

31 August 2021

Central Hawkes Bay District Council

Attention: Robyn Burns
Customer and Consents Manager
Central ¹Hawkes Bay District Council

RM210103- Draft Remedial Action Plan Springhill Farm Lifestyle Development, State Highway 50, Ongaonga, Central Hawke's Bay

Dear Robyn,

Introduction

Stantec New Zealand (Stantec) has been requested by Central Hawke's Bay District Council (CHBDC) to review a Draft Remedial Action Plan (RAP) prepared by Geosciences Limited (GSL) with respect to the proposed 311 allotment rural residential subdivision and subsequent rural residential land use. The 214-ha site is encompassed by lots 1,152, 1,200, and 1,080 State Highway 50, and 604 and 612 Wakarara Road, Ongaonga, Central Hawkes Bay. The site has had a history of pastoral farming.

Stantec has previously reviewed the Detailed Site Investigation (DSI) for this development. The Draft RAP is a continuation of the investigation of the site.

Content of the Draft Remedial Action Plan

Site Review

The Draft RAP report includes a brief review of the site and the previous DSI report. The report states that testing during the DSI confirmed that HAIL activities on the site have resulted in lead and arsenic contamination exceeding rural residential (25% produce) standard at various locations on the site. Additionally, there are several discrete locations where commercial/industrial standard has been exceeded indicating that there is a potential risk to workers during site development.

Lead contamination was found because of the use of lead-based paint on the older buildings on the site. Arsenic contamination was found because of the use of chemicals in the sheep dip solutions used on site, specifically in and around the sheep dip.

Additionally, a farm dump is located on the site. This has not been tested or investigated though the Draft RAP report estimates what may be a likely depth of 5m below ground level though this has not been assessed.

¹ RM210103- Detailed Site Investigation Springhill Farm Lifestyle Development, State Highway 50, Ongaonga, Central Hawke's Bay. Stantec. 2021. Reference numbers, Parent: 310204515, Child: 100.010117

Remedial Action Plan

A list of pre-remedial works commencement requirements are outlined. Amongst these is a hazardous building materials and asbestos survey and removal. Given the age of the buildings on the site this is reasonable. A list of responsible parties and contact information is given for people involved in the remediation of the site. Most of the list is not filled in, this would be expected to be fully completed in the final version. On the list GSL has identified themselves as the Contaminated Land Advisor for the project. The draft RAP specifies that the site manager is responsible for implementing the RAP and briefing staff on safety though at the time the draft RAP does not outline who this person will be.

Health and safety procedures are outlined for ensuring worker health at parts of the site where arsenic and lead exceed commercial/industrial standard. The protection measures seem reasonable for the levels of contamination found on the site. Correct personal protective equipment, dust suppression and a designated clean area are emphasised in the report which in line with what would be expected for the site.

Additional Testing

The Draft RAP identifies that additional testing will be needed to establish the vertical and lateral extend of contamination encountered on the site. Additional testing is proposed in three areas: the farm dump, land surrounding historical structures and the woolshed/sheep dip area.

The farm dump has yet to be investigated. The Draft RAP recommends collecting “five soil samples from base and side walls of the farm dump.” It is unclear if this is meant to be five samples from the base and five samples from the sides or just a scattering of 5 samples total covering both areas. This should be detailed in the final RAP. The contaminants of concern are listed as heavy metals and PAHs. These analytes are appropriate but given farm dumps often contain building materials it would be appropriate to also test for asbestos, especially since the report recommends an asbestos assessment of the buildings. Testing the actual landfill material has not been addressed by the report. It would be appropriate for this material to be assessed for disposal options and something that could be included in the final RAP.

The Draft RAP states that land surrounding historical structures with lead-based paint will need to be additional testing. The report states that samples should be collected from 2.5m out from each exceedance identified in the DSI. The report states that additional samples should be taken on an “expanding 5m spaced grid laterally out from each structure.” It is not stated how large this grid will need to be or how far away from each building should be covered. More specifics or possibly a diagram is needed. Lead contamination from paint is not often encountered at a large distance from each building so without further specification this sampling pattern may be excessive. Additionally, the report states that one location from each structure should be collected from 300 and 500mm bgl. As lead based paint flakes generally accumulate in surface soils this should be adequate to assess the depth of the affected soil profile. The report states the contaminant of concern is lead only which is an accurate conclusion.

It is stated in the draft RAP that land surrounding the woolshed, sheep dip and holding pens should have soil collected on a systematic grid pattern infilling areas between previous exceedances and working out from the sheep dip in a 5m spaced grid. A 5m grid spacing is adequate but it should be specified how far the grid pattern should extend from each area. A diagram might also help the reader understand what is proposed. The report states the contaminant of concern is arsenic only which is an accurate conclusion.

Remediation Strategies

The report states that remediation is expected to comprise two strategies. Excavation and removal of soil exceeding commercial/industrial soil contaminant standards and vertical mixing of low-level impacted soils to provide compliance with rural residential soil contaminant standards.

The report outlines a “standard approach for dig and dump methodology.” This includes erosion and sediment control measures to be instated in accordance with local guidelines which is practical and reasonable. Prior to the removal of any soil authorisation will need to be granted to dispose of soil at a facility licenced to accept the soils which is important though no specifics are given as to which facility might accept the material. Further steps involve methods for dust control, temporary stockpiling, using covered trucks, unexpected discovery protocols, etc. These steps are reasonable for the soil removal of this nature.

For areas with exceedances of the rural residential (25% produce) soil contaminant standard vertical mixing is the recommended remediation technique. It is not explicitly stated how much the rural residential standard can be exceeded and have this method still be appropriate. A maximum contaminant concentration upper limit should be given for where this method is appropriate versus the dig and dump method.

The report states that the soil mixing should be done in accordance with the Guidelines for Contaminated Land Remediation by Soil Mixing guidelines for the Hawkes Bay Regional Council which is an appropriate guidance document. The report outlines two suggested methods for vertical mixing within the top 500mm of soil that are likely to produce a satisfactory mixing of the soil. If done according to the procedures in the above guidance either method should be suitable for the site.

To ensure the mixing has resulted in contaminant concentrations below rural residential (25% produce) standard the report recommends soil in mixed areas should be sampled at a rate of 1 soil sample per 500m³ of soil mixture. It is unclear where this testing ratio has come from. This density of the proposed sampling is not very robust and does not appear to have come from the specified guidance. A rationale for sampling density should be given and the density of sampling should maybe be updated.

Accidental Contamination Discoveries

The report has a section for contingencies which covers the accidental discovery of contamination. In this section the report gives various procedures for identifying and containing contaminated soils. The report states that If any unexpected contamination is encountered the site manager should be contacted immediately and the contaminated land advisor will advise on disposal options and testing which is reasonable. While this section of the report contains important information, which is generally in line with industry best practice it is somewhat confusingly organised and worded.

Asbestos is specified as a contingency though the report states “it is not anticipated that any asbestos materials will be encountered on the site.” Given the age of the buildings on the site and the presence of the farm dump which is likely a repository for old building material it seems that there is a likely chance asbestos will be encountered. The report says the asbestos containing material will be primarily identified by a “suitably competent person.” No specifics on what this means is given. The report should state what the requirements are for being suitably competent.

The report states that a site validation report (SVR) may be required. Given the high exceedances of contamination encountered at certain locations, the farm dump and the sensitive nature of the final rural residential land use it would seem certain that a SVR will be needed. The report also states that the SVR should be completed and provided to Auckland Council. It is assumed this is a typo, but it should be fixed in the final report. Various items are stated as required for the SVR. This list gives some practical items but a more complete way to specify this would be to reference the Ministry for the Environment Contaminated Land Management Guideline No 1, which specifically outlines the requirements for an SVR in Appendix A8.

Contaminated Soil Discovery Guideline

Appended to the report is a Contaminated Soil Discovery Guideline (CSDG) which is a separate report on its own. The CSDG gives further information on the inadvertent discovery of contamination. This report has in depth sections covering the general procedures that should be followed after an unexpected find. In general, the information is useful, but it seems overly detailed for a hypothetical accidental discovery which may make it confusing for the end user to use. Section 4.11 states that if an unexpected find is made a report should be provided to the project manager and that this report will provide assurance to the regulatory authority that necessary steps have been followed. It is unclear who is responsible for this reporting. This should be clarified in the final version of the report.

Section 5 of the CSDG gives a series of factsheets for various potential contamination discoveries. By nature, an unexpected discovery is an unknown but the list of contaminant scenarios should be tailored somewhat to the site. It is highly unlikely that a tannery or drycleaners will be discovered, but it is reasonably likely that refuse, asbestos or pesticides could be discovered. If all the scenarios must be kept the factsheet could be organised in a most likely to least likely to be discovered to aid in the ease of use.

Conclusions and Recommendations

The Draft Remedial Action Plan Report is largely suitable such that it can be used to complete the next phase of investigations that will inform the final remediation of the site. That said there are some details discussed above that should be addressed in the final version of the report to ensure it is complete and readily usable for the site manager and other responsible parties.

The next step in assessing the contamination on the site will be the additional delineation sampling outlined in the Draft Remedial Action Plan. Once this has been completed then the full nature of the remediation strategy can be assessed. It is recommended that once the additional testing is completed and the report is in an updated/final version it should be re-reviewed.

Yours sincerely



Scott Fellers
Environmental Scientist
BSc, CEnvP general, SQEP

Stantec New Zealand

This document has been prepared for the benefit of Central Hawkes Bay District Council. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person. This disclaimer shall apply notwithstanding that the document may be made available to other persons for an application for permission or approval to fulfil a legal requirement.