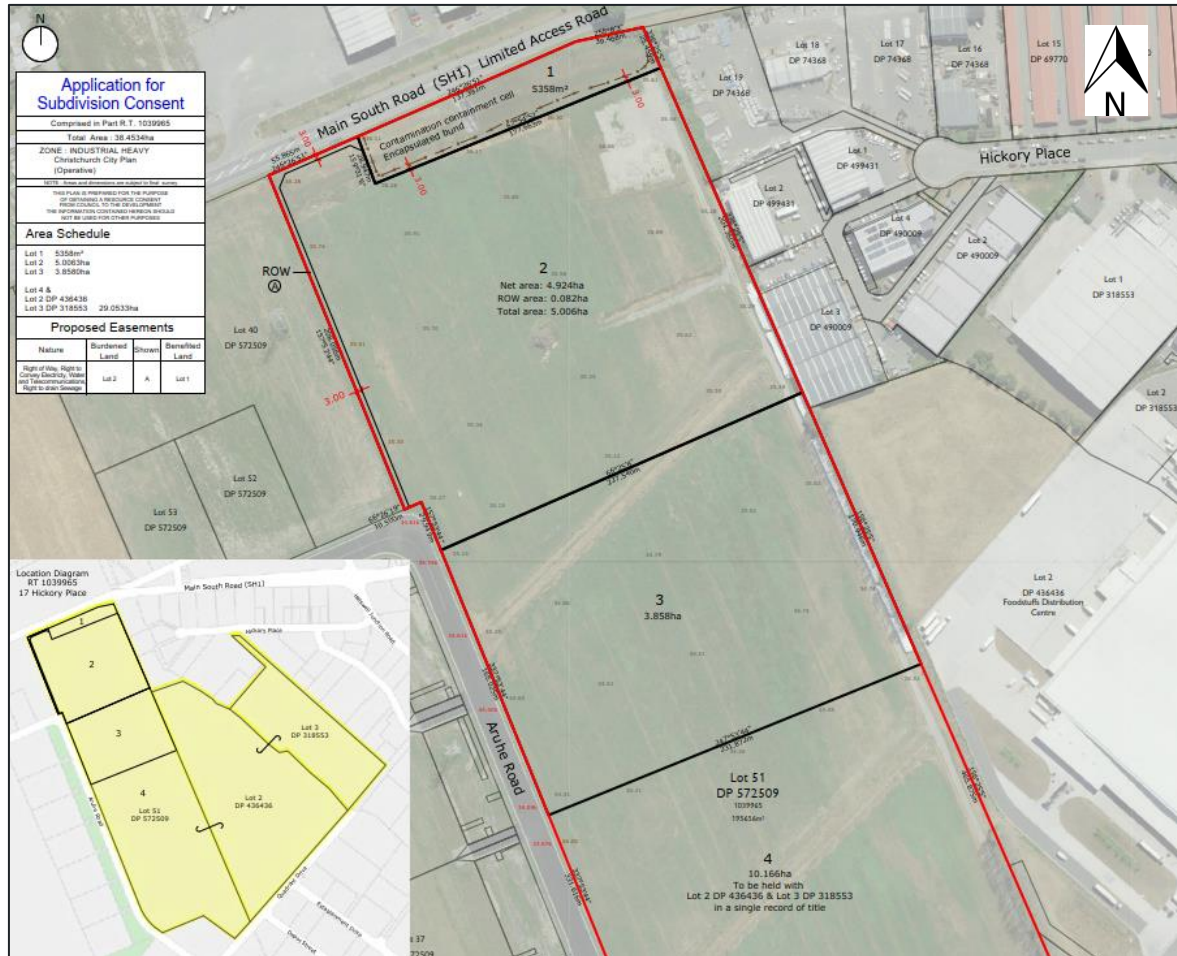


Figure 1. The existing title 1039965 (384,543m²)



Proposed Lot 1 will not be built on and will be retained by Foodstuffs in a separate title.

Proposed Lots 2 & 3 are to be disposed of from the record of title as vacant sections.

Proposed Lot 4 will be amalgamated with the balance of the Foodstuffs Distribution Centre site (existing Lot 2 DP 436436 and Lot 3 DP 318553) together with the balance of Lot 51 DP 572509.

5. Site Description

5.1. General

17 Hickory Place sits in the Islington/Hornby industrial precinct in southwest Christchurch. The site is widely known as part of Foodstuffs South Island's Hornby distribution/cold-chain operations.

Hickory Place is a short cul-de-sac just off Halswell Junction Road, with rapid links to State Highway 1 (Main South Road) and the Christchurch Southern Motorway (SH76) for north-south and port/airport movements.

The lot fronts Hickory Place and is bounded on all sides by comparable industrial titles (warehousing/yard uses) within the same business park. Properties along Hickory Place (nos. 35-55 etc.) are all industrial tenancies or warehouses.

Lot 51 lies on the eastern boundary of the newly developed Mānia commercial subdivision, a project in which Eliot Sinclair was closely involved from start to finish. At present, the lot is fenced off to restrict casual access, as investigations have identified potentially elevated contaminant levels, primarily confined to the surficial topsoil.

5.2. Topography

The site is on the flat Canterbury Plains which is generally level with minimal relief and is typical of the South-West Hornby industrial area.

This area is inland and away from major rivers or streams. There are no large waterways within or adjoining the site. Drainage in this industrial zone is largely via reticulated stormwater infrastructure, not open channels, so there are no natural stream corridors traversing the lot.

The ground surface is essentially level across the entire title. There are no ridgelines, gullies, escarpments, or sudden changes in elevation on or near the site which makes the land particularly suitable for large-format warehousing and distribution.

5.3. Engineering Geology

The published geology for the area⁹ indicates the site is underlain by Holocene river deposits described as '*Modern river floodplain/low-level degradation terrace. Unweathered, variably sorted gravel/sand/silt/clay*'. (Q1).

The GNS Active Fault Database¹⁰ indicates there are no known active faults near the site.

5.4. Land Classification

The Christchurch District Plan planning maps¹¹ indicate the site is in the "Industrial Heavy Zone".

⁹ GNS 250K geological units map New Zealand Geotechnical Database, retrieved August 2025.

¹⁰ GNS Active Faults Database - <http://maps.gns.cri.nz/website/af/viewer.htm>

¹¹ <https://districtplan.ccc.govt.nz/PropertySearch/PropertySearchContainer.html>

6. Existing Geotechnical Information

Due to the restricted access to Lot 51, we have assessed the existing soil test pit logs available on the New Zealand Geotechnical Database (NZGD) and supplemented these with hand auger information from Eliot Sinclair.

Investigation	Year(s)	Location	Topsoil Thickness (mm)	Underlying Soils (depth M bgl)	Gravel Depth & Notes
Aurecon Test Pits	2013	General site	~400	Firm, dry alluvial SILT (1.3–2.5m bgl)	Sandy GRAVEL with cobbles to at least 3.2m bgl; depth to gravel increases northwards
NW Test Pits	2022, 2024	Northwest of site	~100–200	Sandy SILT and silty SAND (1.0–1.6 m bgl)	Sandy GRAVEL with cobbles to at least 3.2 m bgl
Our Hand Augers	2019	General site	~400–600	Sandy SILT and silty SAND (1.2–2.1 m bgl)	Inferred GRAVEL; refusal with hand tools below the SILT

Figure 3 below presents the locations of the soil tests that we have reviewed for the area within the proposed four lots and indicates the depth to GRAVEL at each of the test locations.

Groundwater was not encountered at any of the test locations and is generally below 6m bgl in this part of Canterbury.

Nearby Ecan well bore information indicates the GRAVEL deposits are continuous and extend to depths of at least 23m bgl.

Please refer to the site investigation records in Appendix B.

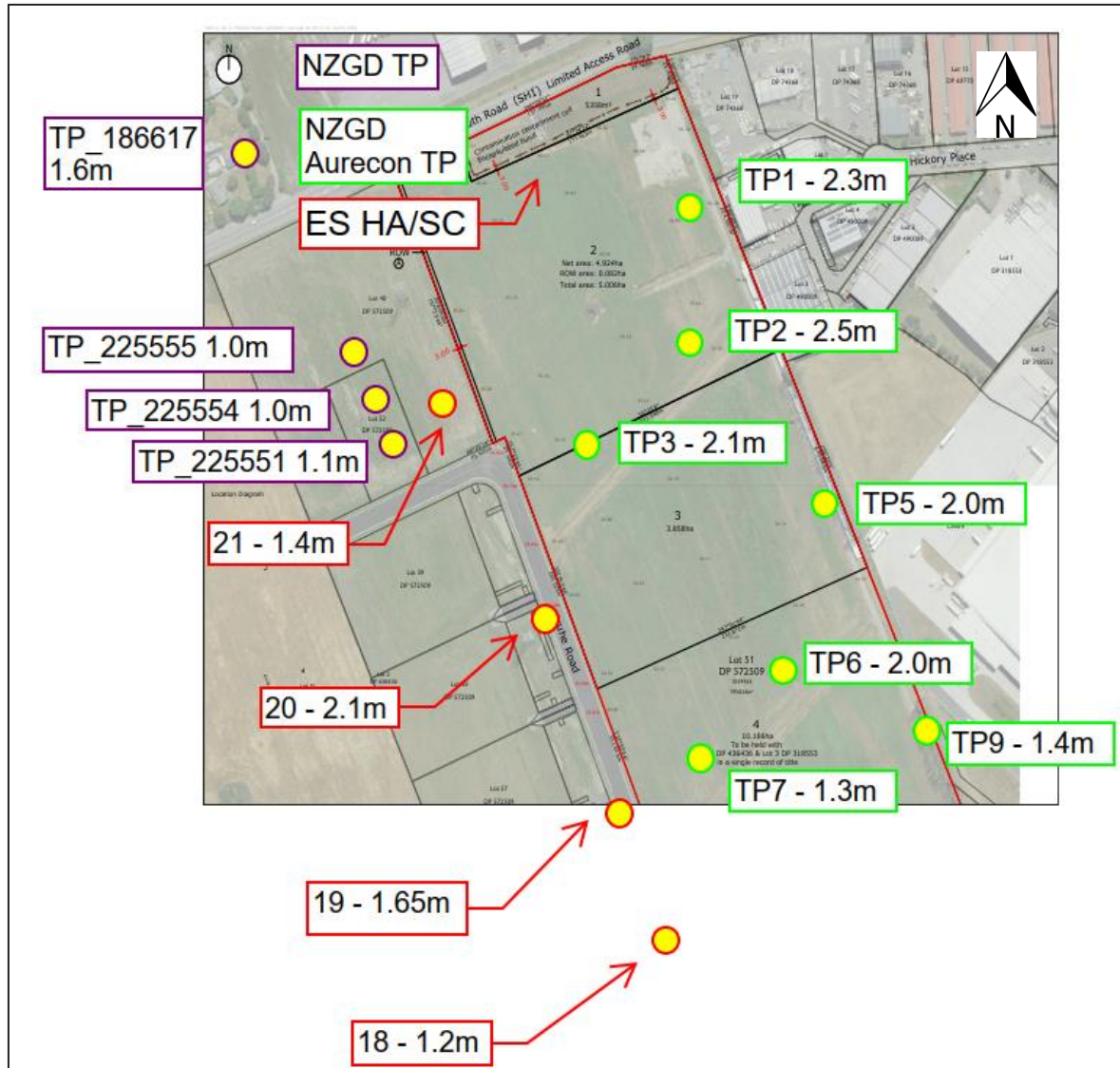


Figure 3. Soil test locations showing the depth to GRAVEL in metres below ground level on and around the proposed lots

7. Natural Hazards Risk Assessment

7.1. Introduction

Council can refuse subdivision consent if there is a significant risk due to natural hazards. To determine whether there is a significant risk due to natural hazards, decision-makers are guided by the matters set out in RMA Section 106(1A). An assessment of the risk from natural hazards requires a combined assessment of:

- The **likelihood** of natural hazards occurring (whether individual or in combination); and
- The **consequences** (material damage) that would result from natural hazards to land where the consent is sought, other land, or structures; and
- Any **likely subsequent use** of the land where the consent is sought that would **accelerate, worsen, or result in material damage**.

Decision-makers are required to consider the magnitude of risk of natural hazards, including natural hazards that have a high impact but low probability of occurrence. This will align assessments with the definition of 'effect' in Section 3 of the RMA.

The RMA defines natural hazards as:

Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment¹².

We have considered the risk of **drought, geothermal activity, falling debris, wind, climate change, sea level rise, Tsunami, and volcanic activity** and conclude these are very unlikely to pose an unacceptable risk to life at this site. In relation to other potential natural hazards, we comment as follows:

7.2. Seismic Hazards

7.2.1. Earthquake Shaking Hazard

New Zealand is a seismically active country. The strength of earthquake shaking is incorporated into industry design guidance such as NZS 1170, NZS 3604 and NZGS/MBIE Module 6. New buildings and infrastructure will be designed, consented, and built to acceptable industry standards and New Zealand Building Code requirements and as such will be designed for any likely shaking as detailed in the current design codes, which will address the risk.

7.2.2. Earthquake Fault Rupture

There are no Active faults mapped on GNS's Active Faults Database near the site. We consider fault rupture to pose an acceptably low risk to the site.

7.2.3. Liquefaction and lateral spreading

The site is classified as N/A Urban and Unmapped by MBIE and TC1 residential properties are located around 900m to the east.

We have reviewed the Mānua subdivision natural hazards assessment report (Ref. 442038). The report finds the site is not located within 'Liquefaction Management Area (LMA).'

¹² <https://www.mfe.govt.nz/publications/rma/resource-legislation-amendments-2017-fact-sheet-series>

Environment Canterbury's (ECan) 2012 liquefaction hazard assessment for eastern Canterbury¹³ indicates the site is within an area where 'damaging liquefaction (is) unlikely'. This means "the geological nature of the ground is such that future design-level earthquakes are unlikely to cause land damage from liquefaction" and "the ground at this area would likely qualify as TC1."

Lateral ground movement as a result of future large earthquakes is not a consideration for the design of structures in this part of Christchurch.

7.3. Erosion and Sedimentation

It is important to ensure that all stormwater run-off from roofs, driveways, paths and landscaping etc. is captured and piped to a stormwater drainage system. Providing this is achieved, we expect this will result in a low risk of erosion and localised soil instability.

Providing normal good practice stormwater management is followed during future site development the risk of erosion and sedimentation is acceptably low.

7.4. Land Slippage

The proposed lots and generally area is near level. Provided stormwater runoff and site development is managed as described in Section 8.4.1, the risk of land slippage will be minimised.

7.5. Flooding

The site is not located in an area of obvious known flood risk. Therefore flooding is not a likely hazard.

7.6. Subsidence

The site is largely underlain by shallow layers of silts and sands that extend to 1.5 to 2.5m bgl beneath. Below this, deep sandy gravels that are continuous for many tens of metres. Groundwater is located deeper than 6m bgl.

8. Discussion

8.1. Foundations

All future foundations and floor slabs will need to be supported by firm, inert ground.

Foundations will need to extend through the topsoil and bear onto the deeper compact silts, sands or gravels. Floor slab and pavement areas will most likely require all topsoil to be stripped, before constructing the slab/pavement.

Lot specific geotechnical investigations will be required to determine bearing capacities, and to inform foundation design at specific building locations at the detailed design stage and to support the development through the Building Consent process.

¹³ Bracklye, H.L. (compiler. 2012. Review of liquefaction hazard information in eastern Canterbury, including Christchurch City and parts of Selwyn, Waimakariri and Hurunui Districts, GNS Science Consultancy Report 2012/218. 99 p. Environment Canterbury report number R12/83.

8.2. Retaining Walls

All vertical cut banks exceeding 0.5m height should be retained to avoid the risk of erosion and slippage. Retaining walls (i.e. loading docks) should be designed in accordance NZGS/MBIE Module 6 'Earthquake resistant retaining wall design'.

8.3. Access

Vehicle access will be via the existing road off Aruhe Road.

8.4. Services

8.4.1. Stormwater

All roof and driveway stormwater for all proposed lots will need to be discharged into the Council's stormwater network. There should be no concentrations of water discharged onto, or into the ground as this could cause erosion, foundation failure or land slippage.

8.4.2. Sewage

All sewage shall be piped to the Council's network.

8.5. Statement of Professional Opinion

In accordance with the Statement of Professional Opinion (refer to Appendix C), we report the following regarding the proposed lots:

1. Existing soil test information is detailed in this risk assessment report.
2. The site is not susceptible liquefaction or lateral spreading as a result of future large earthquakes.
3. The risk associated with land slippage, erosion, flooding and earthquake effects are specifically addressed in this risk assessment.
4. Providing normal good practice design and engineering development controls are implemented we have found no significant risks from natural hazards that would prevent the granting of a subdivision consent.

9. Recommendations

In order to limit the risk associated with natural hazards, we recommend the following be adopted as a condition of subdivision consent;

- Nil

In order to limit the risk associated with natural hazards, we recommend the following be adopted as a Consent Notice on the Record of Titles.

- Nil

We note development of new buildings on the site should be supported by a site-specific geotechnical investigation and report that comments on any specific geotechnical requirements for the proposed foundations, and any requirements for excavation and filling earthworks and retaining walls. This is a normal requirement and therefore does not specifically need to be recorded as a Consent Notice.

10. Conclusions

We have considered the risk associated with natural hazards as required by RMA s106 and conclude that either the risk and consequence of potential natural hazards is either acceptable or tolerable, or providing the recommendations of this report are followed, will be acceptable or tolerable.

Providing normal good practice design and development controls are implemented we have found no significant risks from natural hazards that would prevent the granting of a subdivision consent.

A Statement of Professional Opinion on the suitability of the land subdivision is attached in Appendix C.

11. Disclaimer

This report has been prepared by Eliot Sinclair & Partners Limited ("Eliot Sinclair") only for the intended purpose as a Natural Hazards Risk Assessment. Our analysis is based on our past inspections of the site and geotechnical testing.

The report is based on:

- Information shown on the NZGD, Canterbury Maps and GNS's Active Faults Database.

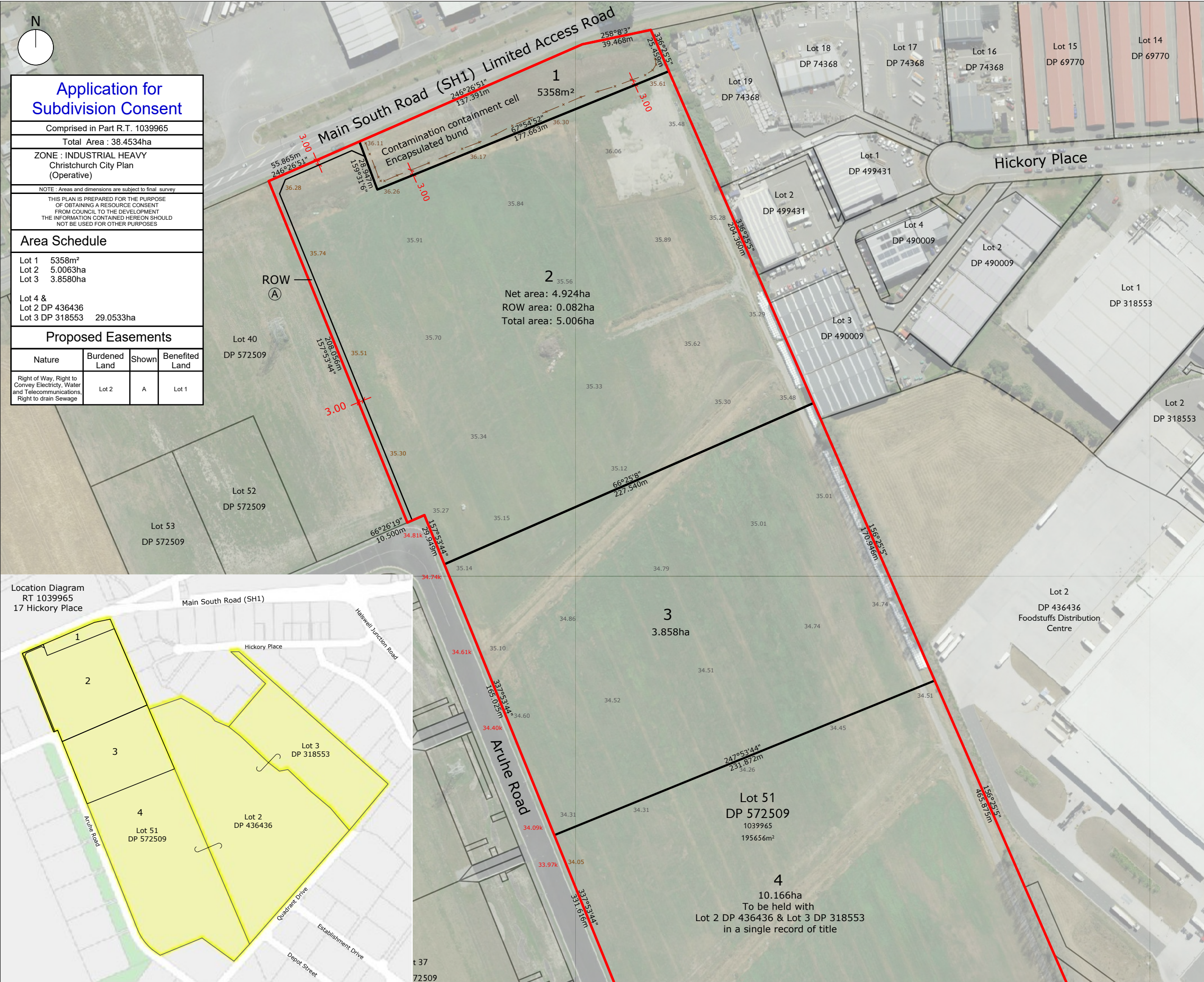
Where data supplied by Foodstuffs (South Island) Properties Ltd or other external sources, including previous site investigation reports, have been relied upon, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Eliot Sinclair for incomplete or inaccurate data supplied by other parties.

Whilst every care has been taken during our investigation and interpretation of the subsurface conditions to ensure that the conclusions drawn, and the opinions and recommendations expressed are correct at the time of reporting, Eliot Sinclair has not performed an assessment of all possible conditions or circumstances that may exist at the site. Variations in conditions may occur between investigatory locations and there may be conditions such as subsoil strata and features that were not detected by the scope of the investigation that was carried out or have been covered over or obscured over time. Additionally, on-going seismicity in the general area may lead to deterioration or additional ground settlement that could not have been anticipated at the time of writing this report. Eliot Sinclair does not provide any warranty, either express or implied, that all conditions will conform exactly to the assessments contained in this report.

The exposure of conditions that vary from those described in this report, or occurrence of additional strong seismicity, or any future update of MBIE's guidelines may require a review of our recommendations. Eliot Sinclair should be contacted to confirm the validity of this report should any of these occur.

This report has been prepared for the benefit of Foodstuffs (South Island) Properties Ltd and the regulatory authority for the purposes as stated above. This report is specifically prepared for the proposed subdivision and should not be used to support any future consent application without prior review and approval by Eliot Sinclair. No liability is accepted by Eliot Sinclair or any of their employees with respect to the use of this report, in whole or in part, for any other purpose or by any other party.

Appendix A. Subdivision Scheme Plan



DISCLAIMER
© Eliot Sinclair and Partners Ltd. This drawing and all its information is only to be used for its intended purpose. All rights reserved.

SURVEY INFORMATION			
SURVEYED		RWT	
SURVEY DATE		12.08.2025	
COORD SYSTEM		NZGD2000	
CIRCUIT		Mt Pleasant	
DATUM		NZVD2016	
ORIGIN OF LEVELS		887T	
		32.816m	

NOTES

A	RWT	25.08.2025	First Issue
REV.	DRAWN	DATE	NOTE

CLIENT

FOODSTUFFS (SOUTH ISLAND) PROPERTIES LTD.

DESIGNED		RWT
DRAWN		WJH
REVIEWED		WJH
APPROVED		WJH
STATUS		FOR INFORMATION
SCALE		1:2000 [A3]

Lot 51 DP 572509
PROPOSED SUBDIVISION
17 HICKORY PLACE, HORNBY
CHRISTCHURCH

SUBDIVISION APPLICATION
PART RT 1039965

PROJECT	SET	SHEET	REV.
600011	V3	V100	A

**eliot
sinclair**

Appendix B. Existing Soil Test Information



Legend

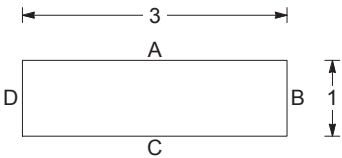
1 Test Pits 1 - 46

⊕ Boreholes 1 - 4

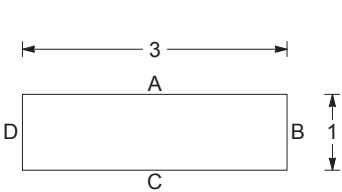
↑

Note: Not to scale; boundaries and locations are approximate only

 Aurecon New Zealand Limited Unit 1, 150 Cavendish Road Casebrook PO Box 1061 Christchurch - New Zealand Telephone: +64 3 366 0821 Facsimile: +64 3 379 6955 Email: christchurch@ap.aurecongroup.com Website: www.aurecongroup.com	Client	Christchurch City Council		Figure 2 Investigation Location Plan (Koordinates, 2012)		Paper Size A4	
	Project	Southwest Christchurch – Hornby Plan Change				Revision 1	
	By	A.Wells		Date	30 April 2013	Job Number	233611

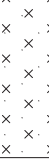
 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP2	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559670 N 5178182		LOGGED A. WELLS	
MACHINE & NO. 5.5T Excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +45.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.50		SILT; dark brown. Firm, dry becoming moist, rootlets present. (TOPSOIL)			
0.50-2.50		SILT; light yellowish brown. Firm, dry to moist, low plasticity.			
2.50-3.10		Sandy GRAVEL; brownish grey. Tightly packed, dry, gravel fine to coarse and subrounded to rounded, sand fine to medium.			
		End of Trial pit/trench at 3.10m, on 02/04/2013 <i>Termination Reason:</i> Target depth reached.			
SHORING/SUPPORT: None STABILITY: None			GENERAL REMARKS		
			Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
All dimensions in metres		CLIENT Christchurch City Council	Pocket Penetrometer Test Insitu Vane Shear Test		Water Level

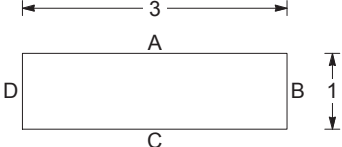
Report ID: AGS4 TEST PIT RECORD (NO SKETCH) || Project: TEST PIT LOGS.GPJ || Library: AGS 4_0.GLB || Date: 12 April 2013

 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP3	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559584 N 5178097		LOGGED A. WELLS	
MACHINE & NO. 5.5T excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +45.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.40		SILT; dark brown. Firm, dry to moist, low plasticity, rootlets present. (TOPSOIL)			
0.40-1.20		SILT; brownish grey. Firm, dry, low plasticity.			
1.20-2.10		SAND, grey. Medium dense, moist, fine to medium.			
2.10-3.10		Sandy GRAVEL with some cobbles; grey. Tightly packed, dry, gravel fine to coarse, sand fine to medium, gravel and cobbles subrounded to rounded.			
		End of Trial pit/trench at 3.10m, on 02/04/2013 <i>Termination Reason:</i> Target depth reached.			
SHORING/SUPPORT: None STABILITY: None			GENERAL REMARKS		
			Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
All dimensions in metres		CLIENT Christchurch City Council		Pocket Penetrometer Test Insitu Vane Shear Test	
				Water Level	

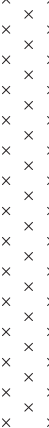
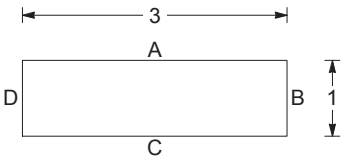
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 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP4	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559491 N 5178007		LOGGED A. WELLS	
MACHINE & NO. 5.5T excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +45.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	

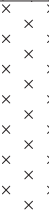
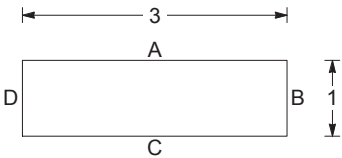
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.40		SILT with some gravel; light greyish brown. Soft, dry to moist, gravel fine to coarse and subrounded to rounded, organic material present. (TOPSOIL)			
0.40-0.50		SILT; light yellowish brown. Firm, dry, low plasticity.			
0.50-0.60		SAND; grey. Medium dense, moist, fine to medium.			
0.60-1.40		Sandy SILT; light yellowish brown with orange brown mottling and grey lenses. Firm, moist, low plasticity.			
		0.90 With some fine to coarse subrounded to rounded gravel.			
1.40-3.20		Sandy GRAVEL; dark grey. Tightly packed, moist, gravel fine to coarse and subrounded to rounded, sand fine to medium.			
End of Trial pit/trench at 3.20m, on 02/04/2013 <i>Termination Reason:</i> Target depth reached.					

SHORING/SUPPORT: None STABILITY: None			
		GENERAL REMARKS Groundwater not encountered. GPS co-ordinates accurate to +/-5m.	

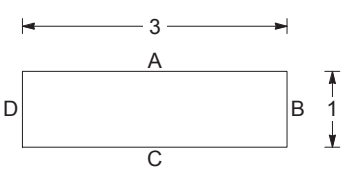
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 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP5	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559767 N 5178097		LOGGED A. WELLS	
MACHINE & NO. 5.5T excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +45.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.20		Silty GRAVEL; grey. Loosely packed, dry, gravel fine to coarse and subrounded. (FILL)			
0.20-2.00		SILT with minor gravel; light yellowish brown. Firm, dry, gravel fine to coarse and subrounded to rounded.			
2.00-2.70		Silty GRAVEL with minor cobbles; light greyish brown. Tightly packed, dry, gravel fine to coarse, gravel and cobbles subrounded.			
		End of Trial pit/trench at 2.70m, on 02/04/2013 <i>Termination Reason:</i> Maximum achievable depth.			
SHORING/SUPPORT: None STABILITY: None			GENERAL REMARKS		
 A: 3 B: 1 C: D: N ↑			Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
All dimensions in metres		CLIENT Christchurch City Council	Pocket Penetrometer Test Insitu Vane Shear Test		Water Level

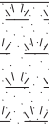
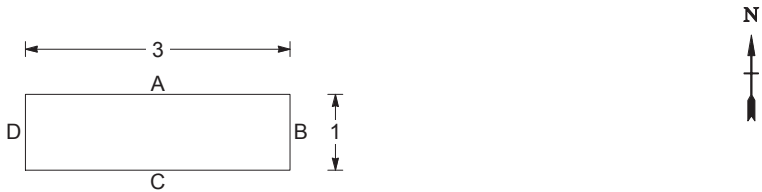
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 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP6	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559754 N 5177950		LOGGED A. WELLS	
MACHINE & NO. 5.5T excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +44.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.40		SILT; dark brown. Firm, dry to moist, rootlets present. (TOPSOIL)			
0.40-1.30		SILT with minor sand; light greyish brown. Firm, dry, sand fine to medium.			
1.30-2.50		Sandy GRAVEL with minor cobbles; dark greyish brown. Tightly packed, dry to moist, gravel fine to coarse, sand fine to medium, gravel and cobbles subrounded.			
		End of Trial pit/trench at 2.50m, on 02/04/2013 <i>Termination Reason:</i> Maximum achievable depth.			
SHORING/SUPPORT: None STABILITY: None			GENERAL REMARKS		
 N ↑			Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
All dimensions in metres		CLIENT Christchurch City Council	☞ Pocket Penetrometer Test ☑ Insitu Vane Shear Test		▼ Water Level

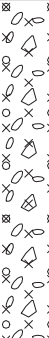
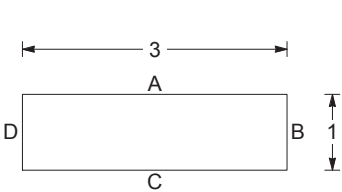
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 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP7	
				PROJECT NO. 233611	
PROJECT Southwest Christchurch Plan Change Hornby					
METHOD TP		CO-ORDINATES (NZTM) E 1559670 N 5177866		LOGGED A. WELLS	
MACHINE & NO. 5.5T excavator				CHECKED M. DAVIDSON	
CONTRACTOR Steve Reardon		GROUND LEVEL +44.00 m RL		DATE 2/04/2013	
				DATE 12/04/2013	
STRATA			SAMPLES & TESTS		
Depth	Legend	Description	Depth	No	Remarks/Tests
0.00-0.15		SILT; dark brown. Firm, dry to moist. (TOPSOIL)			
0.15-1.30		SAND with minor silt; grey with orange brown mottling. Medium dense, dry to moist, sand fine to medium.			
1.30-2.50		Sandy GRAVEL; grey. Tightly packed dry, gravel fine to coarse and subrounded, sand fine to medium.			
		2.00 With some subrounded cobbles.			
		End of Trial pit/trench at 2.50m, on 02/04/2013 Termination Reason: Maximum achievable depth.			
SHORING/SUPPORT: None STABILITY: None			GENERAL REMARKS Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
			N 		
All dimensions in metres		CLIENT Christchurch City Council		 Pocket Penetrometer Test  Insitu Vane Shear Test  Water Level	

Report ID: AGS4 TEST PIT RECORD (NO SKETCH) || Project: TEST PIT LOGS.GPJ || Library: AGS 4_0.GLB || Date: 12 April 2013

 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP8				
				PROJECT NO. 233611				
PROJECT Southwest Christchurch Plan Change Hornby								
METHOD TP		CO-ORDINATES (NZTM) E 1559579 N 5177774		LOGGED A. WELLS		CHECKED M. DAVIDSON		
MACHINE & NO. 5.5T excavator								
CONTRACTOR Steve Reardon		GROUND LEVEL +43.00 m RL		DATE 2/04/2013		DATE 12/04/2013		
STRATA						SAMPLES & TESTS		
Depth	Legend	Description				Depth	No	Remarks/Tests
0.00-0.50		SILT; dark brown. Firm, dry to moist, rootlets present. (TOPSOIL)						
0.50-2.00		SAND; dark greyish brown. Medium dense, dry to moist, sand fine to medium.						
2.00-2.70		Sandy GRAVEL; dark grey. Tightly packed, dry, gravel fine to coarse and subrounded, sand fine to medium.						
		End of Trial pit/trench at 2.70m, on 02/04/2013 <i>Termination Reason:</i> Maximum achievable depth.						
SHORING/SUPPORT: None STABILITY: None						GENERAL REMARKS Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
								
All dimensions in metres		CLIENT Christchurch City Council		 Pocket Penetrometer Test  Insitu Vane Shear Test		 Water Level		

Report ID: AGS4 TEST PIT RECORD (NO SKETCH) || Project: TEST PIT LOGS.GPJ || Library: AGS 4_0.GLB || Date: 12 April 2013

 www.aurecongroup.com		TEST PIT RECORD		TEST PIT NO. TP9				
				PROJECT NO. 233611				
PROJECT Southwest Christchurch Plan Change Hornby								
METHOD TP		CO-ORDINATES (NZTM) E 1559852 N 5177904		LOGGED A. WELLS		CHECKED M. DAVIDSON		
MACHINE & NO. 5.5T excavator								
CONTRACTOR Steve Reardon		GROUND LEVEL +44.00 m RL		DATE 2/04/2013		DATE 12/04/2013		
STRATA						SAMPLES & TESTS		
Depth	Legend	Description				Depth	No	Remarks/Tests
0.00-0.20		Silty GRAVEL; light grey. Tightly packed, dry. (FILL)						
0.20-1.40		SILT with minor gravel; light yellowish brown. Firm, dry to moist, gravel fine to medium and subrounded, low plasticity.						
1.40-2.80		Silty GRAVEL; light greyish brown. Tightly packed, dry, gravel fine to coarse and subrounded.						
		End of Trial pit/trench at 2.80m, on 02/04/2013 <i>Termination Reason:</i> Maximum achievable depth.						
SHORING/SUPPORT: None STABILITY: None						GENERAL REMARKS Groundwater not encountered. GPS co-ordinates accurate to +/-5m.		
								
All dimensions in metres		CLIENT Christchurch City Council		 Pocket Penetrometer Test  Insitu Vane Shear Test		 Water Level		

Report ID: AGS4 TEST PIT RECORD (NO SKETCH) || Project: TEST PIT LOGS.GPJ || Library: AGS 4_0.GLB || Date: 12 April 2013



KEY:

-  TP01 LandTech Consulting testpit locations, tested 21 August 2024
-  SP01 LandTech Consulting Ltd. DCP test location, tested 21 August 2024
-  Proposed workshop
-  Existing boundary
-  Proposed boundary



NOTES:

Locations of features approximate only
Original sheet size A3

Boundary information on this *Test Location Plan* adapted from LINZ website: www.data.linz.govt.nz (accessed 20 August 2024)

Location of proposed workshop adapted from Bernard Johnston Architect Limited drawings titled: Existing Site Plan, Sheet A1.01, Rev 4, dated 2 August 2024

Location of proposed carpark area adapted from Bernard Johnston Architect Limited drawings titled: Proposed Site Plan, Sheet A1.02, Rev 6, dated 12 August 2024

AMENDMENTS		
DATE	REV	DESCRIPTION
21/08/2024	A	Report Issue

Check all dimensions and levels on site before commencing construction.
This drawing and design remains the property of LandTech Consulting Ltd. and may not be reproduced without approval and permission from LandTech Consulting Ltd.

Test Location Plan
24 Aruhe Road
ISLINGTON, CHRISTCHURCH



Christchurch Office:
3/16 Leslie Hills Drive, Riccarton, Christchurch 8011
Auckland Office:
15C Paramount Drive, Henderson, Auckland 0610
Postal Address:
PO Box 119, Christchurch 8013
Website: www.landtech.nz Email: info@landtech.nz

Drawing No: LTC24220/ 1	Drawn by: KP	Date: 21 August 2024
Scale: 1: 1,000 (A3)	Checked by: DW	Revision: A
Filename: LTC24220 - Drawings.dwg		

			Client: 396 Wigram Road Limited			Test Pit No.: TP01				
Project: Proposed Commercial Subdivision			Address: 634 Main South Road			Sheet No.: 1 of 1				
Project No.: LTC21233			Coordinates: NZTM2000: E1559344.34, N5178316.86			Logged By: KP				
Drill Type: Excavator			Reduced Level: 36.70m (LVD1937)			Shear Vane No.:				
Date Started: 06-Sep-22			Ground Conditions: Near Level, Grass			Calibration Factor:				
Date Finished: 06-Sep-22			Groundwater Level (m): Not Encountered			Calibration Date:				
Stratigraphy	Depth (m)	Graphic Log	Description <i>Soil description in accordance with Guideline for the Field Classification and Description of Soil and Rock for Engineering Purposes, NZ Geotechnical Society Inc, 2005</i>	Groundwater Level (m)	Depth (m)	In-situ Field Testing				
						Shear Strength (kPa)		Dynamic Cone (Scala) Penetrometer		
						● Peak ● Remoulded		Depth (m)	Blow Count	Scala Blow Count / 100mm
					50 100 150 200			0 5 10 15 20		
Topsoil			SILT, minor fine sand, trace rootlets, dark brown, firm, moist, non-plastic, [TOPSOIL].					-0.1 2		
FILL			Fine to medium gravelly fine to coarse SAND, some silt, trace brick fragments, brownish black, medium dense, moist, [FILL].					-0.2 3		
	0.5							-0.3 9		
ALLUVIAL DEPOSITS			Fine sandy SILT, light brown, stiff, moist, non-plastic, [ALLUVIAL DEPOSITS].					-0.4 6		
								-0.5 3		
	1.0							-0.6 3		
								-0.7 3		
								-0.8 3		
								-0.9 4		
	1.5							-1.0 2		
								-1.1 2		
								-1.2 3		
								-1.3 9		
			Fine to medium sandy fine to coarse subround to rounded GRAVEL, minor silt, trace cobbles, greyish brown, very dense, moist.					-1.4 6		
								-1.5 6		
								-1.6 14		
								-1.7 40		
	2.0									
	2.5									
	3.0									
			End of Test Pit: 1.9m [TARGET DEPTH]							
	3.5									
	4.0									
	4.5									
Target depth achieved					In-situ testing in accordance with the following standards: Scala Penetrometer Testing: NZS 4402:1988, Test 6.5.2, Dynamic Cone Penetrometer Shear Vane Testing: Guideline for Hand Held Shear Vane Test, NZGS, August 2001					
LandTech Consulting Ltd: 11B Carlyle Street, Sydenham Christchurch, 8023					Ph: 03 390 1371 Email: info@landtech.nz Website: www.landtech.nz					

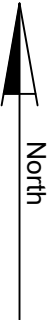


KEY:

TP01

LandTech Consulting testpit locations, tested 6 September 2022

Existing boundary



NOTES:

Locations of features approximate only

Original sheet size A3

Boundary information on this *Test Location Plan* adapted from LINZ website: www.data.linz.govt.nz (accessed 12 January 2022)

LandTech CONSULTING			Client: The Remarks Ltd			Test Pit No.: TP04						
			Project: Proposed New Workshop			Sheet No.: 1 of 1						
			Address: 24 Aruhe Road, Islington, Christchurch									
Project No.: LTC24220			Coordinates: NZTM2000: E1559449.13, N5178148.44			Logged By: KP & SW						
Drill Type: Digger			Reduced Level: 36.00m (LVD1937)			Shear Vane No.:						
Date Started: 21-Aug-24			Ground Conditions: Near level, grass			Calibration Factor:						
Date Finished: 21-Aug-24			Groundwater Level (m): Not Encountered			Calibration Date:						
Stratigraphy	Depth (m)	Graphic Log	Description <i>Soil description in accordance with Guideline for the Field Classification and Description of Soil and Rock for Engineering Purposes, NZ Geotechnical Society Inc, 2005</i>	Groundwater Level (m)	Depth (m)	In-situ Field Testing						
						Shear Strength (kPa)		Dynamic Cone (Scala) Penetrometer				
						● Peak ● Remoulded	50 100 150 200	Depth (m)	Scala Blow Count / 100mm			
Topsoil / Fill	0.0 - 0.5		Fine sandy SILT, dark brown, firm, moist, non-plastic, trace rootlets.		0.0 - 0.5			-0.1	5			
			Fine to medium SAND, greyish brown, medium dense, moist.					-0.2	5			
Alluvial Deposits	0.5 - 3.0		0.8m: Silty. Fine to medium sandy fine to coarse subangular to subround GRAVEL, greyish brown, very dense, moist.		0.5 - 3.0			-0.3	6			
								-0.4	5			
								-0.5	6			
								-0.6	5			
								-0.7	4			
								-0.8	4			
								-0.9	4			
								-1.0	3			
								-1.1	40			
	3.0 - 4.5		End of Test Pit: 3.0m [TARGET DEPTH ACHIEVED]		3.0 - 4.5							
Target depth achieved					In-situ testing in accordance with the following standards: Scala Penetrometer Testing: NZS 4402:1988, Test 6.5.2, Dynamic Cone Penetrometer Shear Vane Testing: Guideline for Hand Held Shear Vane Test, NZGS, August 2001							
LandTech Consulting Ltd: Unit 3, 16 Leslie Hills Drive, Riccarton Christchurch, 8011					Ph: 03 390 1371 Email: info@landtech.nz Website: www.landtech.nz							

LandTechCONSULTING			Client: The Remarks Ltd Project: Proposed New Workshop Address: 24 Aruhe Road, Islington, Christchurch			Test Pit No.: TP01 Sheet No.: 1 of 1			
Project No.: LTC24220			Coordinates: NZTM2000: E1559464.13, N5178114.11			Logged By: KP & SW			
Drill Type: Digger			Reduced Level: 36.00m (LVD1937)			Shear Vane No.: 1999			
Date Started: 21-Aug-24			Ground Conditions: Near level, grass			Calibration Factor: 1.55			
Date Finished: 21-Aug-24			Groundwater Level (m): Not Encountered			Calibration Date: 10-Apr-24			
Stratigraphy	Depth (m)	Graphic Log	Description <i>Soil description in accordance with Guideline for the Field Classification and Description of Soil and Rock for Engineering Purposes, NZ Geotechnical Society Inc, 2005</i>	Groundwater Level (m)	Depth (m)	In-situ Field Testing			
						Shear Strength (kPa)		Dynamic Cone (Scala) Penetrometer	
						● Peak ● Remoulded	50 100 150 200	Depth (m) Blow Count	Scala Blow Count / 100mm
Topsoil / Fill			Fine sandy SILT, dark brown, firm, moist, non-plastic, trace rootlets.					-0.1	6
			Fine sandy SILT, brownish grey with orange mottles, very stiff, moist, non-plastic.					-0.2	12
Alluvial Deposits	0.5							-0.3	12
								-0.4	6
								-0.5	4
								-0.6	4
								-0.7	4
								-0.8	4
								-0.9	4
	1.0				1.0	105		-1.0	6
								-1.1	3
								-1.2	2
								-1.3	13
									40
	1.5		Fine to medium sandy fine to coarse subround GRAVEL, greyish brown, dense, moist. 1.2m: Very dense.						
	2.0								
	2.5								
	3.0								
	3.5		End of Test Pit: 3.2m [TARGET DEPTH ACHIEVED]						
	4.0								
	4.5								
Target depth achieved					In-situ testing in accordance with the following standards: Scala Penetrometer Testing: NZS 4402:1988, Test 6.5.2, Dynamic Cone Penetrometer Shear Vane Testing: Guideline for Hand Held Shear Vane Test, NZGS, August 2001				
LandTech Consulting Ltd: Unit 3, 16 Leslie Hills Drive, Riccarton Christchurch, 8011					Ph: 03 390 1371 Email: info@landtech.nz Website: www.landtech.nz				

Site Investigation Record

Client: Ngāi Tahu Property

Site: 320 Shands Road and 637 Main South Road, Hornby

Technical Category: N/A - Rural & Unmapped

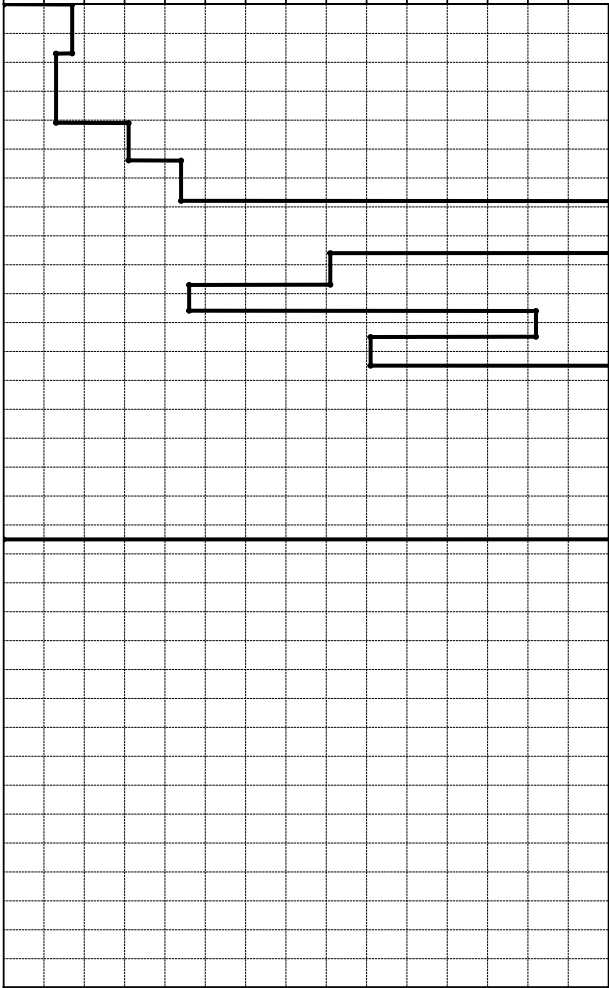
Lot: Lot 1

D.P.: 27842

Date Tested: 2-Aug-2019

Log Sheet No.: 1 of 1

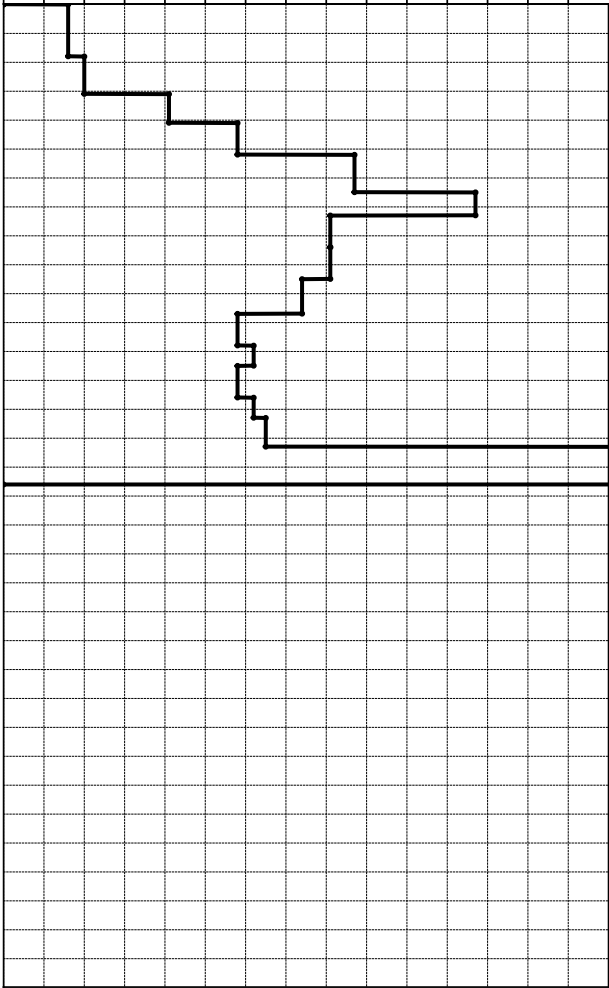
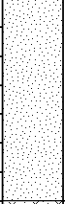
Project No.: 442038-A

Dynamic Cone Penetrometer (DCP) Test Results															Depth (m)	Soil Profile		
California Bearing Ratio (%)																Test Location 18		Water
1	2	3	4	5	6	7	8	9	10	11	12	13	14					
															0.2	 Silty TOPSOIL, with trace sand; dark brown. Non-plastic; moist; Fill.	Groundwater Not Encountered	
															0.4	 Silty fine to medium SAND; grey brown. Moist to wet.		
															0.6			
															0.8	 SILT, with some sand; grey. Non-plastic; moist.		
															1.0			
															1.2	 Fine to medium SAND, with minor silt and gravel; grey. Wet; gravel, fine to medium, round to subround.		
															1.4	EOH: 1.2m - Practical Refusal: Gravel.		
															1.6			
															1.8			
															2.0			
															2.2			
															2.4			
															2.6			
															2.8			
															3.0			
															3.2			
18															Site Plan: (Not to Scale)			
Comments: Scala Penetrometer Results displayed in California Bearing Ratio.																		
Field Staff: PN/SF		Prepared By: PLN		Soil Profile From:														
Job Manager: JTA		Approved By:		☒ Hand Auger														
				☐ Spade Hole														
				☐ Test Pit														

Note: This record identifies the geotechnical conditions encountered at the noted test location(s) only. It is possible that ground conditions could be different away from the point(s) of testing.

Site Investigation Record

Client: Ngāi Tahu Property	Site: 320 Shands Road and 637 Main South Road, Hornby		
Technical Category: N/A - Rural & Unmapped	Lot: Lot 1	D.P.: 27842	
Date Tested: 2-Aug-2019	Log Sheet No.: 1 of 1	Project No.: 442038-A	

Dynamic Cone Penetrometer (DCP) Test Results														Depth (m)	Soil Profile		
California Bearing Ratio (%)															Test Location 19		Water
1	2	3	4	5	6	7	8	9	10	11	12	13	14				
														>>16 >>104 >>166 >>166			Groundwater Not Encountered
														0.2		Silty TOPSOIL, with trace sand; dark brown. Non-plastic; moist.	
														0.4		Silty fine to medium SAND. Wet.	
														0.6		Fine to medium SAND; grey. Wet.	
														0.8			
														1.0			
														1.2			
														1.4		Sandy SILT; grey brown. Non-plastic; wet.	
														1.6			
														1.8		EOH: 1.65m - Practical Refusal: Gravel.	
														2.0			
														2.2			
														2.4			
														2.6			
														2.8			
														3.0			
														3.2			
19														Site Plan: (Not to Scale)			
Comments: Scala Penetrometer Results displayed in California Bearing Ratio.																	
Field Staff: PN/SF		Prepared By: PLN		Soil Profile From:													
Job Manager: JTA		Approved By:		☒ Hand Auger ☐ Spade Hole ☐ Test Pit													

Site Investigation Record

Client: Ngāi Tahu Property

Site: 320 Shands Road and 637 Main South Road, Hornby

Technical Category: N/A - Rural & Unmapped

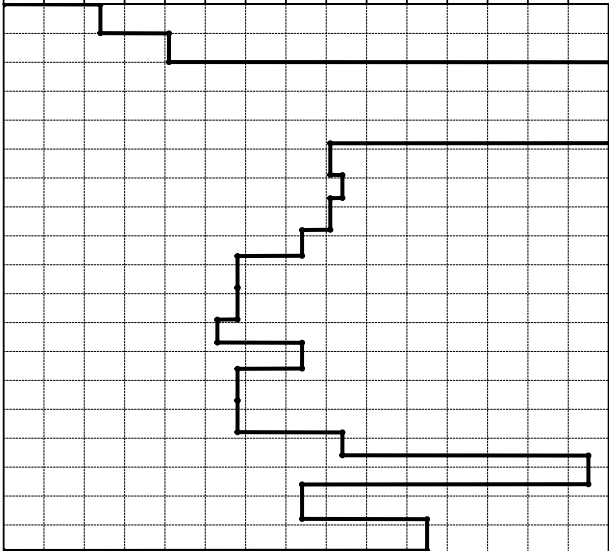
Lot: Lot 1

D.P.: 27842

Date Tested: 2-Aug-2019

Log Sheet No.: 1 of 1

Project No.: 442038-A

Dynamic Cone Penetrometer (DCP) Test Results															Depth (m)	Soil Profile			
California Bearing Ratio (%)																Test Location 20		Water	
1	2	3	4	5	6	7	8	9	10	11	12	13	14						
															>>21 >>23 >>23				
															0.2		Silty TOPSOIL, with minor sand; dark brown. Non-plastic; moist; Fill.	Groundwater Not Encountered	
															0.4				
															0.6				
															0.8		Sandy SILT; grey brown. Non-plastic; moist to wet.		
															1.0		Fine to medium SAND, with minor silt; grey. Wet.		
															1.2			Groundwater Not Encountered	
															1.4				
															1.6		SILT, with minor sand; grey brown. Non-plastic; wet.		
															1.8				
															2.0				
															2.2		EOH: 2.1m - Practical Refusal: Gravel.	Groundwater Not Encountered	
															2.4				
															2.6				
															2.8				
															3.0				
															3.2				
															Site Plan: (Not to Scale)				
Comments: Scala Penetrometer Results displayed in California Bearing Ratio.																			
Field Staff: PN/SF		Prepared By: PLN		Soil Profile From:															
Job Manager: JTA		Approved By:		☒ Hand Auger															
				☐ Spade Hole															
				☐ Test Pit															

Note: This record identifies the geotechnical conditions encountered at the noted test location(s) only. It is possible that ground conditions could be different away from the point(s) of testing.

Site Investigation Record

Client: Ngāi Tahu Property	Site: 320 Shands Road and 637 Main South Road, Hornby		
Technical Category: N/A - Rural & Unmapped	Lot: Lot 1	D.P.: 27842	
Date Tested: 2-Aug-2019	Log Sheet No.: 1 of 1	Project No.: 442038-A	

Dynamic Cone Penetrometer (DCP) Test Results															Depth (m)	Soil Profile		
California Bearing Ratio (%)																Test Location 21		Water
1	2	3	4	5	6	7	8	9	10	11	12	13	14					
															0.2		Silty TOPSOIL, with minor sand; dark brown. Non-plastic; Fill.	Groundwater Not Encountered
															0.4		Fine to medium SAND, with minor silt; grey. Wet.	
															0.6			
															0.8			
															1.0		SILT, with some sand; grey brown. Non-plastic; wet.	
															1.2			
															1.4			
															1.6		EOH: 1.4m - Practical Refusal: Gravel.	
															1.8			
															2.0			
															2.2			
															2.4			
															2.6			
															2.8			
															3.0			
															3.2			
21															Site Plan: (Not to Scale)			
Comments: Scala Penetrometer Results displayed in California Bearing Ratio.																		
Field Staff: PN/SF		Prepared By: PLN		Soil Profile From: ☒ Hand Auger ☐ Spade Hole ☐ Test Pit														
Job Manager: JTA		Approved By:																

Note: This record identifies the geotechnical conditions encountered at the noted test location(s) only. It is possible that ground conditions could be different away from the point(s) of testing.

Appendix C. Statement of Professional Opinion

APPENDIX I

Statement of Professional Opinion on the Suitability of Land for Subdivision

ISSUED BY: Eliot Sinclair & Partners Ltd
(Geotechnical engineering firm or suitably qualified Geoprofessional)

TO: Christchurch City Council
(Territorial authority)

TO BE SUPPLIED TO: Foodstuffs (South Island) Properties Limited
(Owner/Developer)

IN RESPECT OF: 4-lot subdivision of title 1039965
(Description of infrastructure/land development)

AT: 17 Hickory Place, Hornby

(Address)

I Andrei Cotiga on behalf of
(Geoprofessional)
Eliot Sinclair & Partners Ltd
(Geotechnical engineering firm)

hereby confirm:

1. I am a suitably qualified and experienced Geoprofessional employed by Eliot Sinclair & Partners Ltd and the geotechnical firm named above was retained by the owner/developer as the Geoprofessional on the above proposed development.

11 September 2025

2. The geotechnical assessment report, dated _____ has been carried out in accordance with the Ministry of Business, Innovation and Employment *Part D - Guidelines for the geotechnical investigation and assessment of subdivisions in the Canterbury region* and the Christchurch City Council *Infrastructure Design Standard – Part 4: Geotechnical Requirements* and includes:

- (i) Details of and the results of ~~my~~ the site investigations.
- (ii) A liquefaction and lateral spread assessment.
- (iii) ~~An assessment of rockfall and slippage,~~ including hazards resulting from seismic activity.
- (iv) ~~An assessment of the slope stability and ground bearing capacity confirming the location and appropriateness of building sites.~~
- (v) Recommendations proposing measures to avoid, remedy or mitigate any potential hazards on the land subject to the application, in accordance with the provisions of Section 106 of the Resource Management Act 1991.

3. In my professional opinion, not to be construed as a guarantee, I consider that Council is justified in granting consent incorporating the following conditions:

(i) _____

(ii) _____

4. This professional opinion is furnished to the territorial authority and the owner/developer for their purposes alone, on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any building. It is limited to those items referred to in clause 2 only.

5. This statement shall be read in conjunction with the geotechnical report referred to in clause 2 above, and shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

6. Liability under this statement accrues to the geotechnical firm only and no liability shall accrue to the individual completing this statement.

7. The geotechnical engineering firm issuing this statement holds a current policy of professional indemnity insurance of no less than \$ 200,000

(Minimum amount of insurance shall be commensurate with the current amounts recommended by ENGINEERING NEW ZEALAND, ACENZ, NZTA, INGENIUM.)

_____ Date: 11 September 2025

(Signature of engineer, for and on behalf of _____)

Qualifications and experience BE (Hons) Civil ME CPEng

This form is to accompany Form 9 – Resource Management Act 1991 (Application for a Resource Consent (Subdivision))

Appendix F. Email Correspondence with CCC (DC's)

Isabelle Harding

From: iph@eliotsinclair.co.nz
Subject: RE: [#600011] Query regarding new DC policy implication on a proposed subdivision

From: Development Contributions <developmentcontributions@ccc.govt.nz>
Sent: Thursday, 28 August 2025 3:25 pm
To: Warren Haynes <WJH@eliotsinclair.co.nz>
Subject: RE: [#600011] Query regarding new DC policy implication on proposed subdivision

[EXTERNAL EMAIL: Always check the FROM address of an email and treat links and attachments with caution. Check with Helpdesk if unsure.]

Hi Warren,

Thanks for getting in touch for clarification.

I'm afraid the proposed development would trigger development contributions for three additional lots.

Given the intended use of Lot 1 I'd be supportive of a postponement of development contributions for that lot until the condition specified in the consent notice is cancelled. This postponement would need to be secured by way of an encumbrance agreement, which is registered on the title at the developer's cost (typically around \$2,000–\$3,000).

Sections 221 and 241 of the Resource Management Act 1991 don't provide Council with a mechanism to charge development contributions, which is why they are required under the subdivision consent instead.

I've conducted a quick estimate under the Development Contributions Policy and the value of 1 HUE, after factoring in a 96% reduction against the stormwater and flood protection activity, is approximately \$30,740.24 incl GST (vs \$14,471.04 incl GST under the Development Contributions Policy 2021).

Kind regards,

Rosa Ruri

Senior Development Contributions Assessor
Planning & Consents



03 941 8536



Rosa.Ruri@ccc.govt.nz



Te Hononga Civic Offices, 53 Hereford Street, Christchurch



PO Box 73013, Christchurch 8154



ccc.govt.nz

From: Warren Haynes <WJH@eliotsinclair.co.nz>
Sent: Thursday, 28 August 2025 12:07 pm
To: Development Contributions <developmentcontributions@ccc.govt.nz>
Subject: [#600011] Query regarding new DC policy implication on proposed subdivision

Hi Rosa

I am seeking some clarification, if I can, before lodging a subdivision application.

With reference to the attached draft application plan we have identified that currently our client has a single record of title comprising three lots held together by condition of amalgamation. The Foodstuffs Distribution Centre site now wishes to dispose of surplus land.

It is proposed to subdivide one of the three allotments to create four lots so that separate titles are issued for Lots 1-3 and that Lot 4 remains held by amalgamation with the two other balance allotments making up the parent title.

So we start with one title and finish up with four titles as depicted on the areas schedule and the location diagram on the application plan.

The unusual factor is that Lot 1 is solely for the purpose of accommodating an existing Contamination Containment Cell in the physical form of a bund. A consent notice is intended to state that Lot 1 is only to be used for this purpose. It is not proposed that Lot 1 have a connection to sewer, stormwater or HP water as they will not be required. Nor will it have buildings on it. We are wishing to avoid incurring a DC charge for it given the absence of any new demand. We only wish to pay a contribution for Lots 2 & 3 as they are the only new titles that will create an additional demand on infrastructure.

Our questions are

- What must we state in the application as the purpose of Lot 1 to avoid incurring a vacant allotment charge for this lot?
- Are we obligated to pay a contribution for Lot 4 even though it is amalgamated with the existing Foodstuffs Distribution Centre title?

Your guidance would be appreciated as always.

Many thanks

Kind regards



Warren Haynes

SURVEYOR | DIRECTOR

BSurv FS+SNZ RPSurv

+64 3 379 4014 ext. 204

+64 27 439 6491

eliotsinclair.co.nz

Christchurch | Rangiora | Wānaka

Queenstown | Hokitika | Nelson



Caution: This email (including any attachments) may contain confidential and privileged information. If you have received it in error, please 1) notify the sender by return email (or telephone) and then delete this email, together with all attachments and your reply and 2) do not act on this email in any other way. Please visit <https://www.eliotsinclair.co.nz/terms-conditions> for important information concerning this message. Thank you.

Appendix G. Draft Right of Way Easement Document

Form 22

Easement instrument to grant easement or *profit à prendre*

(Section 109 Land Transfer Act 2017)

Grantor**FOODSTUFFS (SOUTH ISLAND) PROPERTIES LIMITED****Grantee****FOODSTUFFS (SOUTH ISLAND) PROPERTIES LIMITED****Grant of Easement or *Profit à prendre***

The Grantor being the registered owner of the burdened land set out in Schedule A **grants to the Grantee** (and, if so stated, in gross) the easement(s) or *profit(s) à prendre* set out in Schedule A, with the rights and powers or provisions set out in the Annexure Schedule(s)

Schedule A*Schedule, if required**Continue in additional Annexure*

Purpose of Easement, or <i>profit</i>	Shown (plan reference)	Burdened Land (Record of Title)	Benefitted Land (Record of Title) or in gross
Right of way Right to convey electricity, telecommunications, water Right to drain sewage	A on DP []	Lot 2 DP [] ()	Lot 1 DP [] ()

Easements or *profits à prendre* rights and powers (including terms, covenants and conditions)

Delete phrases in [] and insert memorandum number as required; continue in additional Annexure Schedule, if required

Unless otherwise provided below, the rights and powers implied in specified classes of easement are those prescribed by the Land Transfer Regulations 2018 and/or Schedule 5 of the Property Law Act 2007

The implied rights and powers are hereby **added to** by:

~~[Memorandum number _____, registered under section 209 of the Land Transfer Act 2017]~~

the provisions set out in the **Annexure Schedule**.

Annexure Schedule

1. Definitions and Interpretation

1.1 In this Instrument unless the context otherwise requires:

Easement Area means that part of the Burdened Land described in Schedule A.

Grantee means the registered owners from time to time of the Benefited Land.

Grantor means the registered owners from time to time of the Burdened Land.

Instrument means this instrument in its entirety, as it may be varied from time to time.

1.2 In this Instrument unless the context otherwise requires, a reference to:

- (a) Grantor or Grantee includes that person's agents, chargeholders, employees, contractors, tenants, licensees and invitees;
- (b) the singular includes the plural and vice versa;
- (c) all periods of time or notice exclude the days they are given and expire; and
- (d) a statute or regulation includes:
 - (i) all regulations under a statute;
 - (ii) all amendments to that statute or regulation; and
 - (iii) any statute or regulation substituting it which incorporates any of its provisions.

2. Right of way

2.1 The Grantor grants to the Grantee, and the Grantee's employees, contractors, agents and invitees, a vehicular and pedestrian right of way over the Easement Area. The Grantee shall have full, free and unrestricted access over the Easement Area at all times for the purpose of accessing the Benefited Land on the following conditions:

- (a) The number of vehicles using the Easement Area shall not exceed six vehicles per calendar month;
- (b) No heavy vehicles (exceeding 26 tonnes) shall use the Easement Area without prior written consent of the Grantor;
- (c) The Easement Area will only be used for the purpose of accessing the Benefitted Land for maintenance and monitoring purposes.

2.2 Neither the Grantee nor the Grantor shall construct, erect, place or plant or suffer or permit to be constructed, erected, placed or planted on the stipulated area any building, structure, fencing, tree or shrub.

2.3 Resource consent number CRC241361 has been granted by Environment Canterbury (**Resource Consent**) in relation to the discharge of contaminants to the Benefited Land. The Benefited Land shall be used in accordance with the Resource Consent, and not for any other activity, and the Easement Area shall be used solely for access to the Benefited Land for maintenance and inspection purposes.

- 2.4 The Grantor shall not obstruct or interfere with the Grantee's use of the Easement Area, provided such use complies with these terms, and shall ensure the Easement Area always remains accessible for the permitted purpose.
- 2.5 No power is included in this Easement Instrument for the parties to determine this easement for breach of any provision in this Easement Instrument (whether express or implied) or for any other cause, it being the intention of the parties that this easement shall subsist for all time unless it is surrendered by mutual consent.

3. Maintenance

- 3.1 The Grantee shall be responsible for forming, repairing and maintaining the Easement Area in to clean and passable standard suitable for the permitted use described in clause 2.
- 3.2 The Grantor shall not be liable for any maintenance or upgrade of the Easement Area or any easement facility within it.

4. General

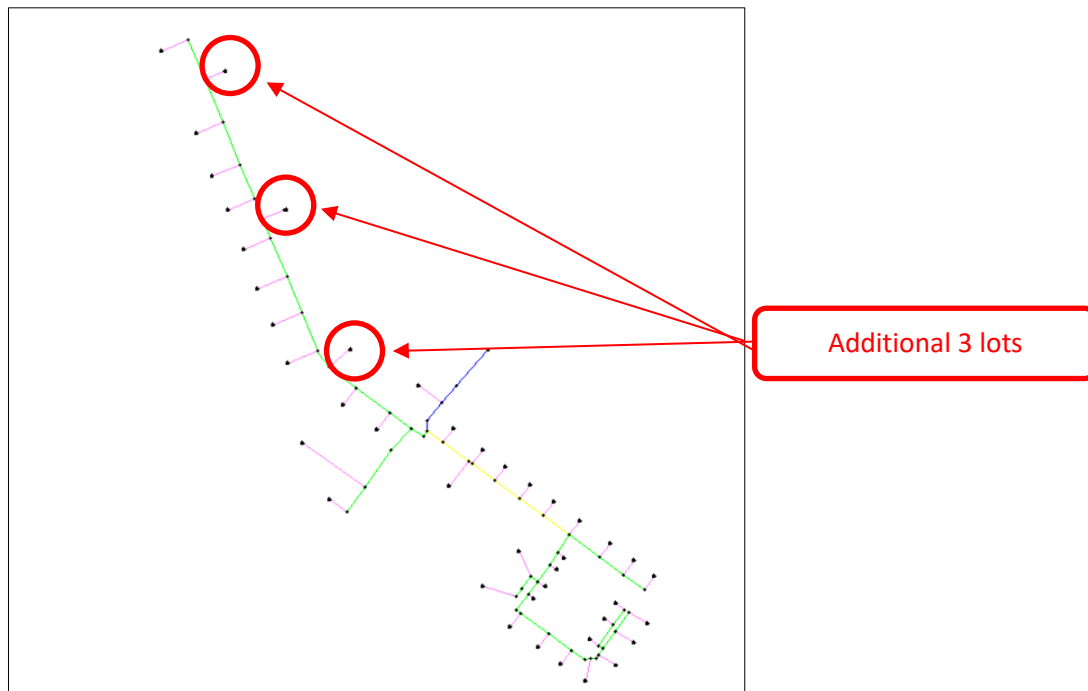
- 4.1 Except where inconsistent with the provisions contained in this Instrument, the provisions set out in Schedule 5 of the Land Transfer Regulations 2018 will apply to the easements created by this Instrument.

Appendix H. Iota Report on Wastewater

Shands Rd Industrial Park - Additional 3 Lots within the Industrial Park LPS network

Hydraulic Result Summary

Modelled network layout to include the additional lots as indicated:



Commentary:

- This result summary is in conjunction to the hydraulic results summary previously done for this industrial park development and is only a reflection of the additional 3 lots
- Inclusive of the additional 3 lots, the current model consists of **42** lot industrial connections with no future lots
- Adopted 50,112 L/day loading for each additional lot since actual land size equates to 19.3 ha and is in accordance with CCC guidelines of 0.09 l/s per ha
- All connections were to the existing OD63 main in Aruhe at 3 different locations
- Each new lot applied a duplex pumping system with a 10KL tank size as per other lots
- Lots struggled to get into the network and as a result spills were seen from lots on the end of the OD63 main as well as from the 3 additional lots. Altered the connection points with only 2 additional lots going into the OD63 main and the other going into the OD125 main in Quadrant Drive produced similar results in with spills and struggling lots

Appendix I. Correspondence with CCC regarding Water Supply

Liam Jagvik

From: WaterCapacity <WaterCapacity@ccc.govt.nz>
Sent: Wednesday, 27 August 2025 4:38 pm
To: Liam Jagvik
Subject: [#600011] Water Capacity Comments - Proposed 3 lot subdivision - 17 Hickory Place

Follow Up Flag: Follow up
Flag Status: Completed

[EXTERNAL EMAIL: Always check the FROM address of an email and treat links and attachments with caution. Check with Helpdesk if unsure.]

Hi Liam

Thanks for your enquiry. The ES design report for the consent that designed the network in Aruhe Road sized the main to meet FW4 fire water demand, 100 l/s. A flow test in the area from last year resulted in 83 l/s and static pressure in the main at 310 kPa. It will be rezoned as a low pressure water supply zone in the future, where we'd expect pressure in the network to be 350 kPa.

Kind regards
Alison
Water & Wastewater Asset Planning

From: Liam Jagvik <LJJ@eliotsinclair.co.nz>
Sent: Wednesday, 20 August 2025 8:52 pm
To: WaterCapacity <WaterCapacity@ccc.govt.nz>
Subject: [#600011] Proposed 3 lot subdivision - 17 Hickory Place

Dear CCC 3 Waters Team

We have been engaged by our client to undertake a three lot subdivision of Lot 51 DP 572509. The address is 17 Hickory Place.

The site is zoned Industrial Heavy.



The CCC 3 waters GIS indicates that there is an existing DN200 watermain within Aruhe Road.

Could you please advise what capacity (flow and pressure) CCC has within the existing reticulation?

Kind regards

**eliot
sinclair**

Liam Jagvik

SURVEYOR | DIRECTOR

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Queenstown | Hokitika | Nelson



Appendix J. Stantec Memorandum

To: Liam Jagvik
Eliot Sinclair

From: Andrew Leckie
Stantec NZ

Project/File:

Date: 9 September 2025

Reference: 17 Hickory Place- Lot 2 Access Advice

This memo outlines an initial assessment of the viability of access for the proposed Lot 2 from Aruhe Road.

Aruhe Road

Aruhe Road is a local industrial road. It is formed as a no-exit road currently, however it can be expected to be continued into the adjacent industrial land to the west in the future. The South West Hornby Industrial Area ODP anticipates Bruce Stewart Drive continuing to Main South Road as a minor arterial road. It is expected that Aruhe Road will form part of the local road network to the north-east of this route, and retain a local road status.

Reference: 17 Hickory Place- Lot 2 Access Advice

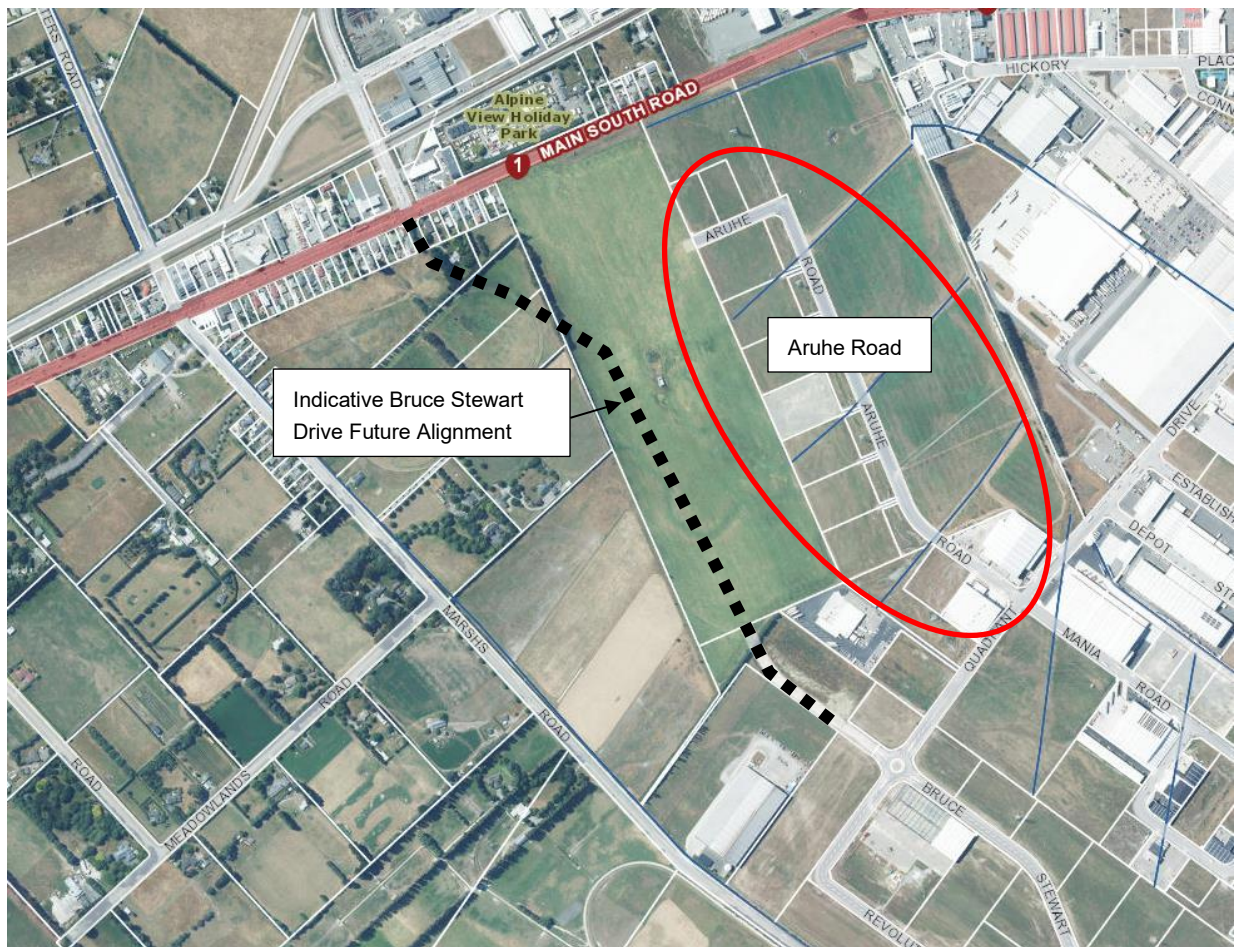


Figure 1: Aruhe Road

Aruhe Road has a small-radius curve near the northern end of the road, shown in Figure 2. The curve has localised widening of traffic lanes to accommodate large vehicle tracking, as well as a bulge in the outside kerbline, understood to be so that this location can act as a turning head for the no-exit road.

Reference: 17 Hickory Place- Lot 2 Access Advice

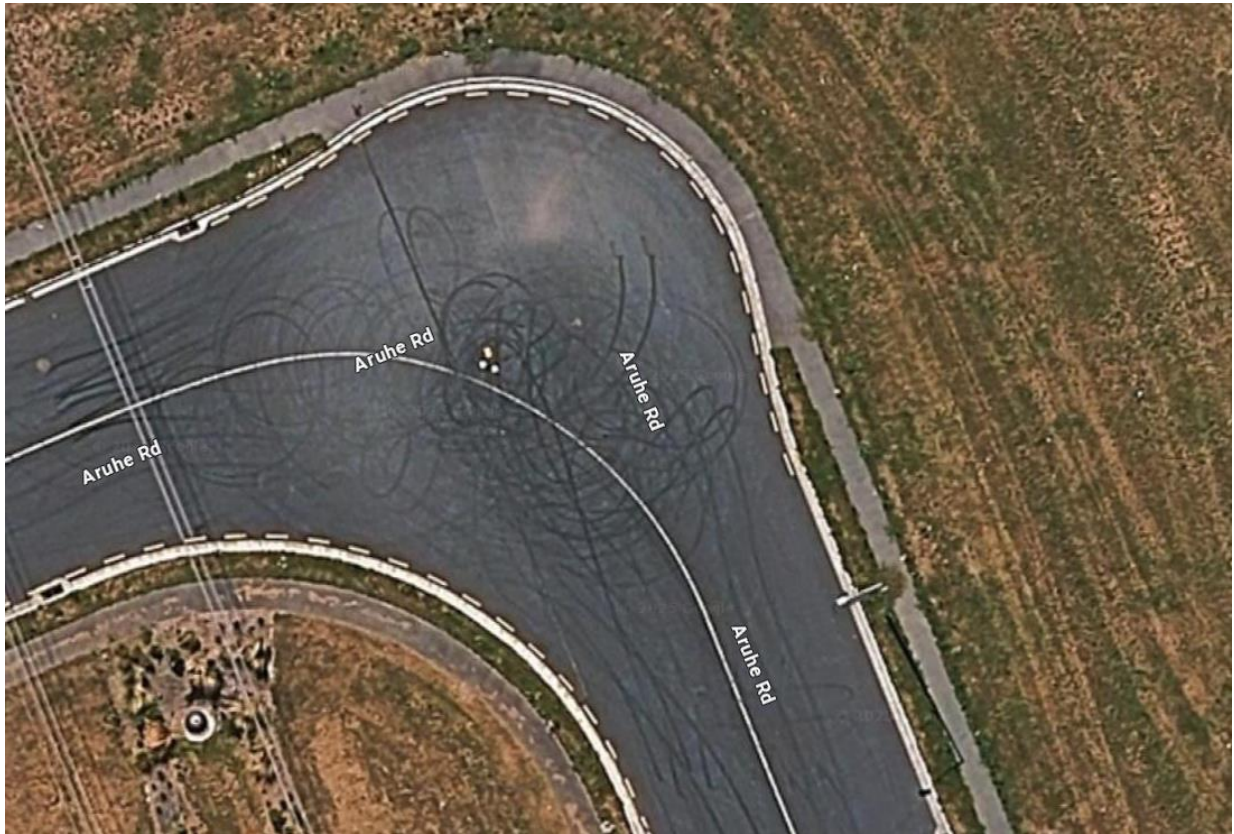


Figure 2: Small Radius Curve

Proposed Lot 2

Lot 2 is proposed with a net area of 4.9ha. This is a large site in the context of the surrounding South West Hornby industrial area. There is potential for a future development of the site that would be considered a “high trip generator” under the District Plan definition and require an integrated transport assessment (ITA). A matter to be covered in any ITA would be the safety and efficiency of access and manoeuvring.

Figure 3 shows the proposed Lot 2 frontage to Aruhe Road, located on the outside of the small-radius curve.

Reference: 17 Hickory Place- Lot 2 Access Advice

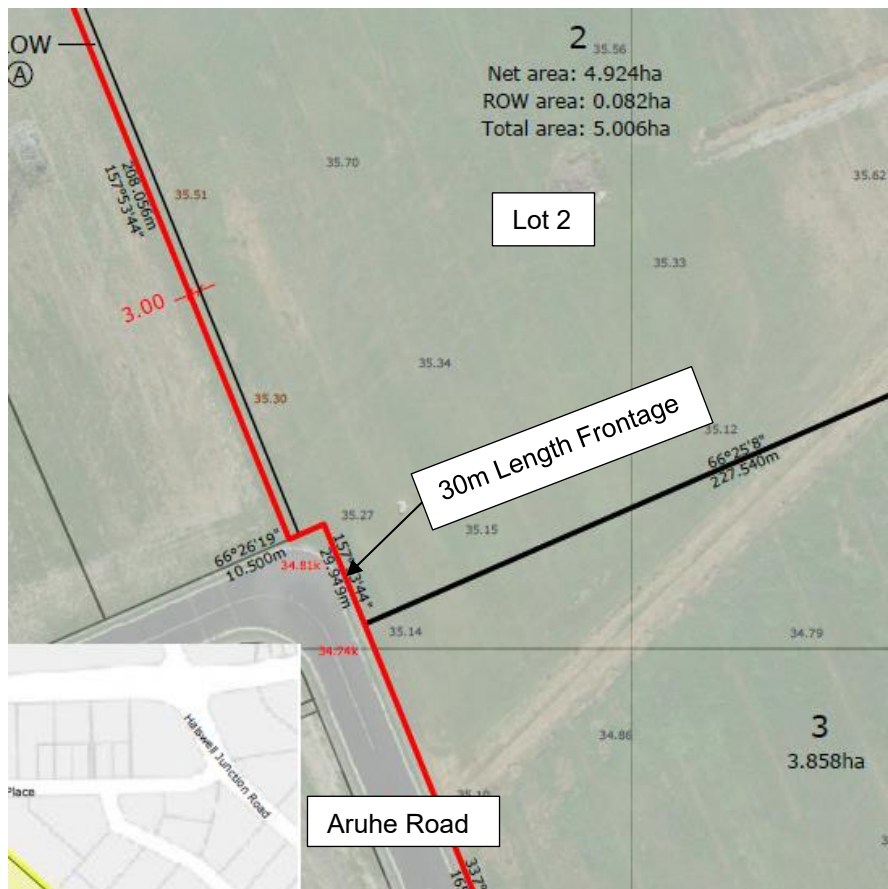


Figure 3: Proposed Lot 2 Aruhe Road Frontage

District Plan Rules

We have reviewed District Plan transport rules for relevance to this initial assessment. The following rules are not relevant to access or can readily be complied with, and brief comment is provided on these.

- Rule 7.4.3.1 car parking- on-site car parking requirements (dimensions, mobility parking) would be considered at resource consent stage
- Rule 7.4.3.2 cycle parking- cycle parking requirements (visitor and staff) would be considered at resource consent stage
- Rule 7.4.3.3 loading- practical loading provisions are integral for industrial site layout design and typically override District Plan requirements
- Rule 7.4.3.4 manoeuvring- expect suitable manoeuvring for parking and loading areas to be readily achievable given size of site
- Rule 7.4.3.5 gradient of parking and loading areas- site is flat so gradients will be achievable

Reference: 17 Hickory Place- Lot 2 Access Advice

- Rule 7.4.3.6 design of parking and loading areas- details relating to lighting, surfacing and drainage TBC through resource consent
- Rule 7.4.3.8.d vehicle crossing spacing- does not apply in 50km/h zone
- Rule 7.4.3.8.f vehicle crossing separation to intersection- vehicle crossing on a local road to be at least 10m from a local road intersection and 20m from an arterial road intersection. There are no nearby road intersections

The following are some requirements relevant to this assessment

- Rule 7.4.3.7.a access design- a 9m maximum vehicle crossing width (measured at the boundary) applies for all activities with more than 15 car parking spaces. Wider vehicle crossings are often consented in the industrial setting. A balance should be achieved between convenient vehicle manoeuvring, considering expected traffic volumes and vehicle types, and access safety including for pedestrians on the footpath.
- Rule 7.4.3.7.c queuing space- inbound vehicle queuing space requirement based on number of parking spaces provided on the site. We expect that a complying queuing space will be achievable given the size of the site. Gate design and location could be a relevant matter for consideration at resource consent stage.
- Rule 7.4.3.7.d visibility splay- the below visibility splay requirement would apply on the exit side of the driveway (assuming two-way driveway). Ideally this will be achieved, either by having the driveway 2m off the southern boundary, or by having boundary fencing set back from the road boundary (allowing for visibility through adjacent site).

Reference: 17 Hickory Place- Lot 2 Access Advice

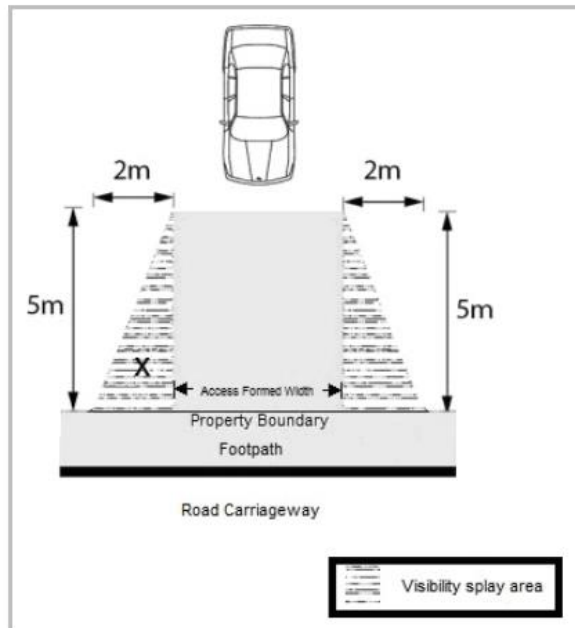


Figure 4: District Plan Pedestrian Visibility Splay Requirement

- Rule 7.4.3.8.e maximum number of vehicle crossings- two vehicle crossings permitted along a 16m – 60m long local road frontage. We expect a single vehicle crossing would be sought given the short length of frontage to Aruhe Road. A second vehicle crossing could be considered at the resource consent stage, for example to separate staff vehicle movements from truck movements, although as discussed below, this may not be straight-forward.

Access Safety Considerations

As outlined, if consent for a high trip generator is sought, assessment of the safety and efficiency of the access will be required.

Figure 5 outlines some initial considerations of how the curve will operate. As noted, there may be scope to remove the bulge on the outside of the curve if the road has been continued, but this assessment is based on the existing curve layout.

Reference: 17 Hickory Place- Lot 2 Access Advice

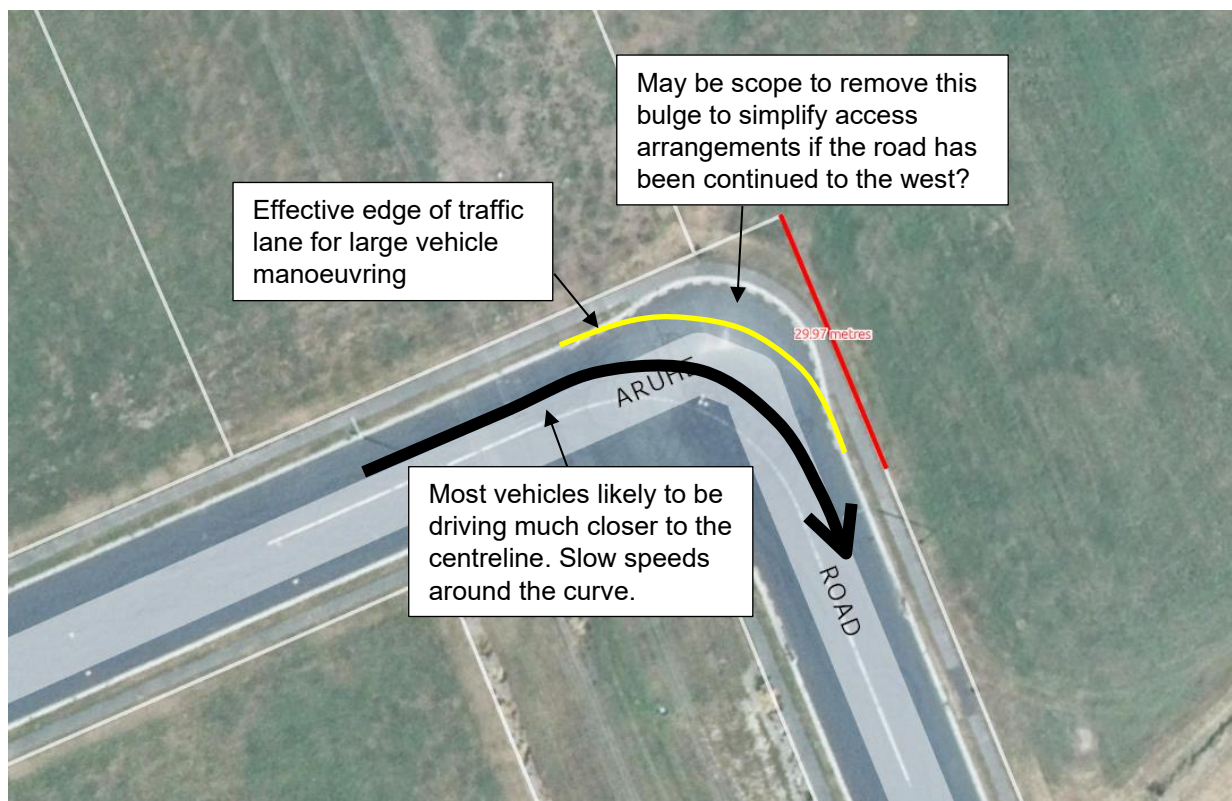


Figure 5: Initial Considerations on Curve

Figure 6 shows considerations for the right turn entry. As noted, it may be preferable for access towards the southern end of the frontage where the right turn in will be simpler. Visibility across the inside of the curve through the drainage reserve will need to be confirmed. The size of the design vehicle that can be accommodated turning right (and left) into the site clear of an exiting vehicle would be a matter for consideration at resource consent stage, when expected traffic volumes and vehicle types are known.

Reference: 17 Hickory Place- Lot 2 Access Advice

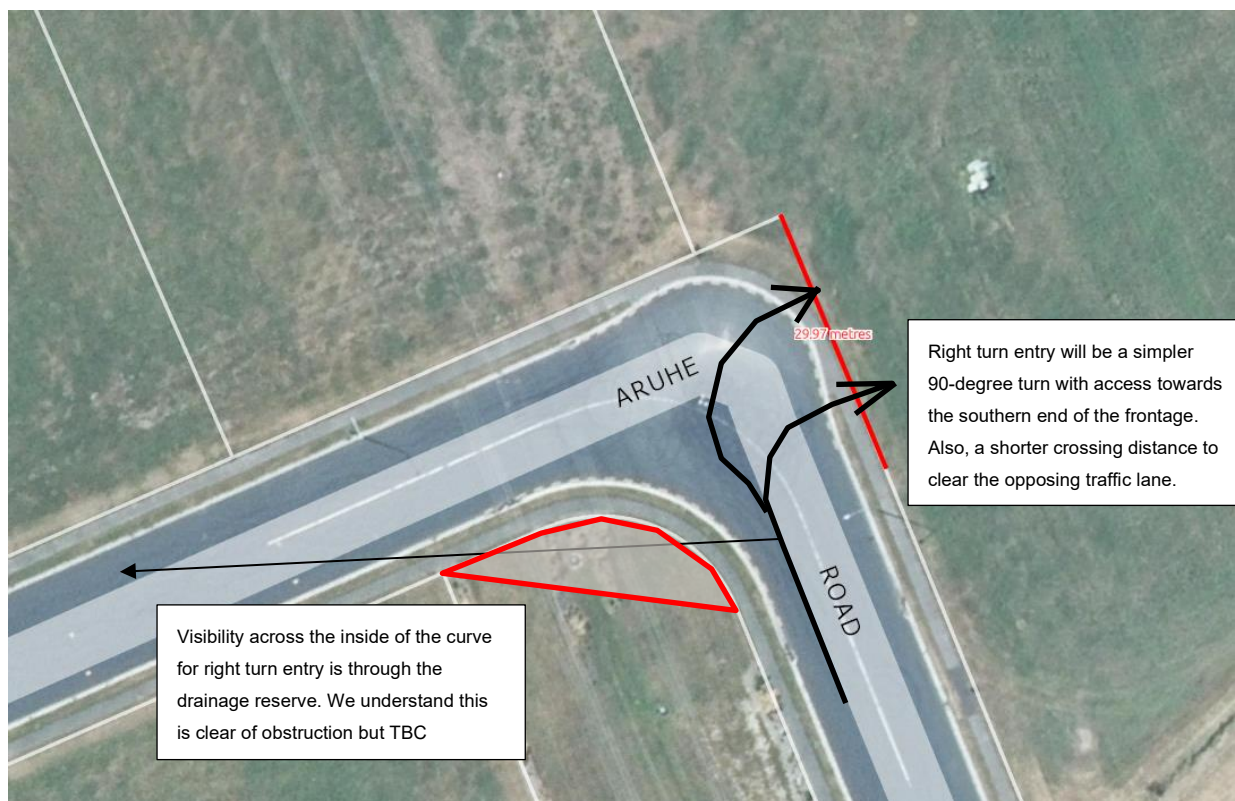


Figure 6: Right Turn Entry Considerations

Figure 7 shows considerations for exit movements. Again, there may be a preference for access to be towards the southern end of the frontage. It will likely be acceptable for large vehicles to cross the Aruhe Road centreline when turning left out, but proximity of the vehicle crossing to the southern boundary will need to be considered with respect to vehicle tracking / vehicle crossing extent as well as pedestrian visibility splay.

Reference: 17 Hickory Place- Lot 2 Access Advice



Figure 7: Exit Considerations

Summary

We expect that Lot 2 access will be supportable in this location, with Aruhe Road carrying low traffic volumes at slow speeds around the curve. Based on the road layout, with lane widening around the curve and the bulge on the outside of the curve, we expect an access towards the southern end of the frontage will be preferable. Clear sightlines through the drainage reserve would need to be ensured for the right turn entry movement. Appropriate design vehicles would be determined when traffic volumes and vehicle types are known (at resource consent stage) and vehicle tracking requirements would determine the location and extent of the vehicle crossing. Visibility to and from the footpath would be another consideration.

Appendix K. Rule Assessment

Assessment of Subdivision Rules in Christchurch District Plan

Chapter	Provision	Comment	Activity Status
Chapter 8: Subdivision (Part)			
8.4 General Rules	8.4.1.1 Notification		
	a. Unless stated otherwise in this chapter, for applications for subdivision consent: i. where the activity is a controlled or restricted discretionary activity, the application shall not be publicly or limited notified, except as specified in clause ii. below; ii. where the activity is a restricted discretionary activity and the subdivision seeks access to a State Highway, limited notification shall be only to the New Zealand Transport Agency (absent its written approval); iii. where the activity is a discretionary or non-complying activity, the application may be publicly or limited notified. Where the subdivision seeks access to a State Highway, the New Zealand Transport Agency shall be notified (absent its written approval).		
	8.4.1.2 Standards for specific zones		
	a. Zone-specific standards shall have precedence where there is any inconsistency with the general standards.		
	8.4.1.3 Servicing constraints		

a. In order to determine the activity status for subdivision in relation to Activity standard 8.3.3.8.b, the applicant must demonstrate that the wastewater system has adequate capacity for the respective potential land uses on all proposed allotments. The Council offers a certification process ([link](#)) as the means of demonstrating such capacity. The certificate will be valid for 6 months and will remain valid during the consenting process (following the lodging of a complete subdivision consent application and for the term of the consent). Certification is not necessary where a relevant Outline Development Plan shows that adequate wastewater capacity is available for the proposed allotments.

Chapter	Provision	Comment	Activity Status
Chapter 8.5: Subdivision Activity Status Tables			
8.5.1.2 Activity Status tables – Controlled Activities	C1A Boundary adjustments within the Medium Density Residential Zone and High Density Residential Zone Relevant Standards a. Where one or more of the allotments is vacant: i. Minimum allotment size requirements shall not apply, providing that the boundary adjustment does not change the existing net site area of the vacant allotment(s) by more than 10%. ii. Where the net site area is altered by more than 10%, activity standard 8.6.1 applies.	N/A.	

Chapter	Provision	Comment	Activity Status
	b. The boundary adjustment must not result in, or increase, the degree of non-compliance with land use standards of the applicable zone. Note: Should standard b. not be met then a land use consent will also be required in addition to consent under Rule 8.5.1.3 RD1.		
	C1B Boundary adjustments within all over zones Relevant Standards a. Minimum allotment size requirements shall not apply providing that the boundary adjustment does not change the existing net site area by more than 10% i. Where the net site area is altered by more than 10% activity standard 8.6.1 applies, b. The boundary adjustment will not lead to, or increase, the degree of non-compliance with land use standards of the applicable zone. Note: Should standard b. not be met then a land use consent will also be required in addition to consent under 8.5.1.3 RD1.	N/A.	
	C2A Conversion of tenure in the Medium Density Residential Zone or High Density Residential Zone Relevant Standards a. For allotments associated within the conversion of tenure from unit title or cross lease to fee simple:	N/A.	

Chapter	Provision	Comment	Activity Status
	i. The size of the resulting fee simple title shall be within 10% of the size of the original allotment or leased area, excluding any access. ii. Where the net site area is altered by more than 10%, activity standard 8.6.1 applies. b. The conversion of tenure must not result in, or increase, the degree of non-compliance with land use standards of the applicable zone. Note: Should standard b. not be met then a land use consent will also be required in addition to consent under Rule 8.5.1.3 RD3.		
	C2B Conversion of tenure for all over zones	N/A.	
	Relevant standards, a. Nil, other than as provided in b. below b. For the conversion of tenure from unit title or cross lease to fee simple for the repair and rebuild of multi-unit residential complexes, the size of the resulting fee simple title shall be within 10% of the size of the original allotment or leased area, excluding any access.		
	C3 Alteration of cross leases, company leases and unit titles	N/A.	
	Relevant Standards Nil		
	C4 Subdivision to create allotments for access, utilities, roads and reserves	N/A.	

Chapter	Provision	Comment	Activity Status
	Relevant Standards The minimum net site area requirements do not apply.		
	C5 Subdivision in any area subject to an outline development plan, or development plan except as otherwise specified in Rules 8.5.1.2 (C4, C6, C7), 8.5.1.3 (RD2, RD4 to RD15), 8.5.1.4 (D1 to D4), 8.5.1.5 (NC1 to NC8). Relevant Standards a. Activity standards in Rules 8.6.1 - 8.6.12. b. The subdivision shall be undertaken in accordance with the relevant outline development plan or development plan, except that: i. In relation to any outline development plan in a Residential New Neighbourhood Zone, the activity shall meet the activity standard in Rule 8.6.11 (a); ii. In relation to any outline development plan contained in Chapter 15 or Chapter 16, compliance is only required with the key structuring elements for that outline development plan area as described in the relevant chapter. c. In the Industrial Park Zone (Awatea), disposal of wastewater shall be via the Council reticulated sanitary sewage disposal system. d. For subdivision in areas marked as controlled on the Awatea Outline Development Plan - Tangata Whenua layer diagram in Appendix 8.10.14, a cultural assessment shall be provided. e. For subdivision in the Industrial General Zone (North Belfast), activity standards in Rule 8.6.14.	Applies. The site is subject to the South West Hornby ODP. The activity does not comply with 8.6.10 (a) (i).	

Chapter	Provision	Comment	Activity Status
	C6 Subdivision providing for residential activity in the following zones: i. Residential Hills; ii. Residential Large Lot; iii. Residential Small Settlement; and iv. All Rural Zones other than Rural Quarry	N/A.	
	Relevant Standards a. Activity standards in Rules 8.6.1-8.6.9 and 8.6.12. b. An identified building area must be shown on the scheme plan of subdivision on every allotment on which a residential unit is anticipated. c. Where the site contains an existing residential unit at the time the subdivision application is made, the identified building area must include the existing residential unit, or it must indicate that the residential unit will be removed from the site altogether or that it will be relocated to an identified building area for that site. d. The identified building area must: i. include a single area of land of not less than 100m² and no greater than 2000m² which is capable of containing a residential unit; ii. include curtilage area contiguous to the area identified in (i.) of not less than 200m² and no greater than 4000m²; and iii. be able to be linked by adequate and appropriate vehicle access to a formed public road. e. For any subdivision in the Rural Banks Peninsula Zone creating a residential allotment with a net site area of 1-4ha under Rules 8.5.1.2 C7 or 8.5.1.3 RD7, the identified building area must include all buildings anticipated on the site.		

Chapter	Provision	Comment	Activity Status
	C7 In the Rural Banks Peninsula Zone, subdivision creating a residential allotment with a net site area between 1ha and 4ha and a balance allotment, that when combined meet the applicable minimum net site area standard specified in Table 5. Relevant Standards a. Activity standards in Rules 8.6.3-8.6.9 and 8.6.12. b. The combined net site area of the 1-4ha residential allotment and the balance allotment must meet the applicable minimum net site area specified in Rule 8.6.1 Table 5. c. Only one residential allotment may be created per complete multiple of the applicable minimum net site area specified in Rule 8.6.1 Table 5. (Where more than one 1-4ha residential allotment (plus balance) is to be created, refer to Rule 8.5.1.3 RD7). d. The balance allotment must be made subject to a consent notice that: i. prevents the erection of any further residential units in perpetuity on the balance area needed to meet b. above; and ii. protects the following where they exist: a. public access connections. e. The balance allotment must be contiguous with the 1-4ha residential allotment to which it relates. f. An identified building area must be shown in accordance with Rule 8.5.1.2 C6.	N/A.	

Chapter	Provision	Comment	Activity Status
	C8 Subdivision that creates any vacant allotments within the Medium Density Residential Zone and High Density Residential Zone except as otherwise specified in Rule 8.5.1.3 RD17. Relevant Standards a. Activity standards 8.6.1, and 8.6.3 – 8.6.9, 8.6.12, and 8.6.15. Note: Where each allotment contains a residential unit for which land use consent is concurrently sought, or a current resource consent has been obtained but not yet implemented, Rule 8.5.1.2 C8 does not apply. Refer to Rule 8.5.1.2 C9, below.	N/A.	
	C9 Subdivision within the Medium Density Residential Zone and High Density Residential Zone where no vacant allotments are created and each allotment: a. Contains an existing residential unit; And/or b. Is proposed to contain a residential unit, approved as part of resource consent; And/or c. Is subject to a concurrent resource consent application for a residential unit; Except as otherwise specified in Rule 8.5.1.2 C1A and C2A. Relevant Standards a. Activity standards in Rules 8.6.3-8.6.9, 8.6.12, and 8.6.15. b. The subdivision shall not result in, or increase the degree of, non-compliance with the built form standards of the applicable zone (14A.5.2, 14A.5.3, 14A.6.2, and/or 14A.6.3).	N/A.	

Chapter	Provision	Comment	Activity Status
	Note: Land use consent is also required where an applicable built form standard is breached in addition to consent under Rule 8.5.1.3 RD2A. c. If, at the time of lodging the subdivision consent application, the residential unit/s relied upon under Rule 8.5.1.2 C9.b or C9.c have not yet been constructed to the extent that the exterior is fully closed in, either: i. the residential unit/s must be constructed to the extent that the exterior is fully closed in before obtaining a certificate under section 224 of the Resource Management Act 1991; or ii. it must be practicable to construct a residential unit on each allotment within the proposed subdivision, as a permitted activity. Note: Where standard c. is not met, then the allotment will be treated as a vacant allotment and Rule 8.5.1.2 C8 shall apply instead.		
	C10 Subdivision in any zone, except as otherwise specified in: i. Rule 8.5.1.2 C1A, C1B, C2A, C2B, C4, C5, C6, C7, C8, and C9; ii. Rule 8.5.1.3 RD2, RD4 to RD15; iii. Rule 8.5.1.4 D1 to D5; and iv. Rule 8.5.1.5 NC1 to NC8. Relevant Standards Activity standards in Rules 8.6.1 - 8.6.9 and 8.6.1	Applies. The application currently does not comply with 8.6.1 due to proposed Lot 3 being under 4ha and not currently serviced. Also does not comply with 8.6.3 – access or 8.6.7 or 8.6.8 or 8.6.9 regarding servicing.	
8.5.1.3 Activity Status tables - Restricted discretionary activities	RD1 Boundary adjustments not complying with 8.5.1.2 C1A or C1B Relevant Standards Nil. <i>Matters of Discretion for imposing conditions: Rule 8.7.1</i>	N/A	

Chapter	Provision	Comment	Activity Status
	<i>Matters of discretion for granting/declining consent and imposing conditions: Rule 8.8.1.</i>		
	RD2 - Subdivision in any zone that does not meet any one or more of the relevant standards in: - Rule 8.5.1.2 C5, C6 or C10; or - Rule 8.5.1.3 RD7; except as otherwise specified in: - Rule 8.5.1.4 D1 to D5; and - Rule 8.5.1.5 NC1 to NC8. - For subdivision in the Residential New Neighbourhood Zone that does not meet Rule 8.6.11.a Outline development plan or Rule 8.6.11.b Residential net density, Rule 8.4.1.1.a.i does not apply. - Subdivision within the Medium Density Residential Zone and High Density Residential Zone that does not meet the following standards: - Rule 8.5.1.2 C8 - Rule 8.5.1.2 C9 activity standard a. - In the instance of non-compliance with RD2 b., written approvals and either limited or public notification may apply.	Applies Activity does not comply with standards 8.6.1, 8.6.3, 8.6.7, 8.6.8 or 8.6.9 in C10, and 8.6.10 in C5.	Restricted Discretionary
	RD2A Subdivision within the Medium Density Residential Zone and High Density Residential Zone that does not meet the following standard: Rule 8.5.1.2 C9.b.	N/A	
	RD3 Conversion of tenure: - For the repair and rebuild of multi-unit residential complexes that does not meet any one or more of the relevant standards listed in Rule 8.5.1.2 C2B; or - That does not meet any one or more of the relevant standards listed in Rule 8.5.12 C2A.		

Chapter	Provision	Comment	Activity Status
	RD4 Subdivision in a Flood Management Area except as otherwise specified in i. Rule 8.5.1.4 D1 to D5; and ii. Rule 8.5.1.5 NC1 to NC6 and NC8. Relevant Standards Nil <i>Matters of Discretion for imposing conditions: a. Rule 8.7.4 and , b. where relevant, Rules 8.7.5 – 8.7.11.</i> <i>Matters of discretion for granting/declining consent and imposing conditions: Rule 8.8.7.</i>	N/A	
	RD5 Subdivision of any site (other than an allotment to provide for a network utility) located within the following corridors: a. 37 metres of the centre line of a 220kV National Grid transmission line as shown on planning maps; or b. 32 metres of the centre line of a 66kV or 110kV National Grid transmission line as shown on planning maps. Except as otherwise specified in Rules 8.5.1.4 or 8.5.1.5. Relevant Standards a. A building platform for the principal building shall be identified on each allotment that is: i. Greater than 12 metres from the centre line of a 220kV or 110kV National grid transmission line and greater than 12 metres from an associated support structure; or ii. Greater than 10 metres from the centre line of a 66kV national grid transmission line and	N/A	

Chapter	Provision	Comment	Activity Status
	greater than 10 metres from an associated support structure		
	<i>Matters of Discretion for imposing conditions: a. Rule 8.7.4 and, b. where relevant, Rules 8.7.5 – 8.7.11.</i> <i>Matters of discretion for granting/declining consent and imposing conditions: Rule 8.8.6.i.</i>		
	RD6 Subdivision of any site (other than an allotment to provide for a network utility) located within the following corridors: a. 32 metres of the centre line of a 66kV electricity distribution line as shown on b. 24 metres of the centre line of a 33kV electricity distribution line as shown on planning maps. Except as otherwise specified in Rules 8.5.1.4 or 8.5.1.5 Relevant Standards a. A building platform for the principal building shall be identified on each allotment that is: i. Greater than 12 metres from the centre line of a 66kV National grid transmission line and greater than 12 metres from an associated support structure; or ii. Greater than 5 metres from the centre line of a 33kV National grid transmission line and greater than 10 metres from an associated support structure <i>Matters of Discretion for imposing conditions: a. Rule 8.7.4, and b. where relevant Rules 8.7.5 - 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: Rule 8.8.6.i.</i>		

Chapter	Provision	Comment	Activity Status
	RD7 In the Rural Banks Peninsula Zone, subdivision of any site creating more than one residential allotment with a net site area between 1ha and 4ha (plus balance) that is otherwise in accordance with Rule 8.5.1.2 C7. Relevant Standard a. The standard in Rule 8.5.1.2 C7, other than Standard c. <i>Matters of Discretion for imposing conditions: a. Rule 8.7.4, 8.7.6 and 8.7.7</i> <i>Matters of discretion for granting/declining consent and imposing conditions: Rule 8.8.13.</i>	N/A	
	RD8 Subdivision within a Site of Ecological Significance listed in Schedule A of Appendix 9.1.6.1 (except in the Avon River Precinct Te Papa Otakaro Zone) Relevant Standard a. Subdivision shall not create any allotment where a permitted activity cannot occur outside the Site of Ecological Significance, unless the sole purpose of that allotment is to protect that Site of Ecological Significance. b. Any land to be set aside for the preservation of conservation values shall have a consent notice registered against the title requiring the continual preservation of the values on the allotment. <i>Matters of Discretion for imposing conditions: Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12. and b. for rural zones, Rule 8.8.13 also applies.</i>	N/A	

Chapter	Provision	Comment	Activity Status
	RD9 Subdivision of land which includes a Significant Tree listed in Appendix 9.4.7.1. Relevant Standards a. No new allotment boundary shall be within the dripline of a significant tree. <i>Matters of Discretion for imposing conditions: Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12. and b. for rural zones, Rule 8.8.13 also applies.</i>	N/A	
	RD10 Any subdivision of land which includes a heritage item or heritage setting listed in Appendix 9.3.7.2. Relevant Standards a. This rule shall not apply where the Council has granted consent for the removal of heritage item or heritage setting b. Where there is an application for subdivision at the same time as an application for the removal of the heritage item or heritage setting, the Council will not grant the subdivision consent prior to considering the application for removal Advice Note: 1. There are further obligations under the Heritage New Zealand Pouhere Taonga Act 2014 that must be met before work can commence. <i>Matters of Discretion for imposing conditions: a. Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12. and b. for rural zones, Rule 8.8.13 also applies.</i>	N/A	

Chapter	Provision	Comment	Activity Status
	RD11 a. Subdivision of land within, or partly within: i. a Rural Amenity Landscape (other than Banks Peninsula) identified in Appendix 9.2.9.2.4; ii. an Outstanding Natural Landscape identified in Appendix 9.2.9.2.2; iii. an Outstanding Natural Feature identified in Appendix 9.2.9.2.1; iv. an Area of Outstanding Natural Character in the Coastal Environment identified in Appendix 9.2.9.2.7; v. an Area of High and Very High Natural Character in the Coastal Environment identified in Appendix 9.2.9.2.8; vi. an Important Ridgeline identified on the planning maps; or vii. a Site of Ngai Tahu Cultural Significance identified in Schedule 9.5.6.1 b. Any application arising from Rule 8.5.1.3 RD11 (a)(vii) need not be publicly notified, but shall be limited notified to the relevant runanga, and Heritage New Zealand Pouhere Taonga in respect of sites on the Heritage New Zealand List / Rarangi Korero, (absent their written approval). Relevant Standards a. An identified building area shall be identified on any allotment created. <i>Matters of Discretion for imposing conditions: Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12. and b. for rural zones, Rule 8.8.13 also applies.</i>	N/A	
	RD12 Subdivision within the Central City for the protection of: a. a Significant Feature identified in Appendix 9.2.9.2.3, or	N/A	

Chapter	Provision	Comment	Activity Status
	b. a heritage item or heritage setting listed in Appendix 9.3.7.2 Relevant Standards a. Where any allotment is created for the sole purpose of enabling the protection of land within a Significant Feature, or protecting a heritage item and associated heritage setting, and no additional building is to be erected on that allotment, a new allotment may be created where the allotment need not comply with the minimum net site area for the relevant zone provided: i. a consent notice is registered against the relevant certificate(s) of title stating that no additional residential unit is to be erected on the allotment being created for protection; and ii. the other allotment must be capable of containing a permitted activity (unless resource consent for any non-compliance has been obtained). <i>Matters of Discretion for imposing conditions: Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i> <i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12.</i>		
	RD13 Subdivision of land in the Avon River Precinct Te Papa Otakaro Zone and within or partly within: i. A Significant Feature identified in Appendix 9.2.9.2.3; or ii. a Site of Ecological Significance listed in Schedule A of Appendix 9.1.6.1. Relevant Standard Nil, <i>Matters of Discretion for imposing conditions: Rule 8.7.4, and b. Where relevant Rules 8.7.5 – 8.7.11</i>	N/A	

Chapter	Provision	Comment	Activity Status
	<i>Matters of discretion for granting/declining consent and imposing conditions: a. Rule 8.8.12.</i>		
	RD14 Subdivision in the Industrial General Zone (North Belfast) which creates an allotment with a new boundary less than 10 metres from: a) the surveyed point of the spring identified on the outline development plan in Appendix 16.8.5; or b) any spring not identified on the outline development plan in Appendix 16.8.5, and which is not within Lots 5, 6 and 7 DP 71209, in which case the setback shall be measured from the head or heads of the spring where visible.	N/A	
	RD15 Within the Meadowlands Exemplar Overlay in the Residential New neighbourhood (North Halswell) Zone ...	N/A	
	RD16 Cancellation or variation of a consent notice (or condition of within a consent notice) that was created as a result of a subdivision to protect an identified tree or trees on an allotment, except as specified in Rule 8.5.1.4 D6. Advice Note: Rule 8.5.1.3 RD16 applies where a s224 certificate has issued. Cancelling or varying a consent notice prior to issue of an s224 certificate requires a change to the resource consent conditions and is a discretionary activity under the Act.	N/A	
	RD17 Within Areas 1, 2, 3, and 4 in Appendix 8.10.30 East Papanui Outline Development Plan: a. subdivision and land use activities, other than the following activities provided for by Rule 14.12.1.1 (to which Rule 14.12 shall continue to apply):	N/A	

Chapter	Provision	Comment	Activity Status
	i. P5 (home occupation) ii. P6 (Care of non-resident children) iii. P7 (Bed and breakfast) iv. P17 (Temporary lifting or moving of earthquake damaged buildings) v. P19 (market gardens, community gardens and garden allotments) and vi. P21 (limited to rural productive activities, other than new buildings or additions to existing buildings, which are permitted activities in the Rural Urban Fringe Zone) – Rule 17.5.1.1 Relevant Standard a. The subdivision and land use consent application shall be processed together. b. The joint subdivision and land consent application shall be accompanied by a Neighbourhood Plan which shall cover a minimum area of 4ha and address the matters set out at Rule 8.6.13 c. The joint subdivision and land use consent application shall be for a developable area of at least 6,000m² within the 4ha neighbourhood plan area. d. The joint subdivision and land use activities shall be in accordance with the development requirements in Appendix 8.10.30.D - e.		
8.5.1.4 Discretionary Activities	D1 Subdivision in a rural zone resulting in allotments that does not meet the minimum net site area standards in Rule 8.6.1, unless specified otherwise.	N/A	

Chapter	Provision	Comment	Activity Status
	D2 Any subdivision in the Specific Purpose (Golf Resort) zone – Whisper Creek Golf Resort that does not comply with a concept plan approved by the Council for that activity in accordance with Rule 13.9.5.1.3 RD6 Concept plans.	N/A	
	D3 Subdivision in the Open Space Coastal Zone	N/A	
	D4 Subdivision that does not meet any one or more of the relevant standards listed in 8.5.1.3 RD8, RD9, RD11, RD12 and RD14.	N/A	
	D5 a. Within the Meadowlands Exemplar Overlay in the Residential New Neighbourhood (North Halswell) Zone as shown on Planning Map 45, comprehensive subdivision and land use activities under Rule 8.5.1.3 RD15 for activities that do not comply with the activity standard Rule 8.5.1.3 RD15 (d)(i) b. The consent application shall not require the written approval of other persons and shall not be publicly notified. c. In determining whether to grant or decline consent and impose conditions, the Council will consider the matters in Rule 8.8.15 and any other relevant matter.	N/A	
	D6 Cancellation or variation of a consent notice (or condition within a consent notice) that was created as a result of a subdivision to protect an identified tree or trees on an allotment where the tree(s) is listed as 'exceptional' in Appendix 9.4.7.1.	N/A	
	D7 Within Areas 1, 2, 3 and 4 of the East Papanui Outline Development Plan in Appendix 8.10.30, subdivision and land use activities under Rule 8.5.1.3 RD17:		

Chapter	Provision	Comment	Activity Status
	i. That do not comply with one or more of the relevant Standards listed in Rule 8.5.1.3 RD17; or ii. That are not otherwise listed as restricted discretionary or discretionary activities.		
8.5.1.5 Activity Status tables - Non-complying activities	NC1 Subdivision in a residential zone (other than the Residential Medium Density Zone or Residential New Neighbourhood Zone) that does not meet the minimum net site area standards 8.6.1 or 8.6.2.	N/A	
	NC2 Subdivision that does not comply with any one or more of the relevant standards listed in Rule 8.5.1.3 RD5 or RD6.	N/A	
	NC3 Subdivision within the Lyttelton Port Influences Overlay, other than where a condition is proposed prohibiting noise sensitive activities on each allotment, to be complied with on a continuing basis, for the purpose of incorporation into a consent notice to be issued by the Council.	N/A	
	NC4 Subdivision in a rural zone resulting in an allotment with a minimum net site area of less than 4ha, except as specified in Rules 8.5.1.2 C7 or 8.5.1.3 RD7	N/A	
	NC5 Subdivision that does not meet any one or more of the standards at Rule 8.6.6(d)	N/A	
	NC6 In the Rural Waimakariri, Rural Templeton or Rural Quarry Zone, subdivision resulting in a new allotment or balance allotment located within 50 dB Ldn Air Noise Contour that does not meet the minimum net site area standards in Rule 8.6.1.	N/A	

Chapter	Provision	Comment	Activity Status
	NC7 In the Rural Port Hills Zone, subdivision that does not meet the minimum net site area standards in Rule 8.6.1.	N/A	
	NC8 Within the Meadowlands Exemplar Overlay in the Residential New Neighbourhood (North Halswell) Zone as shown on Planning Map 45, comprehensive subdivision and land use consent application for activities that are not otherwise listed as a restricted discretionary or discretionary activities, or any subdivision or land use activities that are not part of a comprehensive subdivision and land use activity.	N/A	

Chapter	Provision	Comment	Activity Status
Chapter 8.6 Activity Standards			
	8.6.1 Minimum net area and dimension - Allotments in the Residential Suburban, Residential Hills, Residential Large Lot, Open Space Metropolitan Facilities Zones shall have a minimum dimension of 16m x 18m. - Allotments in the Residential Suburban Density Transition and Open Space Metropolitan Facilities (Addington Racecourse and Rugby Park) Zones and within an Edge Housing Overlay identified in Appendix 13.14.6.1 within the Specific Purpose (Ōtākaro Avon River Corridor) Zone shall have a minimum dimension of 13m x 16m. - Allotments in the Residential Medium Density Zone shall either have a minimum dimension of 10m; or the application shall include a plan demonstrating that a permitted residential unit can be located on any new allotment that has a minimum dimension less than 10m, including in relation to recession planes, unit size, access and parking, outdoor living space, and floor level requirements. - Allotments in any zone except the Residential New Neighbourhood Zone shall meet the minimum net site area and other requirements specified at Tables 1 - 5 to this rule. - Allotments in the Residential New Neighbourhoods Zone shall meet the applicable standards at 8.6.11. - The minimum net site area specified in Tables 1-6 may be reduced by the area within the dripline of a significant tree or group of trees listed in Appendix 9.4.7.1, except that the minimum net site area shall not be reduced to an area less than 200m². - Allotments on a site listed in Appendix 13.14.6.2, and which are in private ownership, shall have the minimum dimension applying to the zoning specified as the Alternative Zone in Appendix 13.14.6.2.	Proposed Lot 3 does not meet the minimum site area for the Industrial Heavy Zone of 4ha when not connected to septic wastewater servicing.	

Table 1. Minimum net site area – residential zones

Zone	Minimum net site area
Residential Suburban	450m ²
Residential Suburban Heathcote Village	2000m ²
Residential Suburban Existing Rural Hamlet	2000m ²
Residential Suburban (Corner Henderson's and Sparks Road)	1 ha
Residential Suburban Density Transition	330m ²
Residential Medium Density	200m ²
Residential Banks Peninsula	400m ²
Prestons Retirement Village Overlay	
Residential Hills	650m ²
Residential Large Lot	1500m ²
Residential Small Settlement	1000m ²
Residential Small Settlement Kainga Overlay Area 1 and 2	450m ²
Residential Small Settlement (Takamatua)	1500m ²
Residential Banks Peninsula Zone – Diamond Harbour Density Overlay	600m ²
Papakianga	a. Maori Land – no minimum

Chapter**Provision****Comment****Activity Status**

	b. Other Land – as applies to Rural Banks Peninsula Zone
Residential Visitor accommodation	a. Kilmarnock, 197 Lincoln Road, 15 Sioux Avenue – 200m ² b. 456 Papanui Road – 330m ² c. 14 Henry Wigram Drive and 110 Marshlands Road – 450m ²
Accommodation and community facility overlay	a. land zoned Residential Medium Density on either Planning Map 31 or 32 – 200m ² b. Land zoned Residential Suburban on either Planning Map 31 or 32 – 450m ²
Residential Central City Zone	a. All allotments shall have a minimum net site area that meets the minimum

Chapter**Provision****Comment****Activity Status**

	requirement in Rule 14.6.2.11, or b. as approved through land use consent.
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Table 2. Minimum net site area – commercial and industrial zones

Table 3. Minimum net site area – open space zones

Table 4. Minimum net site area – specific purpose zones

Table 5. Minimum net site area – rural zones

8.6.2 Allotments with existing or proposed buildings

- a. Where an allotment is to be created around an existing building (that has been constructed to the extent that its exterior is fully closed in), or a proposed building (where the subdivision consent is to be issued at the same time as, or after, the building consent for that building is issued):
- the provisions of Rule 8.3.3.1 do not apply to that allotment; and
 - the existing or proposed building(s) shall either comply with all relevant standards for a permitted activity (except site density standards) in relation to the proposed allotment boundaries, or have been approved through a resource consent in relation to any standards that are not complied with; and
 - no allotment shall be less than the minimum net site area specified in Table 3 to this rule.

No minimum for Industrial Heavy Zone.

- b. Where a. above applies and a building is not yet constructed, the subdivision consent holder shall be required to erect the building before obtaining a certificate under section 224 of the Resource Management Act 1991, and the subdivision consent shall have attached to it a condition to that effect.

Table 6. Allotment with existing or proposed buildings

	Zone	Minimum net site area
a.	Residential Suburban Zone (except as provided for below)	400m ²
b.	Residential Suburban Density Transition Zone (except as provided for below)	300m ²
c.	Allotments for comprehensive developments provided through enhanced development mechanism (Chapter 14, Rule 14.13) or the Community housing redevelopment mechanism (Chapter 14, Rule 14.14.	No minimum
d.	Allotments for residential units which have been converted into two residential units in compliance with or the subject of land-use consent under Chapter 14	No minimum
e.	Allotments for a residential unit where a family flat has been converted into a separate residential unit in compliance with or the subject of land-use consent under Chapter 14	No minimum
f.	Allotment for each residential unit where two residential units replace a single residential unit in compliance with or the	No minimum

Chapter**Provision****Comment****Activity Status**

	subject of land-use consent under Chapter 14	
g.	Allotments for a residential unit where an elderly person's housing unit has been converted to a separate residential unit that may be occupied by any person(s) in compliance with Chapter 14	No minimum
h.	Allotments for a residential unit which is an older person's housing unit or is part of a multi-unit residential complex, retirement village, or a social housing complex, within the Residential Suburban or Residential Suburban Density Transition Zones.	No minimum
i.	Residential Medium Density Zone and Residential New Neighbourhood Zone	No minimum
j.	Industrial General, Industrial Heavy, Industrial Park, Commercial Office, Commercial Core, Commercial Local, Commercial Banks Peninsula, Commercial Mixed use and Commercial Retail Park Zones	No minimum
k.	Specific Purpose (Airport) Zone	No minimum
l.	Specific Purpose (Wigram) Zone	No minimum
m.	Any zone within the Central City	No minimum

8.6.3 Access

The proposed ROW to Lot 1 does not comply

Chapter	Provision	Comment	Activity Status
	a. All sites shall have access which is able to allow vehicles to pass to and from a formed road, and such access shall be in accordance with Appendix 8.10.2 to this chapter and the standards set out in Chapter 7. b. Access shall not be to a state highway, limited access road or across a rail line.	with the standards in Chapter 7 related to the width of the ROW.	
	8.6.4 Roads a. All roads shall be laid out, constructed and vested in accordance with the standards set out in Appendix 8.10.3, and in Chapter 7, except where alternative standards are set out in an outline development plan. b. In the Industrial Park Zone (Tait Campus) the subdivision shall be in accordance with the provisions of the outline development plan shown in Chapter 16 Appendix 16.8.9 and specific road and access requirements as follows: i. There shall be two main vehicle access points to the Industrial Park zoned part of the site. These access points shall be located on Wooldridge Road as indicated in Chapter 16 Appendix 16.8.9; ii. Prior to the creation of vehicle access from the site to Stanleys Road, giveway markings on the Stanleys Road approach to its intersection with Harewood Road shall be provided; iii. Any access from Stanleys Road shall be in the locations marked on the outline development plan in Appendix 16.8.9 as 'Secondary access'; iv. Within 6 months of access being established to Stanleys Road, a left turn lane shall be provided on the Stanleys Road approach to the Stanleys / Harewood Road intersection;	N/A	

Chapter	Provision	Comment	Activity Status
	v. Any subdivision with access to Stanleys Road shall include a footpath along the road frontage with Stanleys Road linking the site with Wairakei Road; vi. All work associated with design and construction of vehicle access to the zone, intersection works, internal roads and footpaths within the zone, and a footpath along the road frontage of Stanleys Road carried out at the cost of the developer or their successor/s in title; vii. A shared cycle way and footpath of minimum 2.5 metre width from Wooldridge Road to Stanleys Road shall be provided, as marked on the outline development plan in Appendix 16.8.9 as 'Public shared walk and cycle connection', connecting with pedestrian and cycle facilities adjoining the zone; viii. Any pedestrian and cycle way through the site shall be illuminated to a level between 2 and 10 lux; and ix. Any roads or accessways shall be setback from trees identified on the outline development plan in Appendix 16.8.9 as 'Existing trees not to be affected by road layout' by a distance of at least 10 metres.		
	c. In the Industrial General Zone (Stanleys Road) shown in Chapter 16 Appendix 16.8.9 a footpath along the Industrial General Zone road frontage shall be provided.		
	d. In the Industrial General Zone bound by Deans Avenue and the railway line, any allotments shall only have access from Lester Lane.		
	e. In the Industrial General Zone (Trents Road), subdivision shall be in accordance with the provisions of the outline development plan shown in Chapter 16 Appendix 16.8.6 and specific road and access requirements as follows:		

Chapter	Provision	Comment	Activity Status
	i. Access from Trents Road shall be provided at the two vehicle access points defined on the outline development plan shown in Chapter 16 Appendix 16.8.6, comprising: a. a northern road connection designed, and with signage, to limit its use to vehicles entering the zone (as shown on the outline development plan in Appendix 16.8.6); b. a southern road connection designed, and with signage, to limit its use to vehicles exiting the zone (as shown on the outline development plan in Appendix 16.8.6); ii. Access from Main South Road shall be provided at the one road connection shown on the outline development plan shown in Chapter 16 Appendix 16.8.6, which shall be designed to restrict its use to light vehicles, and designed and signage displayed to restrict vehicle movements to left entry into the zone and left exit out of the zone as shown on the outline development plan in Appendix 16.8.6; and iii. An internal road shall be provided as shown on the outline development plan in Chapter 16 Appendix 16.8.6 as 'internal roading/ access way layout', including a footpath along one side of the internal road.		
	f. In the Industrial Park Zone (Wairakei Road) subdivision shall be in accordance with the provisions of the outline development plan shown in Chapter 16 Appendix 16.8.14 and specific road and access requirements as follows: i. Any new road within the Industrial Park Zone (Wairakei Road) shall only intersect with Wairakei Road, Stanleys Road and/or Wooldridge Road at the locations shown on the outline development plan in Appendix 16.8.14 as "Road access point – Proposed controlled intersection".		

Chapter**Provision****Comment****Activity Status**

- ii. Any subdivision of allotments that the "Collector road" runs through, as shown on the outline development plan in Appendix 16.8.14, shall incorporate a collector road that follows that alignment. Provision shall be made for a shared cycle way and footpath of a minimum width of 2.5m parallel to the "Collector road", which shall be illuminated to a level between 2 and 10 lux.
- iii. Any subdivision of Lot 2, DP 54992 (580 Russley Road) and Lot 1, DP 54992 (570 Russley Road) shall incorporate a local road that follows the alignment of "Local Road" as shown on the outline development plan in Appendix 16.8.14.

8.6.5 Service lanes, cycle ways and pedestrian access ways

N/A

a. Service lanes, cycle ways and pedestrian access ways shall be laid out and vested in accordance with the standards set out in Table 7 below.

		Minimum legal width (m)	Minimum Formed Width (m)	Turning Area	Passing Area	Sealed and Drained	Height (m)
a.	Service lanes	6.0	4.0	Only where the service lane has a blind end	No	Yes	4.5

Chapter**Provision****Comment****Activity Status**

b.	Cycle ways and pedestrian access ways (public)	8.0	2.5	N/A	N/A	Yes	3.5
c.	Pedestrian access way (private)	1.5	1.5	N/A	N/A	Yes	3.5

8.6.6 Esplanade reserve, strip or additional land

N/A

- a. Esplanade reserves and strips shall be provided in accordance with Appendix 8.10.1.
- b. Within Banks Peninsula, where any allotment of less than 4 hectares is created, an esplanade reserve 20 metres in width shall be set aside from that allotment along the mark of mean high water springs of the sea, and along the bank of any river or along the margin of any lake.

Chapter	Provision	Comment	Activity Status
	c. In accordance with section 237A of the Act, any part of the land contained in the title to which that Section applies, forming the bed of a river or within the coastal marine area, shall vest in the Council or the Crown as appropriate. d. An esplanade reserve or esplanade strip 20 metres in width shall be required for any subdivision along the margins of Wairewa and Te Waihora.		
	8.6.7 Water supply a. All allotments shall be provided with the ability to connect to a safe potable water supply. b. Provision shall be made for sufficient water supply and access to water supplies for firefighting consistent with the New Zealand Fire Service Firefighting Water Supplies Code of Practice (SNZ PAS:4509:2008), except where the allotment is for a utility, road, reserve or access purposes.	Does not comply. Proposed Lots 1,2 and 3 will not be serviced.	
	8.6.8 Wastewater disposal a. All allotments shall be provided with the ability to connect to a wastewater system. b. A valid certificate, issued in accordance with Rule 8.4.1.3, is held which certifies that the wastewater system has adequate capacity for the respective potential land uses on all proposed allotments, except where a relevant outline development plan shows that adequate wastewater capacity is available. c. Where a reticulated sewer is available, and discharge is accepted in the Council's network, each new allotment shall be provided with a	Does not comply. Proposed Lots 1,2 and 3 will not be serviced.	

Chapter	Provision	Comment	Activity Status
	piped outfall connection laid at least 600mm into the net site area of the allotment. d. Where a reticulated sewer is not available, all allotments shall be provided with a means of disposing of sanitary sewage within the net site area of the allotment. e. In the case of the Meadowlands Exemplar Overlay in the Residential New Neighbourhood Zone (North Halswell) Zone, the outfall for wastewater disposal shall be to the Pump Station 42 catchment until the South East Halswell pressure sewer network is available, at which time these sites shall be connected to the South East Halswell pressure sewer network. Advice note: The certification process at clause (b) is described in Rule 8.4.1.3.		
	8.6.9 Stormwater disposal a. All allotments shall be provided with a means for the management of collected surface water from all impervious surfaces. Where discharge is accepted in the Council's network, each new allotment shall be provided with a piped outfall laid at least 600mm into the net site area of the allotment.	Does not comply. Proposed Lots 1,2 and 3 will not be serviced.	
	8.6.10 Additional standards for South West Hornby a. Any subdivision within the area shown as "rural wastewater irrigation area" on the outline development plan at Chapter 16 Appendix 16.8.8 for the Industrial Heavy Zone (South West Hornby) shall not occur until the following works have been undertaken:	Applies. Does not meet 8.6.10 a. as the subdivision is occurring before the construction of the full southern spine road.	

Chapter	Provision	Comment	Activity Status
	i. the construction and opening for traffic of the full southern spine road between Main South Road and Shands Road (marked as 'C') on the outline development plan; and ii. the commencement of the physical construction works for capacity upgrades at both the following intersections - 1. the intersection of the southern spine road and Shands Road (marked as 'A' on the outline development plan); and 2. the intersection of the northern spine road and Shands Road (marked as 'B' on the outline development plan).		
	b. Any subdivision within the Industrial Heavy Zone (South West Hornby) as identified on the outline development plan in Chapter 16 Appendix 16.8.8, south west of the area identified as "rural wastewater irrigation area", shall not occur until the following works have been undertaken: i. the commencement of the physical construction works for the traffic signalised intersection of Shands Road and the southern spine road (marked as 'A' on the outline development plan).		
	c. Any subdivision of more than 15 hectares (excluding roads) within the Industrial Heavy Zone (South West Hornby) as identified in Chapter 16 Appendix 16.8.8, south west of the area identified as "rural wastewater irrigation area", shall not occur until physical construction works of the Christchurch Southern Motorway have commenced.		

Chapter	Provision	Comment	Activity Status
	8.6.11 Additional standards for the Residential New Neighbourhood Zone		
	8.6.12 Radiocommunications		
	8.6.13 Neighbourhood plan - Meadowlands Exemplar Overlay (North Halswell)		
	8.6.14 Industrial General Zone (North Belfast) - Wāhi taonga, wāhi tapu and urupā		
Overall, the proposal is assessed as a Restricted Discretionary Activity.			

Assessment of Transport Rules in Christchurch District Plan

7.4.2 Activity Status Tables

Chapter	Provision	Comment	Activity Status
Chapter 7: Transport – All zones outside the Central City			
7.4.2.1	Permitted Activities		
	a. The activities listed below are permitted activities if they meet the activity specific standards set out in this table and the standards in Rule 7.4.3. b. Activities may also be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in Rules 7.4.2.2, 7.4.2.3, 7.4.2.4, 7.4.2.5, and 7.4.2.6 below.		
	P1	Any activity that meets Rule 7.4.3.1 - Minimum number and dimensions of car parking spaces required.	
	P2	Any activity that meets Rule 7.4.3.2 - Minimum number of cycle parking facilities required.	
	P3	Any activity that meets Rule 7.4.3.3 - Minimum number of loading spaces required.	
	P4	Any activity that meets Rule 7.4.3.4 - Manoeuvring for parking areas and loading areas.	
	P5	Any activity that meets Rule 7.4.3.5 - Gradient of parking areas and loading areas.	
	P6	Any activity that meets Rule 7.4.3.6 - Design of parking areas and loading areas.	
	P7	Any activity that meets Rule 7.4.3.7 - Access design.	
	P8	Any activity that meets Rule 7.4.3.8 - Vehicle crossings.	
	P9	Any activity that meets Rule 7.4.3.9 - Location of buildings and access in relation to road/rail level crossings.	
	P10	Any activity that does not require resource consent in accordance with Rule 7.4.3.10 - High trip generators.	

P11 Only until 30 April 2018, in the Rural Quarry Zone, heavy vehicle trips for any quarrying activity that do not exceed the average daily heavy vehicle trip generation that existed for the 12 month period prior to 27 August 2014.

Advice note:

P11 is a temporary measure to allow existing activities in the Rural Quarry Zone to continue while they seek the necessary consents required by this chapter. The average daily heavy trip generation relates to, and shall be calculated for, each calendar month.

P12 The operation or maintenance of transport infrastructure (including ancillary offices and car parking areas) and freight handling activities in the Transport Zone.

P13 New transport infrastructure and additions to existing transport infrastructure in the Transport Zone (excluding activities or structures listed in Rule 7.4.2.1 P15) and new freight handling activities.

P14 Public transport facilities (including any office or retail activity ancillary to a public transport facility), public amenities and landscaping in the Transport Zone.

P15 All public artwork, street furniture, community markets, cultural activities or community fund-raising events within road reserve in the Transport Zone or South Frame Pedestrian Precinct shown on the planning maps.

P16 Any verandas, balconies or floor area of a building overhanging road reserve within the Transport Zone.

P17

- a. Outside the Central City, any activity in the Transport Zone (except for sensitive activities within 50m of a railway line) permitted in the adjoining zone.
- b. For the avoidance of doubt, any activity permitted in the Industrial General Zone, shall be a permitted activity on 99 Ensors Road (Sec 1 SO 448367).

Advice note:

For the purposes of this rule, where the Transport Zone adjoins two different zones, the provisions of the adjoining zone only apply up to the centre of the Transport Zone in that location.

P18 Construction and/or reconstruction of Selkirk Place, Hawkins Road, Hills Road and Prestons Road within the New Neighbourhood Zone (Highfield).

P19 In Central City - Any activity that complies with Rule 7.4.3.11 - Vehicle access to sites fronting more than one street.

P20 In Central City - Any activity that complies with Rule 7.4.3.12 - Central City lane formation.

P21 Any construction or reconstruction of a roadway within the Central City.

- a. Footpaths on both sides of the road shall be provided, unless the legal width of the road is less than 10 metres or the road is designed as a shared space street or is a Central City lane

Advice note:

Road design standards (including road and footpath widths) for new and existing roads are controlled by the Council's Infrastructure Design Standards.

7.4.2.2 Controlled activities – Outside the Central City

- a. The activities listed below are controlled activities.
 - b. Discretion to impose conditions is restricted to the matters of control set out in the following table, and as set out for those matters in Rule 7.4.4.
-

C1

a. Outside the Central City any activity that requires resource consent in accordance with Rule 7.4.3.10 – High trip generators, and where:

- i. the land use activity is otherwise permitted in the zone where it is located; and
- ii. the activity does not exceed the thresholds in Table 7.4.4.18.1; and
- iii. direct vehicle access is not obtained from a state highway, major arterial road, or crosses a railway line; and
- iv. for a quarrying activity and/or an ancillary aggregates-processing activity in the Rural Quarry Zone, where a vehicle access to the activity is located further than 250m from a residential unit.

Advice note:

1. Refer to the Rule 7.4.3.10 for provisions regarding notification.

Matters over which Council reserves its control

Rule 7.4.4.18 – High trip generators.

C2

- a. Outside the Central City, any activity in the Transport Zone (except for sensitive activities) that is a controlled activity in the adjoining zone.
- b. For the purpose of this rule, where the Transport Zone adjoins two different zones, the provisions of the adjoining zone only apply up to the centre of the Transport Zone in that location.

Matters over which Council reserves its control

The applicable matters of control for the adjoining zone; and

Rule 7.4.4.19 – Transport infrastructure in the Transport Zone.

7.4.2.3 Restricted discretionary activities

- a. The activities listed below are restricted discretionary activities.
- b. Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table and as set out for those matters in 7.4.4.

RD1 Any activity that does not meet any one or more of the standards in Rule 7.4.3; or any activity that requires resource consent in accordance with Rule 7.4.3.10 - High trip generators except where otherwise provided for by Rule 7.4.2.2 C1.

Advice note:

Refer to the relevant standards for provisions regarding notification.

Applies. The activity does not comply with table 7.5.7.1 as the width of the ROW is 3 metres for proposed lot 1. 7.5.7.1 relates to standard 7.4.3.7 – Access design.	Restricted Discretionary
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RD2 Activities P13, P14 and P18 listed in Rule 7.4.2.1, that do not meet any one or more of the activity specific standards

RD3 Any formation of an unformed legal road.

RD4

- a. Outside the Central City, any activity (except for sensitive activities) in the Transport Zone that is a restricted discretionary activity in the adjoining zone.
- b. For the purpose of this rule, where the Transport Zone adjoins two different zones, the provisions of the adjoining zone only apply up to the centre of the Transport Zone in that location.
- c. For the avoidance of doubt, any restricted discretionary activity in the Industrial General Zone, shall be a restricted discretionary activity on 99 Ensors Road (Sec 1 SO 448367).

RD5 Activity P17 listed in Rule 7.4.2.1, that does not meet any one or more of the activity specific standards.

RD6 In the Central City, any site temporarily used for car parking areas, where car parking area is the primary activity on that site until 30 April 2018.

RD7 In the Central City, any permitted activity that does not comply with the activity specific standard in Rule 7.4.2.1 for P21.

RD8 In Central City, any permanent car parking buildings or parking lots where car parking is the primary activity on that site.

7.4.2.4 Discretionary activities

- a. The activities listed below are discretionary activities

D1 Any activity in the Transport Zone not provided for as a permitted, controlled, restricted discretionary, non-complying or prohibited activity.

7.4.2.5 Non-complying activities

- a. The activities listed below are non-complying activities.

NC1

- a. Except where provided for in P12 – P16 and P18 listed in Rule 7.4.2.1, or in RD2 or RD3 listed in Rule 7.4.2.3, any activity in the Transport Zone that is a non-complying activity in the adjoining zone.
- b. For the purpose of this rule, where the Transport Zone adjoins two different zones, the provisions of the adjoining zone only apply up to the centre of the Transport Zone in that location.

NC2

- a. Any building or structure in the Transport Zone (except transport infrastructure and utilities that comply with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001)) that exceeds 2.5 metres in height within:
 - i. 12 metres of the centre line of a 110kV or a 220kV National Grid transmission line; and/or
 - ii. 10 metres of the centre line of a 66kV National Grid transmission line.
-

NC3 Any activity within the Commercial Central City Business Zone (Core) that does not comply with 7.4.3.1 b.i..

7.4.2.6 Prohibited activities

- a. There are no prohibited activities.
-

Overall, the proposal has been assessed as a

7.4.2 Standards - Transport (All zones outside the Specific Purpose (Lyttelton Port) Zone)

Standard	Comment	Activity Status
7.4.3.1. Minimum and maximum number and dimensions of car parking spaces required.		
a. Outside of the Central City:		
Applicable to	Standard	Council's Discretion
i. Any car parking spaces available to the general public.	Car parking spaces shall be provided with the minimum dimensions in Table 7.5.1.3 in Appendix 7.5.1.	Rule 7.4.4.1 - Parking space dimensions.
Any activity: a. where standard car parking spaces are provided (except ii. residential developments with less than 3 residential units); or b. containing buildings with a GFA of more than 2,500m ² .	At least the minimum number of mobility parking spaces in accordance with Table 7.5.1.2 in Appendix 7.5.1 shall be provided on the same site as the activity.	Rule 7.4.4.2 - Mobility parking spaces.
Any activity at the Yaldhurst Recreation and Sports Facility at 466-482 Yaldhurst Road, as shown in Appendix 18.11.4: iii.	The minimum number of car parking spaces shall be 67% of the requirements set out in Appendix 7.5.1 Table 7.5.1.1, and shall be provided on the same site as the activity; Car parking spaces shall comply with the relevant standards in Rules 7.4.2 and 7.4.3 except as specified in (a) above; and The maximum number of car parking spaces shall be 650. If the maximum number of car parking spaces is	Rule 7.4.4.1 - Minimum number of car parking spaces required. Rule 18.10.27 - Additional matters for the Yaldhurst

Standard		Comment	Activity Status
exceeded, the High Trip Generator Rules 7.4.3.10(xii) and 7.4.4.19.1 (I) shall apply.		Recreation and Sports Facility. Rule 7.4.4.19 - High Trip Generators.	
b. Within the Central City			
Applicable to	Standard	Council's Discretion	
i. Any activity (except within the Residential Central City Zone)	Any car parking and associated manoeuvre area shall be no greater than 50% of the GLFA of the buildings on the site.	Rule 7.4.4.27 – Car parking areas	
ii. Any car parking spaces provided, except residential activities.	Any car parking spaces provided shall have the minimum dimensions in Appendix 7.5.1, Table 7.5.1.3.	Rule 7.4.4.2 – Parking space dimensions	
iii. Any activity other than in respect of a residential activities or b visitor accommodation for up to ten guests where car parking spaces are provided, or containing buildings with GFA of more than 2,500m².	The minimum number of mobility parking spaces in accordance with Appendix 7.5.1 shall be provided on the same site as the activity.	Rule 7.4.4.3 – Mobility parking spaces	
Advice note:			

Standard**Comment****Activity Status**

2. For the avoidance of doubt there is no on-site carparking required within the Central City. There is also no requirement to provide mobility parking space for residential activities or for the visitor accommodation activities specified in 7.4.3.1 (b) (iii) above within the Central City.

7.4.3.2 Minimum number of cycle parking facilities required

Applicable to	Standard	The Council's discretion shall be limited to:
a. Any activity	At least the minimum amount of cycle parking facilities in accordance with Appendix 7.5.2 shall be provided on the same site as the activity.	Rule 7.4.4.4 - Minimum number of cycle parking facilities.

7.4.3.3 Minimum number of loading spaces required

Applicable to	Standard	The Council's discretion shall be limited to:
a. Any activity where standard car parks are provided	At least the minimum amount of loading spaces in accordance with Appendix 7.5.3 shall be provided on the same site as the activity.	Rule 7.4.4.5 - Minimum number of loading spaces required

7.4.3.4 Manoeuvring for parking and loading areas

Applicable to	Standard	The Council's discretion shall be limited to:

Standard			Comment	Activity Status
a	Any activity with a vehicle access.	On-site manoeuvring area shall be provided in accordance with Appendix 7.5.6.	Rule 7.4.4.6 - Manoeuvring for parking areas and loading areas	
b	Any activity with a vehicle access to: 1. a major arterial road or minor arterial road; or 2. a collector road where three or more car parking spaces are provided on site; or 3. six or more car parking spaces; or 4. a heavy vehicle bay required by Rule 7.4.3.3; or 5. a local street or local distributor street within the Central City core; or 6. a main distributor street within the Central City where the vehicle access serves three or more parking spaces; or 7. a local street outside the Central City core and the vehicle access serves six or more parking spaces.	On-site manoeuvring area shall be provided to ensure that a vehicle can manoeuvre in a forward gear on to and off a site.	Rule 7.4.4.6 - Manoeuvring for parking areas and loading areas	

7.4.3.5 Gradient of parking and loading areas

Applicable to:	Standard	Council's discretion
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Standard**Comment****Activity Status**

a. all non-residential activities with vehicle access.	i. gradient of surfaces at 90 degrees to the angle of parking (i.e. parking stall width)	Gradient shall be $\leq 1:16$ (6.26%).	Rule 7.4.4.7 - Gradient of parking areas and loading areas
	ii. gradient of surfaces parallel to the angle of parking (i.e. parking stall length)	Gradient shall be $\leq 1:20$ (5%).	
	iii. gradient of mobility parking spaces	Gradient shall be $\leq 1:50$ (2%).	

7.4.3.6 Design of parking areas and loading areas

Applicable to		Standard	Council's discretion
a	All non-residential activities with parking areas and/or loading areas used during hours of darkness.	Lighting of parking areas and loading areas shall be maintained at a minimum level of two lux, with high uniformity, during the hours of operation.	Rule 7.4.4.8 - Illumination of parking areas and loading areas
b	Any urban activity, except: i. residential activities containing less than three car parking spaces; or ii. sites where access is obtained from an unsealed road; or iii. temporary activities and buildings.	The surface of all car parking areas, loading areas, and associated access areas shall be formed, sealed and drained and car parking spaces permanently marked.	Rule 7.4.4.9 - Surface of parking areas and loading areas

Standard**Comment****Activity Status****7.4.3.7 Access Design**

Applicable to	Standard	Council's Discretion
Any activity with vehicle access.	Access shall be provided in accordance with Appendix 7.5.7.	Rule 7.4.4.10 - Vehicle access design
Any activity providing 4 or more car parking spaces or residential units.	Queuing Spaces shall be provided in accordance with Appendix 7.5.8	Rule 7.4.4.11 - Queuing spaces
Outside the Central City, any vehicle access: to an urban road serving more than 15 car parking spaces or more than 10 heavy vehicle movements per day; and/or on a key pedestrian frontage.	Either an audio and visual method of warning pedestrians of the presence of vehicles or a visibility splay in accordance with Appendix 7.5.9 shall be provided. If any part of the access lies within 20m of a Residential Zone any audio method should not operate between 20:00 and 08:00 hours.	Rule 7.4.4.12 - Visibility splay
Within the Central City, any vehicle access to a road serving more than 15 car parking spaces or more than 10 heavy vehicle movements per day, where the site provides access onto any street within the core.	An audio and visual method of warning pedestrians of the presence of vehicles about to exit the access point shall be provided.	Rule 7.4.4.12 - Visibility splay
Within the Central City, any vehicle access to a road serving more than 15 car parking spaces or more than 10 heavy vehicle movements per day, in	Either an audio and visual method of warning pedestrians of the presence of vehicles about to exit the access point or a visibility splay in accordance with Appendix 7.5.9 – Visibility	Rule 7.4.4.12 - Visibility splay

Standard**Comment****Activity Status**

any other location not covered by clause d above.

splay, shall be provided. If any part of the access lies within 20 metres of a Residential Central City Zone any audio method should not operate between 20:00 and 08:00 hours, except when associated with an emergency service vehicle.

7.4.3.8 Vehicle Crossings

Applicable to	Standard	Council's Discretion
Any activity with a vehicle access to any road or service lane	A vehicle crossing shall be provided constructed from the property boundary to the edge of the carriageway / service lane.	Rule 7.4.4.13 - Vehicle crossing design
Any vehicle crossing on an arterial road or collector road with a speed limit 70 kilometres per hour or greater.	Vehicle crossing shall be provided in accordance with Appendix 7.5.10	Rule 7.4.4.13 - Vehicle crossing design
Any vehicle crossing to any land, building or part of a building located in a rural zone, on or in which rural produce is offered for sale by wholesale and/or retail.	Vehicle crossing shall be provided in accordance with Figure 14 in Appendix 7.5.10.	Rule 7.4.4.13 - Vehicle crossing design
Any vehicle crossing on a road with a speed limit 70 kilometres per hour or greater.	The minimum spacing to an adjacent vehicle crossing on the same side of the frontage road, shall be in accordance with Table 7.5.11.1 in Appendix 7.5.11.	Rule 7.4.4.14 - Minimum distance between vehicle crossings

Standard		Comment	Activity Status
Any activity with a vehicle crossing.	The maximum number of vehicle crossings shall be in accordance with Table 7.5.11.2 (outside the Central City) and Table 7.5.11.3 (within the Central City) in Appendix 7.5.11.	Rule 7.4.4.15 - Maximum number of vehicle crossings	
Any activity with a vehicle crossing.	The minimum distance between a vehicle crossing and an intersection shall be in accordance with the Table 7.5.11.4 (outside the Central City) and Table 7.5.11.5 (within the Central City) in Appendix 7.5.11.	Rule 7.4.4.16 - Minimum distance between vehicle crossings and intersections	
Any vehicle crossing on a rural road.	The minimum sight lines to vehicle crossings shall be provided in accordance with Figure 18 in Appendix 7.5.11.	Rule 7.4.4.17 - Sight lines at vehicle crossings	

7.4.3.9 Location of buildings and access in relation to road/rail level crossings

Applicable to	Standard	Council's Discretion
Any new road or access that crosses a railway line.	No new road or access shall cross a railway line.	Rule 7.4.4.18 - Location of buildings and access in relation to rail/road level crossings
All new road intersections located less than 30 metres from a rail level crossing limit line.	The road intersection shall be designed to give priority to rail movements at the level crossing through road traffic signals.	Rule 7.4.4.18 - Location of buildings and access in relation to rail/road level crossings
All new vehicle crossings located less than 30 metres from a rail level crossing limit line.	No new vehicle crossing shall be located less than 30 metres from a rail level crossing limit line unless the boundaries of a site do not enable the	Rule 7.4.4.18 - Location of buildings and access in relation to rail/road level crossings

Standard		Comment	Activity Status
	vehicle crossing to be more than 30 metres from a rail level crossing limit line.		
Any building located close to a level crossing not controlled by automated warning devices (such as alarms and/or barrier arms).	Buildings shall be located outside of the sight triangles in Appendix 7.5.13.	Rule 7.4.4.18 - Location of buildings and access in relation to rail/road level crossings	

7.4.3.10 High Trip Generators

a. This rule applies to activities located outside the Central City, and activities within the Central City that are not exempt from this rule under b. below, that exceed the following thresholds.

b. Within the Central City - Permitted activities² are exempt from this rule.

²Permitted Activities are those listed in the permitted activity tables in the zone chapters and are generally anticipated in the zones. For the purpose of this rule permitted activities must comply with the built form standards for the maximum building height for activity in the zone, any site coverage standards for the activity in the zone, and all the activity specific standards for the activity in the zone. Non-compliance with any other built form standards or being subject to an urban design assessment does not trigger the need to be subject to this rule.

Applicable to	RC under 7.4.2.2 C1 or 7.4.2.3 RDI required for activities with	Council's Discretion
Education Activities (Schools).	More than 150 Students	Rule 7.4.4.19 - High trip generators
Education Activities (Pre-School).	More than 50 Children	

Standard	Comment	Activity Status
Education Activities (Tertiary Education and Research Activities).	More than 250 FTE Students	
Health Care Facilities.	More than 500m2 GFA	
Industrial Activities (excluding Warehousing and Distribution Activities). High Technology Industrial Activities. Heavy Industrial Activities.	More than 5,000m2 GFA	
Industrial Activities (Warehousing and Distribution Activities).	More than 10,000m2 GFA	
Offices.	More than 1750m2 GFA	
Residential Activities.	More than 60 residential units	
Retail Activities (excluding factory shops, retail park zones, trade suppliers and food and beverage outlets).	More than 500m2 GLFA	
Retail Activities (factory shops, retail park zones, but excluding trade suppliers and food and beverage outlets).	More than 1000m2 GLFA	
Mixed use and other activities (not listed above), except where Rule 7.4.2.1 P11 or Rule 7.4.3.10(c)(xii) below applies	More than 50 vehicle trips per peak hour or 250 heavy vehicle trips per day (which ever is met first) 'Peak hour' are those hours between 15:00 and 19:00 hours on a weekday.	
Yaldhurst Recreation and Sports Facility at 466-482 Yaldhurst Road, as shown in	Resource consent under Rule 7.4.2.3 RD1 is required if:	

Standard	Comment	Activity Status
Appendix 18.11.4 (all activities within the site including existing, consented and proposed activities).	More than 650 vehicle trips per peak hour will be generated by all activities on the site; and/or More than 650 car parking spaces are to be provided on the site. 'Peak hour' is the continuous 60 minute period between 15:00 and 19:00 hours on a weekday when the greatest number of vehicle trips occurs.	
d. When resource consent under (c) is required:		
i. An Integrated Transport Assessment shall be undertaken for activities that are High Trip Generators (i.e. are controlled or restricted discretionary activities under Rule 7.4.2.2 C1 or Rule 7.4.2.3 RD1).		
ii. If an Integrated Transport Assessment has already been approved for the site as part of a granted resource consent, then these rules do not apply to any development that is within the scope of that Integrated Transport Assessment and in accordance with the resource consent, unless the resource consent has lapsed. This part of Rule 7.4.3.10 does not apply to the Yaldhurst Recreation and Sports Facility as shown in Appendix 18.11.4.		
iii. A basic Integrated Transport Assessment shall be undertaken for High Trip Generators that do not exceed the thresholds in 7.4.4.19 Table 7.4.4.19.1. A full Integrated Transport Assessment shall be undertaken for activities that exceed the thresholds in 7.4.4.19 Table 7.4.4.19.1.		
iv. Guidance on preparing an Integrated Transport Assessment to address the assessment matters in 7.4.4.19 may be obtained from Council's Integrated Transport Assessment Guidelines.		
v. For the purposes of calculating the thresholds in Rule 7.4.3.10(i) to (xi) (and table 7.4.4.19.1(a) to (k)):		
a. for existing activities with access to urban roads, the level of trip generation and scale of activity that existed prior to the plan becoming operative will not be included;		
b. for existing activities with access to rural roads, the level of trip generation and scale of activity that existed prior to the plan becoming operative shall be included;		

Standard**Comment****Activity Status**

c. for education activities the thresholds in Rule 7.4.3.10 (and table 7.4.4.19.1) shall only apply to any additional traffic generation from a site which increases the number of children, students or FTE students.

d. However, A. and C. do not apply if the existing activity's vehicle access arrangements change so that more than 50 vehicle trips per peak hour will use a new vehicle access to the activity and / or the volumes using any existing vehicle access to the activity increases by more than 50 vehicle trips per peak hour.

vi. For the purposes of calculating the thresholds in Rule 7.4.3.10(xii) and Table 7.4.4.19.1 (I) for the Yaldhurst Recreation and Sports Facility as shown in Appendix 18.11.4, Rules 7.4.3.10(v) (A) to (v) (D) do not apply.

vii. Other than as required by viii. or ix. below, the application shall not be publicly or limited notified where:

a. the land use activity is otherwise permitted in the zone where it is located and direct vehicle access is not from a state highway or crosses a KiwiRail railway line; or

b. the land use activity is otherwise permitted in the zone where it is located and direct vehicle access is from a state highway or crosses a KiwiRail railway line and written approval/s have been provided by the NZ Transport Agency and/or KiwiRail (whichever is relevant);

viii. Where written approvals have not been provided under vii. B. above, Council shall give limited notification of the application to the New Zealand Transport Agency and/or KiwiRail only.

ix. For a quarrying activity and/or an ancillary aggregates-processing activity in the Rural Quarry Zone, where a vehicle access to the activity is located within 250 metres of a residential unit, the Council shall give limited notification of the application to the owners/occupiers of that residential unit only, unless such approvals have already been provided.

7.4.3.11 Vehicle access to sites fronting more than one street – within Central City

Applicable to	Standard	Council's Discretion
Any new vehicle access.	Vehicle access shall be provided in accordance with Appendix 7.5.15.	Rule 7.4.4.22 - Vehicle access to sites fronting more than one street - within the Central City.

Standard		Comment	Activity Status
7.4.3.12 Lane Formation – within Central City			
Applicable to	Standard	Council's Discretion	
Any new Central City Lane created.	The legal width of the Central City Lane shall be between 6m and 12m and have a minimum height clearance of 4.5m.	Rule 7.4.4.23 - Central City Lane formation - within the Central City	