



Contaminated Land Management Plan

Waka Kotahi NZ Transport Agency – State Highway 2 Waikare Gorge safety realignment project – Contaminated Land Management Plan to address potential risks during surficial roading works near 4 Putorino Station Road, Hawke’s Bay, New Zealand

1) Introduction

1.1 Purpose

GHD Limited (GHD) was engaged by Waka Kotahi NZ Transport Agency (Waka Kotahi) to prepare a Contaminated Land Management Plan (CLMP) for proposed surficial roading works near 4 Putorino Station Road, Hawke’s Bay, New Zealand (the ‘Site’), as part of the State Highway 2 (SH2) Waikare Gorge safety realignment project (the ‘Project’). An outline location plan (sourced from design plans) depicting the Site is presented in Figure 1.

The purpose of this CLMP is to outline protocols and mitigation measures to manage any earthworks and contractor safety and outline environmental controls. This CLMP provides a guide for on-Site roading workers and contractors for managing potentially contaminated material to protect human health and the environment. Procedures to be implemented in the event of unexpected and/or accidental discovery of contaminated material are also outlined.

This CLMP provides an overview of the procedures and controls to be implemented when undertaking Site activities where potentially contaminated material may be handled and details the personal protective equipment (PPE) to be worn. This CLMP is intended to assist all personnel i.e. Site owners, Site managers, Site workers, and third-party contractors to Waka Kotahi in meeting their legal obligations with respect to health, safety and the environment. The CLMP is an operational document, and its relevance and the procedures described herein should be reviewed in light of any new and/or unexpected contamination discoveries at the Site.

1.2 Responsibilities

Item	Party
Communicating controls listed in this CLMP (Section 3)	PCBU
Generation of a health and safety plan (Section 3)	Contractor
Site control procedures (Section 4)	Contractor
Health and safety protection measures (Section 5)	Contractor
Environmental management procedures (Section 5)	Contractor
Unexpected contamination discovery protocol (Section 6)	Contractor
Record keeping (Section 7)	PCBU

PCBU - Person Conducting a Business or Undertaking

1.3 Methodology

This CLMP was prepared under the supervision of a contaminated land Suitably Qualified and Experienced Practitioner (SQEP) and in general accordance with current editions of the following documents:

- **NESCS:** Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.
- **NESCS Users’ Guide:** Ministry for the Environment. 2012. *National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*. Wellington: Ministry for the Environment.
- **CLMG No 1:** 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.

1.4 Regulatory context

The following regulatory standards or guidelines have been applied to the Site and may be referenced at various points throughout the CLMP:

- NESCS.
- Health and Safety at Work Act (2015).

1.5 Background

The Project is part of a series of East Coast roading improvements aimed to make SH2 safer and less likely to suffer closures. As part of the Project, construction of approximately 4 kilometres of roadway (the ‘Alignment’) through rural village Putorino is proposed to provide a safer route of passage for road users. It is also part of a package of projects in the Tairāwhiti region that have been identified for enabling region-oriented economic growth.

As part of the Project, GHD were engaged to prepare an environmental Preliminary Site Investigation (PSI), which was completed in September 2021. The PSI identified two activities on the Ministry for the Environment (MfE) Hazardous Activities and Industries List (HAIL) that had historically occurred near the Site at 4 Putorino Station Road. These HAIL activities fell under categories A17 (storage tanks for drums or fuel, chemicals or liquid waste) and F4 (motor vehicle workshops). Both of these activities ceased circa 2002 when a motor vehicle workshop at the address was decommissioned. As part of the decommissioning, two underground storage tanks (USTs) of approximately 4,545 litres (L) each were removed and disposed of, one of which contained diesel and the other, petrol. It is unknown whether these HAIL activities were the direct cause of any soil contamination at 4 Putorino Station Road or neighbouring land parcels.

1.6 Potential contaminants of concern

The potential contaminants of concern as identified in 2021 GHD PSI:

- Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc).
- Total petroleum hydrocarbons (TPH).
- Polycyclic aromatic hydrocarbons (PAH).
- Benzene, toluene, ethylbenzene, xylene (BTEX).
- Various solvents.

As a precaution, this CLMP should be applied to the whole Site, as described in Figure 1 below, when undertaking works as protection for potential unidentified contaminants.

2) Contamination risks

2.1 Human health

The primary potential contaminants of concern for human health during works at the Site are outlined in Section 1.5. The primary exposure pathways for these contaminants to humans are dermal contact, ingestion, and inhalation.

Assuming Site works are managed in accordance with this CLMP, the identified potential contamination is considered unlikely to present a risk to workers at the Site, surrounding residents, and members of the public.

2.2 Environmental

Potential risks to the environment are based on the discharge of contaminants to the surrounding land, air and water. A list of discharges to the environment applicable at this Site include the following:

- Discharge of contaminants to surrounding land and water bodies from rainwater coming into contact with contaminated soils.
- Discharge of contaminants to surrounding land and water bodies through the generation of dust.
- Leaching of contaminants into groundwater from contaminated soils.

Implementation of the controls set out in the CLMP, including appropriate erosion, sediment and dust controls during any disturbance of potentially contaminated soils, will assist in minimising any potential risks to the receiving environment.

3) Statutory context

3.1 Responsibilities

In accordance with the provisions of the Health and Safety at Work Act (2015):

- It is the responsibility of the Person Conducting a Business or Undertaking (PCBU) to communicate to their workers and contractors undertaking work on the Site, associated hazards and recommended risk mitigation procedures. This CLMP provides information and recommendations to augment this process but is not intended to relieve the landowner or the controller of the place of work or any other party of their responsibility for the health and safety of their workers and contractors. A separate, detailed construction health and safety plan should be prepared for each soil disturbance activity. The controls in this CLMP can be referenced in the health and safety plan.

Documentation demonstrating compliance with legislative requirements shall be provided to Waka Kotahi for record keeping at the completion of the works.

3.2 Review and update

This CLMP is based on the current understanding of conditions at/near the Site and proposed Site works. This CLMP should be reviewed in light of any new circumstances that occur, information that may become available, or if there are any changes to proposed works at the Site.

4) Site setup

Prior to disturbance works commencing, erosion, sediment and dust control measures are to be put in place. Please refer to Hawke’s Bay Regional Council’s *Hawke’s Bay Waterway Guidelines: Erosion and Sediment Control* for guidance.

Access to the Site during works should be controlled appropriately and set up in such a way as to restrict access to only those that require it.

5) Potentially contaminated material management

The following controls shall apply to general excavation and surficial roading works at the Site.

5.1 Excavation worker activities

Before work commences, excavation staff shall be thoroughly briefed regarding potential exposures to contaminated material and the contents of this CLMP.

PPE at a minimum should include hardhats, overalls (washable/disposable as required), steel toe capped boots, gloves (cut resistant/nitrile as required) and a dust mask (disposable/respirator as required).

5.2 Dust

Soils are to be kept moist with the use of light water misting. Works are to be stopped should visible dust be apparent and further dust controls be put in place prior to works commencing. Site works should cease during high wind conditions. Site workers should wear dust masks when dust is noted and unable to be appropriately controlled.

5.3 Earthworks and stormwater

The following controls shall apply to general excavation and surficial roading works at the Site:

- No unnecessary excavation shall be undertaken.
- Tracking of material should be kept to a minimum.
- Stockpiling of soil should be kept at a minimum; stockpiles should be covered, and a temporary bund constructed to contain any stormwater runoff from the stockpiles.
- Drain covers should be fitted with filter mats and/or temporary stormwater collection ponds be constructed as required.
- Any additional material required for reinstatement should be sourced from a certified cleanfill facility.



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5.4 Groundwater

Based on input from the Project geotechnical team, it is highly unlikely that groundwater will be encountered during the proposed surficial roading works and excavations.

5.5 Disposal options

As soil contamination may be present within the Site area, soil testing should be undertaken on any excavated material before it is removed from Site for disposal. Analytical results should be reviewed by a SQEP to determine appropriate disposal locations. In any instance, the analytical results must be forwarded to prospective disposal facilities and be accepted in advance of transportation and disposal.

6) Unexpected contamination discovery

The following unexpected contamination indicators may be observed in soil including, but not limited to:

- Visual (buried refuse, metal objects, fibrous cement board, building material, soil or water staining/bleaching or discolouration).
- Olfactory (hydrocarbons, sulphurous, rotting vegetation or sewage).
- Auditory (gas leaks, flowing or dripping liquid).

It is recommended if any of these indicators are discovered, the Site manager or subcontractors should cease work to make the Site safe and seek the advice of a SQEP.

7) Record keeping

Records for keeping by the PCBU and party responsible for provision:

Record	Party
Legislative requirements and safety documentation (Sections 3, 4, & 5)	Contractor
Imported soil and disposal / reuse records (Sections 5.3 & 5.5)	Contractor
Unexpected contamination discovery documentation (Section 6)	Contractor
Soil and groundwater sampling works (Sections 5.5 & 6)	SQEP

8) Contacts

Emergency services

Fire and Emergency New Zealand and Ambulance Services – 111

National Poisons and Hazardous Chemicals Information Hotline – 0800 764 766

In the event of any emergency on-Site, emergency services should be contacted immediately. Where there is not significant risk to personal health and safety the on-Site personnel should take all practicable steps to secure the site and react to the emergency.

Regulatory bodies

The main regulatory authorities to be consulted in respect of the controls given above are as follows:

WorkSafe New Zealand – 0800 030 040

Hastings District Council – 06 871 5000

Hawke’s Bay Regional Council – 06 835 9200

Landowner

Waka Kotahi – 0800 44 44 49

9) General limitations

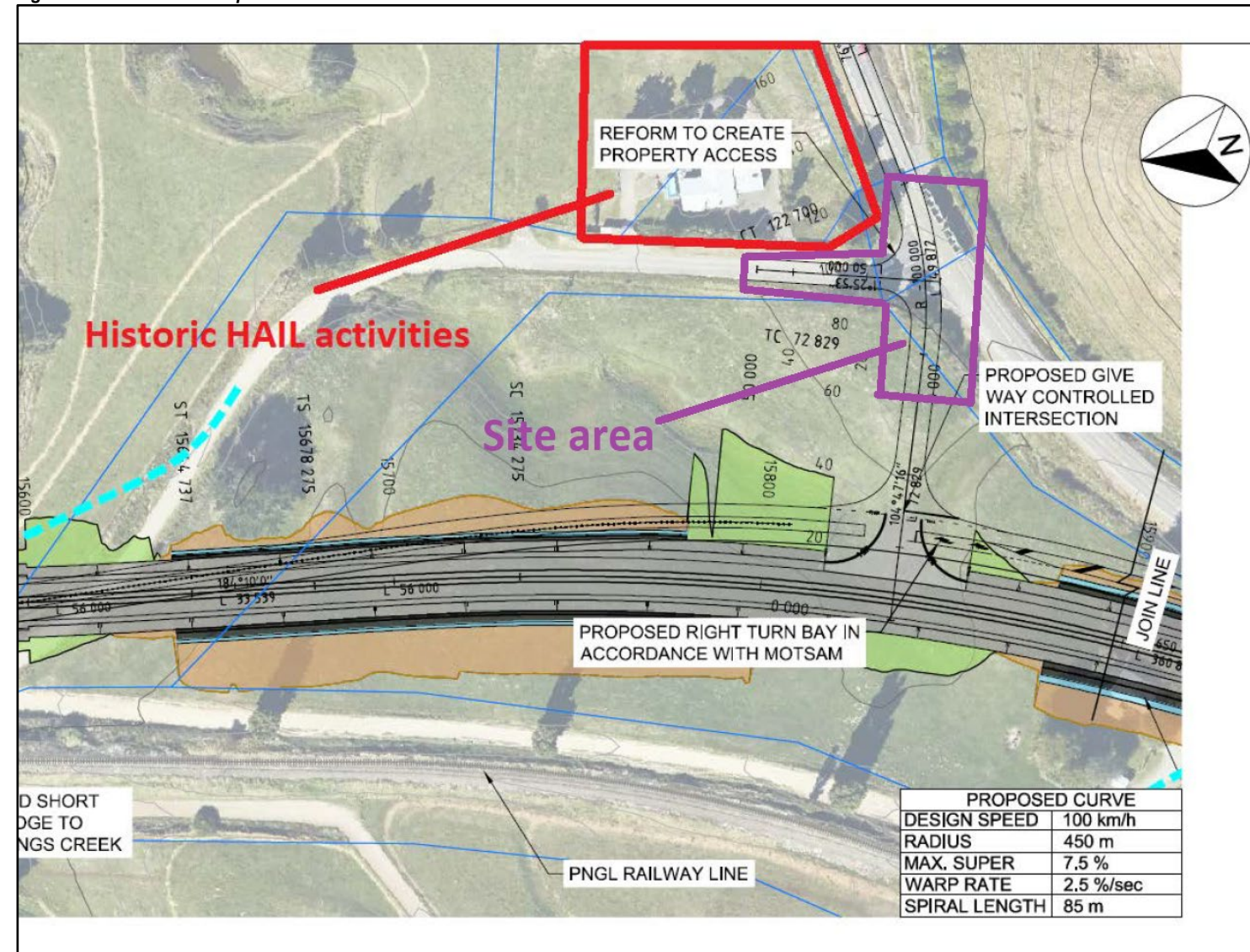
The mitigation measures presented in this CLMP relate only to the potential hazards undertaken associated with working where there is potential soil contamination. However, all works carried out should adhere to the relevant legislation and current best practice. This would include compliance with the Health and Safety at Work Act (2015), Hazardous Substances and New Organisms Act (1996), OSH Workplace Exposure Standards (2002), NESCS and any other associated regulations.

10) Document control

Status	Date	Approved by
Draft	28/04/2022	A. Gray
Final	5/05/2022	D. Fellows

11) Figures

Figure 1: Outline location plan



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