69 Inland Kaikoura Road, Proposed Lot 14. Site Validation Report

Kaikoura Business Park 2021

Reference: J2021031

7 September 2022

CLS contaminated land solutions

RONGOĀ WHENUA POKE

Document control record

Document prepared by:

Contaminated Land Solutions
RONGOĀ WHENUA POKE
8A Huntsbury Avenue
Christchurch 8022

T: +64 21 153 1662
E: helen@cls.net.nz
W: cls.net.nz

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Certification			
Author and Certifier		Reviewer	
Name	Helen Davies	Name	Nicola Peacock
Signature		Signature	
Title	Director	Title	Director, Momentum Environmental
Years' experience	25	Years' experience	13 years contaminated land experience within 29 years environmental experience
Certification		Certification	

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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 within a site 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.

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

Asbestos, arsenic, cadmium and lead were identified above the Ministry for the Environment's rural residential Soil Contaminant Standards (SCSs) in analytical results from samples collected from surface in an area referred to as 'HM1'. This area is located in the proposed Lot 14 (see **Figure 2**).

The subdivision consent issued by Kaikoura District Council requires remediation of this area to make it acceptable for the proposed rural residential future use. The consent with conditions is provided in **Appendix 2**, along with the remedial action plan for the work.

This report has been prepared in accordance with the requirements of the Ministry of 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)

Figure 1. Site Location (Left Figure: Entire Site, Right Figure: Area HM1). Source: Canterbury Maps NZ LINZ Topographic Layer

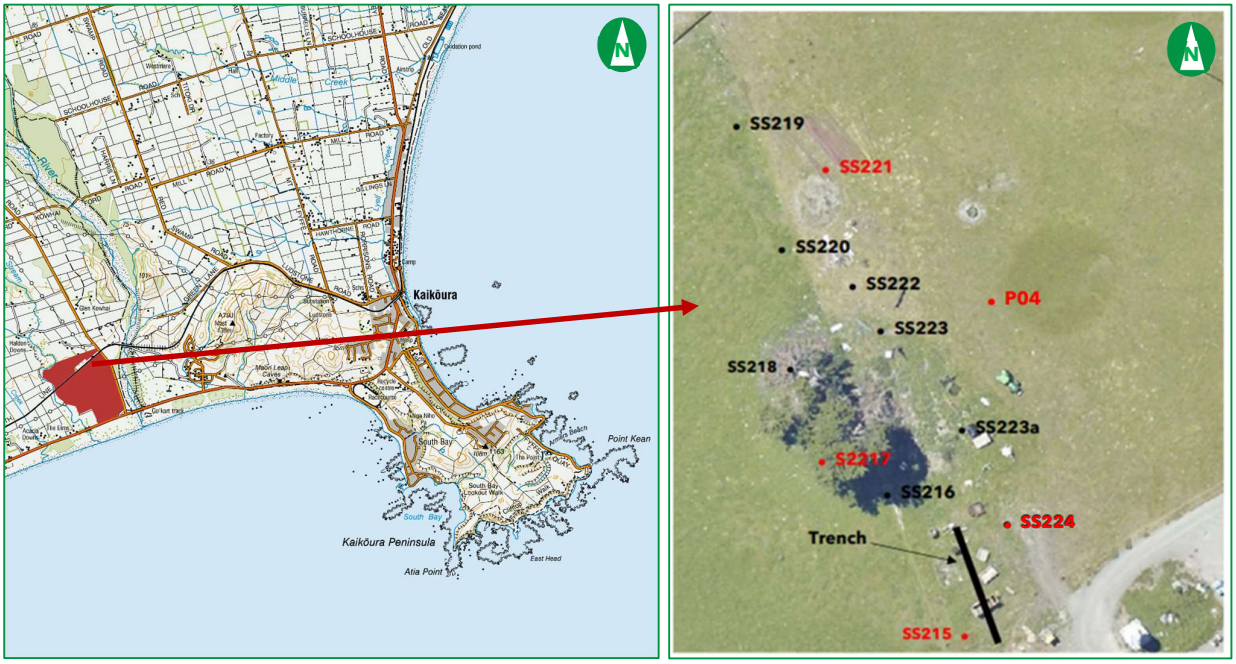
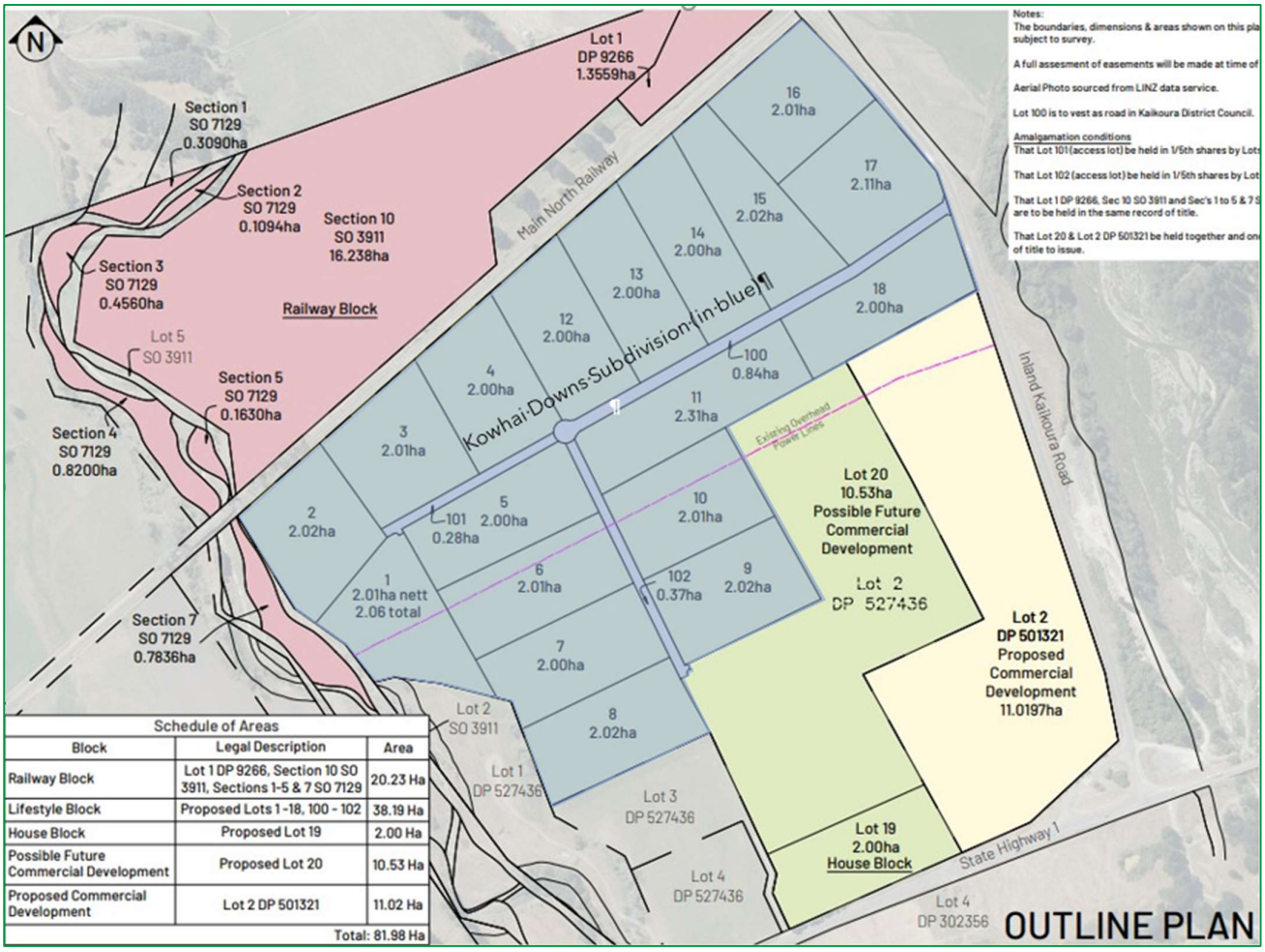


Figure 2 Subdivision Plan. Source: Baseline Group



3 Background Information

3.1 Summary of Site Contamination

Potentially health significant contamination was identified in area HM1, which is located within Lot 14, in a Detailed Site Investigation (DSI) conducted by CLS (CLS, 2022a). Summarised details of the contamination are provided below.

Thirteen surface soil samples and four sub surface soil samples were collected from area HM1 and analysed for heavy metals in investigations conducted by CLS on 4 January 2022 and 24 February 2022. Health significant results were identified in five of the thirteen surface samples at locations shown in red in **Figure 1** and as detailed in **Table 2.** Solid waste (old vehicle parts, machinery parts, metal, plastic pipework etc) was also observed to be present in the area. Full details of the sample results and assessment against Soil Contaminant Standards are provided in Tables A1 and A2 in **Appendix 3**.

Based on the investigation results, solid waste was removed from the area and an asbestos removal programme was conducted by Agon Solutions Ltd (reported in **Appendix 4**).

Following that remedial work, the contamination remaining on site and the subject of this report was cadmium, lead and arsenic in soil.

3.2 Remedial Strategy and Objectives

The ultimate remediation goal is to break the complete exposure pathways between the heavy metal contaminated soil and human receptors to the extent that the risk to human health and the environment becomes acceptable for a future rural residential land use.

The complete exposure pathways at this site are associated with direct contact with soil contaminated with arsenic, lead and cadmium via ingestion, inhalation, and dermal contact.

The DSI (CLS 2022a) identified six health significant heavy metal results from samples taken from five locations in area HM1.

The health significant results are shown in **Table 2** and are based on assessment against the Soil Contaminant standards (SCSs) for rural residential use based on 25% home grown produce consumption. Commercial/Industrial SCSs are also provided to demonstrate that the contamination recorded was below the standards applicable for a commercial/industrial land use (see Section 4 for details of the relevance of this).

Table 2. Heavy Metals Results Exceeding the SCSs for the Proposed Future Use (out of all Investigation Results).

Sample ID	Contaminant	Result (mg/kg)	SCS rural residential 25% produce, pH 5 (mg/kg)	SCS Commercial/Industrial (mg/kg)
P04 – 0.0-0.1m	Arsenic	**25**	**17**	70
P04 – 0.0-0.1m	Lead	**179**	**160**	3,300
SS215-0.0m	Cadmium	**3.3**	**0.8**	1,300
SS217-0.0m	Cadmium	**0.97**	**0.8**	1,300
SS221-0.0m	Cadmium	**0.84**	**0.8**	1,300
SS224-0.0m	Lead	**166**	**160**	3,300

Results 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.

The chosen option for managing contamination in this area, which was estimated to be approximately 100m x 30m, and assumed to be limited to the top 0.10m (total volume of impacted soil estimated to be 300m^3) was described in the Contaminated Site Remediation Plan (CSMP, CLS 2022b):

Excavation of the impacted surface soil and relocation into an encapsulation bund/cell located in the commercial/industrial part of the site. The excavated area is to be validated by soil sampling using a combination of field screening with a portable XRF and collection of samples for submission to an IANZ accredited laboratory for

analysis for arsenic, cadmium, and lead. The 95% UCL of the mean result for each metal must not exceed the remediation goals detailed in Table 3.

Table 3. Remediation Goals for Heavy Metals and Asbestos (based on SCS rural residential 25% produce)

	Arsenic	Cadmium	Lead	ACM (% w/w)	FA and/or AF (%w/w)
Total recoverable concentration (mg/kg)	17	0.8	160	0.01%	0.001%

4 Summary of Remedial Work Undertaken

The following remedial work was undertaken in June 2022:

- A draft erosion and sediment control plan was produced to defined management methods including the haulage route (**Appendix 5**).
- A containment cell was excavated in the commercial/industrial area of the site on 27 June 2022. The location of the cell is shown in **Figures 4 and 5.** As this area is intended for commercial /industrial future use the Commercial/industrial SCSs (see **Table 2**) apply and as all soil sample results are below these SCSs no specific soil management was required for placement and ongoing management.
- Prior to the remediation commencing on 29 June 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 29 June 2022, the haulage route and speed limit were discussed with the truck driver and supervisor and the route was altered to prevent unnecessary erosion of soil/damage to the newly formed road within the subdivision
- The remediation was completed in one day: 29 June 2022.
- The weather was mild, dry and calm on the day of the remedial work, and the soil was moist from heavy rainfall the previous day.
- Soil within the remedial area was excavated using a systematic approach working from south to north. The work programme needed modification due to the presence of new stockpiles of topsoil on the remediation area which required relocation.
- Soil was excavated using a mechanical excavator directly into a 14-tonne truck which transferred to soil directly into the encapsulation cell. A mechanical excavator compacted the relocated soil in layers to form a flat, un-bulked surface within the cell.
- During the excavation, Helen Davies of CLS conducted a total of approximately 200 field tests of soil using a portable XRF analyser (for results, see Table A6, **Appendix 3**). Where elevated results indicative of potential failure of the remediation goal were obtained with the XRF analyser, further excavation and retesting occurred.
- Twenty soil samples were collected from the base and walls of the excavated area into laboratory supplied containers at the end of the remedial work. These were delivered to Hill Laboratories for analysis of arsenic, cadmium and lead concentrations. Results were compared against the remediation goals in **Table 3** to determine the residual levels of contamination at the site. Section 7 provides further details of the validation.
- There were no incidents associated with the remediation.
- Thirty-nine truckloads of soil were transferred to the containment cell, indicative of a total weight of 546 tonnes. This equates to an approximate volume of 320 m^3 based on 1.7 tonnes per m^3.

Figure 3. Images from the Remedial Work (Including Additional Excavation of Areas Returning High XRF Readings)

5 Disposal in the Containment Cell

Soil removed from Lot 14 was directly transferred to a purpose-built containment cell located in the commercial/industrial part of the site.

The location of the containment cell is shown in **Figure 4**. Details of the containment cell are provided in **Table 4**.

Figure 4. Location of Containment Cell (green). Right hand figure sourced from Baseline Group

Table 4. Containment Cell Details

Depth	1.5m below ground surface
Lined?	No
Weight/volume of soil transferred from area HM1 to the cell	546 tonnes / 320 m3 (approximate based on 39 truckloads, each being approximately 14 tonnes). Material compacted but left unsealed pending development of the site and proposed sealing of the area with hardstand

It is understood that processes related to the establishment of a community drinking-water supply for the site could mean that the containment cell may be relocated from its current position to the southern end of the commercial part of the site, close to, but upgradient of, the wastewater treatment plant and disposal field.

Figure 5. Containment Cell View to the East

6 Unexpected Discovery During Remedial Works

During the excavation and removal of surface soil in area HM1, previously sub-surface asbestos was exposed (see **Figure 6**). The discovery was in the approximate location of the previous asbestos removal works conducted by Agon Solutions Ltd (mentioned in Section 3.1). CLS assessed the health and safety associated with the discovery, donned additional PPE/RPE and hand-picked visible ACM, which was placed in a labelled asbestos disposal bag. Underlying soil was scraped and placed in a 20L bucket. Two validation soil samples were collected from the base of the impacted area. Soil in the 20L bucket was transferred to part of the site shown in **Figure 7** which is known to already be impacted with asbestos and is earmarked for future asbestos remediation.

The discovery details summarised above are documented more fully in a memo provided in **Appendix 6**.

The actions taken to address the unexpected discovery did not successfully remove the asbestos contamination. As a result, Agon Solutions was commissioned to return to the site on 18 July 2022, to conduct further removal of asbestos contaminated soil to meet the asbestos remediation goals in **Table 3**.

Helen Davies of CLS was present on site at that time to perform the role of a 'competent person' per WorkSafe requirements. Visual clearance was performed along with soil sampling.

The asbestos removal process including clearance certificate is provided in **Appendix 7**. The soil removed was relocated to the same location as that of the 20L bucket transferred on 29 June 2022. The results of the validation samples collected and analysed indicated that the asbestos remediation had been successful. The validation sample locations and results are presented in the memo provided in **Appendix 7**.

The temporary stockpile requires appropriate removal and disposal as its current storage is not acceptable in the long-term.

Figure 6. Asbestos Discovery

Figure 7. Temporary Disposal Location of 20L Bucket of Asbestos Contaminated Soil Next to Hay Barn (Covered and Marked)

7 Validation Works

The remediation goal is to break the link between the arsenic, cadmium, lead and asbestos contamination and future rural residential occupiers. The soil contaminant standards associated with this goal are detailed in **Table 3**. The goal was achieved through the following approach:

- Marking out of the remedial area based on the remediation drawing (**Appendix 2**) 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 from south to north to prevent cross contamination.
- Use of a portable XRF (Niton XL2GOLDD) to allow immediate arsenic and lead screening results to enable further excavation to be directed to areas as required. Field screening results are provided in Table A5, **Appendix 3**, and the final excavation area is shown in **Figure 8**. Note that the XRF results were used for screening purposes only to guide the remedial excavation and are not validation sampling results (results from samples submitted to an IANZ accredited laboratory meet this purpose). Further, the XRF cannot provide useful data for cadmium when the rural residential soil contaminant standard is the remedial goal because the detection limit is too high. The XRF results assisted with identification and removal of additional arsenic and lead contamination. Nearly 200 tests were performed including calibration and blank testing for QA purposes.
- At the end of the remediation earthworks: Collection of twenty soil samples from the base and sides of the excavation (as shown in **Figure 5**) for IANZ accredited laboratory analysis of total recoverable arsenic, cadmium and lead concentrations. Each sample was given a unique identification number and collected using decontaminated equipment/clean nitrile gloves and placed into a laboratory supplied 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 A4, **Appendix 3**, and the laboratory report is also provided in **Appendix 3**.

Figure 8. Final Remediation Area and Validation Sample Locations (Arsenic, Cadmium and Lead). Basemap Sourced from Baseline Group

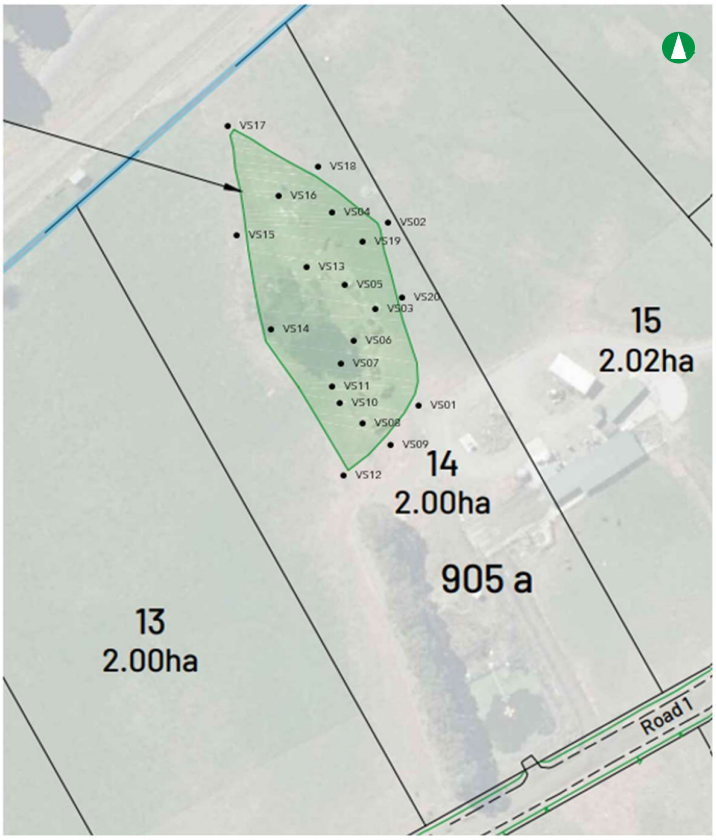


Figure 9. Validation Sample Locations (Asbestos)
Photograph Taken Looking South i.e., At the Southern End of Area HM1

8 Tier 1 Risk Screening Assessment

8.1 Arsenic Cadmium and Lead

The arsenic, cadmium and lead analytical results from twenty soil samples taken from the base and walls of the remediation excavation have been assessed against the remedial target concentrations (**Table 3**).

All arsenic and lead results were below these values and it is therefore considered that there is no longer a significant risk to human health associated with these contaminants in this area of the site.

Three of the twenty soil sample results returned results that were above the remediation goal for cadmium (0.8mg/kg). These were samples VS05: 0.81mg/kg, VS09: 0.85mg/kg and VS11: 1.03mg/kg.

There was no pattern associated with the locations of these results (see **Figure 8** for their location), and one was located beyond (south of) the remediation area.

The 95% UCL of the mean cadmium concentration is 0.59mg/kg, which is below the remediation goal.

Pockets of cadmium elevated above the remediation target concentration (**Table 3**) are present within and to the south of the remediation area. However, the remediation target concentration is based on a default soil pH of 5 (see MfE 2011 and the corresponding table reproduced in **Appendix 3**).

It is understood (Richard Watherson, pers. comm.) that the soil at the site has a pH of 6.2. On this basis, the remedial target can be revised to 2.34mg/kg and all results are below this.

8.2 Asbestos

Asbestos was identified during the excavation of soil and removed by hand picking and limited soil removal.

Following the failure of validation samples VS11 and VS12 to meet the remediation goals for asbestos, further remedial work has been conducted and validation samples VS21 – VS24 collected. These samples returned results below the remediation goals.

9 Community Drinking-water Supply

Following completion of the remediation of area HM1, plans for a community drinking-water supply were produced. A proposed option involves use of on-site well O31/0155. The drinking water supply protection zone calculated per Canterbury Land and Water Regional Plan (ECan, 2018) requirements extends into the containment cell area and for this reason an assessment of the leachability of the material disposed of in the cell was undertaken through SPLP extraction and analysis of arsenic, cadmium and lead.

Samples extracted and analysed were as follows:

- Samples VS05, VS09 and VS11 from area HM1 in Lot 14. These samples had the most elevated total cadmium concentrations following remediation and would therefore present 'worst case' SPLP results, and
- SPLP01 and SPLP02, taken from the containment cell. Samples were collected from surface soil located close to each end of the cell.

Results have been conservatively assessed against 50% of the Maximum Acceptable Value (MAV) detailed in the *Drinking-water Standards for New Zealand 2005 (Revised 2018)* (MoH 2018) and are presented in **Table 5**. 50% MAV was chosen as this is the water quality limit for groundwater indicated in the Canterbury Land and Water Regional Plan (ECan, 2018) but this is a very conservative assessment for soil leachate and 20 times MAV is often used when assessing SPLP results. That the results are below this very conservative assessment is relevant to any assessment of impact to the proposed community drinking-water supply associated with the location of the cell in the drinking-water supply protection zone.

Table 5. Results from SPLP Extraction and Analysis (mg/l)

SPLP extract analysis	VS05	VS09	VS11	SPLP01	SPLP02	Conservative adopted limit - DWSNZ 50% MAV
Arsenic	0.00112	0.00219	<0.0011	0.0039	0.0039	0.005
Cadmium	<0.000053	0.000074	0.000087	<0.000053	<0.000053	0.002
Lead	0.00224	0.00203	0.00375	0.0025	0.00158	0.005

There were no exceedances of 50% MAV.

10 Effectiveness of the Remediation

10.1 Summarised site condition following remediation

An assessment of the effectiveness of the remediation against the remedial objectives has been conducted. The remediation was successful in that all the remedial objectives specified in **Section 3** were met when the soil pH of 6.2 was used. On this basis, no long-term management controls associated with soil contamination are required.

The requirements of the conditions within resource consent LU1818 (**Appendix 2**) have been met for Lot 14, where contamination was present and has been remediated as reported here. This lot is acceptable for a future rural residential land use. No health significant contamination was identified in the remaining residential lots associated with the Kowhai Downs residential subdivision (CLS 2022a) and these lots are acceptable for a future rural residential land use.

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

The stockpile of asbestos contaminated soil, along with the *in-situ* contaminated soil, both located in the future commercial development area (proposed Lot 20), require remediation. That area of the site has contaminants identified at health significant concentrations.

The containment cell used to accommodate soil stripped from area HM1 is currently located within the community drinking water supply protection zone of the well proposed for use for this purpose. SPLP extraction and testing of samples has been conducted and the results are below 50% MAV suggesting a lack of impact on groundwater in the protection zone.

10.2 Suitability of site for proposed development

Based on the DSI (CLS 2021a) and the remediation of Lot 14 (reported here), the 18 subdivided lots that form the Kowhai Downs subdivision are suitable for future rural residential use.

11 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)*.

Environment Canterbury 2018. *Canterbury Land and Water Regional Plan*. Environment Canterbury.

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

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.

Ministry of Health 2018, *Drinking-water Standards for New Zealand 2005 (Revised 2018)*. Wellington: Ministry of health

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

CLS contaminated land solutions

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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 Field Screening

A Thermo Scientific Niton XL2GOLDD has been used to field screen samples for certain heavy metals. The manufacturers' instructions were followed when using this device. A blank and a calibration sample were tested prior to initiating the analysis of field samples. The blank was retested at regular intervals to confirm an absence of contamination on the XRF window.

The USEPA *Method 6200 – Field Portable X-ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment* (USEPA, 2007) was used as guidance as required to assure data quality. The XRF is a field screening instrument and is always used in conjunction with the collection of samples for analysis at an IANZ accredited laboratory.

2.3 Laboratory

Hill Laboratories was selected to perform analysis of all samples. This laboratory is IANZ accredited and each of the test methods used are also IANZ accredited. All samples were analysed within the appropriate holding times for each analyte.

Appendix 2

Remediation Plan and NES Consent

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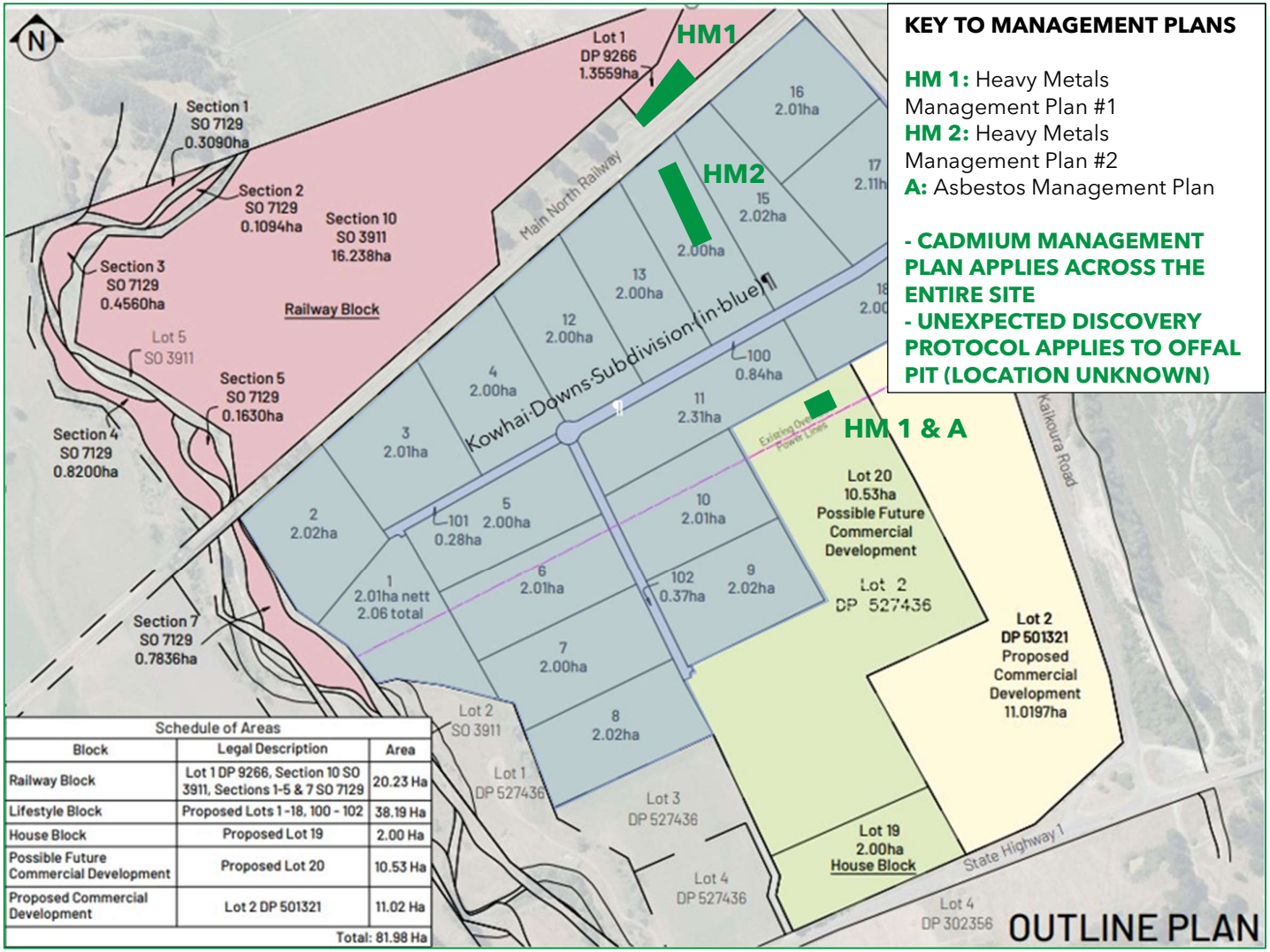
Remediation Figure



Schedule of Areas		
Block	Legal Description	Area
Railway Block	Lot 1 DP 9266, Section 10 SO 3911, Sections 1-5 & 7 SO 7129	20.23 Ha
Lifestyle Block	Proposed Lots 1 -18, 100 - 102	38.19 Ha
House Block	Proposed Lot 19	2.00 Ha
Possible Future Commercial Development	Proposed Lot 20	10.53 Ha
Proposed Commercial Development	Lot 2 DP 501321	11.02 Ha
		Total: 81.98 Ha

KAIKŌURA
DISTRICT COUNCIL

2 June 2022

NOTICE OF DECISION

Resource Management Act 1991 (RMA)

Application Number:	LU1818
Applicant:	Kaikoura Business Park 2021 Limited
Consent Sought:	Land use consent to undertake earthworks for the purpose of contaminated soil removal
Address of Activity:	69 Inland Road, Kaikoura
Legal Description:	Lot 2 DP 527436, Lot 1 DP 9266 SEC 10 SO 3911 SECS 1-5 7 SO 7129 Lot 2 DP 501321
Valuation Number:	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: Date: 2/06/2022

Matt Hoggard
Strategy, Policy & District Plan Manager

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) 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.

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.

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 if 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
Analytical Results and Cadmium SCS

CLS contaminated land solutions

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Table No:	A1 - SURFACE SAMPLE RESULTS
Site:	69 Inland Kaikoura Road Remediation
Project No:	J2021031
Sample media:	Soil
Analysis:	Total Recoverable Concentrations
End-Use:	Rural Residential / Lifestyle Block 25% Produce
Date:	29/06/2022
Revision:	0

CLS contaminated land solutions
RONGOĀ WHENUA POKE

Sample Name	P01	P02	P03 - 0.0-0.1m	P04 - 0.0-0.1m	SS215 - 0.0m	SS216 - 0.0m	SS217 - 0.0m	SS218 - 0.0m	SS219 - 0.0m	SS220 - 0.0m	SS221 - 0.0m	SS222 - 0.0m	SS223 - 0.0m	SS223a - 0.0m	SS224 - 0.0m	**Assessment Criteria (mg/kg)**	
Sample Depth (m bgl)	0.0	0.0	0.0-0.1	0.0-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Natural / Fill?	Natural / Reworked Natural															Protection of Human Health	Application of NES Regulation 5(9)
Soil Type	Sandy Gravel															NZRB SCS (Health) Rural / Lifestyle 25% Produce[3]/IRB NEPM SGV[4]	Canterbury Level 2 Background Concentrations **Recent** [5]
Metals (mg/kg)																	
Arsenic	-	-	9	25	11	7	6	< 8	6	7	19	7	6	7	11	17	12.58
Cadmium[1]	-	-	0.57	0.48	3.3	0.34	0.97	0.4	0.27	0.36	0.84	0.67	0.52	0.52	0.67	0.8 / 2.34[4]	0.19
Chromium[2]	-	-	19	37	19	10	11	10	13	14	21	16	13	13	16	290	22.7
Copper	-	-	27	38	21	21	31	25	17	20	26	32	23	21	33	>10,000	20.3
Lead	-	-	75	179	74	16.7	22	22	17.8	21	23	39	37	27	166	160	40.96
Mercury [3]	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.4	< 0.10	< 0.10	< 0.19	< 0.10	< 0.10	< 0.10	< 0.10	200	0.11
Nickel	-	-	9	11	11	9	8	8	10	10	9	12	10	9	10	400	20.7
Zinc	-	-	230	290	430	91	147	128	96	104	125	158	171	110	250	7,400	93.94
Asbestos w/w																	
Asbestos Presence / Absence	Asbestos NOT detected	Chrysotile (White Asbestos) detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Description of Asbestos Form	-	Fibre cement, ACM debris and Loose fibres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM (bonded)	< 0.001%	0.119%	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	0.01%	-
FA and/or AF	< 0.001%	< 0.001%	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	0.001%	-

All concentrations are in mg/kg

Abbreviations:

SCS = Soil contaminant standard

NZRB = New Zealand Risk Based

NAD = No asbestos detected

m bgl = meters below ground level

Notes:

1. Cadmium - SCS based on pH 5 and pH 6. Cadmium absorption (i.e. plant uptake of cadmium) increases with decreasing pH (see MfE methodology document)
2. Chromium - SCS tabulated is for chromium VI. This is conservative as samples have been analysed for total chromium (i.e. III and VI).
3. Users Guide National Environmental Standard (NES) For Assessing and Managing Contaminants in Soil to Protect Human Health. New Zealand. 2012
4. 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 F2013C00288, National Environmental Protection Council. (HIL - Health Investigation Level).
5. Environment Canterbury Background Concentrations of Selected Trace Elements in Canterbury Soils. R07/1/2 Dated February 2007. Table 2 Proposed level 2 background levels.

Results above human health values
Results above background

Table No:	A2 SUB-SURFACE SAMPLE RESULTS
Site:	69 Inland Kaikoura Road Remediation
Project No:	J2021031
Sample media:	Soil
Analysis:	Total Recoverable Concentrations
End-Use:	Rural Residential / Lifestyle Block 25% Produce
Date:	24/02/2022
Revision:	0

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Sample Name	SS215 - 0.15m	SS217 - 0.15m	SS221 - 0.15m	SS224 - 0.15m	**Assessment Criteria (mg/kg)**	
Sample Depth (m bgl)	0.15	0.15	0.15	0.15		
Natural / Fill?	Natural / Reworked Natural				Protection of Human Health	Application of NES Regulation 5(9)
Soil Type	Sandy Gravel				NZRB SCS (Health) Rural / Lifestyle 25% Produce[3]/IRB NEPM SGV[4]	Canterbury Level 2 Background Concentrations **Recent** [5]
Metals (mg/kg)						
Arsenic	6	7	10	11	17	12.58
Cadmium[1]	0.62	0.22	0.42	0.28	0.8 / 2.34[1]	0.19
Chromium[2]	14	12	16	14	290	22.7
Copper	13	16	16	17	>10,000	20.3
Lead	156	15.2	21	109	160	40.96
Nickel	11	10	11	10	400	20.7
Zinc	320	79	87	220	7,400	93.94

All concentrations are in mg/kg

Abbreviations:

SCS = Soil contaminant standard

NZRB = New Zealand Risk Based

NAD = No asbestos detected

m bgl = meters below ground level

Notes:

1. Cadmium - SCS based on pH 5 and pH 6. Cadmium absorption (i.e. plant uptake of cadmium) increases

2. Chromium - SCS tabulated is for chromium VI. This is conservative as samples have been analysed for total chromium (i.e. III and VI).

3. Users Guide National Environmental Standard (NES) For Assessing and Managing Contaminants in Soil to Protect Human Health. New Zealand. 2012

4. 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 F2013C00288, National Environmental Protection Council. (HIL - Health Investigation Level).

5. Environment Canterbury Background Concentrations of Selected Trace Elements in Canterbury Soils. R07/1/2 Dated February 2007. Table 2 Proposed level 2 background levels.

Results above human health values

Results above background

Table No:	A3 VALIDATION SAMPLING
Site:	69 Inland Kaikoura Road Remediation
Project No:	J2021031
Sample media:	Soil
Analysis:	Total Recoverable Concentrations
End-Use:	Rural Residential / Lifestyle Block 25% Produce
Date:	29/06/2022
Revision:	1

CLS contaminated land solutions
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Sample Name	VS01	VS02	VS03	VS04	VS05	VS06	VS07	VS08	VS09	VS10	**Assessment Criteria (mg/kg)**		
Sample Location	Wall	Wall	Base	Base	Base	Base	Base	Base	Wall	Base			
Natural / Fill?	Natural / Reworked Natural										Protection of Human Health	Application of NES Regulation 5(9)	
Acceptable?	Yes	Yes	Yes	Yes	Yes, based on SCS at pH6	Yes	Yes	Yes	Yes, based on SCS at pH6	Yes	NZRB SCS (Health) Rural / Lifestyle 25% Produce[2]/IRB NEPM SGV[3]	Canterbury Level 2 Background Concentrations **Recent** [4]	DWSNZ 50% MAV[5]
Total Recoverable Metals Concentrations in Soil (mg/kg)													
Arsenic	6	6	6	7	6	7	7	9	8	6	17	12.58	-
Cadmium[1]	0.11	0.49	0.58	0.73	0.81	< 0.10	0.4	0.37	0.85	0.58	0.8 / 2.34[1]	0.19	-
Lead	15.2	19.3	18.3	22	41	15.6	38	45	30	42	160	40.96	-
Total Recoverable Metals concentrations in Extract mg/l													
Arsenic SPLP	-	-	-	-	0.00112	-	-	-	0.00219	-	-	-	0.005
Cadmium SPLP	-	-	-	-	<0.000053	-	-	-	0.000074	-	-	-	0.002
Lead SPLP	-	-	-	-	0.00224	-	-	-	0.00203	-	-	-	0.005
Asbestos % w/w													
Asbestos Presence / Absence	-	-	-	-	-	-	-	-	-	-	-	-	-
Description of Asbestos Form	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM (bonded)	-	-	-	-	-	-	-	-	-	-	0.01%	-	-
FA and/or AF	-	-	-	-	-	-	-	-	-	-	0.001%	-	-

Abbreviations:

SCS = Soil contaminant standard
SGV = Soil guideline value
NZRB = New Zealand Risk Based
IRB = International risk based
m bgl = meters below ground level

Notes:

1. Cadmium - SCS based on pH 5 and pH 6. Cadmium absorption (i.e. plant uptake of cadmium) increases with decreasing pH (see MfE methodology document).
2. Users Guide National Environmental Standard (NES) For Assessing and Managing Contaminants in Soil to Protect Human Health. New Zealand. 2012
3. 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 F2013C00288, National Environmental Pro
4. Environment Canterbury Background Concentrations of Selected Trace Elements in Canterbury Soils. R07/1/2 Dated February 2007. Table 2 Proposed level 2 background levels.
5. Drinking-water Standards for New Zealand 2005. Revised 2018. Ministry of Health

Results above human health values
Results above background
Results above groundwater protection values

Table No:	A4 VALIDATION SAMPLING
Site:	69 Inland Kaikoura Road Remediation
Project No:	J2021031
Sample media:	Soil
Analysis:	Total Recoverable Concentrations
End-Use:	Rural Residential / Lifestyle Block 25% Produce
Date:	29/06/2022
Revision:	1

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Sample Name	VS11	VS12	VS13	VS14	VS15	VS16	VS17	VS18	VS19	VS20	VS21	VS22	VS23	VS24	SPLP01	SPLP02	95% UCL of arithmetic mean	**Assessment Criteria (mg/kg)**		
Sample Depth (m bgl)	Base	Wall	Base	Base	Wall	Base	Wall	Wall	Base	Wall	Base	Base	Base	Base	Surface	Surface				
Natural / Fill?	Natural / Reworked Natural																	Protection of Human Health	Application of NES Regulation 5(9)	
Acceptable?	Further asbestos remediation conducted, Cadmium below SCS based on pH6	Further asbestos remediation conducted	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		NZRB SCS (Health) Rural / Lifestyle 25% Produce[2]/IRB NEPM SGV[3]	Canterbury Level 2 Background Concentrations **Recent** [4]	DWSNZ 50% MAV[5]
Total Recoverable Metals Concentrations in Soil (mg/kg)																				
Arsenic	8	6	9	8	6	5	5	5	6	6	-	-	-	-	8	9	7.18	17	12.58	-
Cadmium	1.03	0.49	< 0.10	0.25	0.25	0.42	0.43	0.63	0.25	0.43	-	-	-	-	0.41	0.46	0.59	0.8 / 2.34[1]	0.19	-
Lead	41	15.7	15.1	16.9	16.1	45	19.2	17.1	17.0	18.1	-	-	-	-	25	27	30.85	160	40.96	-
Total Recoverable Metals concentrations in Extract mg/l																				
Arsenic SPLP	<0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0039	0.0039	-	-	-	0.005
Cadmium SPLP	0.000087	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000053	<0.000053	-	-	-	0.002
Lead SPLP	0.00375	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0025	0.00158	-	-	-	0.005
Asbestos % w/w																				
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	-	-	-	-	-	-	-	-	Chrysotile (White Asbestos) detected.	NAD	NAD	Chrysotile (White Asbestos) detected.	-	-	-	-	-	-
Description of Asbestos Form	Fibre cement, ACM debris and Loose fibres	Fibre cement, ACM debris and Loose fibres	-	-	-	-	-	-	-	-	Loose fibres	-	-	Loose fibres	-	-	-	-	-	-
ACM (bonded)	0.488	0.452	-	-	-	-	-	-	-	-	<0.001	-	-	<0.00001	-	-	-	0.01	-	-
FA and/or AF	0.01	0.004	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-	-	0.001	-	-

Abbreviations:

SCS = Soil contaminant standard
SGV = Soil guideline value
NZRB = New Zealand Risk Based
IRB = International risk based
m bgl = meters below ground level

Notes:

1. Cadmium - SCS based on pH 5 and pH 6. Cadmium absorption (i.e. plant uptake of cadmium) increases with decreasing pH (see MfE methodology document).
2. Users Guide National Environmental Standard (NES) For Assessing and Managing Contaminants in Soil to Protect Human Health. New Zealand. 2012
3. 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 F2013C00288, National Environmental Protection Council. (HIL - Health Investigation Level).
4. Environment Canterbury Background Concentrations of Selected Trace Elements in Canterbury Soils. R07/1/2 Dated February 2007. Table 2 Proposed level 2 background levels.
5. Drinking-water Standards for New Zealand 2005. Revised 2018. Ministry of Health

Results above human health values
Results above background
Results above groundwater protection values

Table No:	A5
Site:	69 Inland Kaikour Road
Project No:	J2021031
Sample media:	Soil
Analysis:	Portable Niton XL2GOLDD XRF
End-Use:	Residential 25% Produce
Date:	44741
Revision:	0

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Reading No	Lead	Lead Error	Asenic	Arsenic Error	Comments
604	<LOD	7.35	<LOD	5.09	Blank
605	470.21	29.02	391.09	25.41	Standard Reference Material
606	11.8	5.18	6.9	3.9	
607	25.27	7.84	<LOD	8.86	
608	<LOD	8.92	<LOD	6.2	
609	22.02	7.73	<LOD	8.32	
610	14.61	4.69	11.44	3.65	
611	10.45	5.43	9.43	4.19	
612	21.14	6.39	<LOD	7.16	
613	15.18	6.96	<LOD	7.79	
614	25.87	4.6	19.15	3.73	Further excavation occurred
615	22.93	5.66	11.62	4.4	
616	22.88	6.6	<LOD	7.34	
617	40.07	9.41	<LOD	10.31	
618	10.53	6.47	<LOD	7.01	
619	33.26	5.52	8.31	4.15	
620	55.67	5.84	15.96	4.52	Further excavation occurred
621	49.46	5.63	15.59	4.37	Further excavation occurred
622	37.82	5.31	12.47	4.09	
623	43.63	5.3	5.91	3.91	
624	53.26	5.64	11.39	4.27	
625	38.9	7.43	<LOD	8.18	
626	55.98	6.67	<LOD	7.38	
627	9.54	5.12	<LOD	5.51	
628	13.1	6.36	<LOD	7.03	
629	22.8	8.01	<LOD	8.99	
630	13.06	6.25	<LOD	6.79	
631	12.1	6.49	<LOD	7.2	
632	28.13	5.3	12.68	4.12	
633	19.14	4.58	13.8	3.62	
634	<LOD	14.54	<LOD	4.2	
635	<LOD	7.54	8.89	3.91	
636	22.26	4.98	16.57	3.99	
637	8.67	4.65	15.22	3.79	
638	12.08	5.51	<LOD	6.12	
639	11.71	4.5	25.37	3.95	Further excavation occurred
640	31.89	4.41	7.76	3.29	
641	13.61	5.27	8.38	4.01	
642	<LOD	127.5	<LOD	96.63	
643	11.47	4.23	12.59	3.34	
644	13.22	4.2	10.95	3.28	
645	13.65	4.66	5.51	3.47	
646	<LOD	6.44	<LOD	4.72	
647	19.37	4.18	12.16	3.26	

648	<LOD	10.33	<LOD	7.86	
649	8.9	5.1	<LOD	5.43	
650	9.66	6.24	<LOD	6.79	
651	<LOD	9.5	<LOD	7.02	Blank
652	<LOD	7.91	<LOD	5.84	Standard Reference Material
653	20.53	6.01	<LOD	6.44	
654	39.97	7.36	11.36	5.62	
655	<LOD	1488.33	<LOD	980.78	Removed from site
656	<LOD	7.45	<LOD	4.81	Blank
657	443.37	27.73	405.23	24.61	Standard Reference Material
658	<LOD	10.43	9.38	5.28	
659	10.73	7.01	12.43	5.54	
660	<LOD	11.08	<LOD	8.25	
661	<LOD	11.65	<LOD	8.65	
662	<LOD	10.32	8.06	5.22	
663	22.59	7.19	10.54	5.52	
664	11.06	5.39	<LOD	5.71	
665	<LOD	10.27	<LOD	7.61	
666	<LOD	8.27	<LOD	6.18	
667	<LOD	7.67	<LOD	5.37	
668	<LOD	8.64	<LOD	6.22	
669	<LOD	10.08	<LOD	7.47	
670	<LOD	10.67	<LOD	7.88	
671	<LOD	11.35	<LOD	8.13	
672	<LOD	11.04	<LOD	8.29	
673	9.67	6.1	<LOD	6.84	
674	<LOD	9.87	7.61	4.99	
675	14.65	8.42	<LOD	8.66	
676	14.01	7.64	<LOD	8.56	
677	<LOD	9.48	<LOD	6.9	
678	<LOD	10.19	<LOD	7.16	
679	<LOD	7.96	<LOD	5.64	
680	<LOD	9	<LOD	6.73	
681	<LOD	8.43	<LOD	6.1	
682	<LOD	6.24	<LOD	4.31	
683	8.38	5.31	<LOD	5.62	
684	<LOD	5.66	4.45	2.81	
685	<LOD	7.43	<LOD	5.19	
686	<LOD	7.46	<LOD	5.29	
687	<LOD	8.45	<LOD	6.17	
688	<LOD	7.54	<LOD	5.24	
689	14.84	7.11	<LOD	7.72	
690	<LOD	8.08	<LOD	5.9	
691	19.54	6.85	8.35	5.19	
692	15.44	6	<LOD	6.67	
693	29.66	7.53	<LOD	8.09	
694	19.95	8.27	<LOD	9.26	
695	45.55	10.94	22.98	8.84	
696	17.89	9.98	13.87	7.83	
697	12.07	7.14	13.83	5.67	
698	17.06	7.22	18.32	5.88	
699	38.83	7.44	13.87	5.78	
700	11.38	5.84	7.86	4.42	
701	10.42	5.28	8.21	4.03	
702	20.89	5.47	20.19	4.52	Further excavation occurred
703	24.46	6.25	19.9	5.13	Further excavation occurred

704	13.56	7.29	14.2	5.81	Further excavation occurred
705	18.59	7.63	19.2	6.22	Further excavation occurred
706	62.89	9.16	21.05	7.19	Further excavation occurred
707	23.28	7.18	9.32	5.47	
708	17.49	6.76	11.91	5.29	
709	49.11	7.88	20.74	6.3	Further excavation occurred
710	22.04	8.48	<LOD	9.42	
711	<LOD	2805.66	<LOD	1365.59	
712	19.9	8.09	11.52	6.26	
713	37.42	9.88	32.24	8.43	Further excavation occurred
714	21.65	7.85	<LOD	8.58	
715	132.4	17.57	38.45	14.05	Further excavation occurred
716	88.69	11.61	18.38	8.93	Further excavation occurred
717	14.47	5.05	9.65	3.89	
718	37.09	7.48	17.18	5.92	Further excavation occurred
719	16.88	6.38	17.16	5.21	Further excavation occurred
720	15.48	5.65	9.99	4.35	
721	21.45	7.78	11.11	6	
722	20.62	6.46	8.43	4.89	
723	29.2	8.4	23.09	6.91	Further excavation occurred
724	19.58	6.4	17.46	5.19	Further excavation occurred
725	27.16	8.67	13.96	6.79	Further excavation occurred
726	11.65	6.73	<LOD	7.37	
727	31.2	8.28	<LOD	9.1	
728	28.17	7.96	14.19	6.26	Further excavation occurred
729	11.75	5.44	11.3	4.28	
730	14.89	6.89	<LOD	7.42	
731	12.03	4.56	5.49	3.37	
732	<LOD	7.69	<LOD	5.59	
733	<LOD	12.02	<LOD	9.06	
734	<LOD	8.3	<LOD	5.9	
735	<LOD	9.83	<LOD	7.14	
736	25.13	9.8	<LOD	10.97	
737	15.31	7.91	<LOD	8.5	
738	17.48	7.46	<LOD	8.1	
739	14.12	7.35	<LOD	8.28	
740	<LOD	8.69	<LOD	5.92	
741	<LOD	8.1	<LOD	5.79	
742	<LOD	7.54	<LOD	5.19	
743	<LOD	7.12	<LOD	5.23	
744	<LOD	6.06	<LOD	4.24	
745	<LOD	6.08	<LOD	4.26	
746	<LOD	6.63	<LOD	4.67	
747	<LOD	7.34	<LOD	4.78	Blank
748	462.36	28.69	375.25	24.98	Standard Reference Material
749	<LOD	12.85	<LOD	9.76	
750	<LOD	7.23	<LOD	5.31	
751	<LOD	10.23	<LOD	7.25	
752	12.54	7.78	<LOD	8.84	
753	15.97	6.25	<LOD	6.82	
754	<LOD	11.36	9.81	5.83	
755	27	6.12	<LOD	6.74	
756	36.14	8.67	12.22	6.68	
757	18.74	7.21	<LOD	7.8	
758	<LOD	8.56	6.6	4.31	
759	23.92	8.67	<LOD	9.85	

760	21.73	8.81	<LOD	9.59	
761	35.79	7.64	<LOD	8.27	
762	<LOD	8.79	<LOD	6.66	
763	<LOD	97538.65	<LOD	36466.63	ERROR
764	<LOD	8.15	<LOD	5.97	
765	<LOD	10.17	<LOD	7.74	
766	<LOD	14.64	<LOD	10.86	
767	<LOD	12.89	<LOD	9.96	
768	<LOD	10.94	<LOD	7.93	
769	236.44	11.74	14.17	8.65	Further excavation occurred
770	<LOD	12.03	10.88	6.23	
771	<LOD	9.86	16.57	5.43	Further excavation occurred
772	<LOD	10.59	8.14	5.38	
773	<LOD	9.61	8.66	4.95	
774	<LOD	8.15	<LOD	5.44	
775	16.86	7.16	8.9	5.44	
776	23.76	7.62	<LOD	8.44	
777	19.51	8.34	<LOD	9.4	
778	15.36	7.86	<LOD	9.02	
779	13.2	7.09	<LOD	8.03	
780	20.84	7.51	20.98	6.2	Further excavation occurred
781	21.77	8.37	22.64	7.03	Further excavation occurred
782	15.13	6.72	13.67	5.35	Further excavation occurred
783	<LOD	10.61	14.36	5.72	Further excavation occurred
784	<LOD	7.26	<LOD	5.43	
785	<LOD	6.88	13.67	3.75	Further excavation occurred
786	<LOD	7.18	<LOD	5.03	
787	<LOD	10.22	<LOD	7.32	
788	38.52	8.83	<LOD	9.79	
789	12.32	8	12.08	6.29	
790	69.03	10.72	<LOD	11.8	
791	<LOD	9.66	<LOD	7.24	
792	12.53	7.83	<LOD	9.03	
793	<LOD	8.95	<LOD	6.36	
794	<LOD	8.42	<LOD	6.23	
795	14.99	5.06	<LOD	5.39	
796	13.68	7.59	<LOD	8.35	
797	<LOD	10.38	<LOD	7.5	
798	11.15	6.03	<LOD	6.41	
799	38.55	9.88	<LOD	11.27	
800	<LOD	11.67	<LOD	8.42	
801	<LOD	9.93	8.29	5.08	
802	<LOD	7.34	<LOD	5.16	
803	<LOD	8.97	<LOD	6.5	
804	<LOD	9.05	<LOD	6.77	
805	<LOD	7.27	<LOD	5.37	
806	<LOD	32.03	<LOD	10.33	

Health-based cadmium soil guideline values (mg/kg)		Threshold	
Oral RHS (mg/kg BW/day)	0.000 833	Skin absorption factor	0.001
Dermal RHS (mg/kg BW/day)	na	Bioconcentration factor leaf	Depend on pH and soil conc. See separate calculations
Inhalation RHS (mg/kg BW/day)	na	Bioconcentration factor root	
Background intake child (mg/kg BW/day)	0.00041	Bioconcentration factor tuber	
Background intake adult (mg/kg BW/day)	0.00026	Mean bioconcentration factor	

Scenario		Soil ingestion	Dermal	Inhalation	Produce ingestion				Combined SGV			
					No produce	10% produce	25% produce	50% produce	No produce	10% produce	25% produce	50% produce
RHS-child background (mg/kg BW/day)		0.00042	0.00042	na	0.00042							
RHS-adult background (mg/kg BW/day)		0.00057	0.00057	na	0.00057							
Rural residential / lifestyle block	pH 5	115	75,456	na	na	3.12	0.83	0.30	110	3	0.8	0.3
	pH 5.5	115	75,456	na	na	5.19	1.40	0.51	110	5	1.4	0.5
	pH 6	115	75,456	na	na	8.50	2.34	0.87	110	8	2.3	0.9
	pH 6.5	115	75,456	na	na	13.7	3.86	1.45	110	12	3.7	1.4
	pH 7	115	75,456	na	na	21.7	6.28	2.38	110	18	6	2.3
Standard residential	pH 5	115	75,456	na	na	3.12	0.83	0.30	110	3	0.8	0.3
	pH 5.5	115	75,456	na	na	5.19	1.40	0.51	110	5	1.4	0.5
	pH 6	115	75,456	na	na	8.50	2.34	0.87	110	8	2.3	0.9
	pH 6.5	115	75,456	na	na	13.7	3.86	1.45	110	12	3.7	1.4
	pH 7	115	75,456	na	na	21.7	6.28	2.38	110	18	6	2.3
High-density residential		229	150,912	na	na				230			
Parks / recreation		401	132,048	na					400			
Commercial / industrial indoor worker		NL	NL	na					NL			
Commercial / industrial outdoor worker		1,273	433,602	na					1,300			

Note: The default soil pH for initial assessment is pH 5. The residential SGVs provided here for pH other than pH 5 are for site-specific assessment purposes where it can be demonstrated that some other pH is appropriate. Information for demonstrating that a pH greater than 5 is appropriate is provided in appendix 2.

NL = No limit.

na = Not applicable.

Appendix 4
First Asbestos Removal

CLS contaminated land solutions
RONGOĀ WHENUA POKE

Agon Solutions Limited
agonasbestos@gmail.com
3rd March
69 Inland Kaikoura Rd
Asbestos removal
Attn: Helen Davies

Agon Solutions Limited was engaged by Drones at Work Limited to identify surface asbestos debris at 69 Inland Kaikoura Road. The property is a farm that is being subdivided into residential sections.
The areas of concern were identified as the incinerator and the old piggery.
The incinerator sits behind a concrete barn and the historic piggery area is a clear site.

Figures 1 and 2. Incinerator and environs

Figure 3. Piggery

On the 22nd of February I travelled to the above address and met the owner Richard Watherston on site. I asked Mr Watherston to identify the areas that were to be investigated then donned PPE and began to hand pick the areas.

The grass in both areas had been sprayed to enable visual confirmation of ACM.

ACM (cement sheet and super six) was found around the containers,barn, timber pile,incinerator and the used farm equipment.

Figure 4. Incinerator area

There was a notable increase in the concentration of ACM on the west side of the barn.

Figures 4 and 5 west side of barn

.

Figure 6. ACM from incinerator area

The areas beneath the containers, timber pile,farm equipment and boulders could not be visually investigated

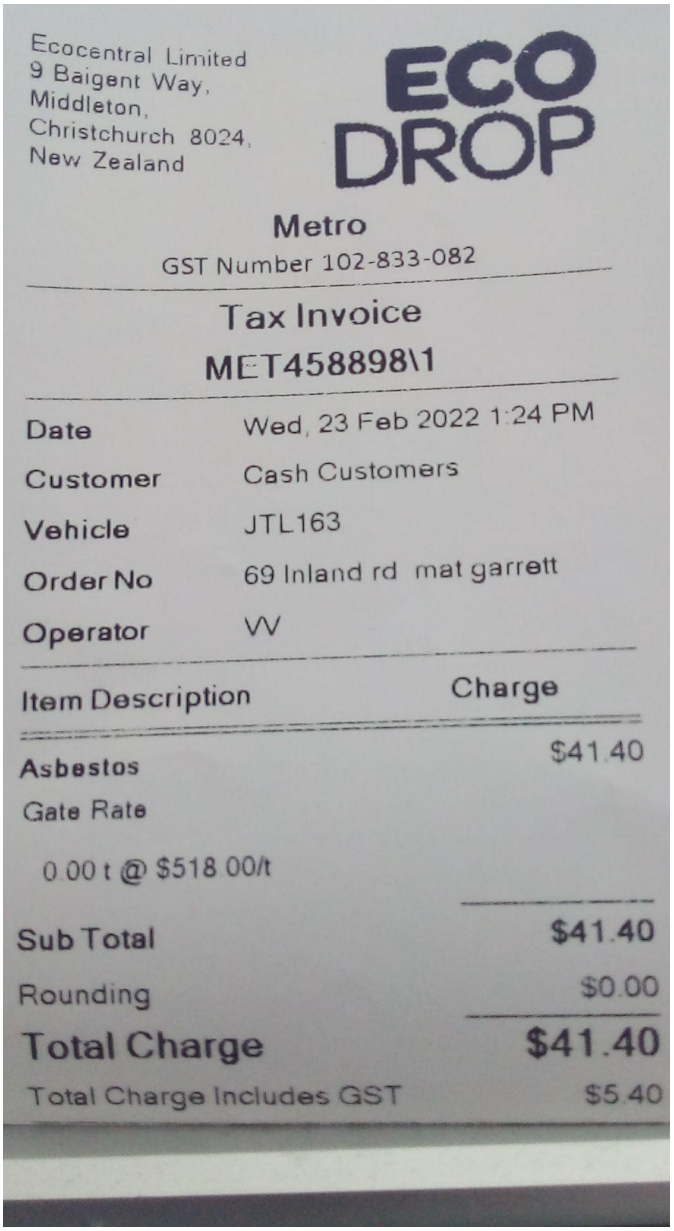
The piggery area revealed only a small amount of ACM, mainly in a line at the southern boundary suggesting the existence of an historic structure.

Figure 7. ACM from piggery area.

Worksafe was notified of this project.

[Notification Of Licensed Asbestos Removal - agonasbestos@gmail.com - Gmail (google.com)]

The material was visually identified and placed into a 200mu asbestos waste bag then double bagged, gooseneck tied and taken to Eco Drop in Bromley, Christchurch and disposed of as asbestos waste.



Ecocentral Limited
9 Baigent Way,
Middleton,
Christchurch 8024,
New Zealand

ECO DROP

Metro

GST Number 102-833-082

Tax Invoice

MET458898\1

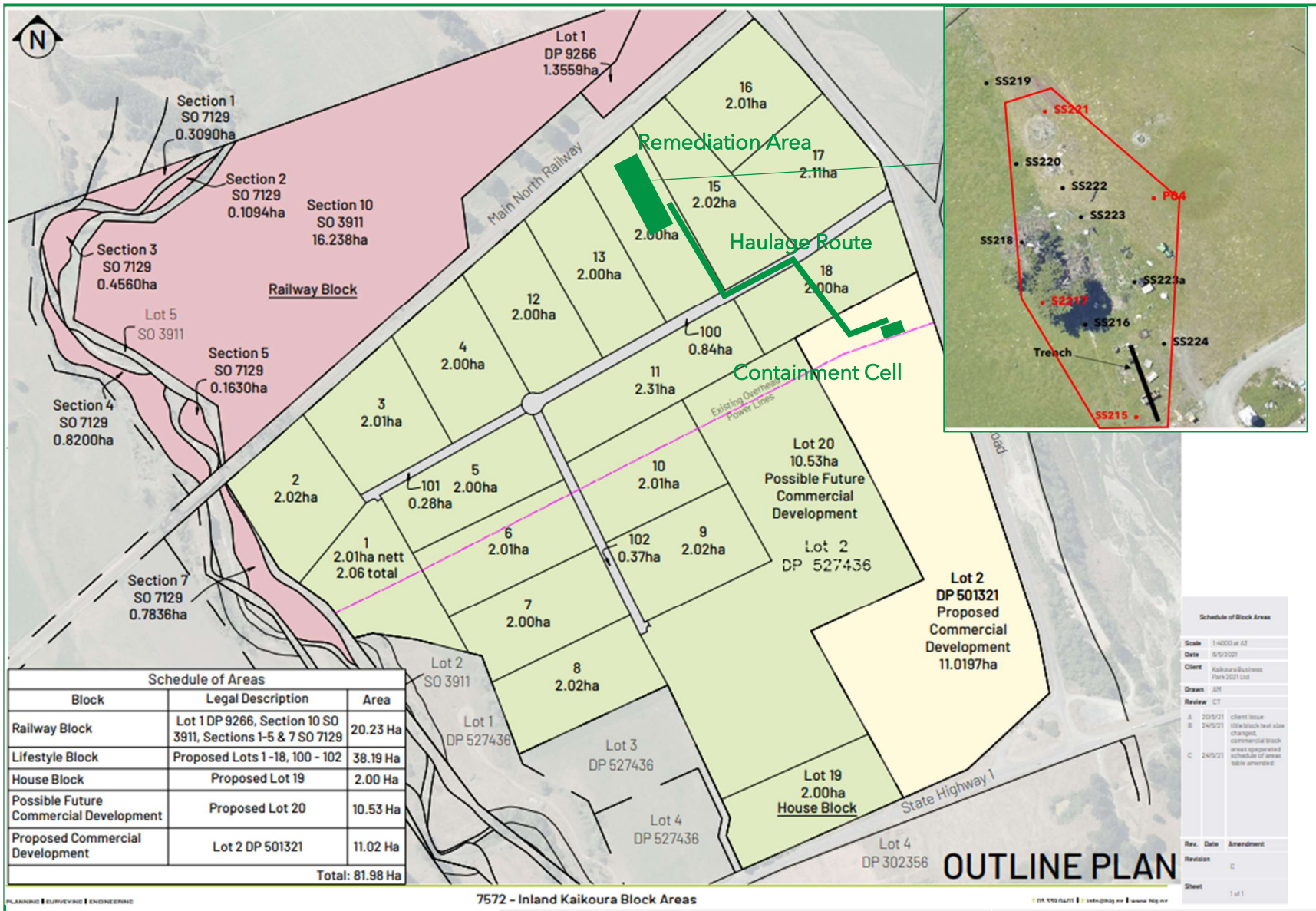
Date	Wed, 23 Feb 2022 1:24 PM
Customer	Cash Customers
Vehicle	JTL163
Order No	69 Inland rd mat garrett
Operator	VV

Item Description	Charge
Asbestos	$41.40
Gate Rate	
0.00 t @ $518.00/t	
Sub Total	$41.40
Rounding	$0.00
Total Charge	**$41.40**
Total Charge Includes GST	$5.40

Appendix 5
Erosion and Sediment Control Plan

CLS contaminated land solutions

RONGOĀ WHENUA POKE



Schedule of Areas		
Block	Legal Description	Area
Railway Block	Lot 1 DP 9266, Section 10 SO 3911, Sections 1-5 & 7 SO 7129	20.23 Ha
Lifestyle Block	Proposed Lots 1 -18, 100 - 102	38.19 Ha
House Block	Proposed Lot 19	2.00 Ha
Possible Future Commercial Development	Proposed Lot 20	10.53 Ha
Proposed Commercial Development	Lot 2 DP 501321	11.02 Ha
		Total: 81.98 Ha

PLANNING | SURVEYING | ENGINEERING

7572 - Inland Kaikoura Block Areas

CLS contaminated land solutions
RONGOĀ WHENUA POKE

CLIENT: KAIKOURA BUSINESS PARK 2021	FIGURE NO: E&SCP-001
	JOB NO: J2021031
DRAWN BY: HMD	DATE: 27 JUNE 2022

Issue	Method
Timing of the works	▪ Proposed for 29 June 2022. Completion in one day
Weather forecast	▪ Temperature: Min 7°C, Max 12°C, Precipitation 10%, Wind 8km/h
Method of remediation	▪ CLS to mark out impacted area requiring excavation ▪ Impacted area to be excavated to 0.1m and placed into truck (total, approx. 300m^3) ▪ Field screening using a portable XRF to determine if remediation has succeeded, further excavation, as required ▪ Validation soil samples collected for laboratory analysis for arsenic, lead and cadmium ▪ Excavated material transferred to containment cell along haulage route ▪ Containment cell base to be above groundwater (groundwater is at approximately 3.5 – 10m bgl) and have capacity of min 300m^3, e.g. 1.0m depth x 10m wide x 30m long
Dust and sediment control	▪ Soil is anticipated to be moist from preceding day's rain
H&S	▪ Maximum speed on site restricted to 15km ▪ Toolbox meeting with excavator operator and truck driver at start of work ▪ PPE: Hi Viz jackets, steel toe capped boots, gloves, hard hat ▪ No sampling to occur while excavator is operating, CLS staff to remain within visibility of excavator operator
Environmental controls	▪ Remediation to proceed in one direction to avoid cross contamination. Truck/s will not be leaving site during the work ▪ End condition of remediated area to be addressed through the overarching erosion and sediment control plan for the site

Appendix 6

Unexpected Discovery - Asbestos

CLS contaminated land solutions

RONGOĀ WHENUA POKE

Contaminated Land Solutions Ltd
helen@cls.net.nz
www.cls.net.nz

UNEXPECTED DISCOVERY 29/6/2022 - ASBESTOS

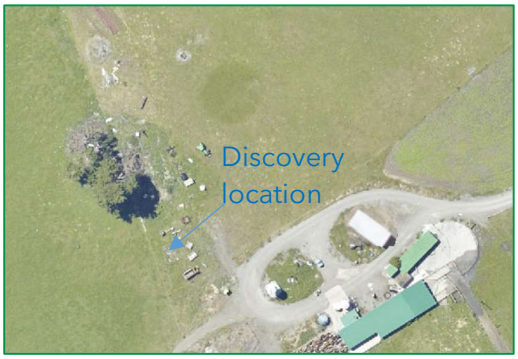
Project number	**J2021031**	Date	**2 July 2022**
Project name	**69 Inland Kaikoura Road**	Recorded by	**Helen Davies**
Record Number		Total pages	**2**

Background

This memo serves to report in an unexpected discovery of asbestos and to provide direction on the required action.

On 29 June 2022, the area known as HM1[1] was remediated by scraping the top 0.1m soil from the affected area and transferring it to a purpose-built containment cell. This process was augmented by field screening using a Niton portable XRF analyser to provide immediate field screening results for arsenic and lead. In this way, areas still impacted by elevated heavy metals were further excavated until acceptable readings were achieved using the XRF. Validation samples were then collected for laboratory analysis.

During the excavation, asbestos cement sheeting (ACM) was encountered as shown below.



As the quantity was below that requiring an asbestos removalist, and PPE was available, visible ACM was handpicked by Helen Davies of CLS and transferred into an asbestos waste bag. Underlying soil was removed into a bucket which was transferred to the known ACM contaminated area on the site, located near the incinerator (approx. total of 15 litres soil transferred).

Validation Results

Following removal, two validation samples were collected from the affected area and submitted to Hill Laboratories for semi-quantitative asbestos analysis. The results are presented below.

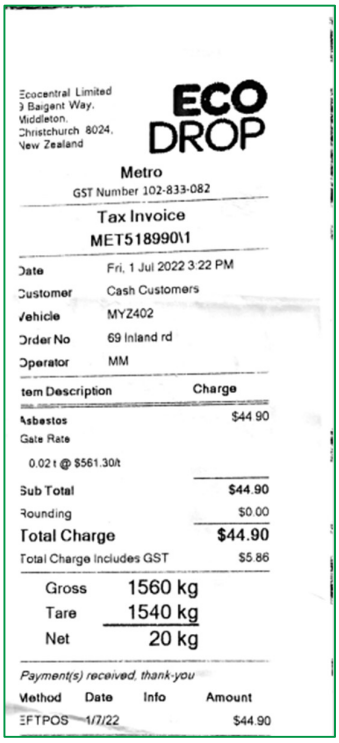
[1] Refer to CLS Contaminated Site Management Plan for details

Sample Name	VS11	VS12	
Sample Depth (m bgl)	0.2	0.2	
Natural / Fill?	Natural / Reworked Natural		Protection of Human Health
Soil Type			NZRB SCS (Health) Rural / Lifestyle 25% Produce[6]/IRB NEPM SGV[7]
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.	-
Description of Asbestos Form	Fibre cement, ACM debris and Loose fibres	Fibre cement, ACM debris and Loose fibres	-
ACM (bonded)	0.488	0.452	0.01%
FA and/or AF	0.01	0.004	0.001%

As both results are health significant, the remediation of the asbestos through hand picking has not been successful and further remediation will be required. It is considered that the ACM encountered may originate from historical piggery buildings present in the area, and further ACM could be present below surface in the vicinity of the contamination discovery reported here.

Disposal of asbestos

The asbestos hand-picked on 29 June 2022 was transferred by CLS to the EcoDrop facility in Christchurch for disposal to Kate Valley Landfill.



Ecocentral Limited
9 Baigent Way,
Middleton,
Christchurch 8024,
New Zealand

ECO DROP

Metro
GST Number 102-833-082

Tax Invoice
MET518990\1

Date	Fri, 1 Jul 2022 3:22 PM
Customer	Cash Customers
Vehicle	MYZ402
Order No	69 Inland rd
Operator	MM

Item Description	Charge
Asbestos	$44.90
Gate Rate	
0.02 t @ $561.30/t	
Sub Total	$44.90
Rounding	$0.00
Total Charge	**$44.90**
Total Charge Includes GST	$5.86

Gross	1560 kg
Tare	1540 kg
Net	20 kg

Payment(s) received, thank-you

Method	Date	Info	Amount
EFTPOS	1/7/22		$44.90

Action Required

The New Zealand Guidelines for Assessing and Managing Asbestos in Soil (BRANZ 2017) indicate that, while the quantity of affected soil is likely to be low, removal will be classified as Class B removal work. For this reason, CLS recommends that an asbestos removalist be engaged to conduct the work. CLS will guide the collection of revalidation samples at the end of the process and will supply the required containers and equipment for this task.

Appendix 7

Second Asbestos Removal

CLS contaminated land solutions

RONGOĀ WHENUA POKE

Contaminated Land Solutions Ltd
helen@cls.net.nz
www.cls.net.nz

69 INLAND KAIKOURA ROAD ASBESTOS CLEARANCE

Project number	**J2021031**	Date	**1 August 2022**
Project name	**69 Inland Kaikoura Road**	Recorded by	**Helen Davies**
Record Number		Total pages	**3 plus attachment**

Background

During remediation of the area within Lot 14 known as 'HM1' in June 2022, a small amount of asbestos was identified (asbestos cement board pieces). These were hand-picked, placed in an asbestos waste bag and disposed of as described in CLS memo J2021031-MEM-004 dated 2 July 2022.

Validation samples were collected from soil beneath the discovery and the results indicated that health significant asbestos was still present. As such Agon Solutions Ltd (Agon) was commissioned to remove the impacted soil.

Following the removal of soil by Agon, a visual clearance inspection was conducted by CLS and validation samples (VS21 – VS24) were collected and analysed for asbestos to provide an additional line of evidence to accompany the Clearance Certificate (**attached**). The asbestos removal exercise is reported here.

Remediation

On 18 July 2022, Agon Solutions (Matt Garrett, Licensed Asbestos Removalist) and CLS (Helen Davies, 'Competent Person' per WorkSafe 2016) attended site for removal of asbestos impacted soil from the area shown in **Figure 1** using procedures described in an Asbestos Removal Control Plan (Agon 2022) and in the Contaminated Site Management Plan (CLS 2022). The removal was classified as Asbestos-Related Work. Conditions were calm and dry throughout the removal, and soil was moist following recent heavy rainfall. Work commenced at 8.00am using a mechanical excavator to scrape approximately 100mm soil from a 12m x 6m remediation area. Soil was directly placed into a truck used for its transferral across the site for temporary stockpiling in an area of the site already known to be contaminated with asbestos (see **Figure 2**). The works were completed by 10.40am and Clearance Inspection commenced at that time and included inspection of the remediation area. In addition, 'raking' and inspection of soil surrounding the remediation area was conducted to identify any further undiscovered visual ACM in the surrounding area (none was found).

Results

Per the Clearance Certificate, the remediation area shown in **Figure 1** was visually inspected by 1 metre spaced passes looking for ACM. In addition to the visual clearance, four soil samples (samples VS21 – VS24) were collected from the base of the remediation area for analysis for the presence of asbestos. Asbestos was detected in two of the four validation samples (see **Table 1**). The w/w percentages were all below the soil guideline values in the *New Zealand Guidelines for Assessing and Managing Asbestos in Soil* (BRANZ, 2017), and the soil is therefore considered to have been successfully remediated with respect to asbestos.

Figure 1. Remediation Area Looking East (Sample Containers Located at Sampling Points)

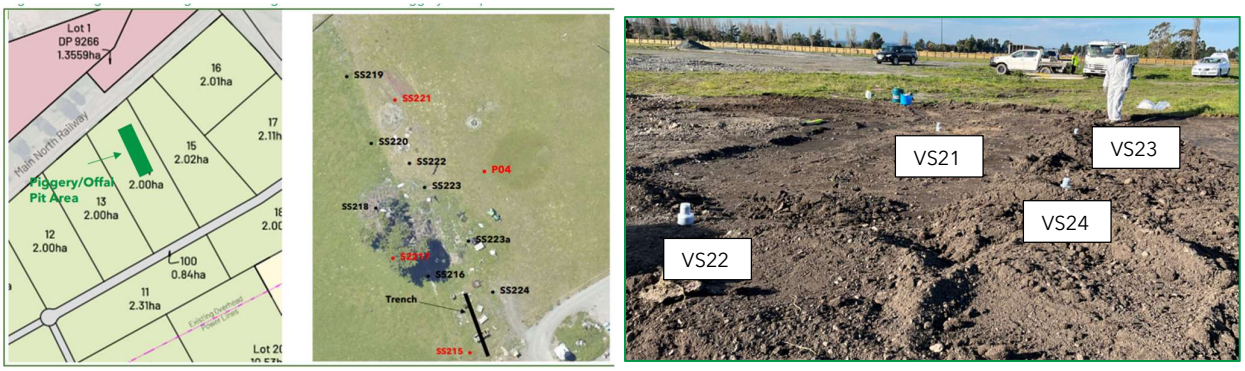


Figure 2. Temporary Stockpiling of Asbestos Contaminated Soil in the Incinerator Area

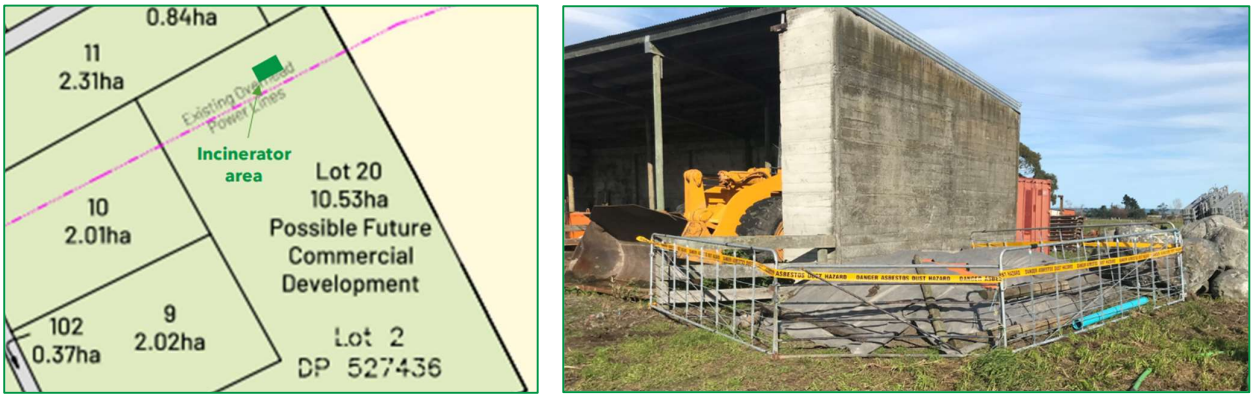


Table 1. Validation Results

Sample Name	VS21	VS22	VS23	VS24	**Assessment Criteria (mg/kg)**	
Sample Depth (m bgl)	Base	Base	Base	Base		
Natural / Fill?	Natural / Reworked Natural				Protection of Human Health	Application of NES Regulation 5(9)
Soil Type	Sandy GRAVEL				NZRB SCS (Health) Rural / Lifestyle 25% Produce[6]/IRB NEPM SGV[7]	Canterbury Level 2 Background Concentrations **Recent** [8]
Asbestos % w/w						
Asbestos Presence / Absence	Chrysotile (White Asbestos) detected.	NAD	NAD	Chrysotile (White Asbestos) detected.	-	-
Description of Asbestos Form	Loose fibres	-	-	Loose fibres	-	-
ACM (bonded)	<0.001	-	-	<0.00001	0.01	-
FA and/or AF	<0.001	-	-	<0.001	0.001	-

Conclusions

Based on the visual inspection and soil sampling results, the site has been remediated and residual asbestos contamination is below the soil guideline values based on residential use (BRANZ, 2017).

The temporary stockpile in the commercial/industrial part of the site requires appropriate removal and disposal.

Report Written By

Helen Davies
'Competent Person' per WorkSafe 2016 definition

References

Agon 2022. Asbestos Removal Control Plan. 69 Inland Kaikoura Road

CLS 2022. Contaminated Site Management Plan. 69 Inland Kaikoura Road

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

WorkSafe 2016. Approved Code of Practice. Management and Removal of Asbestos

Attachments

Clearance Certificate

ATTACHMENT 1 – CLEARANCE CERTIFICATE

APPENDIX I: CLEARANCE CERTIFICATE TEMPLATE

Note: When asbestos removal work requires a Class A licence, an independent licensed asbestos assessor[23] 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:	Kaikoura Business Park 2021
Client contact details:	Richard Watherston, 027 433 8051

Removal work details	
Date(s) that removal work was carried out:	18 / 07 / 2022 (DD / MM / YEAR)
Site address where removal work was carried out:	69 Inland Kaikoura Road, Kaikoura, Canterbury
Details of the specific asbestos removal area(s):	Per attached drawing
Name of licensed asbestos removalist:	Matt Garrett, Agon Solutions Ltd
Name and contact details of licensed asbestos removalist supervisor(s) (if different to removalist):	

Inspection details			
Date of clearance inspection:	18 / 07 / 2022	Time of clearance inspection:	3 / PM

[23] 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?	X Yes	No
Do you have a copy of the WorkSafe notification form?	X Yes	No
Is the removal work consistent with the control plan and the notification form? (eg use of enclosures, decontamination facilities, waste facilities)	X Yes	No

SECTION C: ASBESTOS REMOVAL AREA

VISUAL INSPECTION

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

AIR MONITORING NOT CONDUCTED

Air monitoring was carried out as part of the clearance inspection. **The result did not exceed 0.01 fibres/ml.**	Yes	No
Has the air monitoring sample been analysed?	Yes	No
Is the air monitoring report attached?	Yes	No
Can the area be reoccupied?	Yes	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 **no visible asbestos was found.**	X Yes	No
Can the enclosure be dismantled?	X Yes	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 **no visible asbestos was found.**	X Yes	No
Is the air monitoring report attached?	Yes	No
Can the area be reoccupied?	X Yes	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

Helen Davies (CLS)

From: Matt Garrett <agonasbestos@gmail.com>
Sent: Tuesday, 12 July 2022 2:26 pm
To: rwatherston@xtra.co.nz; Helen Davies (CLS); planning@kaikoura.govt.nz
Subject: Fwd: Notification Of Licensed Asbestos Removal

Kia ora,
Here is the Worksafe notification for 69 Inland Rd Kaikoura.
ARCP to follow.
Thanks,
Matthew Garrett
02109182621

AGON

---------- Forwarded message ---------
From: <healthsafety.notification@worksafe.govt.nz>
Date: Tue, 12 Jul 2022 at 13:56
Subject: Notification Of Licensed Asbestos Removal
To: <agonasbestos@gmail.com>
Cc: <asbestos.notifications@worksafe.govt.nz>

Notification Of Licensed Asbestos Removal

This email confirms that WorkSafe has received your notification of asbestos removal work.

Reference ID	0089943
Date Created	12/07/2022 1:56:00 p.m.
Does this information relate to the immediate removal of asbestos work?*	No
Have you given notice to WorkSafe by telephone?*	No
Licensee details	
Name of licence holder*	Agon Solutions Ltd
Asbestos removal licence number OR Certificate of Competence number OR WKSL number*	RA17090133

Business contact number*	02109182621
Email*	agonasbestos@gmail.com
Supervisor details	
Title	
Last name*	Garrett
First name*	Matt
Middle names	
Business contact number*	02109182621
Email*	agonasbestos@gmail.com
Clearance inspection	
Title	
Last name*	Davies
First name*	Helen
Middle names	
Assessor licence number	
Assessor licence expiry	
Person or organisation for whom the work is being carried out	
Full legal name*	Kaikoura Business Park 2021
Trading name	
New Zealand Business Number (NZBN)	
Business contact number*	0274338051
Email	rwatherston@xtra.co.nz
Contact name*	Richard Watherston
PCBU with management or control of the workplace	
Full legal name*	Kaikoura Business Park
Trading name	
New Zealand Business Number (NZBN)	
Workplace address	
Street address 1*	69 Inland Kaikoura Rd
Street address 2	
Locality/Suburb*	Kaikoura
Region/City*	Canterbury
Where in the workplace is the asbestos located?*	Contaminated soil in old piggery area.
Notification dates	
Date notified Worksafe*	12/07/2022
Work start date*	18/07/2022
Estimated duration of work (in days)*	10
Work details	

Type of asbestos being removed*	Non-friable
What is the estimated quantity of asbestos to be removed?*	20m3 contaminated soil
Specify how the asbestos waste will be transported and disposed of*	Asbestos waste will be transported from the 'piggery' area to the 'Hayshed' area, which is also asbestos contaminated, by a truck travelling at no more than 20kph after having its load wetted down to suppress dust. It will be stockpiled according to the site management plan and then covered with bidim cloth, fenced off and have signage displayed. The stockpile and the contaminated soil around the Hayshed area will be transported in 15m3 lined hook bins by Waste Management to KV.
Worker details	
How many workers are carrying out the removal work?*	1
Title	
Last name*	Garrett
First name*	Matt
Middle names	
Holds certificate in relevant training*	Yes
Summary of training*	NZQA US 29765 / 29766 / 29767
Declaration	
Full legal name*	Matthew Garrett
Date*	12/07/2022
Email address of contact person*	agonasbestos@gmail.com

Agon Solutions Limited
Asbestos Removal Control Plan

Agon Solutions Limited

Agon
Licence type:
Removalist

Licence number:
RA17090133

Expiry date:
5 September 2022

Status:
Active

Licence class:
A

Supervisor(s):
Matthew Garrett

Location:
Canterbury
Otago
Southland
West Coast
Tasman
South Island
Nationwide

Email:
agonasbestos@gmail.com

Agon Solutions Limited
Asbestos Removal Control Plan

JOB OVERVIEW DETAILS				
Prepared by:			Matt Garrett	
Date:			12/07/22	
Asbestos Removal Licence Holder (PCBU Name): RA17090133			Agon Solutions Ltd.	RA17090133
Asbestos Removal Licence Holders Contact Details: 02108182621			agonasbestos@gmail.com	02108182621
For ACM removal Address			69 Inland Rd	
On behalf of PCBU who commissioned asbestos removal (client):			KBP 2021	
Contact Name: Richard Watherstone			rwatherstone@xtra.co.nz	0274338051
Supervisor: The person who will supervise asbestos removal is:				
Name		Contact Number		
Matt Garrett		021 090182621		
Informing people and parties				
Entity	Name & Position	Address	Phone / Email	
Neighbouring properties	Various	Nearby properties	Door knocking / flyer	
PCBU commissioning the asbestos removal	Richard Watherstone	rwatherstone@xtra.co.nz	0274338051	
Independent asbestos assessor	Helen Davies	helen@cls.co.nz	0211531662	
KDC	Mike Russell	planning@kaikoura.govt.nz	03-319 5026	
Timing of Removal Work:				
Date of planned notification to WorkSafe:			12/7/22	
Removal Start Date			18/7/22	
Estimate duration of removal			10	
Workers Details				

Agon Solutions Limited
Asbestos Removal Control Plan

Worker Name	Date Certified Training completed	Supervisor	
Matt Garrett	US 29765/29766 US 29767 18 May 2018	Matt Garrett	
Trained First Aiders			
Matt Garrett			
Communication/ Employee Participation			
Regular site briefings			
Notifiable Works			
WorkSafe has been advised of asbestos notifiable works		Reference ID	0089943
WorkSafe has been advised of other notifiable works?		No	
Safety Representative			
Safety Representative for this Project is:		Matt Garrett	

Asbestos Identification On Site	
Location of Asbestos or ACM	Historical debris in piggery area/ contaminated soil
Description	Weathered ACM pieces
Type	Chrysotile/ Amosite
Est. Volume	20m2
Non/Friable	Non Friable

List of emergency contact details attached to ARCP:	Yes	
All site workers are trained in emergency response:	Yes	
Emergency response equipment is indicated on the site plan:	Yes	

DECONTAMINATION – Facilities, Process and Tools
Decontamination Facilities A decontamination / clean area will be set up with a waste bag, pre filters, new suits and gloves, wet wipes and a spray bottle
Decontamination Process
Spray down suit, gumboots and mask, remove suit and gloves then place in waste bag.remove mask ,clean and put in mask box, wash hands and face, remove gumboots /booties.
Tool Decontamination
All reusable tools and equipment will be wet wiped and sealed in asbestos waste bags. Tools and equipment that could not be decontaminated will be double wrapped in asbestos waste bags, goose neck tied ready to use at other sites.

Other Control Measures The following additional controls will be put in place to contain asbestos within the designated work area.
The removal area will have temporary barriers with asbestos hazard signs prominently displayed with a hazard board erected at the main entrance. Access to the removal areas will be denied to unauthorised personnel. All workers will undergo a tool box meeting and will be made aware of the scope of works involved, general and site specific safety issues also. All workers will be adequately equipped with the correct disposable personal protective coveralls and respiratory protective equipment.

CONTROL OF NON ASBESTOS HAZARDS
20 General Public and Visitors Controlling the Risk: Engineering Administrative • All visitors who are visiting a specific staff member are to sign the Visitors Book on arrival and sign out when leaving, where applicable. • The public are not allowed in work areas that machinery or vehicles are operating unless there is a reason to be there and only if accompanied by a staff member. • If you are to take a person through a work area ensure you provide them with any required personal protective equipment, you inform them of hazards in the area and stay within designated areas, walkways, etc. Their safety is your responsibility. • If you see anyone you do not know in the workplace, ask them to leave.
33 Trip Risks Controlling the Risk: Elimination • Keep bins, mats, power leads and other items that can create trip risks out of foot traffic areas. • Keep items off the ground where possible or stack them in an area that won't create a direct risk. • If you see something that could be a trip risk, remove it.
12 Dehydration Controlling the Risk: Administrative • Keep well hydrated when working during warmer months of the year. • Dehydration causes fatigue and can impair judgement. • If you feel thirsty, you are already becoming dehydrated water is the best.
22 Manual Handling

Controlling the Risk: Elimination Administrative • Lift by keeping your back straight and bending your knees, reduce twisting from side to side. • Do not lift anything that is too heavy for you and could cause you an injury.

• If something is too heavy use a mechanical lifting device if available or ask for assistance.

13 Dust

Controlling the Risk: Engineering • Keep your work area as clean as possible to eliminate dust build-up and keep dust levels to a minimum. • You should always wear dust masks in any area where dust is a problem.

• If the dust is affecting you, then you should inform your supervisor immediately.

4 Box Cutters/Retractable Blade Knives

Controlling the Risk: Engineering Administrative • Never carry a box cutter or similar without retracting the blade.

• Always retract the blade as soon as you have finished an action.

• When cutting, don't put any part of your body in front of the blade i.e. stand to the side. • Use caution when using retractable blades.

Note: Many sites do not permit retractable blade knives unless the blade is spring loaded and is auto retractable. With these knives, you must hold your finger on the button for the blade to remain out, so minimises the chances of cutting yourself. Other options are knives with a form of guard over the blade. Either of these types of knives are a preferable and safer option.

34 Vehicles and Machinery on Sites

Controlling the Risk: Engineering Administrative • Use walkways/footpaths whenever possible and use the designated crossing areas whenever practicable. • Always stay away from any areas where vehicle being loaded or unloaded, or machinery is working, unless it

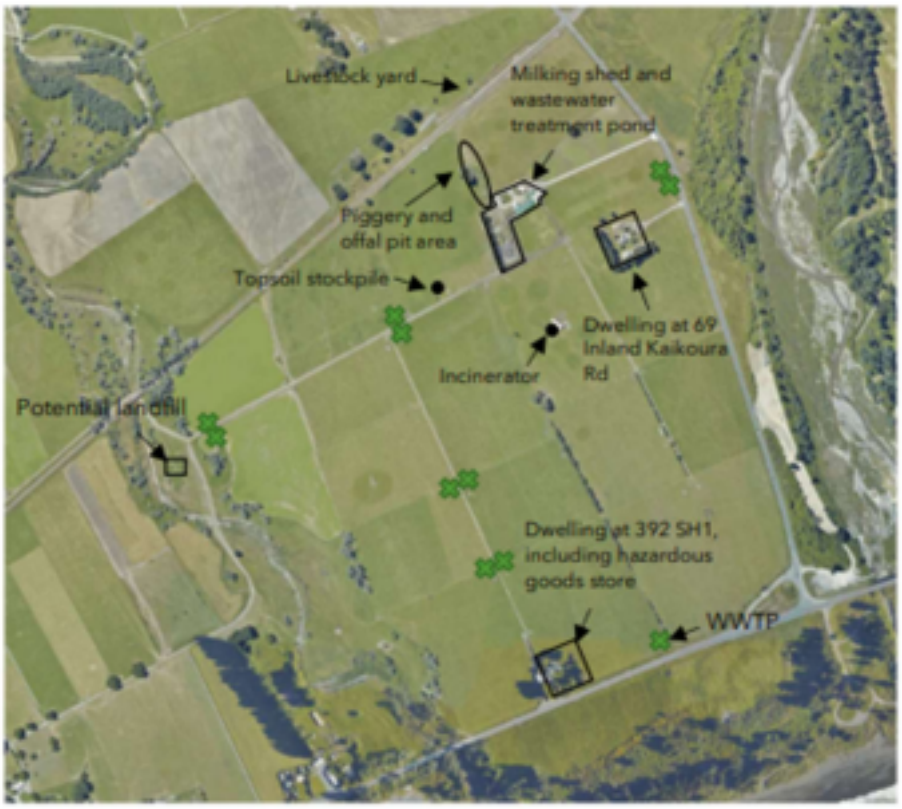
is necessary to be there.

• If it is necessary to approach a vehicle do it in a manner so you can be clearly seen approaching. • If you are required to enter an area or site where commercial vehicles or machinery are operating you must wear a fluoro jacket, shirt, vest or similar. The object is to raise the level of awareness of both the vehicle, machinery operator and people walking near them.

• In the carpark area, always be aware of vehicles backing out driving forwards as often the driver is looking for a car park and not looking ahead.

No Access is to be made to the removal area by any person –Owner/Tenant/Tradesmen until Clearance Certificate is issued by an independent assessor.*

Site map



Relocate contaminated soil

SECURE THE WORK SITE	Set up temporary barriers around the perimeter Put up asbestos hazard signs
Don PPE	Suits, gloves,masks
Load truck with excavator	Ensure soil is damp and truck is dampened down and does not travel above 20kph
Unload truck in designated area beside hay barn/ incinerator	To comply with site management stockpile protocol
Cover stockpile with geofabric (bidim)	To prevent the release of airborne fibres
Fence stockpile and place hazard tape and asbestos signage around it. Lock gate.	Secure the ACM
Clearance	Class B asbestos clearance
Vehicle decontamination	Decontaminate truck and excavator and validate

Tools, Equipment and Maintenance	
The following tools and equipment will be used when removing asbestos or ACM:	
Hand Tools	
Rake,shovel,box cutter	Hose/ sprayer

Saturation Equipment	
Garden Hoses	Water Spray bottles

Equipment Maintenance:			
All tools and equipment used in removing asbestos or ACM are inspected before all removal work:	Yes	✓	
All tools and equipment used in removing asbestos or ACM are inspected and cleaned following all removal work:	Yes	✓	
All tools and equipment used in removing asbestos or ACM are inspected and cleaned at least once every seven days when in continuous use:	Yes	✓	

Management and Disposal of Asbestos Waste *On-Site containment of removed ACM*		
Removed (waste) asbestos or ACM will be held on-site for more than one working day:	Yes	✓

Person(s) responsible for safe asbestos waste storage on site:	Matt Garrett
The ACM will be stored on site under bidim cloth behind a locked fence then removed by Waste Management in 15m3 lined hook bins then taken to KV	

All asbestos waste will be stored in the designated locations for asbestos waste:	Yes	✓	
Used, disposable PPE and RPE will bagged and put into the lined truck before removing it from the site	Yes	✓	

Details of the licensed asbestos assessor or competent person engaged to plan and conduct clearance:	
Name:	Helen Davies
Contact Details:	0211531662

The following monitoring will be deducted:		
Class B (visual) Clearance	YES	

Declaration and Sign Off			
I declare the information contained in this plan is accurate to the best of my knowledge:			
Signed by:	*Matt Garrett*	Matt Garrett	Date: 2/07/22

No Access is to be made to the removal area by any person –Owner/Tenant/Tradesmen until Clearance Certificate is issued by an independent assessor.*

Agon Solutions Limited
Asbestos Removal Control Plan

HSA06 Site Specific Safety Plan

To be completed by Agon Solutions Limited prior to commencement of work or Sub-Contractors to you For smaller jobs of a day or less unless requested there is a job prestart form available on the eSafety app	
Site: KBP2021	Address: 69 Inland Kaikoura Rd
Mandatory Fields	
Health & Safety Policy and Insurances	
√	Current Health & Safety Policy (reviewed and updated within 2 years)
	Have you done any prequals. Please put Type and Score.
	Public liability insurance
	Other insurances
Emergency Locations, Personnel & Contacts	
√	Completed Emergency Locations, Personnel & Contacts form
Meetings & Inspections	
	Job Pre-Start Safety/Planning Meeting - Then weekly thereafter (N/A if sole trader)
√	Site Inspection
√	Completed Task Analysis or JSA
Training/Inductions	
√	Current licences and relevant certificates to the job
	Current Staff Skill Level Training Sheet (N/A if sole trader)
√	Induction of all staff working on site
Risk Identification	
√	Current Site Risk Register/Board
Accidents/Incidents/Reporting	
√	Accident/incident reporting/investigation system & register
	Attach any accident or incident reports and investigations. *Note: all accidents or incidents are to be reported to the Lead Contractor or Site Manager*
Hazardous Substances	
	Current Hazardous Substance Register
	Safety Data Sheets as per listed in Hazardous Substance Register
Notifiable Works (Where Applicable)	
√	Completed notifiable works forms associated with contract.

√	WorkSafe Notified		
Sub-Contractors (Where Applicable)			
	Sub-Contractor has completed a Contractor Acknowledgement (Section 5 policy or App) and SSSP		
	Sub-Contractor has provided relevant training records/certificates		
	Sub-Contractors has provided Safety Data Sheets for any hazardous substances bought onto the site		
	Sub-Contractor and their staff have been inducted onto the site.		
Brief description of work to be completed			
Asbestos removal			
Completed by	Matt Garrett	Date	18/7/2022
Company	Agon Solutions Ltd.	Signature	M.G.
Position	Director		
Approved by	Matt Garrett	Date	18/07/22
Company	Agon Solutions Ltd.	Signature	M.G.
Position	Director		

HS48 Emergency Plan

Fire Warden Duties

If you discover a fire in the building:

1. Activate the Alarms.
2. Put on your Fire Warden Identifier (Vest, Hat or Arm Band).
3. Begin your patrol of the building and instruct all staff to evacuate immediately and proceed to the Assembly Point.
4. Once you have reached the assembly point, conduct a roll call for the staff in your area.
5. Report to the Building Warden.

If the alarms activate without your knowledge, carry out tasks 2 to 5 above.

Your target time for a complete evacuation is a maximum of 2:00 minutes.

The 30 Second Rules are:

1. Fire will double in size every 30 Seconds. This is without any accelerants.
2. It will take you 30 seconds from the time you discover a fire, activate the alarms, get the correct fire extinguisher, and return to the fire.
3. 30 seconds is the approximate life of an extinguisher once it has been activated.

Use the Correct Firefighting equipment for the type of fire:

- Type A - Wood, Paper, Textiles – Use a water-based extinguisher (Hose or Stored Pressure).
- Type B – Liquids (Oil, Petrol, Chemicals) – Use a Dry Powder or CO2 extinguisher.

HS48 Emergency Plan

Tsunami

The following rules apply:

- The Ministry of Civil Defence and Emergency Management will issue a national warning on the television and radio.
- Move inland to high ground.
- Stay away from streams and rivers.
- Never go to the coast.

Volcanic Eruption

The following rules apply:

- Listen to the radio for information and advice.
- Conserve water and save in containers.
- Stay inside as much as possible.
- Wear a mask and goggles if you are going outside.
- If possible, keep clothes worn outside separate from clothes worn inside.
- Avoid basements and or confined spaces as gases can accumulate.
- If possible, keep the roof and guttering free of ash to avoid the roof collapsing under the weight.
- Unless necessary do not leave the building unless advised by Civil Defence Emergency Management officials.
- Turn your electricity and gas off at the mains.

Medical Emergency

The following rules apply:

- Do not move the injured/ill person unless they are in danger of further injury and you are not endangering yourself.
- Have someone get the first aider to attend to the injured/ill person.

- Type E – Electrical Equipment – Use a CO2 or Dry Powder (Must be labelled ABE) extinguisher.
- Type F – Cooking oil/fat.

Fire extinguishers can be easily recognised by the colour band on them:

- Red – Water/water-based
- White – Dry powder
- Black – CO2 (Carbon dioxide)
- Blue – Foams
- Beige – Wet chemical

Look for the labels on the fire extinguisher for the type of fire it is most effective on.

Never put yourself at the risk of getting burnt or trapped by the fire.

Heat + Oxygen + Fuel = FIRE

N.B. Trial Evacuations are to be conducted at 6-month intervals or 6 months from the previous evacuation (real or trial)

- Call an ambulance if required.

Earthquakes

The following rules apply:

- Store heavy items near or on the floor.
- Implement the recognized self-protection process of: *"Drop – Cover - Hold".*
- Know how to turn off water, electricity, and gas.
- Have adequate fire extinguishers for small fires.
- Have a survival kit.
- Treat injuries.
- If you are in a damaged building, try to get outside into an open safe place.

HS41 Emergency Personnel and Contacts

Safety Representatives			
Name	Area	Phone	Email
Matt Garrett	Management Representative	02109182621	agonasbestos@gmail.com
Matt Garrett	Staff Representative	02109182621	agonasbestos@gmail.com
Fire Wardens			
Name	Area	Phone	Email
Matt Garrett	ALL	02109182621	agonasbestos@gmail.com
First Aiders			
Name	Area	Phone	Email
Matt Garrett	ALL	02109182621	agonasbestos@gmail.com
Emergency Locations			
Locations		Locations	
First Aid Kit	Vehicle		
First Aid Kit	Vehicle		
Evacuation Point	Front gate		
Emergency Contacts			
Contacts		Contacts	
Civil Defence	www.civildefence.govt.nz	WorkSafe NZ	0800 030 040 www.worksafe.govt.nz
EPA	0800 429 7827 www.epa.govt.nz	National poisons Centre	0800 764 766
CCC (dog control)	03 941 8999	Power Supplier -Orion	03 363 9898 or 0800 363 9898.
Ambulance	111	National Gas Emergency	0800 111 999
Police	111	Fire	111
Environment Canterbury	0800 765 588	Medical Centre	03 319 3501

Daily Job Pre-Start Minutes

Site: KDC2021		Location: 69 Inland Kaikoura Rd	
Date: 4/07/22		WSN	0089943

Attendees Name/Initials	Attendees Name/Initials	Attendees Name/Initials
Matt Garrett M.G.		

Work to Be Performed	Workers
Asbestos removal	Matt Garrett

Potential Risks	Controls
Vehicle movements	20kph speed limit

Other Things to Consider

PPE Required		
☐ Hi-Visibility Clothing	☐ Hearing Protection	☐ Eye Protection
☐ Steel-capped Footwear	☐ Gloves	☐ Mask
☐ Breathing apparatus	☐ Suits-	Helmet

Time	8.30am	Chaired by	Matt Garrett
Date	18/07/22	Signature	M.G.

Weekly Toolbox Meeting Minutes

Site: KBP2021		Location:69 Inland Kaikoura Rd
Attendees Name	**Attendees Name**	**Attendees Name**
Matt Garrett		

Previous Meeting Minutes: Brought Forward	Completion Date
Yes	11/7/22

New Business/Issues	Assigned to
	Matt Garrett

Risk/s Identified/Assessed	Action Required
Yes	No

Incidents/Near Miss (Discuss all incidents & investigations)			
Injury Type	**Machine/Process Involved**	**Investigated**	**Actioned**

Time	8.30am	Chaired by	Matt Garrett
Date	18/07/22	Signature	M.G.

Site Inspection

Checklist	*	Checklist	*
Housekeeping	√	PPE in Use:	
First Aid Kit	√	Foot Protection	√
Tagging of Electrical Equipment	v	Hearing Protection	
RCDs or similar	√	Eye Protection	
Hazard/Risk Board	√	High Visibility Clothing	√
Temporary Structures	No	Head Protection	√
Hoardings/Barriers/Taped off Areas	√	Health and Safety Forms:	
Public Protection	√	Contractor Inductions	
Signage	√	Incident Register	√
Ladders	√	Site Inductions	√
Scaffolding		Safety/Toolbox Meetings	√
Services	√	Licences/Certificates	
Elevated Work Platforms		Safety Data Sheets	
Traffic Management	No	JSA/Task Analysis	√
Operating Equipment		WORKSAFE NZ Notification	√
Other -		Permit to Work	

*Legend: Tick if requirement is achieved, cross if not achieved, NA if not applicable, comments if required

Issue/Recommended Solution	Completed Date

Completed by	
Name: Matt Garrett	Location:69 Inland Kaikoura Rd
Signature: M.G.	Date:18/7/22

Site Induction

The following induction ensures that all contractors and their staff are made aware of risks on Agon Solutions Limited's site. Once completed, it must be signed by the contractor to show that they are able to perform their required function with confidence and not endanger themselves or any other person.

In the case of contracting work on another site, the Contractor is to be inducted onto the site they are working on:

- **A tour of the work area has been given.**
- **Introductions made to site supervisor, safety officers and relevant staff.**
- **Restricted areas have been shown.**
- **Rest rooms, lunchroom, first aid area have been shown.**
- **Emergency evacuation procedure explained, and meeting areas shown.**
- **Safety/protective equipment required to be worn on site explained.**
- **Site specific hazards explained.**
- **Risk reporting process explained.**
- **Health and Safety obligations of the contractor while working on site explained.**
- **Requirements for equipment brought onto site explained.**
- **Incident/near miss reporting procedures explained.**
- **Contractor is not to do any work they are not trained, certified, or licenced to do.**
- **Copies of all relevant certificates, licences etc. have been provided.**
- **Permits, procedures and processes required for various work types discussed.**

I have been shown, had the opportunity to discuss and agree to comply with all areas listed above and have a clear understanding of all the points noted:

Inducted by: Matt Garrett		Site: 69 Inland Kaikoura RD	
Date	**Name**	**Company**	**Signature**

Risk Identification Form

Risk Report Source		
Name of Risk:		
Location of Risk:		
Description of Risk:		
Recommendation:		
Reported by	**Signature**	**Date**

Risk Rating Assessment (Refer to table page 10.6)			
Risk (Likelihood)	**Injury (Consequences)**	**Initial Risk Rating**	**Residual Risk Rating**

Manager, Supervisor or Health and Safety Representative Action Plan		
Brief Detail of Action Required:	**Date**	**Signature**
Health Monitoring Required (Y/N): (If the answer is yes, add to page 10.5 Health Monitoring)		
Risk Register Updated (Y/N):	**Section:**	**Number:**
Approved by (Senior Manager)	**Signature**	**Date**

Risk Management Process Complete

Approved by (Senior Manager)	Signature	Date

Event Report Form

Complete in the case of an event which is non-notifiable i.e. incident or near miss				
Complete the following form in the case of a Notifiable Event worksafe.govt.nz/notify-worksafe				
Particulars of event				
Date of incident	**Time**	**Reported by**	**Location**	**Date reported**
The injured person				
Name		**Date of Birth**		**Sex (M/F)**
Address				
Occupation		**Period of employment**		**Hours worked since arrival**
The incident				
Description				
Describe what happened				
Body Part affected				
☐ **Head**	☐ **Neck**	☐ **Trunk**	☐ **Upper Limb**	☐**Multiple location**	☐ **Internal**
Nature of injury/disease				
☐ **Superficial**	☐ **Wound**	☐ **Sprain/strain**	☐ **Bruise/crushing**	☐ **Foreign body**	☐ **Burn**
☐ **Other -**				
Treatment				
☐ **None**	☐ **First Aid only**	☐ **Doctor**	☐ **Hospital**	☐ **N/A**	
If hospitalisation is required, you will need to complete an online Notifiable Event form (see website link above)				
Mechanism of incident				
☐ **Fall, trip, slip**	☐ **Heat, energy**	☐ **Radiation**	☐ **Sound, pressure**	☐ **Chemicals**	☐ **Substances**
☐**Hitting object**	☐ **Body stress**	☐ **Mental stress**	☐ **Biological**	☐ **Other**	
Agency of incident				
☐ **Machinery**	☐ **Mobile plant**	☐ **Transport**	☐ **Tool - Powered**	☐ **Non-powered**	☐ **Chemical**
☐ **Material**	☐ **Substance**	☐ **Environment**	☐ **Biological**	☐ **Bacteria/virus**	☐ **Other**
Investigation of incident				
Investigated by		**Signature**	**Position**	**Date**

Job Safety Analysis

Job/Operation: Asbestos Removal		Location: 69 Inland Kaikoura Rd
PPE Required		
☒ Hi-Visibility Clothing	☒ Hearing Protection	☒ Eye Protection
☒ Steel-capped Footwear	☒ Gloves	☒ Hard Hat
☐ Mask	☐ Suits-	

Personnel Involved			
Name	**Signature**	**Name**	**Signature**
Matt Garrett	M.G.		

Completed by	Matt Garrett	Date	12 /07/22
Company	Agon Solutions Ltd.	Signature	M.G.
Position	Director		

Legend	
Sequence of Steps	Put up signs and danger tape Put on PPE Load soil with digger onto truck Make sure load in damp Unload at designated area Cover stockpile Fence stockpile Decontaminate machines Get clearance
Potential Significant Risks	Airborne fibres Vehicle movements
Risk Control Method	Loads will be wet, vehicles will not exceed 20kph, operators and supervisors to maintain eye contact and use hand signals
Risk Rating	Extreme
Residual Risk Rating	Low

Risk Level Chart					
Likelihood/Consequences	**Negligible**	**Minor**	**Moderate**	**Significant**	**Severe**
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Hazardous Substances Register

Trade Name	Chemical Name & Form*	What is this Used For?	Quantity Held	Person(s) Responsible	SDS Date