

69 Inland Kaikoura Road, Proposed Lot 20. Site Validation Report

**Kaikoura Business Park 2021**

Reference: J2021031

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# Document control record

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Title	Director	Title	Director, Momentum Environmental
Years' experience	25	Years' experience	14 years contaminated land experience within 30 years environmental experience
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# 1 Introduction

Kaikoura Business Park Ltd engaged Contaminated Land Solutions Ltd (CLS) to supervise and validate remediation of a piece of land located at 69 Inland Kaikōura Road, Peketā, Kaikōura District. This report documents the work undertaken and the condition of the piece of land following completion of the remediation.

**Appendix 1** details the limitations associated with the report.

The site location is shown in **Figure 1**.

The site is currently disused, having formerly been a dairy farm. It is in the process of being subdivided. The subdivision includes 17 sub-lots for future rural residential use (known as the Kowhai Downs Subdivision), along with lots for proposed future commercial/industrial development. It is one of the lots within this proposed future commercial/industrial development (Lot 20) that is the subject of this report.

A Detailed Site Investigation (CLS, 2022a) has been completed at the site. This included collection of surface and sub surface soil samples from a limited number of locations across the 82-hectare land parcel.

Asbestos was identified above the Soil Guideline Values provided in the *New Zealand Guidelines for Assessing and Managing Asbestos in Soil* (NZ GAMAS) (BRANZ 2017) in analytical results from samples collected from surface and subsurface locations in an area surrounding a haybarn. This area is in the proposed Lot 20 and is shown in **Figure 2** as 'HM&A'.

The subdivision consent issued by Kaikoura District Council requires remediation of this area to make it acceptable for the proposed future use. The consent with conditions is provided in **Appendix 2**.

This report has been prepared in accordance with the requirements of the Ministry for the Environment's *Contaminated Land Management Guidelines. Reporting on Contaminated Sites in New Zealand* (MfE 2021).

## 2 Site Identification

Site identification details are presented in **Table 1** and **Figure 1**, and the subdivision plan is provided **Figure 2**.

Table 1 Site Identification

Site Name	69 Inland Kaikōura Road, Peketā, Kaikōura
Site Location	69 Inland Kaikōura Road, Peketā, Kaikōura
Legal Description/s	LOT 2 DP 527436 LOT 1 DP 9266 SEC 10 SO 3911 SECS 1-5 7 SO 7129 LOT 2 DP 501321
Site Area	82 hectares
Current Site Use	Farming/Disused plus two existing residential properties
Proposed Site Use	Low density residential (rural residential) and Commercial/Industrial
Proposed Site Use for Lot 20	Commercial/Industrial

Figure 1. Site Location (Left Figure: Entire Site, Right Figure: Impacted Area "HM&A"). Basemap: Canterbury Maps NZ LINZ Topographic Layer and Aerial Image layer

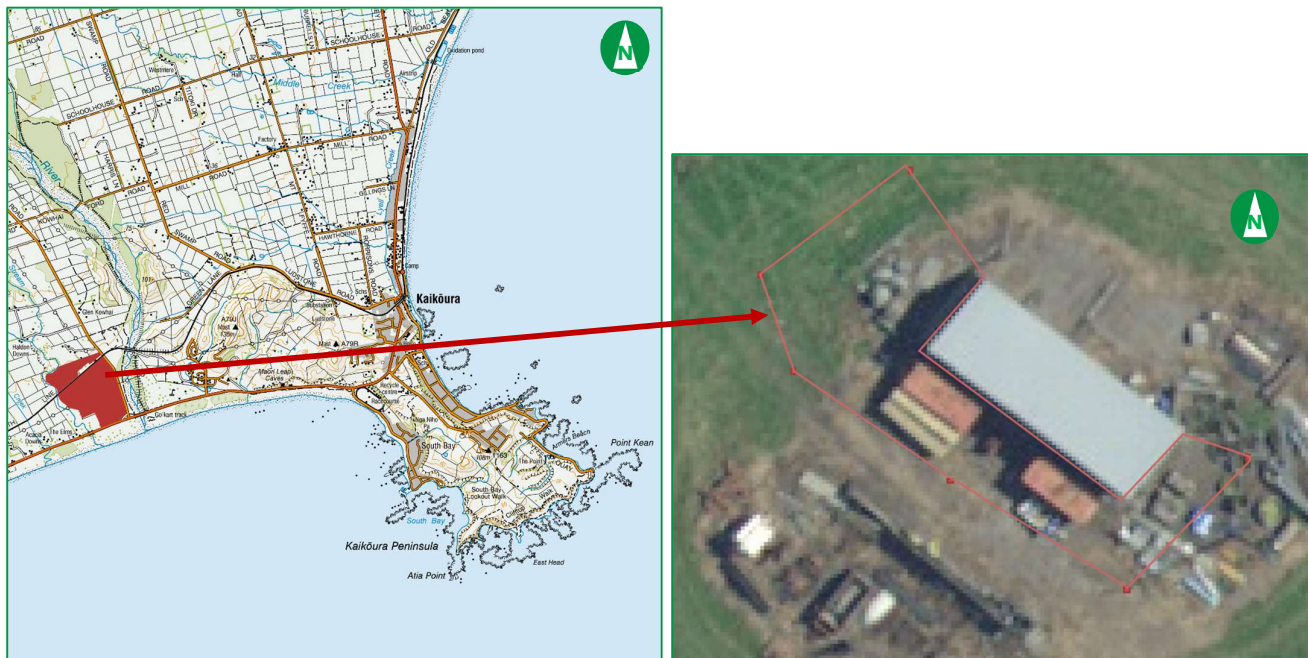
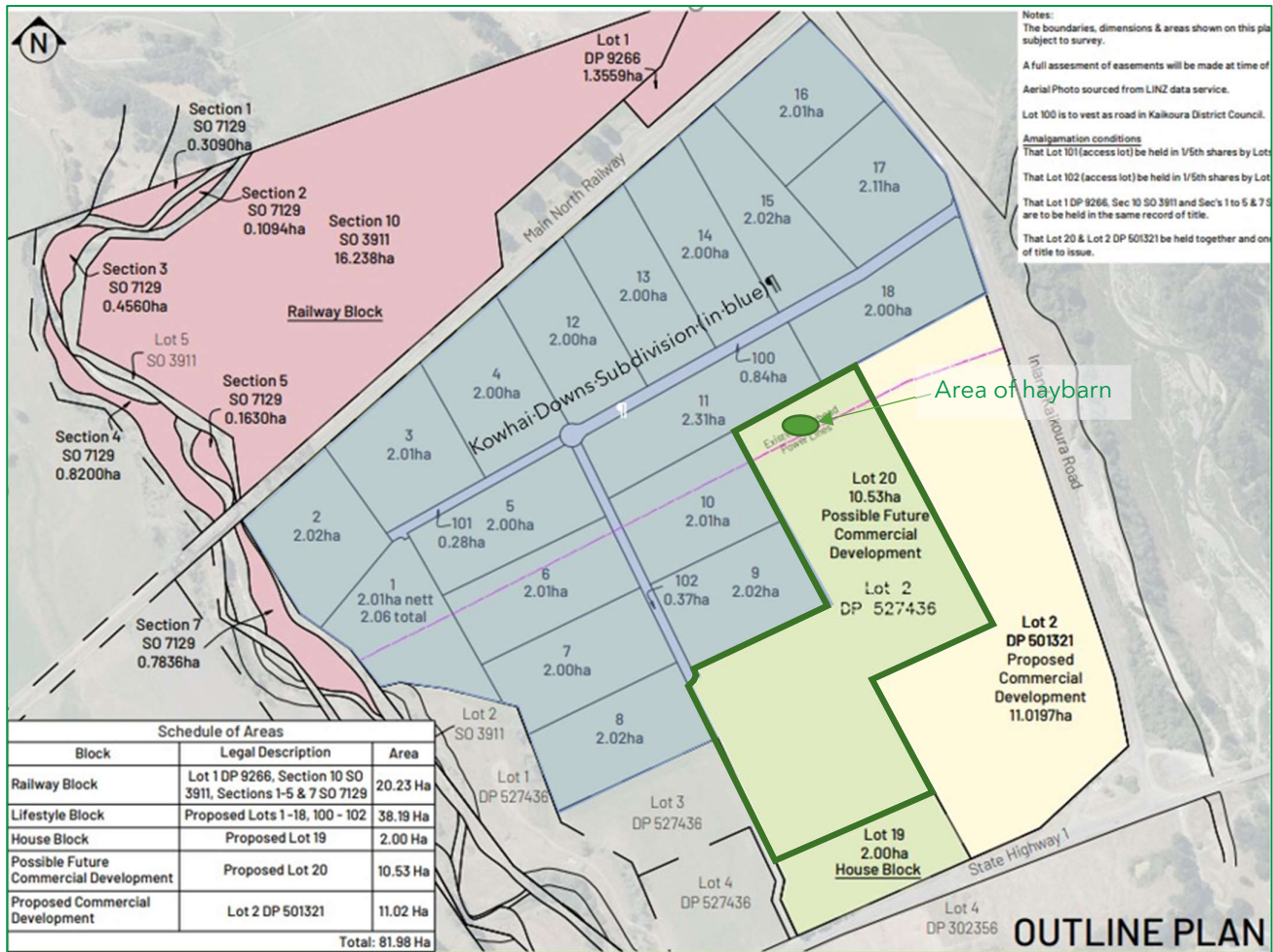


Figure 2. Subdivision Plan, with Proposed Lot 20 outlined in Green. Plan Source: Baseline Group



## 3 Background Information

### 3.1 Summary of Identified Site Contamination

Potentially health significant contamination was identified in area 'HM&A' (also referred to as the 'incinerator area'), which is located within Lot 20, in a Detailed Site Investigation (DSI) conducted by CLS (CLS, 2022a).

Eleven surface and three sub surface soil samples were collected in the DSI, and the results are presented in **Appendix 3**, with sampling locations shown in **Figure 3**. Asbestos was the only health significant contaminant in this area of the site. Additional ACM fragments were visually identified in the same area in a subsequent site visit, adding to the lines of evidence associated with asbestos contamination in the area.

A *Contaminated Site Management Plan* was produced (CLS 2022b) and a resource consent was obtained for the soil disturbance (**Appendix 2**).

Figure 3. Sampling Locations used in DSI (CLS 2022a). Health Significant Results Shown in Red.



### 3.2 Asbestos Contaminated Soil Stockpile

This site validation report is one of two validation reports produced for the site. The other report relates to the remediation of an area in Lot 14 associated with an historical piggery in July 2022. That area was identified in the DSI (CLS 2022a) to have elevated concentrations of heavy metals and a smaller area of asbestos contamination. The heavy metal contaminated soil was remediated through relocation to a containment cell, while the asbestos contaminated soil was remediated through excavation and temporary storage in a stockpile within Lot 20. The area in Lot 14 was then validated for acceptability for the future land use by soil sampling to affirm the success of the remediation. This work is reported in: *69 Inland Kaikoura Road, Proposed Lot 14. Site Validation Report* (CLS 2022c).

The stockpile was located at the northern end of the exterior of the haybarn, within the footprint of area 'HM&A' which is the subject of this report. Underlying soil in this area was known to be contaminated with asbestos, which is why it was deemed to be a suitable temporary location for the stockpile of soil originating from Lot 14. The stockpile was covered, as shown in **Figure 4**. The volume of soil was approximately 15m<sup>3</sup>.

Removal of this stockpile was included within the remediation of area 'HM&A' reported here.

Figure 4. Temporary Stockpile of Asbestos Contaminated Soil at Northern End of Haybarn. Stockpile originating from the Historical Piggery Area in Lot 14. Basemap from Canterbury Maps



### 3.3 Remedial Strategy and Objectives

The ultimate remediation goal is to break the complete exposure pathways between the asbestos contaminated soil and receptors to the extent that the risk to human health and the environment becomes acceptable for the proposed future use (commercial/industrial).

The complete exposure pathways at this site have been identified to be associated with inhalation of asbestos fines. Results from the DSI for samples taken at approximately 100 - 150mm below ground level by CLS (CLS 2022a) suggested that health significant concentrations of contamination could effectively be removed by a shallow surface scrape, noting that the area had not been well characterised due to the presence of above ground structures in the area at the time of the investigation. The volume of impacted soil was estimated in the Contaminated Site Management Plan (CSMP) (CLS 2022b) to be 52.5m<sup>3</sup>. Noting that an additional 15m<sup>3</sup> asbestos contaminated soil was stockpiled at the northern end of the haybarn, the total volume of soil was estimated to be approximately 67.5m<sup>3</sup> - 80m<sup>3</sup>.

The following process was defined for the work (adapted from the CSMP, CLS 2022b):

1. All above ground solid material to be removed, e.g., shipping containers, farm equipment, waste.
2. Following removal of above ground structures, the remediation area is to be marked out by the Suitably Qualified and Experience Practitioner (SQEP) using the available soil analysis results plus a site walkover.
3. The area is to be excavated using processes defined in a site-specific asbestos removal control plan produced by an Asbestos Removalist licensed by WorkSafe. The excavation will extend to a minimum depth of 200mm below ground level, or to a depth where the SQEP confirms no visible ACM following completion of their clearance inspection. All excavated soil is to be placed in truck bins lined with 200 µm heavy-gauge polythene. The soil is to be transferred to an agreed disposal location.
4. Following excavation, the area is to be validated by soil sampling using a systematic sampling pattern such as a grid or herringbone pattern with a minimum of fifteen sampling points from the base of the area and a minimum of six sample points from the sidewalls.
5. Each sample is to be submitted to an IANZ accredited laboratory for analysis for asbestos (presence/absence).
6. The results of the analysis must be all negative. Where positive results are obtained, further excavation will be undertaken OR semi-quantitative analysis and comparison with the guideline values associated with the proposed future use within the New Zealand Guidelines for Assessment and Management of Asbestos in Soil (BRANZ 2017, **Table 2**) will be conducted. This table provides the remediation goals.
7. All waste material removed from the site must be tracked to its final destination.
8. On completion of the work, a Site Validation Report (this report) must be produced and submitted to Kaikoura District Council.



Table 2. Asbestos Remediation Goals. Source: BRANZ 2017

Form of asbestos	Soil guideline values for asbestos (w/w)			
	Residential <sup>1</sup>	High-density residential <sup>2</sup>	Recreational <sup>3</sup>	Commercial and industrial <sup>4</sup>
ACM (bonded)	0.01%	0.04%	0.02%	0.05%
FA and/or AF <sup>5</sup>	0.001%			
All forms of asbestos – surface	No visible asbestos on surface soil <sup>6</sup>			
Capping requirements for residual contamination above selected soil guideline value				
Depth <sup>7</sup>	Hard cap	No depth limitation, no controls – except for long-term management		
	Soft cap	≥0.5 m		≥0.2 m

**Notes:**

- 1. Residential:** Single dwelling site with garden and/or accessible soil. Also includes daycare centres, preschools, primary and secondary schools and rural residential.
- 2. High-density residential:** Urban residential site with limited exposed soil/soil contact, including small gardens. Applicable to urban townhouses, flats and ground-floor apartments with small ornamental gardens but not high-rise apartments (with very low opportunity for soil contact).
- 3. Recreational:** Public and private green areas and sports and recreation reserves. Includes playing fields, suburban reserves where children play frequently and school playing fields.
- 4. Commercial and industrial:** Includes accessible soils within retail, office, factory and industrial sites. Many commercial and industrial properties are well paved with concrete pavement and buildings that will adequately cover/cap any contaminated soils.
- 5. FA and/or AF:** Where free fibre is present at concentrations at or below 0.001% w/w, a proportion of these samples should be analysed using the laboratory analysis method described in section 5.4.4 (≥10% of samples). This is due to limitations in the AS 4964-2004 and WA Guidelines 500 ml sample method for free fibre (see section 5.4 for more information).
- 6. Surface:** Effective options include raking/tilling the top 100 mm of asbestos-contaminated soil (or to clean soil/fill if shallower to avoid contaminating clean material at depth) and hand picking to remove visible asbestos and ACM fragments or covering with a soft cap of virgin natural material (VNM) 100 mm thick delineated by a permeable geotextile marker layer or hard cap. Near-surface fragments of ACM can become exposed in soft soils such as sandy pumiceous soils after periods of rain.
- 7. Depth:** Capping is used where contamination levels exceed soil guideline values. Considerations of depth need to incorporate the type and likelihood of future disturbance activities at the site and site capping requirements (see section 6.1). Ideally, any capping layer should be delineated by a permeable geotextile marker layer between the cap and underlying asbestos/contaminated material. Institutional controls must be used to manage long-term risks, particularly where the cap may be disturbed (see section 7). Two forms of capping are typically used:
  - a. Hard cap comprises surfaces that are difficult to penetrate and isolate the asbestos contamination, such as tar seal or concrete driveway cover. This would typically not include pavers or decking due to maintenance and coverage factors.
  - b. Soft cap consists of a layer[s] of material which either comprise virgin natural material or soils that meet the asbestos residential soil guideline value from an on-site source. Use of on-site soils may require resource consent.

## 4 Summary of Remedial Work Undertaken

The following remedial work was undertaken in November 2022:

- WorkSafe was notified of the works by the Licensed Asbestos Removalist (Agon Solutions Ltd).
- The asbestos removal control plan was supplied to Kaikoura District Council prior to the works commencing, as required by the consent conditions.
- A draft erosion and sediment control plan was produced to define management methods including the haulage route (**Appendix 4**). The plan was finalised on the day of the remediation, following visual confirmation of the route's acceptability and consultation with the truck driver.
- A containment cell was excavated in the commercial/industrial area of the site on 29 November 2022. The location of the cell is shown in **Figure 6**.
- Prior to the remediation commencing on 30 November 2022, an on-site toolbox meeting was conducted with the excavator operator to run through the contaminants of concern and the remedial work.
- Prior to the remediation commencing on 30 November 2022, the haulage route and speed limit were discussed and agreed with the truck driver.
- The remediation was completed in one day: 30 November 2022.
- The weather was mild, dry and calm on the day of the remedial work, and the soil was moist from recent rainfall.
- Soil within the remedial area was excavated using a systematic approach working around the haybarn.
- Soil was excavated using a mechanical excavator and placed directly into a Moxy truck which transferred the soil directly into the encapsulation cell. The truck (capacity 13.7m<sup>3</sup>) was not filled to capacity, to avoid spillage of soil during transit. A mechanical excavator compacted the relocated soil in the containment cell in layers to form a flat, un-bulked surface within the cell. In both the area of excavation and the excavation cell, sprinklers were used to suppress fibre release.
- Following excavation, Helen Davies of CLS conducted visual inspections through systematic 1m passes of the area followed by collection of validation soil samples.
- A total of thirty soil samples were collected. from the base and walls of the excavated area into laboratory supplied containers. Following completion of the work, these were delivered to Eurofins Laboratories in Rolleston for analysis of asbestos. Results were compared against the remediation goals in **Table 2** to determine the residual levels of contamination at the site.
- There were no incidents associated with the remediation.
- Seven and a half truckloads of soil were transferred to the containment cell, with an average volume of 10m<sup>3</sup> soil per truckload. The total weight of soil transferred was estimated by Agon Solutions Ltd to be between 97.5 and 127.5 tonnes.
- Photographs taken of the remedial work are presented in **Appendix 6**.

# 5 Disposal in the Containment Cell

Soil removed from Lot 20 was directly transferred to a purpose-built containment cell lined with geotextile, located in the commercial/industrial part of the site (**Figure 5**).

The location of the containment cell is shown in **Figure 6**. Details of the containment cell are provided in **Table 3**.

Figure 5. Containment Cell



Figure 6. Containment Cell (red). Photographs show: 1. Geotextile layer on top of waste, 2. Topsoil on top of geotextile, 3. Gravel aggregate on top of topsoil. Basemaps from Baseline Group and Canterbury Maps

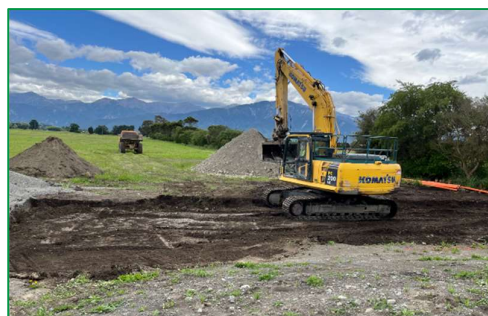
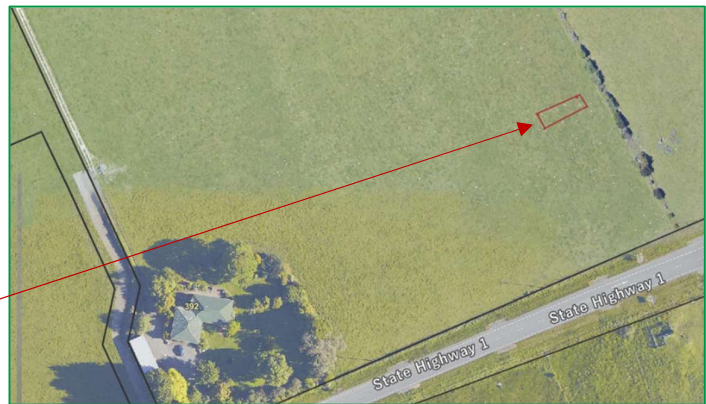
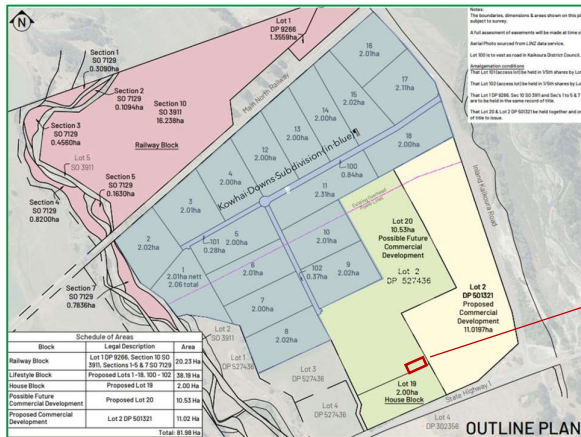


Table 3. Containment Cell Details

Depth	1.6m below ground surface
Width	6.3m
Length	19m
Capping details	Material was compacted, covered in geotextile, followed by 0.3m topsoil and a layer of gravel aggregate to bring the level the cell up to that of the surrounding area
Lined?	Yes, geotextile
Soil transfer details	7.5 truckloads transferred from the haybarn area to the containment cell. Total weight of soil transferred was estimated by Agon Solutions Ltd to be between 97.5 and 127.5 tonnes
Future identification and management of the cell	Per ongoing site management plan (Section 8.2). GPS coordinates of the cell location are provided in <b>Appendix 5</b>

## 6 Validation Works

The remediation goal is to break the link between the asbestos and future owners/occupiers. The soil contaminant standards associated with this goal are detailed in **Table 2**. The goal was achieved through the following approach:

- Marking out of the remedial area based on the remediation drawing using survey pegs and survey paint.
- Toolbox meeting with the excavator operator and truck driver to ensure a shared understanding of the objectives of the work, the haulage route and containment cell and health and safety.
- Methodical excavation around the haybarn to prevent cross contamination.
- Use of a licensed asbestos removalist to set up and supervise the excavation and apply water spray as required to suppress the release of asbestos fibres during soil disturbance. The Asbestos Removalist's report is provided in **Appendix 5**.
- At the end of the remediation earthworks: Collection of thirty soil samples from the base and sides of the excavation (as shown in **Figure 7**) for analysis of asbestos by an IANZ accredited laboratory. Each sample was given a unique identification number and collected using decontaminated equipment/clean nitrile gloves and directly placed into a laboratory supplied, labelled container. All samples were placed into a chilly bin directly after collection and transferred to the laboratory following completion of the remediation. Sample results are presented in Table A1, **Appendix 5**, and the laboratory reports are also provided in **Appendix 5**.
- Placement of the asbestos contaminated soil in a lined and capped containment cell.
- There were no unexpected discoveries of contamination during the work.

Figure 7. Final Remediation Area and Validation Sample Locations.



## 7 Tier 1 Risk Screening Assessment

The asbestos results from thirty soil samples taken from the base and walls of the remediation excavation have been assessed against the remedial goals (**Table 2**).

Twenty eight of the thirty asbestos samples returned a negative result. The two samples returning positive asbestos results (samples VS51 and VS54) were subjected to a qualitative analysis. Both sample results were at (sample VS51) or below (sample VS54) the remediation goals in **Table 2**.

The AF/FA result for sample VS51 was the same as, but not exceeding, the remediation goal. This is a compliant result but warrants further discussion as it could represent an area where greater levels of asbestos could theoretically be present.

Sample VS51 was in an area where significant visual ACM was present prior to remediation, and excavation was consequentially extended deeper than in other areas (to approximately 0.3m below ground level (bgl)), while the majority of the area was excavated to approximately 0.2m bgl).

CLS considers that any residual asbestos remaining in this area meets the remediation goal because the result did not exceed the goal, and the location of VS51 is confined by the presence of the haybarn wall to the north and by negative asbestos results in all other directions (see **Figure 7**).

Based on the analytical and visual results, it is considered that the asbestos contaminated soil has been successfully removed and encapsulated, and there is no longer a significant risk to human health associated with these contaminants in this area of the site. A Clearance Certificate has been issued and is provided in **Appendix 6**. Photographs of the remediation are also provided in **Appendix 6**.

## 8 Effectiveness of the Remediation

### 8.1 Summarised Site Condition Following Remediation

An assessment of the effectiveness of the remediation against the remedial goals has been conducted. The remediation was successful in that the remedial goals were met. On this basis, no long-term management controls associated with soil contamination are required in the 'HM&A' location adjacent to the haybarn.

The requirements of the conditions within resource consent LU1818 (**Appendix 2**) have been met for Lot 20, where contamination was present and has been remediated as reported here. This lot is acceptable for a future commercial land use.

Should unexpected contamination be discovered during earthworks associated with redevelopment of the site, advice from a SQEP should be sought.

The containment cell used to accommodate soil excavated from the remediation area is located close to the waste water treatment system at the southern end of the site. The soil is wrapped in geotextile cloth, with 300mm soil and gravel aggregate placed on top. It is understood that the area is not proposed to be disturbed and the containment cell area will be used as a parking bay for workers maintaining the waste-water treatment plant.

### 8.2 Ongoing Site Management Plan for the Containment Cell

The containment cell currently presents no risk to receptors. This is due to the barrier that the capping presents between contaminated material and humans/animals and the separation distance between the contaminated soil and underlying groundwater (noting that asbestos will not dissolve, but that heavy metals are present in the soil at low concentrations - See **Appendix 3** for heavy metals results from the DSI). The containment cell is understood to have a proposed future use as a parking bay for waste-water treatment plant maintenance workers.

The ongoing maintenance of the containment cell involves ensuring the integrity of the cap. This is the responsibility of the owner of the wastewater treatment plant.

The ongoing maintenance involves the following:

- Identification of the cell (and this ongoing site management plan) in all site plans related to the wastewater treatment plant. GPS coordinates of the location of the cell are provided in **Appendix 5**;
- Annual inspection of the cap and replenishment of the gravel layer as required to prevent the underlying topsoil cap from being eroded;
- Inspection records to be provided to Kaikoura District Council;
- Care with the use of machinery/vehicles accessing the parking bay, particularly during wet/muddy conditions, to prevent damage to the cap.

The geotextile layer below the topsoil provides a marker layer in the event that the above maintenance proves insufficient. Should the geotextile layer become visible, immediate maintenance of the capping layer is required along with an update to the maintenance programme to prevent a reoccurrence.

### 8.3 Suitability of site for proposed development

Based on the findings of the DSI (CLS 2021a) the remediation of Lot 20 (reported here), and remediation of Lot 14 reported in CLS 2022c, the site is suitable for the proposed future uses (rural residential and commercial/industrial).

Should soil disturbance occur in land surrounding either of the existing dwellings or in the 'railway block' to the north, further investigative work would be required, as prescribed in the consent conditions (**Appendix 2**).

## 9 Reference List

BRANZ 2017. *New Zealand Guidelines for Assessing and Managing Asbestos in Soil*.

Contaminated Land Solutions (CLS) 2022a. *69 Inland Kaikōura Road. Preliminary and Detailed Site Investigation*.

Contaminated Land Solutions (CLS) 2022b. *69 Inland Kaikōura Road Contaminated Site Management Plan (CSMP)*.

Contaminated Land Solutions (CLS) 2022c. *69 Inland Kaikōura Road, Proposed Lot 14. Site Validation Report*.

Ministry for the Environment 2021, *Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (Revised 2021)*. Wellington: Ministry for the Environment.

Ministry for the Environment 2021, *Contaminated Land Management Guidelines No 5: Site Investigation and Analysis of Soils (Revised 2021)*. Wellington: Ministry for the Environment.

Parliamentary Counsel Office 2011, *Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011*, Parliamentary Counsel Office, Wellington.

WorkSafe 2016. *Approved Code of Practise. Management and Removal of Asbestos*. WorkSafe.



# Appendix 1

About Your Report



# Important Information About Your Report



Contaminated Land Solutions (CLS) is an independent, New Zealand owned company (NZBN: 9429049086843).

## 1 Limitations

### 1.1 Use of this Report

- CLS has prepared this report for Kaikoura Business Park 2021, exclusively for its use. It has been prepared in accordance with our scope of services and the instructions given by or on behalf of Kaikoura Business Park 2021. Data or opinions contained within the report may not be used in other contexts or for any other purposes without CLS's prior review and agreement.
- CLS accepts no responsibility or liability to any third party for the use of, or reliance on, the report by any third party and the use of, or reliance on, the report by any third party is at the risk of that party.

### 1.2 Project Specific Limitations

- The remedial work described in this report was conducted in close association with Kaikoura Business Park 2021. Kaikoura Business Park 2021 chose the location of the containment cell and coordinated the excavation of the cell and placement of material within it.
- In preparing the report, CLS has relied upon information provided by or on behalf of the Client.
- This report has not specifically promoted the involvement of tangata whenua. The involvement of Māori stakeholders in the issues raised by the report should be considered by the client. Likewise, mātauranga Māori may be relevant when considering the findings of the report and this knowledge has not been sought during the production of this report.

### 1.3 Limits on Investigation and Information

- This investigation is based on information collected at the times indicated in the report. This information will become outdated with time.
- Soil and rock formations are often variable, and this along with use, storage or disposal of hazardous substances on a site can result in heterogeneous distribution of contaminants. Contaminant concentrations may be evaluated at chosen sample locations - however, conditions between sample sites can only be inferred based on geological and hydrological conditions and the nature and the extent of identified contamination. Boundaries between zones of contamination are often indistinct, and therefore interpretation is based on available information and the application of professional judgement.
- Only a finite amount of information has been collected to meet the specific technical requirements of the Kaikoura Business Park 2021's brief and this report does not purport to completely describe all the site's characteristics and properties. The nature and continuity of the ground between test locations has been inferred using experience and judgement and it must be appreciated that actual conditions could vary from the assumed model.
- This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should further information become available regarding the conditions at the site, including previously unknown likely sources of contamination, CLS reserves the right to review the report in the context of the additional information.
- This report has been prepared for Kaikoura Business Park 2021 for its own use and is based on information provided. CLS takes no responsibility and disclaims all liability whatsoever for any loss or damage that Kaikoura Business Park 2021 may suffer as a result of using or relying on any such information or recommendations contained in this report, except to the extent CLS expressly indicates in this report that it has verified the information to its satisfaction. This report is not to be reproduced either wholly or in part without our prior written permission.

### 1.4 Reporting Standard

This report meets the requirements of the Ministry for the Environment *Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (Revised 2021)* (MfE 2021) and is certified by a practitioner meeting the requirements to be classified as a Suitably Qualified and Experienced Practitioner (SQEP).

### 1.5 Fieldwork Standards

Sampling of soil is a permitted activity in Regulation 8 of the NES Soil provided defined requirements are met. The sampling conducted for this investigation complied with the NES Soil requirements.

## **2 Quality Assurance / Quality Control**

Quality assurance / quality control (QA/QC) procedures were implemented during field investigation works. All samples were collected using chain of custody (COC) documentation procedures.

### **2.1 Sample Integrity**

Prior to sampling, and between sample locations, equipment used (i.e. hand trowel/hand auger) was cleaned by wiping with a cloth, washing with decontamination solution (Decon 90), and rinsing with potable water. Soil samples were collected using a clean pair of nitrile gloves for each sample and then placed into laboratory supplied sample containers. Each sample was given a unique sample identification number and the location the sample was collected from was recorded at the time of sampling.

Following collection, all samples were placed directly into chilled storage and transported, under standard chain of custody procedures, to an International Accreditation New Zealand (IANZ) laboratory for analysis. The remaining material was placed back into its original location, ensuring each area was returned to a flat condition following completion of the sampling and in compliance with Regulation 8 of the NES (soil sampling).

### **2.2 Laboratory**

Eurofins was selected to perform analysis of all samples. This laboratory is IANZ accredited and the test methods used are also IANZ accredited.

# Appendix 2

## NES Consent





2 June 2022

## NOTICE OF DECISION

Resource Management Act 1991 (RMA)

<b>Application Number:</b>	LU1818
<b>Applicant:</b>	Kaikoura Business Park 2021 Limited
<b>Consent Sought:</b>	Land use consent to undertake earthworks for the purpose of contaminated soil removal
<b>Address of Activity:</b>	69 Inland Road, Kaikoura
<b>Legal Description:</b>	Lot 2 DP 527436, Lot 1 DP 9266 SEC 10 SO 3911 SECS 1-5 7 SO 7129 Lot 2 DP 501321
<b>Valuation Number:</b>	2110015800

### REASONS FOR DECISION:

- Resource consent is required under the Kaikōura District Plan to undertake earthworks for the purpose of removing contaminated soil at 69 Inland Road, Kaikoura.
- The application has been processed on **non-notified** basis under Section 95 of the RMA.
- It is considered that the application is consistent with the policy and objectives of the Kaikōura District Plan.
- It is considered that the application is consistent with and does not contravene the Purpose of the Resource Management Act 1991 (section 5). It is considered that the application is consistent with the Principles of the Resource Management Act 1991 (sections 6, 7 and 8). The activity is therefore assessed as being consistent with, and not contravening Part II of the Act.
- Council may grant this consent under section 104 of the RMA and may set conditions under 108 of the RMA.

### DECISION: GRANTED

Consent is granted pursuant to section 104 and 108 of the Resource Management Act 1991 to undertake earthworks for the purpose of removing contaminated soil at 69 Inland Road, Kaikoura in the application LU1818 subject to the conditions in Appendix I.

*Please note that advice notes relating to specific conditions follow those conditions in italics and general advice notes and development contribution advice follow the conditions of consent advice notes are useful information to help the consent holder meet the conditions of the resource consent. Please read your entire consent carefully.*

### CONDITIONS ON NEXT PAGE

PLEASE NOTE: THAT IT IS YOUR RESPONSIBILITY TO ENSURE THAT ALL CONTRACTORS ARE PROVIDED WITH A COPY THE ABOVE RESOURCE CONSENT AND UNDERSTAND THE ACCIDENTAL DISCOVERY PROTOCOL. SEE APPENDIX II.



Signed:

**Matt Hoggard**

**Strategy, Policy & District Plan Manager**

Date: 2/06/2022



## APPENDIX I

### General Conditions:

1. The proposal shall proceed in general accordance with the information and plans submitted with the application and recorded in Council records as LU1818.
2. The consent holder shall meet all actual and reasonable costs incurred by this Council in monitoring, enforcement and administration of this consent.
3. The consent holder shall ensure all guests adhere to Council's "Zero Waste" policy by promoting and encouraging the reduction, reuse and recycling of unwanted materials.

### Site Remediation Works

4. All works on site shall be undertaken in accordance with an approved Contaminated Site Management Plan (CSMP) ) produced by CLS and dated 23 March 2022 to ensure appropriate management of the identified contamination.
5. Prior to development of the area north of the railway land ('Railway Block') a detailed site investigation to determine the suitability of the land for its future use will be required prior to activities specified in the NES proceeding on this land..
6. At such time that either dwelling on site, associated septic tanks or the hazardous goods store are to be removed, investigation of soil for contamination shall be required.
7. The proposed activity shall be undertaken in accordance with the Remediation Action Plan that details site management during the works, site validation and final reinstatement of the site.
8. All soil sampling shall be conducted in accordance with the *Contaminated Land Management Guidelines No 5. Site Investigation and Analysis of Soils*. All reporting shall be consistent with the requirements of the *Contaminated Land Management Guidelines No 1. Reporting on Contaminated Land in New Zealand*.
9. Asbestos removal shall occur by a person/company holding an asbestos removal license and in accordance with their site-specific Asbestos Removal Control Plan prepared and submitted to Kaikōura District Council ( [planning@kaikoura.govt.nz](mailto:planning@kaikoura.govt.nz)) five working days prior to the commencement of works.
10. On completion of the asbestos removal the remaining soil shall be validated by a suitably qualified and experienced practitioner to confirm the asbestos has been successfully removed. Confirmation shall be provided to Kaikōura District Council with the Site Validation Plan required by Condition 13.
11. Any soils removed from the site during the course of the activity must be disposed of to a facility authorised to accept the material and evidence provided to Kaikoura District Council to confirm this
12. Kaikōura District Council shall be notified no less than 5 working days after completion of the works by way of email to [planning@kaikoura.govt.nz](mailto:planning@kaikoura.govt.nz).

13. At the completion of the works a Site Validation Plan shall be completed and shall contain the following information as a minimum:
  - a. Details of the project works completed on the site;
  - b. The type of any unexpected contamination observed and location and depth, if any;
  - c. Any variations from the proposal Remediation Action Plan and the consequences of such variations; and
  - d. Records of disposal of soil material, date of collection and destination of the material disposed.
  
14. The Site Validation Plan required by Condition 13 shall be provided to the Kaikōura District Council's Environmental Compliance Team within two months of completion of works and prior to the application for the Section 224(c) certificate for SU 2021-1765-00. This should be emailed to [planning@kaikoura.govt.nz](mailto:planning@kaikoura.govt.nz).
  
15. In the event an unidentified archaeological site or human remains (koiwi tangata) is located during works, the Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol (attached as Appendix A) shall be followed.

#### **ADVICE NOTES**

You have the right of objection to the consent authority pursuant to section 357 of the Resource Management Act 1991 in respect to the above decision within fifteen working days of receipt of this decision. Should you wish to object to this decision please advise Kaikoura District Council in writing, setting out the reasons for your objections, within the above time limit.

Pursuant to section 125 of the Resource Management Act 1991 these consents will lapse on the expiry of 5 years after date of commencement of the consent, or such other date as provided for in the consent, unless:

- The consent is given effect to or;
- Application for an extension of time is made within 3 months after expiry of that period.

In accordance with section 127 of the Resource Management Act 1991, the consent holder at any time prior to the issue of a section 224 certificate may apply for the change or cancellation of any of the conditions of this consent.

This is not a building consent. You are still required to obtain a building consent before any building work commences.

The Accidental Discovery Protocol of the Kaikoura District Plan shall be followed at all times See Appendix II. Where during excavation or land disturbance, any archaeological artefact or human remains are accidentally discovered; work shall cease immediately, the site secured and the Accidental Discovery Protocol process begun. Please review and begin the Protocol and contact the Kaikoura District Council immediately.

The consent holder is responsible to ensure that all contractors are aware of and follow the Accidental Discovery Protocol.

We please ask that all external lighting be hooded and facing in a downward direction to protect the darkness of the night sky and the Hutton Shearwater.

Kaikoura District Council strongly encourages the enhancement and protection of indigenous biodiversity values and recommends the use of locally sourced native species for landscaping and/or planting purposes. A planting list is available from Council for your use.

## **APPENDIX II**

### **RELEVANT SECTIONS OF THE RESOURCE MANAGEMENT ACT 1991**

Applications for resource consents are considered under sections 104, 106 and 108 of the RMA.

Section 104(1) sets out the matters to which the Council shall have regard when considering an application for resource consent. Subject to Part II of the Act, which contains the Act's purpose and principles, the following matters are relevant:

- any actual and potential effects on the environment of allowing the activity;
- any relevant provision of;
- a national policy statement;
- a New Zealand coastal policy statement;
- a regional policy statement or proposed regional policy statement;
- a plan or proposed plan; and
- any other matters that the consent authority considers relevant and reasonably necessary to determine the application.

In accordance with section 104(2) a consent authority may disregard an adverse effect of the activity on the environment if the plan permits an activity with that effect.

Under section 104(3) a consent authority must not-

- have regard to trade competition when considering an application;
- when considering an application, have regard to any effect on a person who has given written approval to the application;
- grant a resource consent contrary to provision of section 107 (Coastal Permits) or section 217(Water Conservation Order) or any Order in Council in force under section 152 (Coastal Permits), or under any regulations;
- grant a resource consent if the application should have been publicly notified and was not.

Under section 104(A),(B),(C),(D)(determination and restrictions on applications), council must grant consent for controlled activities. May grant or refuse applications for (restricted) discretionary and non-complying activities.

If the activity is non-complying under section 104(D) then it may only be granted if council is satisfied that either-

- The adverse effects of the activity on the environment (other than any effect to which section 104(3)(b) applies) will be minor; or
- The application is for an activity that will not be contrary to the objectives and policies of the relevant plans (operative or proposed).

Any decision of the Council is subject to the provisions contained in Part Two of the Resource Management Act 1991. In considering the application, the consent authority must give pre-eminence to Part II of the Act.

Section 5 of the Act contains the purpose of the Act, which is to promote the sustainable management of natural and physical resources. Sustainable management is defined in the Act as:

*“managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while-*

*Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*

*Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and  
Avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

Sections 6, 7, and 8 of the Resource Management Act (1991) outline the principles of the Act. All persons exercising functions and powers under the Act shall consider:

- Matters of National Importance (s.6);
- Other Matters (s.7); and
- The Treaty of Waitangi (s.8).

### **APPENDIX III**

#### **ACCIDENTAL DISCOVERY PROTOCOL: ARCHAEOLOGICAL SITES, ARCHAEOLOGICAL AREAS, HISTORIC AREAS OR WAAHI TAPU**

This rule does not apply to the Kaikoura Peninsula Tourism Zone and the Ocean Ridge Comprehensive Living Zone

Where, during earthworks on any site, any archaeological feature, artefact or human remains are accidentally discovered or are suspected to have been discovered, the following protocol shall apply:

- i. Immediately that it becomes apparent that a suspected archaeological site, burial site, wahi tapu or wahi taonga site has been uncovered, all excavation shall cease.

#### **In cases other than suspected human remains**

- ii. The contractor must shut down all machinery immediately, secure the area and advise the consent holder or proponent and Kaikoura District Council of the occurrence.
- iii. The consent holder or proponent must notify the Heritage NZ Trust so that the appropriate consent procedure can be initiated.
- iv. The consent holder or proponent must consult with a representative of the Te Rūnanga o Kaikoura to determine what further actions are appropriate to safeguard the site of its contents.

#### **Where human remains are suspected**

- v. The contractor must take steps immediately to secure the area in a way which ensures human remains are not further disturbed. The contractor shall advise the consent holder or proponent of the steps taken.
- vi. The contractor shall notify the Police of the suspected human remains as soon as practicably possible after the remains have been disturbed. The consent holder or proponent shall notify Te Rūnanga o Kaikoura and Heritage NZ within 12 hours of the suspected human remains being disturbed, or otherwise as soon as practically possible.
- vii. Excavation of the site shall not resume until the Police, Heritage NZ and the relevant Kaumatua have each given the necessary approvals for excavation to proceed.

**Note:** If any land use activity (such as earthworks, fencing or landscaping. is likely to modify, damage or destroy any archaeological site (whether recorded or unrecorded, an “authority” consent from Heritage NZ must also be obtained for the work to lawfully proceed.

# Appendix 3

## DSI Sample Results





<b>Table No:</b>	A6
<b>Site:</b>	Piggery/Dump Area and Incinerator
<b>Project No:</b>	J2021031
<b>Sample media:</b>	Soil and Bulk Material
<b>Analysis:</b>	Total Recoverable Concentrations
<b>End-Use:</b>	Commercial / Industrial/Outdoor Worker (Unpaved) and Rural Residential
<b>Date:</b>	24/01/2022
<b>Revision:</b>	0

Sample Name	PPACM1	PPACM2	PPACM3	IPACM	PO1	PO2	I01	Assessment Criteria (w/w)	
								Commercial / Industrial	Residential
<b>Sample Depth (m bgl)</b>	-	-	-	-	0.0	0.0	0.0	Protection of Human Health	
<b>Natural / Fill?</b>	-	-	-	-	Reworked natural			Commercial / Industrial	
<b>Soil Type</b>	Bulk Material	Bulk Material	Bulk Material	Bulk Material	Sandy Gravel			Residential	
<b>Type of asbestos</b>									
Amosite	Not Detected	Not Detected	Detected	Detected	-	-	-	-	-
	Detected	Detected	Detected	Detected	-	-	-	-	-
Chrysotile	Not Detected	Not Detected	Not Detected	Not Detected	-	-	-	-	-
	Detected	Detected	Not Detected	Not Detected	-	-	-	-	-
Crocidolite	Not Detected	Not Detected	Not Detected	Not Detected	-	-	-	-	-
	Detected	Detected	Not Detected	Not Detected	-	-	-	-	-
Organic Fibres	Not Detected	Not Detected	Not Detected	Not Detected	-	-	-	-	-
	Detected	Detected	Not Detected	Not Detected	-	-	-	-	-
Synthetic Mineral Fibres	Not Detected	Not Detected	Not Detected	Not Detected	-	-	-	-	-
	Detected	Detected	Not Detected	Not Detected	-	-	-	-	-
Unknown Asbestos	Not Detected	Not Detected	Not Detected	Not Detected	-	-	-	-	-
	Detected	Detected	Not Detected	Not Detected	-	-	-	-	-
Sample Category	Fibre Cement	Fibre Cement	Fibre Cement	Fibre Cement	-	-	-	-	-
	26.66	11.81	18	25.43	-	-	-	-	-
Sample Weight on receipt (g)	26.66	11.81	18	25.43	-	-	-	-	-
	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	-	-	-	-	-
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	-	-	-	-	-
	26.66	11.81	18	25.43	-	-	-	-	-
<b>Calculated results expressed as % w/w</b>									
Asbestos in ACM as % of Total Sample	-	-	-	-	< 0.001	0.119	< 0.001	0.05%	0.01%
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample	-	-	-	-	< 0.001	< 0.001	< 0.001	0.001%	0.001%

Results in **green** Indicate an Exceedance of One or More of the Acceptance Criteria  
The Acceptance Criteria that has been Exceeded is also in **green**

**Abbreviations:**

m bgl = meters below ground level

**Notes:**

Refer to *New Zealand Guidelines for Assessing and Managing Asbestos In Soil* (BRANZ 2017) for details related to use of the soil guideline values

Table No:	A7
Project No:	2022/031
Sample media:	Soil
Analysis:	Total Recoverable Concentrations
End-Use:	Commercial/Industrial/Outdoor Worker (Unpaved) and Rural Residential
Date:	04/02/2022
Revision:	0



Sample Name	Assessment Criteria (mg/kg)										
	SS201 - 0.0m	SS202 - 0.0m	SS203 - 0.0m	SS204 - 0.0m	SS205 - 0.0m	SS206 - 0.0m	SS207 - 0.0m	SS208 - 0.0m	SS209 - 0.0m	SS210 - 0.0m	SS211 - 0.0m
Sample Depth (m bgl)	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m	0.0m
Natural / Fill <sup>1</sup>	Reworked natural										
Soil Type	Sandy Gravel										
	<b>Metals (mg/kg)</b>										
Arsenic	9	6	4	4	4	8	8	11	10	5	14
Cadmium <sup>1</sup>	0.35	0.72	0.4	0.19	0.36	0.14	0.17	0.26	0.32	< 0.10	0.28
Chromium <sup>2</sup>	15	13	10	11	11	13	13	15	14	12	17
Copper	26	19	21	15	19	15	17	25	25	13	24
Lead	72	76	12.3	11.8	17.7	14.2	17.5	44	21	13	47
Mercury <sup>3</sup>	< 0.19	< 0.10	< 0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	10	10	10	9	10	11	11	14	11	10	14
Zinc	260	250	199	103	143	80	240	160	181	56	510

Results in green indicate an Exceedance of One or More of the Acceptance Criteria

The Acceptance Criteria that has been Exceeded is also in green

All concentrations are in mg/kg

**Abbreviations:**

IRB – International Risk based

m bgl – meters below ground level

**Notes:**

- Cadmium - SCS based on pH 5. Cadmium absorption (i.e. plant uptake of cadmium) increases with decreasing pH (see MIE methodology document).
- Chromium - SCS tabulated is for hexavalent chromium VI. This is conservative as samples have been analysed for total chromium (i.e. III and VI).
- Mercury - SCS tabulated is for inorganic mercury. Samples have been analysed for total mercury and therefore this SCS is conservative.
- DDT - SCS is based on a sum of DDT, DDE and DDD
- Dieldrin - SCS applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dieldrin (both are involved).
- As, Cd, Cr, Cu, Pb, Hg: Users Guide National Environmental Standard (NES) For Assessing and Managing Commitments in Soil to Protect Human Health, New Zealand, 2012
- Ni & Zn: National Environmental Protection (Assessment of Site Contamination) Measure 1999 (Australia); Schedule B1 (as amended May 2013) - Guideline on Investigation Levels For Soil and Groundwater, Federal Register of Legislative Instruments F2013C00286, National Environmental Protection Council, (NH) - Health Investigation Level.
- Environment Canterbury Background Concentrations of Selected Trace Elements in Canterbury Soils, R07/12 Dated February 2007 Proposed Level 2 background. DDT levels sourced from MIE 1998.
- Supplemental Guidance for Developing Soil Screening Levels (human health) at Superfund Sites (US EPA, 2002) based on soil pH 6.8. Figures derived for protection of potable water supply, but are also used as a guideline figure for protection of ecological receptors in waterbodies in the absence of an alternative.

Protection of Human Health	Background	3 x Sediment Quality Guidelines	Protection of Groundwater for Potable Use
Rural Residential 25% <sup>4,5,7</sup>	Canterbury Level 2 Background Concentrations Recent <sup>8</sup>	Australian and New Zealand Guidelines for Fresh and Marine Water Quality	IRB - US EPA 351 Values Dilution Factor x 20 <sup>9</sup>
Commercial/Industrial (µg)			
70	17	210	29
1,300	0.8	30	8
6,300	290	1110	38
>10,000	<10,000	810	-
3,300	160	660	-
4,200	200	3	2
6,000	400	156	130
400,000	7,400	1,230	12,800



## Certificate of Analysis

<b>Client:</b>	Contaminated Land Solutions Limited	<b>Lab No:</b>	2896765	A2Pv2
<b>Contact:</b>	Helen Davies	<b>Date Received:</b>	25-Feb-2022	
	C/- Contaminated Land Solutions Limited	<b>Date Reported:</b>	09-Mar-2022	(Amended)
	8a Huntsbury Avenue	<b>Quote No:</b>	110877	
	Huntsbury	<b>Order No:</b>		
	Christchurch 8022	<b>Client Reference:</b>	69 Inland Kaikoura Road	
		<b>Submitted By:</b>	Helen Davies	

### Sample Type: Soil

Sample Name	Lab Number	As Received Weight (g)	Dry Weight (g)	<2mm Subsample Weight (g dry wt)	Asbestos Presence / Absence	Description of Asbestos Form
SS201 0.0m	2896765.1	709.0	627.7	53.9	Asbestos NOT detected.	-
SS202 0.1m	2896765.4	843.5	771.8	51.5	Chrysotile (White Asbestos) detected.	Loose fibres (major)
SS203 0.0m	2896765.5	517.0	342.1	51.6	Asbestos NOT detected.	-
SS204 0.0m	2896765.6	674.3	588.4	53.1	Asbestos NOT detected.	-
SS205 0.0m	2896765.7	582.6	485.0	51.2	Asbestos NOT detected.	-
SS206 0.0m	2896765.8	830.7	771.6	50.9	Asbestos NOT detected.	-
SS207 0.0m	2896765.9	729.1	604.2	54.5	Asbestos NOT detected.	-
SS208 0.0m	2896765.10	948.4	892.9	56.6	Amosite (Brown Asbestos), Chrysotile (White Asbestos) and Crocidolite (Blue Asbestos) detected.	ACM debris (major)
SS209 0.0m	2896765.11	577.9	461.3	56.0	Asbestos NOT detected.	-
SS210 0.0m	2896765.12	897.3	876.2	50.6	Asbestos NOT detected.	-
SS211 0.0m	2896765.13	709.6	626.4	54.7	Amosite (Brown Asbestos) and Chrysotile (White Asbestos) detected.	Fibre cement (2 x1 cm), ACM debris (major) and Loose fibres (major)
SS215 0.0m	2896765.14	622.4	566.5	59.5	Asbestos NOT detected.	-
SS216 0.0m	2896765.15	499.8	368.9	55.7	Asbestos NOT detected.	-
SS217 0.0m	2896765.16	510.5	392.0	51.3	Asbestos NOT detected.	-
SS218 0.0m	2896765.17	461.5	342.7	51.3	Asbestos NOT detected.	-
SS220 0.0m	2896765.19	702.2	626.5	57.7	Asbestos NOT detected.	-
SS221 0.0m	2896765.20	555.6	487.8	55.8	Asbestos NOT detected.	-
SS222 0.0m	2896765.21	637.1	585.2	55.8	Asbestos NOT detected.	-
SS223 0.0m	2896765.22	513.1	439.0	57.2	Asbestos NOT detected.	-
SS223a 0.0m	2896765.23	727.8	657.4	55.2	Asbestos NOT detected.	-
SS224 0.0m	2896765.24	499.4	402.4	50.6	Asbestos NOT detected.	-
SS208 0.15m	2896765.27	317.7	270.9	50.6	Chrysotile (White Asbestos) detected.	Loose fibres (minor)
SS211 0.15m	2896765.28	370.5	318.1	53.0	Asbestos NOT detected.	-

### Glossary of Terms

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

For further details, please contact the Asbestos Team.

### Analyst's Comments

**Amended Report:** This certificate of analysis replaces report '2896765-A2Pv1' issued on 02-Mar-2022 at 1:05 pm.  
Reason for amendment: Additional analysis added.



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.

## 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 Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; 101c Waterloo Road, Christchurch.	0.1 g	1, 4-17, 19-24, 27-28
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; 101c Waterloo Road, Christchurch.	0.1 g	1, 4-17, 19-24, 27-28
<2mm Subsample Weight	Sample dried at 100 to 105°C, weight of <2mm sample fraction taken for asbestos identification if less than entire fraction. Analysed at Hill Laboratories - Asbestos; 101c Waterloo Road, Christchurch.	-	1, 4-17, 19-24, 27-28
<b>Asbestos Presence / Absence</b>	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 101c Waterloo Road, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1, 4-17, 19-24, 27-28
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1, 4-17, 19-24, 27-28

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

Testing was completed between 01-Mar-2022 and 09-Mar-2022. For completion dates of individual analyses please contact the laboratory.

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

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

John Keneth Paglingayen BAPSc  
Laboratory Technician - Asbestos

# Appendix 4

Erosion and  
Sediment Control  
Plan





Issue	Method
Timing of the works	<ul style="list-style-type: none"> <li>▪ Proposed for 30 November 2022. Completion in one day</li> </ul>
Weather forecast	<ul style="list-style-type: none"> <li>▪ Fine, then rain developing. Southwesterlies. Temperature: Min 13°C, Max 22°C, Precipitation: 1+mm, 70% probability, 10+mm 20% probability</li> </ul>
Method of remediation	<ul style="list-style-type: none"> <li>▪ CLS to mark out impacted area requiring excavation on Tuesday 29 November</li> <li>▪ Impacted area to be excavated to 0.15m (0.2m in some areas) and placed directly into truck under supervision of a licensed asbestos removalist (Matt Garrett)</li> <li>▪ Asbestos controls put in place by Matt Garrett, including water truck at excavation area and containment cell</li> <li>▪ Validation soil samples collected by CLS for laboratory analysis for asbestos</li> <li>▪ Excavated material transferred to containment cell along haulage route</li> <li>▪ Containment cell base to be above groundwater (groundwater is at approximately 3.5 - 10m bgl) and have capacity of 90m<sup>3</sup>, e.g. 1.5m depth x 5m wide x 15m long</li> </ul>
Fibre release, dust and sediment control	<ul style="list-style-type: none"> <li>▪ Soil may be moist from preceding day's predicted showers</li> <li>▪ Matt Garrett to supervise controls that prevent fibre release from soil into air</li> </ul>
H&S	<ul style="list-style-type: none"> <li>▪ Maximum speed on site restricted to 15km, truck/s covered during transit</li> <li>▪ Toolbox meeting with excavator operator and truck driver at start of work - Matt Garrett to lead discussion</li> <li>▪ PPE: Steel toe capped unlaced boots, gloves, hard hat, coveralls, respirator</li> <li>▪ No sampling to occur while excavator is operating, CLS staff to remain within visibility of excavator operator</li> </ul>
Environmental controls	<ul style="list-style-type: none"> <li>▪ Remediation to proceed in one direction to avoid cross contamination. Truck/s will not be leaving site during the work</li> <li>▪ Truck/s and other equipment to be decontaminated at the end of the work - Matt Garrett to arrange</li> <li>▪ End condition of remediated area to be addressed through the overarching erosion and sediment control plan for the site</li> </ul>



# Appendix 5

## Validation Results



**Agon Solutions Ltd.**  
**9/12/2022**

Agon was engaged to supervise a soil scrape at 69 Inland Kaikoura Road by Kaikoura Business Park Ltd 2021.

An area around the haybarn was found to contain historical asbestos debris which required remediation.

The work took place on November the 29th and 30th.

The weather was calm and sunny.

<https://www.metservice.com/towns-cities/locations/kaikoura-airport/past-weather>



The area was approximately 80m<sup>2</sup> and was excavated to a depth of 150 to 200mm.

The estimated quantity of contaminated soil was between 97.5 and 127.5 tonnes.



**Agon Solutions Ltd.**  
**9/12/2022**

Asbestos Removal License Holder (PCBU Name): <b>RA17090133</b>		<b>Agon Solutions Ltd</b>	
AsbestosRemoval License Holders Contact Details: <b>02109182621</b>		<a href="mailto:agonasbestos@gmail.com">agonasbestos@gmail.com</a>	
For ACM removal at:		<b>69 Inland Kaikoura Rd</b>	
On behalf of PCBU who commissioned asbestos removal (client): <b>0274338051</b>		<b>Kaikoura Business Park Ltd</b>	
Contact Name: Richard Watherstone		<a href="mailto:rwatherstone@extra.co.nz">rwatherstone@extra.co.nz</a>	
<b>Supervisor:</b> The person who will supervise asbestos removal is:			
Matt Garrett		021 09182621	
<b>Informing people and parties</b>			
Client	Kaikoura Business Park	<a href="mailto:rwatherstone@extra.co.nz">rwatherstone@extra.co.nz</a>	0274338051
Asbestos assessor	Helen Davies	<a href="mailto:helen@cls.net.nz">helen@cls.net.nz</a>	0211531662
<b>Timing of Removal Work:</b>			
Date of planned notification to WorkSafe:		23/11/22	
Removal Start Date		29/11/22	
Estimate duration of removal		2 days	
<b>Notifiable Works</b>			
WorkSafe has been advised of asbestos notifiable works		0097379	
<b>Safety Representative</b>			
Safety Representative for this Project is:		Matt Garrett	

<b>Asbestos Identification On Site</b>	
Location of Asbestos or ACM	Haybarn/ incinerator area
Description	Historical debris, cement sheet and super six
Type	Chrysotile/ Amosite
Est. Volume	Approx. 80m <sup>3</sup>
Non/Friable	Non friable/ Class B

**Agon Solutions Ltd.**  
**9/12/2022**

The contaminated soil was loaded into a truck then covered and placed into a containment cell that was lined with geo fabric (bidim) and then covered with clean fill.



The excavator bucket and truck deck were decontaminated.

Soil samples from the contaminated area were taken by CLS Ltd.

The work area was visually free from asbestos.

**Table No:** A1 VALIDATION SAMPLING  
**Site:** 69 Inland Kaikoura Road Remediation  
**Project No:** J2021031  
**Sample media:** Soil  
**End-Use:** Commercial/Industrial  
**Date:** 30/11/2022  
**Revision:** 0



Sample ID	Presence/Absence AS 4964 (2004)	NZ GAMAS	
		ACM (bonded)	FA and/or AF
Protection of Human Health % w/w		0.01 % w/w	0.001 % w/w
VS25	NAD	-	-
VS26	NAD	-	-
VS27	NAD	-	-
VS28	NAD	-	-
VS29	NAD	-	-
VS30	NAD	-	-
VS31	NAD	-	-
VS32	NAD	-	-
VS33	NAD	-	-
VS34	NAD	-	-
VS35	NAD	-	-
VS36	NAD	-	-
VS37	NAD	-	-
VS38	NAD	-	-
VS39	NAD	-	-
VS40	NAD	-	-
VS41	NAD	-	-
VS42	NAD	-	-
VS43	NAD	-	-
VS44	NAD	-	-
VS45	NAD	-	-
VS46	NAD	-	-
VS47	NAD	-	-
VS48	NAD	-	-
VS49	NAD	-	-
VS50	NAD	-	-
VS51	Chrysotile asbestos detected in fibre cement and in the form of loose fibre bundles. Approximate raw weight of asbestos containing material = 3.7g* Total estimated asbestos content in the sample = 0.55g*. Total estimated asbestos concentration = 0.36% w/w*	<0.01	0.001
VS52	NAD	-	-
VS53	NAD	-	-
VS54	Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of asbestos = 0.0017g* Total estimated asbestos content in the sample = 0.0017g* Total estimated asbestos concentration = 0.0012% w/w* No asbestos detected at the reporting limit of 0.01% w/w	<0.01	<0.001

\*Limit of reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)).  
Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

**Contaminated Land Solutions Ltd**  
**8A Huntsbury Avenue**  
**Christchurch**  
**NZ 8022**



All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

**Attention:** Helen Davies  
**Report** 946105-AID  
**Project Name** 69 INLAND KAIKOURA RD  
**Project ID** J2021031  
**Received Date** Dec 01, 2022  
**Date Reported** Dec 08, 2022

**Methodology:**

**Asbestos Fibre Identification** Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.  
*NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*

**Unknown Mineral Fibres** Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.  
*NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*

**Subsampling Soil Samples** The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.  
*NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*

**Bonded asbestos-containing material (ACM)** The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.  
*NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*

**Limit of Reporting** The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence IANZ Accreditation does not cover the performance of this service (non-IANZ results shown with an asterisk).  
*NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*



**Project Name** 69 INLAND KAIKOURA RD  
**Project ID** J2021031  
**Date Sampled** Nov 30, 2022  
**Report** 946105-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
VS25	22-De0000669	Nov 30, 2022	Approximate Sample 288g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS26	22-De0000670	Nov 30, 2022	Approximate Sample 207g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS27	22-De0000671	Nov 30, 2022	Approximate Sample 202g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS28	22-De0000672	Nov 30, 2022	Approximate Sample 235g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS29	22-De0000673	Nov 30, 2022	Approximate Sample 207g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS30	22-De0000674	Nov 30, 2022	Approximate Sample 234g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS31	22-De0000675	Nov 30, 2022	Approximate Sample 158g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS32	22-De0000676	Nov 30, 2022	Approximate Sample 219g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
VS33	22-De0000677	Nov 30, 2022	Approximate Sample 198g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS34	22-De0000678	Nov 30, 2022	Approximate Sample 243g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS35	22-De0000679	Nov 30, 2022	Approximate Sample 164g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS36	22-De0000680	Nov 30, 2022	Approximate Sample 187g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS37	22-De0000681	Nov 30, 2022	Approximate Sample 263g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS38	22-De0000682	Nov 30, 2022	Approximate Sample 166g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS39	22-De0000683	Nov 30, 2022	Approximate Sample 215g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS40	22-De0000684	Nov 30, 2022	Approximate Sample 259g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS41	22-De0000685	Nov 30, 2022	Approximate Sample 167g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS42	22-De0000686	Nov 30, 2022	Approximate Sample 208g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS43	22-De0000687	Nov 30, 2022	Approximate Sample 239g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS44	22-De0000688	Nov 30, 2022	Approximate Sample 220g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS45	22-De0000689	Nov 30, 2022	Approximate Sample 221g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
VS46	22-De0000690	Nov 30, 2022	Approximate Sample 172g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS47	22-De0000691	Nov 30, 2022	Approximate Sample 162g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS48	22-De0000692	Nov 30, 2022	Approximate Sample 209g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS49	22-De0000693	Nov 30, 2022	Approximate Sample 161g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS50	22-De0000694	Nov 30, 2022	Approximate Sample 192g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS51	22-De0000695	Nov 30, 2022	Approximate Sample 154g Sample consisted of: Fine grained soil and rocks	Chrysotile asbestos detected in fibre cement and in the form of loose fibre bundles. Approximate raw weight of asbestos containing material = 3.7g* Total estimated asbestos content in the sample = 0.55g* Total estimated asbestos concentration = 0.36% w/w*  Organic fibre detected. No trace asbestos detected.
VS52	22-De0000696	Nov 30, 2022	Approximate Sample 171g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS53	22-De0000697	Nov 30, 2022	Approximate Sample 239g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
VS54	22-De0000698	Nov 30, 2022	Approximate Sample 147g Sample consisted of: Fine grained soil and rocks	Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of asbestos = 0.0017g* Total estimated asbestos content in the sample = 0.0017g* Total estimated asbestos concentration = 0.0012% w/w* No asbestos detected at the reporting limit of 0.01% w/w.  Organic fibre detected. No trace asbestos detected.

**Sample History**

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

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

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Asbestos - LTM-ASB-8020	Christchurch	Dec 07, 2022	Indefinite

**Company Name:** Contaminated Land Solutions Ltd  
**Address:** 8A Huntsbury Avenue  
Christchurch  
NZ 8022

**Project Name:** 69 INLAND KAIKOURA RD  
**Project ID:** J2021031

**Order No.:** J2021031  
**Report #:** 946105  
**Phone:** 0211531662  
**Fax:**

**Received:** Dec 1, 2022 9:00 AM  
**Due:** Dec 8, 2022  
**Priority:** 5 Day  
**Contact Name:** Helen Davies

**Eurofins Analytical Services Manager : Karishma Patel**

Asbestos - AS4964

**Sample Detail**

**Auckland Laboratory - IANZ# 1327**

**Christchurch Laboratory - IANZ# 1290**

**External Laboratory**

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	VS25	Nov 30, 2022	9:30AM	Soil	Z22-De0000669	X
2	VS26	Nov 30, 2022	9:32AM	Soil	Z22-De0000670	X
3	VS27	Nov 30, 2022	9:35AM	Soil	Z22-De0000671	X
4	VS28	Nov 30, 2022	9:38AM	Soil	Z22-De0000672	X
5	VS29	Nov 30, 2022	9:40AM	Soil	Z22-De0000673	X
6	VS30	Nov 30, 2022	9:42AM	Soil	Z22-De0000674	X
7	VS31	Nov 30, 2022	9:45AM	Soil	Z22-De0000675	X
8	VS32	Nov 30, 2022	9:47AM	Soil	Z22-De0000676	X
9	VS33	Nov 30, 2022	9:50AM	Soil	Z22-De0000677	X
10	VS34	Nov 30, 2022	10:22AM	Soil	Z22-De0000678	X
11	VS35	Nov 30, 2022	10:28AM	Soil	Z22-De0000679	X
12	VS36	Nov 30, 2022	10:25AM	Soil	Z22-De0000680	X

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NATA# 1261 Site# 25079

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46-48 Banksia Road  
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NATA# 2377 Site# 2370

<b>Company Name:</b>	Contaminated Land Solutions Ltd	<b>Order No.:</b>	J2021031	<b>Received:</b>	Dec 1, 2022 9:00 AM
<b>Address:</b>	8A Huntsbury Avenue Christchurch NZ 8022	<b>Report #:</b>	946105	<b>Due:</b>	Dec 8, 2022
<b>Project Name:</b>	69 INLAND KAIKOURA RD	<b>Phone:</b>	0211531662	<b>Priority:</b>	5 Day
<b>Project ID:</b>	J2021031	<b>Fax:</b>		<b>Contact Name:</b>	Helen Davies
<b>Eurofins Analytical Services Manager : Karishma Patel</b>					

<b>Sample Detail</b>						Asbestos - AS4964
<b>Auckland Laboratory - IANZ# 1327</b>						
<b>Christchurch Laboratory - IANZ# 1290</b>						
<b>External Laboratory</b>						
13	VS37	Nov 30, 2022	10:36AM	Soil	Z22-De0000681	X
14	VS38	Nov 30, 2022	10:40AM	Soil	Z22-De0000682	X
15	VS39	Nov 30, 2022	10:42AM	Soil	Z22-De0000683	X
16	VS40	Nov 30, 2022	10:44AM	Soil	Z22-De0000684	X
17	VS41	Nov 30, 2022	10:47AM	Soil	Z22-De0000685	X
18	VS42	Nov 30, 2022	11:27AM	Soil	Z22-De0000686	X
19	VS43	Nov 30, 2022	10:49AM	Soil	Z22-De0000687	X
20	VS44	Nov 30, 2022	10:52AM	Soil	Z22-De0000688	X
21	VS45	Nov 30, 2022	10:55AM	Soil	Z22-De0000689	X
22	VS46	Nov 30, 2022	11:31AM	Soil	Z22-De0000690	X
23	VS47	Nov 30, 2022	11:33AM	Soil	Z22-De0000691	X
24	VS48	Nov 30, 2022	11:35AM	Soil	Z22-De0000692	X
25	VS49	Nov 30, 2022	11:37AM	Soil	Z22-De0000693	X
26	VS50	Nov 30, 2022	11:39AM	Soil	Z22-De0000694	X

NZBN: 9429046024954

ABN: 50 005 085 521

ABN: 91 05 0159 898

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**Company Name:** Contaminated Land Solutions Ltd  
**Address:** 8A Huntsbury Avenue  
Christchurch  
NZ 8022

**Project Name:** 69 INLAND KAIKOURA RD  
**Project ID:** J2021031

**Order No.:** J2021031  
**Report #:** 946105  
**Phone:** 0211531662  
**Fax:**

**Received:** Dec 1, 2022 9:00 AM  
**Due:** Dec 8, 2022  
**Priority:** 5 Day  
**Contact Name:** Helen Davies

**Eurofins Analytical Services Manager : Karishma Patel**

Sample Detail						Asbestos - AS4964
<b>Auckland Laboratory - IANZ# 1327</b>						
<b>Christchurch Laboratory - IANZ# 1290</b>						X
<b>External Laboratory</b>						
27	VS51	Nov 30, 2022	11:41AM	Soil	Z22-De0000695	X
28	VS52	Nov 30, 2022	11:43AM	Soil	Z22-De0000696	X
29	VS53	Nov 30, 2022	11:45AM	Soil	Z22-De0000697	X
30	VS54	Nov 30, 2022	11:46AM	Soil	Z22-De0000698	X
<b>Test Counts</b>						30

## Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

## Holding Times

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

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

## Units

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

## Calculations

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

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

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

## Terms

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



**Comments****Sample Integrity**

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

**Asbestos Counter/Identifier:**

Adelle Black                      Senior Analyst-Asbestos

**Authorised by:**

Sophie Bush                      Senior Analyst-Asbestos

**Sophie Bush****Senior Analyst-Asbestos (Key Technical Personnel)**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates ISO/IEC 17025:2017 accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**Contaminated Land Solutions Ltd**  
**8A Huntsbury Avenue**  
**Christchurch**  
**NZ 8022**



All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

**Attention:** Helen Davies  
**Report** 948403-AIS-NZ  
**Project Name** 69 INLAND KAIKOURA RD  
**Project ID** J2021031  
**Received Date** Dec 08, 2022  
**Date Reported** Dec 12, 2022

**Methodology:**

- Asbestos Fibre Identification** Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.  
*NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
- Unknown Mineral Fibres** Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.  
*NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
- Subsampling Soil Samples** The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.  
*NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
- Bonded asbestos-containing material (ACM)** The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.  
*NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
- Limit of Reporting** The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).  
 The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).  
*NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

<b>Client Sample ID</b>			<b>VS51</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>22-De0018742</b>
<b>Date Sampled</b>			<b>Nov 30, 2022</b>
Test/Reference	LOR	Unit	
<b>Asbestos in Soils (AS 4964-2004)</b>			
Sample Description	-	Comment	Fine grained soil and rocks
Received Weight	0.1	g	551.79
Total Dry Mass	0.1	g	467.64
Total Analytical Fraction	0.1	g	467.64
Asbestos Detected	-	Yes/No	Yes
Materials Identified	-	Comment	Fibre cement fragments and loose fibre bundles.
Fibres Identified and estimated Asbestos Content (%)	-	Comment	Chrysotile and amosite asbestos detected. Organic fibre detected.
Asbestos Content (as asbestos)	0.01	% w/w	< 0.01
Trace Analysis	0.1	g/kg	No trace asbestos detected.
<b>Asbestos in Soils (NZ GAMAS)</b>			
Weight (>10 mm)	0.1	g	54.95
Weight (<10 mm >2 mm)	0.1	g	106.27
Weight (<2 mm)	0.1	g	306.39
<b>Asbestos Containing Materials (ACM) &gt;10 mm</b>			
Total ACM (> 10mm)	0.1	g	< 0.1
ACM % asbestos (weighted average)	-	%	N/A
ACM in Soil (as asbestos)	0.01	% w/w	< 0.01
<b>Fibrous Asbestos (FA) &gt;10 mm</b>			
Total FA	0.00001	g	< 0.00001
FA % asbestos (weighted average)	-	%	N/A
FA Asbestos in Soil	0.001	% w/w	< 0.001
<b>Fibrous Asbestos (FA) &lt;10 mm</b>			
Total FA	0.00001	g	0.02657
FA % asbestos (weighted average)	-	%	20
FA Asbestos in Soil	0.001	% w/w	0.001
<b>Asbestos Fines (AF) &lt; 10 mm</b>			
Total AF	0.00001	g	0.00125
AF % asbestos (weighted average)	-	%	100
AF Asbestos in Soil	0.001	% w/w	< 0.001
Combined AF+FA	0.001	% w/w	0.001

<b>Client Sample ID</b>			<b>VS54</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>22-De0018743</b>
<b>Date Sampled</b>			<b>Nov 30, 2022</b>
Test/Reference	LOR	Unit	
<b>Asbestos in Soils (AS 4964-2004)</b>			
Sample Description	-	Comment	Fine grained soil and rocks
Received Weight	0.1	g	772.44
Total Dry Mass	0.1	g	681.27
Total Analytical Fraction	0.1	g	681.27
Asbestos Detected	-	Yes/No	No
Materials Identified	-	Comment	N/A
Fibres Identified and estimated Asbestos Content (%)	-	Comment	Organic fibre detected.
Asbestos Content (as asbestos)	0.01	% w/w	< 0.01
Trace Analysis	0.1	g/kg	No trace asbestos detected.
<b>Asbestos in Soils (NZ GAMAS)</b>			
Weight (>10 mm)	0.1	g	91.88
Weight (<10 mm >2 mm)	0.1	g	208.59
Weight (<2 mm)	0.1	g	380.84
<b>Asbestos Containing Materials (ACM) &gt;10 mm</b>			
Total ACM (> 10mm)	0.1	g	< 0.1
ACM % asbestos (weighted average)	-	%	N/A
ACM in Soil (as asbestos)	0.01	% w/w	< 0.01
<b>Fibrous Asbestos (FA) &gt;10 mm</b>			
Total FA	0.00001	g	< 0.00001
FA % asbestos (weighted average)	-	%	N/A
FA Asbestos in Soil	0.001	% w/w	< 0.001
<b>Fibrous Asbestos (FA) &lt;10 mm</b>			
Total FA	0.00001	g	< 0.00001
FA % asbestos (weighted average)	-	%	N/A
FA Asbestos in Soil	0.001	% w/w	< 0.001
<b>Asbestos Fines (AF) &lt; 10 mm</b>			
Total AF	0.00001	g	< 0.00001
AF % asbestos (weighted average)	-	%	N/A
AF Asbestos in Soil	0.001	% w/w	< 0.001
Combined AF+FA	0.001	% w/w	< 0.001

**Sample History**

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

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

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
LTM-ASB-8020 Method for the Qualitative Identification of Asbestos in Bulk Samples	Christchurch	Dec 09, 2022	Indefinite

NZBN: 9429046024954

ABN: 50 005 085 521

ABN: 91 05 0159 898

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NATA# 2377 Site# 2370

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email: EnviroSales@eurofins.com

<b>Company Name:</b>	Contaminated Land Solutions Ltd	<b>Order No.:</b>		<b>Received:</b>	Dec 8, 2022 12:00 AM
<b>Address:</b>	8A Huntsbury Avenue Christchurch NZ 8022	<b>Report #:</b>	948403	<b>Due:</b>	Dec 12, 2022
<b>Project Name:</b>	69 INLAND KAIKOURA RD	<b>Phone:</b>	0211531662	<b>Priority:</b>	2 Day
<b>Project ID:</b>	J2021031	<b>Fax:</b>		<b>Contact Name:</b>	Helen Davies
<b>Eurofins Analytical Services Manager : Karishma Patel</b>					

<b>Sample Detail</b>						Asbestos in Soils (NZ GAMMAS)
Auckland Laboratory - IANZ# 1327						
Christchurch Laboratory - IANZ# 1290						X
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	VS51	Nov 30, 2022		Soil	Z22-De0018742	X
2	VS54	Nov 30, 2022		Soil	Z22-De0018743	X
<b>Test Counts</b>						2

**Internal Quality Control Review and Glossary****General**

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

**Holding Times**

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

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

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

**Units**

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

**Terms**

<b>Dry</b>	Sample is dried by heating prior to analysis
<b>LOR</b>	Limit of Reporting
<b>COC</b>	Chain of Custody
<b>SRA</b>	Sample Receipt Advice
<b>ISO</b>	International Standards Organisation
<b>AS</b>	Australian Standards
<b>NZ GAMAS</b>	New Zealand Guideline for Assessing and Managing Asbestos in Soil, BRANZ (2017)
<b>ACM</b>	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. ACM is generally restricted to those materials that do not pass a 10mm x 10mm sieve.
<b>FA</b>	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. FA is generally restricted to those materials that do not pass a 10mm x 10mm sieve.
<b>Friable</b>	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres in the matrix.

**Comments**
**Sample Integrity**

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

**Asbestos Counter/Identifier:**

Sophie Bush                      Senior Analyst-Asbestos

**Authorised by:**

Katyana Gausel                      Senior Analyst-Asbestos



**Sophie Bush**  
**Senior Analyst-Asbestos (Key Technical Personnel)**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates ISO/IEC 17025:2017 accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**NZMG Grid References**

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**Sampling points**

	<b>E</b>	<b>N</b>
VS25	2561603	5865462
VS26	2561451	5865941
VS27	2561451	5865937
VS28	2561449	5865938
VS29	2561452	5865940
VS30	2561454	5865943
VS31	2561450	5865944
VS32	2561451	5865945
VS33	2561448	5865943
VS34	2561446	5865934
VS35	2561443	5865935
VS36	2561446	5865932
VS37	2561450	5865933
VS38	2561452	5865929
VS39	2561455	5865928
VS40	2561458	5865925
VS41	2561463	5865924
VS42	2561464	5865918
VS43	2561448	5865929
VS44	2561460	5865921
VS45	2561444	5865939
VS46	2561468	5865919
VS47	2561465	5865923
VS48	2561469	5865923
VS49	2561473	5865923
VS50	2561473	5865926
VS51	2561470	5865927
VS52	2561471	5865932
VS53	2561475	5865931
VS54	2561475	5865928

**Remediation Area**

	<b>E</b>	<b>N</b>
W12	2561467	5865916
W13	2561455	5865925
W14	2561443	5865932
W16	2561440	5865940
W17	2561451	5865948

**Containment Cell**

	<b>E</b>	<b>N</b>
W19	2561615	5865454
W20	2561597	5865445
W21	2561593	5865451
W22	2561609	5865460



# Appendix 6

Clearance  
Certificate



## APPENDIX I: CLEARANCE CERTIFICATE TEMPLATE

**Note:** When asbestos removal work requires a Class A licence, an independent licensed asbestos assessor<sup>23</sup> must carry out the clearance inspection and complete a clearance certificate if satisfied the area is safe to reoccupy.

An independent competent person can conduct clearance inspections for all other asbestos removal work that is not Class A work.

### SECTION A: CLEARANCE INSPECTION DETAILS

Client details (either the PCBU who commissioned asbestos removal work in a workplace, or licensed asbestos removalist for work done in a home)	
Name of client:	<a href="#">Kaikoura Business Park 2021</a>
Client contact details:	<a href="#">Richard Watherston, 027 433 8051</a>
Removal work details	
Date(s) that removal work was carried out:	<a href="#">30 / 11<sup>M</sup> / 2022</a> DD / MM / YEAR
Site address where removal work was carried out:	<a href="#">69 Inland Kaikoura Road, Kaikoura, Canterbury</a>
Details of the specific asbestos removal area(s):	<a href="#">Per attached drawing</a>
Name of licensed asbestos removalist:	<a href="#">Matt Garrett, Agon Solutions Ltd</a>
Name and contact details of licensed asbestos removalist supervisor(s) (if different to removalist):	
Inspection details	
Date of clearance inspection:	<a href="#">30 / 07<sup>M</sup> / 2022</a> Time of clearance inspection: <a href="#">12 / AM</a>

<sup>23</sup> Until 4 April 2018, an independent competent person can conduct clearance inspections and issue clearance certificates for Class A asbestos removal work.

**SECTION B: ASBESTOS REMOVAL PAPERWORK**

Do you have a copy of the asbestos removal control plan?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Do you have a copy of the WorkSafe notification form?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the removal work consistent with the control plan and the notification form? (eg use of enclosures, decontamination facilities, waste facilities)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**SECTION C: ASBESTOS REMOVAL AREA**

VISUAL INSPECTION

Inspection of the specific area detailed in Section A <b>found no visible asbestos</b> remaining as a result of the asbestos removal work carried out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is air monitoring required? (if not, proceed to section E)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Can the area be reoccupied?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Has additional information been attached? (eg photos, drawings, plans)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

AIR MONITORING **NOT CONDUCTED**

Air monitoring was carried out as part of the clearance inspection. <b>The result did not exceed 0.01 fibres/ml.</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has the air monitoring sample been analysed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is the air monitoring report attached?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Can the area be reoccupied?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Number of samples collected:		

	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5
Results					

**SECTION D: ENCLOSURES**

BEFORE DISMANTLING THE ENCLOSURE

The area within the enclosure and the area immediately surrounding the enclosure was inspected and <b>no visible asbestos was found.</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Can the enclosure be dismantled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

After the enclosure is dismantled and removed:

An inspection of the area in which the enclosure was erected and the area immediately surrounding the area where the enclosure was erected was inspected and <b>no visible asbestos was found.</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the air monitoring report attached?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Can the area be reoccupied?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**SECTION E: CLEARANCE DECLARATION**

I, (name) declare that:

- > I found no visible asbestos residue from asbestos removal work in the area, or in the vicinity of the area, where the work was carried out
- > (if air monitoring was conducted as part of the clearance inspection): the monitoring shows the respirable fibre level does not exceed 0.01 fibres/ml and
- > as far as can be determined from the clearance inspection, the asbestos removal area does not pose a risk to health and safety from exposure to asbestos.

Signature of licensed asbestos assessor or competent person:

**Helen Davies**

Assessor licence number (if applicable):

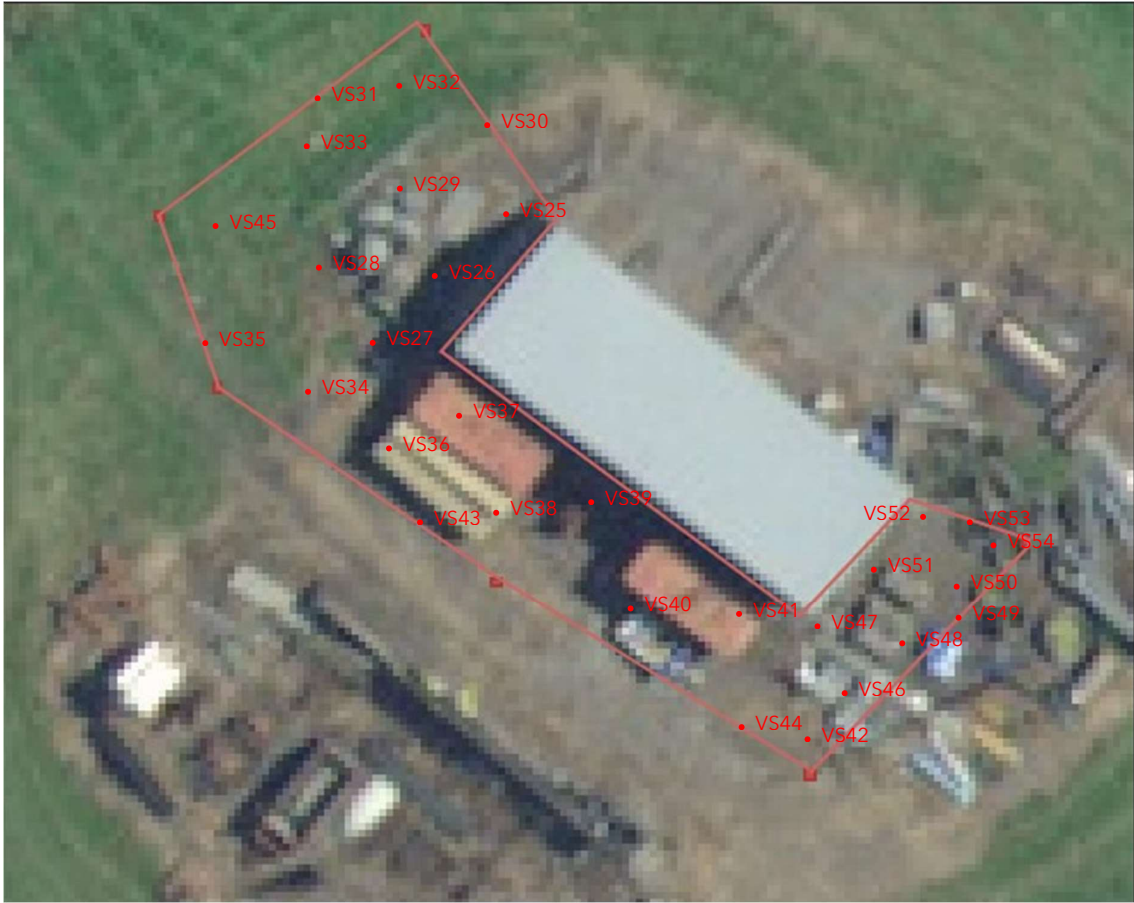
Name of licensed asbestos assessor or competent person:

**HELEN DAVIES**

Qualifications of licensed asbestos assessor or competent person:

**MSc Environmental Technology, Certified Environmental Practitioner Soil Contamination**

ASBESTOS REMOVAL AREA – 69 INLAND KAIKOURA ROAD, 30 NOVEMBER 2022











**CLS** contaminated land solutions  

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*RONGOĀ WHENUA POKE*