

Chapter 23

Part G

VOLUME 2

Contaminated Land

Overview

The NZTA is taking a staged approach to contaminated land management in accordance with current practice, as set out below;

1. Conduct a high-level overview assessment of the Project corridor to identify potentially contaminated sites.
2. For those sites that may have (or may have had) potential sources of ground contamination and/or sites where contaminated land issues may have a significant impact on construction, conduct a Phase 1 Contaminated Land Assessment (CLA).
3. Based on the high-level overview assessment and Phase 1 CLAs, prepare a BECLMP which provides a framework and general procedures for management of contaminated soil during construction of the Project. The BECLMP would be updated with site and Project specific details once additional information becomes available.
4. Conduct Phase 2 CLAs (detailed site investigations including intrusive works), as and if required, at selected sites to characterise the nature and extent of contaminants present in soil and groundwater (if applicable).
5. Review the findings of the Phase 2 CLAs and, where applicable, obtain consent from KDCDC for fuel system removal and soil disturbance at contaminated sites under the NESCS. Consents would be obtained prior to construction commencing.
6. Update the BECLMP, as required, based on the findings of the Phase 2 CLA and align with any NESCS consents required to complete the works.

As part of NZTA's staged approach, the first three items described above were prepared in support of the designation and resource consent application process. The detailed Phase 2 CLAs (item 4 above) are proposed to occur after the resource consent and designation applications are lodged. Phase 2 CLAs will be undertaken after the application has been determined, for the following reasons:

- There are practical barriers to completing the investigations at this time including land ownership, site access agreements and continued use of the sites.
- Project design details relevant to the Phase 2 investigations have not yet been confirmed.

The Overview Phase contaminated land assessment identified 21 sites with the potential for ground contamination within the Project corridor. Of these, 12 sites were considered to be potentially contaminated.

Site-specific CLAs were conducted at the following properties:

- Ōtaki Station, off Arthur Street, Ōtaki
- Ōtaki Sidings, off Arthur Street, Ōtaki
- Winstone Aggregates, SH1 South, Ōtaki
- Bridge Lodge, 3 Ōtaki Gorge Road, Ōtaki
- Mary Crest, 701 SH1, Te Horo

These properties were selected for site-specific Phase 1 CLAs because it is considered that the nature and location of potential ground contamination at these sites could be refined and associated risks identified through such an assessment. The findings from the site-specific Phase 1 CLAs are presented in Technical Report 16, Volume 3 of the AEE.

Site-specific Phase 1 CLAs were not completed for the KiwiRail Corridor or the market garden/orchard sites because site-specific Phase 1 CLAs would not significantly refine the nature or extent/location of potential ground contamination. Such refinement and assessment would be completed through a Phase 2 CLA, as and if required.

Other sites identified as being of potential concern, but that are not assessed as requiring a Phase 1 or 2 CLA, will be managed via the draft BECLMP.

Potential effects on human health and the environment may occur if contaminated land is disturbed and/or used during construction of the Project. Those effects can be avoided through application of appropriate procedures to manage contaminated soils and materials, which may include retaining soil and materials *in situ* where appropriate to be capped by the Expressway. Soils and materials not suitable to remain on site will be excavated, removed offsite and disposed of in accordance with procedures outlined in the draft BECLMP and New Zealand guidelines⁴⁴, NESCS, and consent conditions.

23 Contaminated Land

23.1 Introduction

This chapter summarises the potential effects resulting from the construction of the Project on areas of potentially contaminated land.

This chapter is informed by an assessment of potentially contaminated sites within the Project area and identification of procedures for management of contaminated soils and materials during construction and operation.

The reports detailing the effects of the Project on contaminated land and proposed mitigation are:

- Peka Peka to Ōtaki – Phase 1 Contaminated Land Assessment (Technical Report 16); and
- BECLMP – Peka Peka to Ōtaki Expressway Project.

Technical Report 16 is included in Volume 3 of this AEE report and the BECLMP is included in Volume 4.

23.2 Staged Approach to Contaminated Land Management

NZTA has taken a staged approach to contaminated land management.

Phase 1 CLA involved:

- a high level assessment of the project corridor to identify potentially contaminated sites,
- preparation of a Phase 1 CLA; and
- preparation of the BECLMP which provides a framework and general procedures for management of contaminated soil during construction of the Project.

Phase 1 has been completed as part of this application.

Phase 2 CLA (detailed site investigations, including intrusive works) will be undertaken (if required) at selected sites to characterise the nature and extent of contaminants present in soil or ground water. These findings will be reviewed and, where applicable, resource consents for fuel system removal, soil sampling, ground disturbance, soil removal/remediation activities will be applied for from KCDC under the NESCS (as well as any necessary regional consents from GWRC).

Phase 2 CLAs will be undertaken after this application has been determined, for the following reasons:

⁴⁴ Ministry for the Environment Contaminated Land Management Guidelines.

- Continued land use between lodgement and consultation may result in changes to the nature and extent of contamination in soil.
- There are practical barriers to completing the investigations at this time including land ownership, site access agreements and continued use of the sites.
- Project design details relevant to the Phase 2 investigations have not yet been confirmed.

23.3 Existing Environment – Contaminated Land

The following five sites within or adjacent to the Project corridor (i.e. the area to be designated for the Project) have been identified as having the highest potential for contaminated soil.

- **Ōtaki Station:** historic railway station where current and historic railway maintenance and operational activities have taken place.
- **Ōtaki sidings:** railway sidings where current and historic railway maintenance and operational activities have taken place.
- **Winstone Aggregates:** Site of current aggregate processing company, and where current and historical maintenance, operational and fuel storage activities have taken place.
- **Bridge Lodge:** Historic agricultural and holiday camp land where current and historic fuel storage activities take place and potential for septic tanks.
- **Mary Crest:** former farm and convent, where historic fuel storage activities have taken place and potential for septic tanks. Potential sources of contamination within the Project corridor.

Works are proposed within the existing NIMT corridor. Based on the nature of activities that typically occur within rail corridors, it is inferred that potential for land contamination also exists within this corridor.

In addition, the assessment identified other sites within the Project corridor of potential concern for contaminated land. These sites are inferred to have lower risk for land contamination than those identified above.

Previously unidentified contaminated soils or other materials may be discovered during the works. Given the nature of the Project corridor it is anticipated that such discoveries would most likely be associated with farm tips and offal pits, storage and handling of agricultural chemicals, septic tanks, fuel storage, sheep dips and market gardens and orchards.

23.4 Assessment of Contaminated Land Effects

The disturbance of contaminated land may result in the discharge of contaminants to air, groundwater and surface water. Such discharges may have adverse effects on human health and the environment. There are well-established mechanisms to avoid such effects (or mitigate them to an acceptable level). The discharges, and the potential for the resulting adverse effects, are assessed to be minimal and acceptable assuming the mitigation proposed (described below) is implemented.

Over the long term, the proposed mitigation would result in a reduction in the potential for adverse effects to the environment resulting from isolation (capping) and removal of contaminated soil and structures not suitable to remain within the Project corridor.

23.5 Measures to Avoid, Remedy or Mitigate Actual and Potential Adverse Contaminated Land Effects

The BECLMP is in Volume 4 of this AEE report. The BECLMP contains procedures on the identification and mitigation of effects associated with the disturbance of potentially contaminated materials (in ground) or soil. Below is a summary of the key procedures detailed in the BECLMP.

- Specific procedures have been developed for mitigation of effects associated with works at the sites with the highest potential for ground contamination and works within the rail corridor. These procedures include confirmation/assessment of soil contamination and subsurface structures (tanks and sumps) that may have contained contaminants, and removal of soil and structures assessed to be unsuitable to remain on site.
- Sites with potential for ground contamination identified in technical reports shall be reviewed in the field and assessed as required prior to initiating physical works in those areas.
- Potentially contaminated soils and materials not previously identified may also be encountered during Project works. Guidance is provided in the BECLMP on the identification of these materials, and the following preliminary measures have been developed:
 - Assess potential immediate hazards, if unsafe move away, and upwind from area.
 - Notification of potential discovery in accordance with the Project/contract communication plan as soon as practical.

If the conditions are assessed to be safe, the following actions shall be undertaken:

- Make area and works in progress safe.
- Stop works in and adjacent to the inferred area of contaminated soil or material.
- Secure/isolate area.
- Implement temporary measures to minimise transport of potential contaminants offsite.

The following general procedures for management of contaminated soil have been developed, and these are set out in the BECLMP:

- Assessment of potentially contaminated soil or other materials shall be undertaken by a suitably qualified and experienced practitioner.
- Assessment may conclude that contaminated soils and other materials may be left in place. It is anticipated that covering/capping of ground contamination as a result of the Project construction may be the most practical and suitable solution for mitigating effects of ground contamination.
- Soils or other materials assessed as not suitable to remain in situ shall be removed offsite for treatment and disposal.
- Consents shall be obtained from KCDC for fuel system removal, soil sampling, ground disturbance and/or soil removal/remediation activities as required under the NESCS.
- Notification, assessment, validation sampling and reporting shall be conducted in accordance with the NESCS.
- Health, safety and environmental management measures shall be put in place for works that may result in direct or indirect exposure to ground contamination to avoid impacts on human health, or the environment, including appropriate management of excavation and stockpiling.
- Measures shall be implemented for excavation and temporary stock piling of contaminated or potentially contaminated soil.

- Sumps or septic tanks conflicting with proposed works shall be abandoned in place or excavated and removed for offsite disposal by an appropriately qualified contractor. Underground storage tanks shall be removed in accordance with relevant codes of practice.
- Transportation of contaminated soil, material or liquids for offsite disposal shall be in accordance with specified rules, regulations, guidelines, standards and licensing requirements. Classification shall be completed by a suitably qualified and experienced practitioner.
- Contaminated soil and other material shall be disposed of at a facility licensed to accept such materials.
- Liquid wastes shall be treated and disposed of by discharge under permit to a trade waste system or removal off site for disposal and treatment at a facility consented to receive such wastes.
- Removed petroleum storage tanks shall be disposed of in accordance with the relevant code of practice.