



Contaminated Site Management Plan

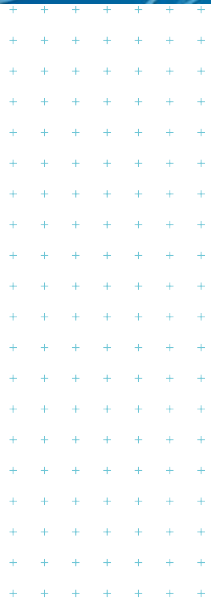
Category 3 Areas

Prepared for
Christchurch International Airport Ltd

Prepared by
Tonkin & Taylor Ltd

Date
April 2019

Job Number
53920.2000.v3



Document Control

Title: Contaminated Site Management Plan					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
April 2016	1		Lyn Nugent		Peter Cochrane
December 2016	2	Inclusion of accidental discovery protocols (Section 3).	Mark Morley		Peter Cochrane
April 2019	3	Updates to asbestos in soils earthworks controls (after New Zealand Guidelines for Assessing and Managing Asbestos in Soil (BRANZ, November 2017)) and CIAL discussions. Refer to Category 1 areas plan (version 4, April 2019).	Mark Morley	Lean Phuah	Gordon Ashby

Distribution:

Christchurch International Airport Ltd

1 electronic copy

Tonkin & Taylor Ltd (FILE)

1 electronic copy

Document Control (Continued)

This report has been prepared for the benefit of Christchurch International Airport Ltd with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

This report has been prepared in general accordance with national guidance and standards for conducting ground contamination-related desk study investigations in New Zealand. This includes compliance with the general format described in the Ministry for the Environment (MfE) Contaminated Land Management Guideline No. 1 "Reporting on Contaminated Sites in New Zealand".

Tonkin & Taylor Ltd

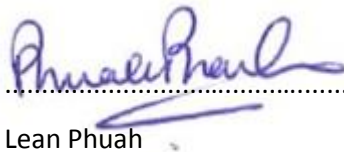
Report prepared by:

Report certified by a suitably qualified and experienced practitioner as prescribed under the NES Soil Users Guide (April 2012):



.....

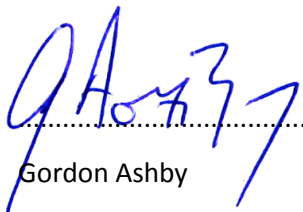
Mark Morley
Environment Geologist



.....

Lean Phuah
Principal Environmental Engineer

Authorised for Tonkin & Taylor Ltd by:



.....

Gordon Ashby
Project Director

Table of contents

1	Introduction	1
1.1	Basis for the procedures	1
1.2	Site management	1
1.3	Identification of contamination	2
1.4	Post-works verification	2
2	Soil Management Procedures	3
2.1	Inspection procedures	3
2.2	General soil handling procedures	3
2.2.1	Stockpiling of contaminated soils	4
2.2.2	Dust generation	4
2.2.3	Stormwater and sediment control measures	4
2.2.4	Cross contamination	5
2.2.5	Prevention of preferential pathways along pipelines	5
2.2.6	Procedure for removing and reporting on unforeseen structures	5
2.2.7	Soil sampling requirements and procedures	5
2.2.8	Dewatering procedures	6
2.2.9	Imported material procedures	6
3	Accidental Discovery Protocols	7
4	Soil Disposal	8
4.1	Disposal of contaminated soil	8
4.2	Disposal of hydro excavation materials	8
4.3	Disposal of un-contaminated soil	8
5	Health and Safety Procedures	9
5.1	General requirements	9
5.1.1	Site establishment	9
5.1.2	General safety requirements	9
5.1.3	General hazard minimisation procedures	10
Appendix A :	Works Verification Form	

1 Introduction

1.1 Basis for the procedures

Tonkin & Taylor Ltd (T+T) has undertaken a Preliminary Site Investigation (PSI) on the Christchurch International Airport campus to identify current or historical uses at the site with the potential to cause ground contamination. This PSI informs a global consent under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES Soil) for soil disturbance, the removal and replacement of fuel storage systems and for land use changes.

Category 3 areas are those that have been used for only low-risk HAIL activities. The classification of HAIL activities is described in Section 1.2 of the campus-wide Site Management Plan (SMP)¹, to which this document is appended. The boundaries of Category 3 areas are presented in Figure 3, Appendix A of the SMP. Ground contamination investigations have been undertaken on a number of HAIL sites within Category 3 areas. These investigations have not been assessed for methodology, results, or reliability.

Although the potential for contamination is relatively low compared to other categories, there is still some potential for contamination to arise from general airport operations. All staff working on site should be aware of this potential and work methods should allow for early identification of contamination.

Excavations can proceed in accordance with standard earthworks procedures as set out in Sections 2 and 3. As with other categories, the excavation shall also be undertaken in a manner which allows soils of a different type/composition/contaminant levels to be kept separate, should contamination be identified. If this is carried out the better material may be able to be disposed at a lower landfill cost, following sampling and testing reducing the overall project costs.

The excavation method should allow for regular inspections and monitoring of the subsurface conditions to allow identification of any areas of unforeseen contamination. Inspection requirements are covered in Section 2.1, with soil sampling procedures in Section 2.2.7.

1.2 Site management

The following are key aspects of site management during all earthworks on Category 3 areas:

- The contractor shall advise CIAL's Environmental Manager at least one day prior to commencement;
- The site Hazard Board shall include information pertaining to the contamination likely to be identified (refer Table 1.1). The Contractor's details shall be provided on the Hazard Board;
- Personal protective equipment (PPE) relevant to the expected contamination shall be available on site (Section 5);
- The site shall remain secured during non-working hours to prevent access by the public or unauthorised personnel; and
- Appropriate earthworks controls (Section 2) shall be established prior to works commencing.

¹ Site Management Plan, Excavation and handling of contaminated soils at Christchurch International Airport – T+T reference 53920v2 – April 2019.

1.3 Identification of contamination

A range of contaminants may be present within Category 3 areas, although the potential for them is lower than other categories. Standard indicators of contamination in Category 3 areas include the following:

- A hydrocarbon odour (typically smells like petrol, diesel, kerosene etc.);
- Other abnormal odours not normally associated with soil;
- Discoloured soil (i.e. areas of soil with dark staining, abnormal or unnatural colouring);
- Soil with waste material or building debris (i.e. plastics, metal, bricks, timber etc.) indicating the ground has been filled and may contain asbestos containing materials (ACM); and
- An oily substance or sheen on the surface of soil, or on the surface of water in the excavation.

In order to identify HAIL activities that have occurred on a proposed work area and potential indicators of likely contamination are identified, the Contaminated Land Specialist shall be notified to inspect the excavation and advise on appropriate handling procedures if required in addition to the procedures in Section 2. Otherwise, soil shall be handled in accordance with the procedures in Section 2.

There may be situations where the development of specific site management procedures is needed in addition to the procedures outlined in this SMP, depending on the nature of the excavations and the HAIL activity (e.g. munitions from grenade throwing). Table 1.1 summarises likely contaminants that may be encountered in Category 3 and instances where specialist advice is required prior to earthworks.

Table 1.1: Specific HAIL activities, key contaminants and additional management sections

Type of HAIL activity	Potential Contaminants	Identification of Contamination	Sections
<ul style="list-style-type: none"> • Corrosives bulk storage (Activity A4) 	Various acids and bases.	Stressed vegetation.	No additional management sections.
<ul style="list-style-type: none"> • Commercial printers (Activity A15) 	Solvents, metals, acids and bases.	Stained ground, stressed, vegetation, solvent odours.	
<ul style="list-style-type: none"> • Persistent pesticide storage or use (Activity A10) • Woolsheds (Activity A16) 	Metals and organochlorine pesticides (OCPs).	Stained ground, stressed vegetation.	
<ul style="list-style-type: none"> • Grenade throwing (Activity C3) 	PCP, nitroglycerine, heavy metals, fuel oils and solvents.	Visible shot or shells.	Specific site management procedures required.

1 Note - for asbestos in soils see Appendix B, Contaminated Site Management Plan - Category 1 Areas – version 4, April 2019.

1.4 Post-works verification

Works verification procedures are outlined in Section 5 of the campus-wide SMP and are centred on the use of a works verification form by the Contractor and Contaminated Land Specialist. A copy of the Works Verification Form is included in Appendix A.

2 Soil Management Procedures

Due to the relatively low potential for contamination in Category 3 areas, standard soil management procedures will generally be applicable, with some additions to allow for low-level contamination. The additional procedures focus on the early identification of contaminants and implementation of appropriate handling and disposal procedures.

2.1 Inspection procedures

Inspections of Category 3 excavations will be undertaken by the Site Environmental Supervisor at an interval determined by the Contaminated Land Specialist prior to the commencement of works.

If unforeseen contamination is encountered (see accidental discovery protocols – Section 3), the Contaminated Land Specialist shall be contacted to inspect the excavation and advise on the appropriate contaminated soil handling procedures, or soil sampling, if required by the Contaminated Land Specialist.

2.2 General soil handling procedures

The following general handling procedures should be followed where contamination may be present in any Category 3 area, except where testing of soils has proven soils to be absent of contaminants above published background levels (see Section 2.2.7):

- Consult the CIAL Environmental Manager and Contaminated Land Specialist prior to disturbing soils to determine a suitable receiving facility (if applicable);
- Material excavated shall be loaded by the Contractor directly onto trucks for offsite disposal (refer Section 4), or temporarily stockpiled to prevent contamination of other areas;
- Trucks shall be loaded within the site where runoff and possible spills during loading will be controlled and contained;
- Measures shall be put in place to ensure contaminated soil is not tracked offsite on wheels of trucks;
- Each truck shall have a tracking document² signed onsite and collected at the receiving facility to track each load of material;
- Trucks shall have their loads covered by tarpaulins during transport of material to the receiving facility. These shall be affixed before leaving site;
- Stockpiling shall be in accordance with Section 2.2.1;
- A permit/manifest shall be obtained by the Contractor from the disposal destination prior to transportation and the Contractor is responsible for obtaining this approval;
- All contaminated material removed from site shall be disposed as per the procedures set out in Section 4.1; and
- All weighbridge dockets shall be retained by the Contractor and provided to the Engineer to the Contract as soon as practicable or within two working days. The Engineer to the Contract is to provide a tracking summary to the CIAL Environmental Manager for all material removed from site.

Health and safety precautions identified in Section 5 shall also be followed.

² Driver's log sheets will be sufficient as tracking documents

2.2.1 Stockpiling of contaminated soils

It is possible stockpiling of contaminated soil on site may be required due to phasing of work, or other construction constraints. Where possible stockpiling should be avoided and, if required, the time material is stockpiled shall be minimised as far as is practicable.

Any material that is suspected to be contaminated that requires stockpiling shall be managed by the Contractor as below:

- Sediment control measures shall encircle the stockpile, this may include:
 - Proprietary products (e.g. filter socks); and
 - Silt fences.
- If the stockpile is to be remain for more than 1-2 days and/or if rain is forecast during the time the stockpile is present, the stockpile shall be covered with geotextile or a polythene cover (or a similar material) to prevent rainfall induced erosion;
- Fenced or otherwise secured so that the general public cannot have access to the stockpile; and
- If the material is odorous, odour control measures shall be put in place. This could include covering the material with clean soil, a polythene cover or instituting a deodoriser system.

2.2.2 Dust generation

From an environmental and human health perspective, dust generated from contaminated soils has the potential to contain contaminants and, during windy conditions, may discharge offsite.

Where there is potential for contamination in Category 3 areas, in addition to the standard dust control practices, the Contractor shall:

- Limit the amount of material to be excavated as much as practicable;
- Limit vehicle access onto contaminated areas;
- Use a water truck or portable water sprays in trafficked areas to dampen dust during dry and windy conditions;
- If required, cover stockpile material awaiting laboratory testing/removal to prevent dust generation;
- Visually monitor dust emissions in the vicinity of the excavation until exposed material has been covered by clean material; and
- Avoid work during windy conditions.

When utilising water to control dust, the Contractor shall ensure that:

- The volume of water used for dust suppression does not cause surface ponding or runoff; and
- The application of water does not induce soil erosion and soil pugging.

2.2.3 Stormwater and sediment control measures

Rainwater has the potential to come into contact with contaminated material and become contaminated itself. Contaminated soil may also be entrained in the stormwater and result in the deposition of contaminated sediment. All stormwater at the airport campus is discharged to groundwater via soakpits.

Where contamination is suspected/identified in Category 3 areas, the Contractor shall ensure that stormwater and sediment control procedures are put in place prior to any ground breaking works commencing and include at a minimum:

- Limiting the duration of exposure of contaminated ground as much as possible;
- Divert clean stormwater away from excavations/exposed soil in contaminated areas.
- If stormwater does enter contaminated areas, contain runoff during rainfall events within the excavation;
- Bund stockpiles as set out in Section 2.2.1;
- Controlled site exit points and methods to prevent contaminated soils being tracking offsite by vehicles.

The purpose of the above stormwater and sediment control measures is to prevent contaminated water from entering groundwater via soakpits.

2.2.4 Cross contamination

To avoid transferring contaminated soils from one location to another, all machinery and equipment shall be decontaminated prior to moving from a suspected/identified contaminated area to a different location. Decontamination procedures are site-specific and will be determined by the Contaminated Land Specialist prior to the commencement of works. Procedures may include the manual brushing down or washing of vehicles.

2.2.5 Prevention of preferential pathways along pipelines

Installation of pipelines through contaminated soils can provide a preferential flow path, through which contaminants can migrate. When laying pipe work through areas of contaminated soil where the contaminants may interact and migrate with groundwater, measures (such as pipe dams) shall be put in place to prevent these contaminants from travelling along the permeable bedding of the pipeline. Advice on the design of the mitigation measures (pipe dam etc.) shall be sought from the Contaminated Land Specialist.

2.2.6 Procedure for removing and reporting on unforeseen structures

It is possible that subsurface structures with potential to cause ground contamination may be encountered during the works in Category 3 areas. Structures of concern are those associated with the storage, transfer or disposal of fuels, chemicals or wastes. These may include USTs, pipelines, waste tanks or sumps, but do not include structures associated with stormwater or municipal wastewater.

If unforeseen structures of this type are encountered, the Contaminated Land Specialist shall inspect the structures and advise on handling, disposal, and site validation procedures. Any abandoned drainage lines shall be permanently capped to prevent the migration of contaminants, and inspected by the Contaminated Land Specialist prior to reinstatement.

Underground fuel storage tanks (USTs) are a special case, and a procedure for their removal, if encountered during works, is set out in the Category 1 SMP. The CIAL Environmental Management team and Contaminated Land Specialist shall be contacted if a UST is encountered during works.

2.2.7 Soil sampling requirements and procedures

Soil sampling required under Section 2.1 shall be undertaken by the Contaminated Land Specialist according to the requirements of the NES Regulations 2012, the “Australian/ New Zealand Standard AS/NZS 5667 11:1998” and the MfE Contaminated Land Management Guidelines No.5³. Soil samples shall be collected according to the following procedure:

³ Ministry for the Environment, 2004: Contaminated Land Management Guideline No. 5 – *Site Investigation and Sampling*, (revised 2011).

- The materials encountered shall be described in accordance with the NZ Geotechnical Society “Guidelines for the classification and field description of soils and rocks for engineering purposes”;
- Freshly gloved hands shall be used to collect soil samples and shall be placed immediately into 300 ml glass jars;
- Any equipment used to collect the samples shall be decontaminated between sample locations using clean water and Decon 90 (a phosphate-free detergent) or similar; and
- Samples shall be shipped in a chilled container to an IANZ accredited laboratory under chain of custody documentation.

The Contaminated Land Specialist shall identify potential contaminants on the basis of visual and olfactory observations. However, at a minimum they shall include metals (arsenic, chromium, copper, nickel, lead and zinc), TPH, BTEX and PAH. Any evidence of the presence of asbestos shall trigger testing for asbestos content in soil. Other contaminants may be tested for at the discretion of the Contaminated Land Specialist.

The Contaminated Land Specialist shall report the results of any testing to CIAL and the Contractor. It is appropriate to evaluate the results with respect to:

- NES Soil soil contaminant standards for an industrial/commercial land use with respect to protection of human health; and
- Background concentrations for the local area.

2.2.8 Dewatering procedures

It is highly unlikely that groundwater will be encountered in excavations within Category 3 areas. The Contractor shall in the first instance contact the Contaminated Land Specialist to advise if contamination is present. Groundwater and ponded surface water within Category 3 areas shall not be discharged to soakpits without prior approval by the CIAL Environmental Manager to ensure that water quality meets the conditions of CIAL’s global stormwater consent (CRC130198).

Disposal shall be to sewer at the discretion of CCC. Treatment of the water may be required prior to disposal. Alternatively, disposal by sucker truck and transport to a Treatment Plant may also be possible.

2.2.9 Imported material procedures

Material imported to site is generally virgin quarry material, site sourced material, certified cleanfill, or topsoil from a garden supplier. Any other soil or aggregate imported to site that is not sourced from a quarry or garden supplier, site sourced, or certified as cleanfill shall be sampled by the Contaminated Land Specialist at a rate of one sample for every 500 m³ and tested for metals and hydrocarbons as well as any other contaminants as determined by the Contaminated Land Specialist. Results must be consistent with expected background, unless otherwise authorised by resource consent conditions at the source location. It is preferable that fill is tested at its source prior to its use at the site. Otherwise, if not, the Contractor shall stockpile the fill on site until test results are available.

Rock or aggregate sourced directly from a quarry or supplier does not require testing prior to importation.

3 Accidental Discovery Protocols

Unexpected soil contamination could be encountered during earthworks at Category 3 Areas. Visual and olfactory indicators of contamination include, but are not limited to, the following:

- Odour (petroleum hydrocarbons, oil);
- Green/yellow discoloured soil which may indicate high levels of copper and chromium;
- Black staining coupled with an odour which may indicate heavy oil/hydrocarbon contamination;
- Black gravel/sand which may be boiler ash materials that could be high in metals and PAHs; and
- Inclusions of deleterious materials including, but not limited to, abrasive blasting sand/agents, asbestos*, asphalt, bark, cables, cesspit/stormwater sump cleanings, containers, cork tiles, corrugated iron, electrical equipment and insulation, formica, foundry sand, greenwaste, hardboard, household waste, MDF, medical and veterinary waste, metals, paint, painted materials, paper and cardboard, particleboard (chipboard), plywood, road sweepings, sawdust, tar, timber (processed) and wood chips⁴.

*for asbestos in soils see Appendix B, Contaminated Site Management Plan - Category 1 Areas –version 4, April 2019.

The following is a “first response” checklist for the Contractor to follow should visual or olfactory evidence of contamination be encountered during the execution of earthworks.

The presence of other contaminants in high levels may dictate further controls need to be implemented and additional or amended containment/disposal procedures may be required. The first response procedures are designed to provide actions for the Contractor to ensure that contamination is contained while decisions and procedures regarding its management and final disposal are being confirmed.

First Response Checklist:	
Stop work within 10 m of the contamination discovery and isolate the area by taping, coning or fencing off.	<input type="checkbox"/>
Advise the site controller (e.g. appointed person by the contractor managing the works) who will inform the CIAL Environmental Manager as soon as practicable.	<input type="checkbox"/>
Prepare and implement contaminated soil Health and Safety procedures.	<input type="checkbox"/>
Update the site Hazard Board and prevent access to the area by unnecessary personnel.	<input type="checkbox"/>
The contractor and/or CIAL Environmental Manager must advise the Contaminated Land Specialist to inspect and advise of specific controls if appropriate.	<input type="checkbox"/>

⁴ MfE A guide to Management of Cleanfills 2002 – Unacceptable materials.

4 Soil Disposal

4.1 Disposal of contaminated soil

All soils excavated from Category 3 areas shall be assumed to be contaminated unless testing (previous investigations or as per Section 2.2.7) has indicated that soils are uncontaminated. Contaminated soils shall be kept separate from other excavated material where possible in order to minimise disposal costs.

If sampling is required, as determined by the Contaminated Land Specialist, it can be undertaken in situ (pre testing prior to excavation) or following excavation from stockpiles. All sampling must be undertaken by a Contaminated Land Specialist⁵. Contractors should be aware that laboratory testing takes **AT LEAST 5-7 working days and methodology should account for this potential delay**.

The results of the testing will dictate the disposal locations, broad guidelines are as follows:

- If the levels of contaminants are consistent with background concentrations (or specific cleanfill consent conditions) then these materials may be disposed of to cleanfill (subject to approval from the cleanfill operator; see Section 4.3);
- If the levels of contaminants are greater than background but less than the Burwood Landfill acceptance criteria then these materials can be disposed of within the Burwood Landfill, subject to CCC approval, in the locations directed by the site operator;
- If the levels of contaminants exceed the Burwood Landfill acceptance criteria, pre-treatment may be necessary or disposal shall be sought at facilities licensed to accept such waste (e.g. Texco , Kate Valley Landfill); and
- Excavated materials containing asbestos require disposal to a facility licensed to accept this waste type (e.g. Kate Valley Landfill) with the prior approval of the operator.

Records of the material disposed (weighbridge dockets etc.), and the location of disposal shall be kept for all loads and provided to the Engineer to the Contract and CIAL Environmental Manager as soon as practicable.

4.2 Disposal of hydro excavation materials

Materials from all hydro excavation (slurry etc.) works undertaken at Category 3 sites must only be disposed of at the designated location at the Burwood Landfill (or similarly licensed facility) as directed by the site operator.

4.3 Disposal of un-contaminated soil

Soils from Category 3 that have been pretested and proven to be uncontaminated⁶ may be transported to cleanfill for disposal, subject to approval from the cleanfill operator, or retained on site.

The loading of trucks and transport to the cleanfill shall be as per standard soil handling procedures.

Records of the material disposed, and the location of disposal should be kept and provided to the Engineer to the Contract and CIAL Environmental Manager as soon as practicable.

⁵ Where pre-testing is required for disposal or health and safety purposes then testing shall be undertaken in accordance with Ministry for the Environment Contaminated Land Management Guidelines. All testing shall be undertaken by a Contaminated Land Specialist. Analysis results will be compared to the receiving facility acceptance criteria and most recent and relevant human health assessment criteria.

⁶ Soils are uncontaminated for the purposes of disposal to cleanfill if they meet the relevant resource consent conditions of the receiving cleanfill.

5 Health and Safety Procedures

This Health and Safety Plan (HSP) relates to the risk to workers as a result of low to moderate potential for significant ground contamination. These are additional to standard health and safety requirements of the Contractor during excavation works.

5.1 General requirements

Health and Safety requirements shall be managed through site specific and job specific safety authorisations (JSAs). The following procedures are to be used as a guide for the preparation of these JSAs. The following procedures deal with health and safety matters relating to contaminated ground only and do not cover other hazards on site.

These general procedures are designed as a base level for all sites, and are designed to cover the generic health and safety set up and controls related to contaminated ground.

5.1.1 Site establishment

The following shall be put in place by the Contractor prior to ground works commencing:

- The site will be fenced 1.8 m secured fencing to restrict entry to authorised workers and prevent access by the general public. Appropriate warning signs (e.g. “*Restricted entry*”, “*Danger open excavations*”) shall be erected around the fenced site unless the works are suitably excluded from the general public as deemed appropriate by a CIAL Senior Manager (i.e. WHS Manager, Environmental Manager, Property Projects Manager);
- Health and safety site specific inductions and daily prestart meetings shall be completed; and
- Health and safety facilities as required by the hazard management procedures, such as wash facilities, personal protection equipment stores and first aid points shall be provided.

5.1.2 General safety requirements

Contractor’s staff, sub-contractors and visitors shall be required to undergo a site specific safety induction before entering and/or commencing work. The purpose of the safety induction is to make sure staff, sub-contractors and visitors are aware of the hazards related to contaminated soil relevant to the site, safe working procedures, safety equipment and requirements and the action plan in case of an emergency.

The Contractor shall appoint an HSO for the duration of the works. The HSO shall be responsible for ensuring health and safety procedures are adhered to and that the risks associated with the potential hazards are controlled.

The following general safety procedures shall be followed by all staff entering and/or working in the immediate area of the project activities:

- All incidents shall be reported to the HSO;
- Workers shall be made aware of potential hazards on site so they can be identified and appropriate control measures can be taken to ensure the safety of workers, and passers-by;
- Site workers shall avoid unnecessary contact with site soils;
- Site workers shall avoid exposure to suspected asbestos containing material;
- Site workers shall wear personnel protective clothing and equipment as outlined in Section 5.1.3;
- A first aid kit and fire extinguisher must remain and be available on site at all times; and
- Hand washing facilities must be provided onsite.

5.1.3 General hazard minimisation procedures

Works undertaken in Category 3 areas are unlikely to contain highly contaminated soil. However, as there is still some risk, it is appropriate for all workers, sub-contractors and visitors to adopt a certain precautionary level of hazard management related to contaminated soils. This section sets out the procedures to manage the potential hazards on sites where no obvious signs of contamination are observed.

Where obvious signs of contamination are observed, additional procedures are contained in the procedures for Category 1 areas. To prevent exposure to potentially present contaminants, the following procedures shall be followed on Category 3 sites where no obvious signs of contamination are present:

- All workers physically involved in excavating soil, or working within the excavations shall:
 - Wear clothes that cover arms and legs;
 - Wear P2 dust masks during dusty conditions; and
 - Have good hygiene practises (i.e. wash hands before eating, drinking, using the toilet or smoking).

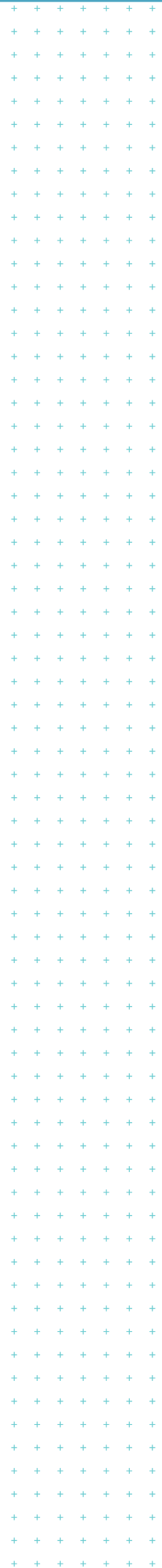
If signs of contamination are noted, the Contractor must immediately cease works until the additional health and safety measures set out for Category 1 areas are instituted.

The Contractor must review any new work element and continually monitor and assess whether there are any new associated hazards, and whether these can be eliminated, isolated or minimised. If these hazards are related to ground contamination, the Contractor shall seek advice from the Contaminated Land Specialist. The Contractor shall then instruct all staff, sub-contractors and visitors on the health and safety procedures associated with the new hazard.

Appendix A: Works Verification Form

Works Verification Form – Low Risk Sites

Job Name:			
Location:			
Duration:			
Summary of Works:			
Contaminated soil/water identified (if yes, detail actions undertaken)			
Material disposed (fill name and volume disposed)	Cleanfill:		
	Managed Fill:		
	Landfill:		
Imported material:	Source:		
	Volume:		
Test results (if any)			
Form completed by:		Date:	
Project Manager		Signed:	
Contaminated Land Specialist		Signed:	



www.tonkintaylor.co.nz