

The Proposed Auckland Unitary Plan (notified 30 September 2013)

4.5 Contaminated land

Introduction

Land use and development on land containing elevated levels of contaminants need to be managed to ensure contaminants do not adversely affect human health and the environment. Consequently, the council is required to manage both the use of land containing elevated levels of contaminants and the discharge of contaminants from land containing elevated levels of contaminants.

The disturbance of contaminated land is also regulated by the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES). This NES addresses the assessment and management of actual or potential adverse effects of contaminants in soil on human health from five land-use activities: subdivision, land-use change, soil disturbance, soil sampling, and removing fuel storage systems. The provision of this NES must be considered separately to, but concurrently with, the provisions of this section of the Unitary Plan.

1. Activity table

The following table specifies the activity status for the discharge of contaminants to land and/or water from containing elevated levels of contaminants.

[rp]

| Discharge Rules (s. 15 RMA) | |
|---|----|
| Discharges of contaminants from intrusive investigations, including sampling soil, and disturbing soil on land containing elevated levels of contaminants | P |
| Discharges of contaminants from land currently used for primary production | P |
| Discharges of contaminants from land not used for primary production | P |
| Discharges of contaminants from managed or remediated land | P |
| Discharges of contaminants from a fuel storage system | P |
| Discharges of contaminants from land not meeting the permitted activity controls in clause 2.1.1 or 2.1.3 | C |
| Discharges of contaminants from disturbance or remediation of land not meeting the permitted activity controls in clause 2.1.1 or 2.1.4 | C |
| Discharges of contaminants from land not meeting the controlled activity controls in clause 2.2.1 or 2.2.2 | RD |
| Discharges of contaminants not meeting the restricted discretionary controls | D |

2. Controls

2.1 Permitted activities

2.1.1 Discharges of contaminants from intrusive investigations (including sampling soil) that involve chemical testing or monitoring (excluding soil fertility testing) and from disturbing soil on land containing elevated levels of contaminants

1. Prior to the activity commencing:
 - a. the council must be advised of the activity in writing
 - b. adequate controls must be implemented to minimise discharges of contaminants to the environment
 - c. the controls must be effective for duration of the activity and until the soil is reinstated to an

The Proposed Auckland Unitary Plan (notified 30 September 2013)

erosion-resistant state.

2. Any water encountered must not be discharged to surface water unless testing demonstrates compliance with the Australian and New Zealand Environment and Conservation Council (ANZECC) Guidelines for Fresh and Marine Water Quality (2000) for freshwater and for the protection of 95 per cent of species, or disposed of, without causing more than minor adverse effects on the environment.
3. The land containing elevated levels of contaminants and the discharge must not contain separate phase liquid contaminants including separate phase hydrocarbons.

2.1.2 Discharges of contaminants from land currently used for primary production

1. The land must have been previously used only for primary production.
2. The land must not be redeveloped or used for non-primary production.
3. The discharge must not have adverse effects on potable water supplies.

2.1.3 Discharges of contaminants from land not used for primary production

1. For in-situ soil and material imported or deposited onto land, the concentrations of target contaminants, or the 95 percent upper confidence limit of the mean, determined in accordance with the 'Contaminated Land Management Guidelines – No.5 – Site Investigation and Analysis of Soils', Ministry for the Environment (2011), must not exceed the greater of a. or b. below:
 - a. For in-situ soil and material imported and/or deposited onto the land
 - i. the criteria specified in Table 1; or for contaminants not included in Table 1:
 - ii. the tier 1 soil acceptance criteria for the protection of groundwater quality specified in Table 4.20 of the 'Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand,' Ministry for the Environment (October 2011); or for contaminants not included in Table 1 or Table 4.20:
 - iii. the soil quality guidelines for the current land use or, in the case of a proposed change in land use, the proposed land use in the 'Canadian Environmental Quality Guidelines', Canadian Council of Ministers of the Environment (2013):
 - iv. for dieldrin and lindane only, the soil guideline values in Table A.5 of the report 'Identifying, Investigating and Managing Risks Associated with Former Sheep Dip Sites: A Guide for Local Authorities,' Ministry for the Environment (2006).
 - b. The natural background levels for that soil or material or the relevant background levels specified in Table 2.
2. The land and the discharge must not contain separate phase liquid contaminants including separate phase hydrocarbons.

Table 1: Permitted activity soil acceptance criteria

| Contaminant | Permitted activity criteria (mg/kg) |
|----------------------------------|--|
| Arsenic | 100.0 |
| Benzo (a) pyrene (equivalent) | 2.15 |
| Cadmium | 7.5 |
| Chromium (total) | 400.0 |
| Copper | 325.0 |
| Total DDT | 12.0 |
| Lead | 250.0 |
| Mercury | 0.75 |

The Proposed Auckland Unitary Plan (notified 30 September 2013)

| | |
|--------|-------|
| Nickel | 105.0 |
| Zinc | 400.0 |

Total DDT includes the sum of DDT, DDD and DDE.

Table 2: Background ranges of trace elements in Auckland soils (Auckland Council TP153, 2001)

| Element (total recoverable) | Non-volcanic range | Volcanic range |
|-----------------------------|--------------------|----------------|
| Arsenic (As) | 0.4 – 12 | |
| Boron (B) | 2 – 45 | <2 - 260 |
| Cadmium (Cd) | <0.1 – 0.65 | |
| Chromium (Cr) | 2 – 55 | 3 – 125* |
| Copper (Cu) | 1 – 45 | 20 – 90 |
| Lead (Pb) | <5 – 65* | |
| Mercury (Hg) | <0.03 – 0.45 | |
| Nickel (Ni) | 0.9 – 35 | 4 – 320 |
| Zinc (Zn) | 9 – 180 | 54 – 1160 |

2.1.4 Discharges of contaminants from managed or remediated land

1. Discharges from land, for which resource consent for discharges of contaminants has previously been held, must meet all the consent condition requirements for that discharge consent, including for remediation and monitoring.

2.1.5 Discharges of contaminants from a fuel storage system

1. For discharges of contaminants from a fuel storage system:
 - a. the concentration of soluble contaminants in any of: overland stormwater at the site boundary, surface water within the site, and groundwater at the site boundary must not exceed the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC) Guidelines (2000) Table 3.4.1 'Trigger values for toxicants at alternative levels of protection' for marine or freshwater, where relevant, at the level of protection of 80 percent of species
 - b. the discharge must not contain separate phase hydrocarbons.
2. For discharges of contaminants from the removal or replacement of a fuel storage system:
 - a. the concentration of soluble contaminants in any of: overland stormwater at the site boundary, surface water within the site, and groundwater at the site boundary must not exceed the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC) Guidelines (2000) Table 3.4.1 'Trigger values for toxicants at alternative levels of protection' for marine or freshwater, where relevant, at the level of protection of 80 per cent of species
 - b. the concentrations of contaminants remaining in the soil on the site following the removal or replacement of a fuel storage system must not exceed the tier 1 soil acceptance criteria for the protection of groundwater quality specified in Table 4.20 of the 'Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand,' Ministry for the Environment (October 2011)
 - c. the discharge must not contain separate phase hydrocarbons
 - d. any contaminated materials removed from the site must be disposed of to a facility or site authorised to accept such materials
 - e. the fuel storage system removal investigation, remediation, validation and management processes must be carried out in accordance with the 'Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand', Ministry for the Environment (October 2011).

2.2 Controlled activities

The Proposed Auckland Unitary Plan (notified 30 September 2013)

2.2.1 Discharges of contaminants from land not meeting the relevant permitted activity controls

1. A detailed site investigation (contaminated land) must exist
2. The report on the detailed site investigation (contaminated land) must state either that:
 - a. the concentrations of soluble contaminants in any of overland stormwater at the site boundary, surface water within the site, and groundwater at the site boundary must not exceed the guideline values specified in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC) Guidelines (October 2000) Table 3.4.1 'Trigger values for toxicants at alternative levels of protection' for marine or freshwater, where relevant, at the level of protection for 80 percent of species, or
 - b. discharges from the land are highly unlikely to cause significant adverse effects on the environment at present or in the future, or
 - c. the contamination associated with the land must be contained beneath a continuous impervious layer and must be located above the highest seasonal groundwater level beneath the site.
3. The consent authority must have been provided the report.

2.2.2 Discharges of contaminants from disturbance or remediation of land not meeting the relevant permitted activity controls

1. A detailed site investigation (contaminated land) report must exist.
2. A remedial action plan (contaminated land) report must exist.
3. The consent authority must have been provided both reports.

2.3 Restricted discretionary activities

2.3.1 Discharges of contaminants from land not meeting the relevant controlled activity controls

1. A detailed site investigation (contaminated land) report, site management plan (contaminated land), remedial action plan (contaminated land) and a site validation report (contaminated land), if relevant for the site, must be provided to the council.

3. Assessment - Controlled activities

3.1 Matters of control

The council will restrict its control to the following matters when assessing controlled activity resource consent application

1. Discharges of contaminants from land
 - a. adequacy of the detailed site investigation, including:
 - i. site sampling.
 - ii. laboratory analysis.
 - iii. risk assessment.
 - b. adequacy of a site management plan, if required.
2. Discharges of contaminants from disturbance or remediation of land
 - a. adequacy of the detailed site investigation, including:
 - i. site sampling
 - ii. laboratory analysis
 - iii. risk assessment.

The Proposed Auckland Unitary Plan (notified 30 September 2013)

- b. adequacy of and implementation of the remedial action plan
- c. how the activity must be:
 - i. managed, which may include the requirement of a site management plan and/or a site validation report
 - ii. monitored
 - iii. reported on
- d. the transport, disposal and tracking of soil and other materials removed in the course of the activity
- e. methods to avoid adverse effects on potable water supplies
- f. the timing and nature of the review of the conditions in the resource consent
- g. the duration of the resource consent.

4. Assessment - Restricted discretionary activities

4.1 Matters of discretion

The matters over which discretion is restricted are as follows:

1. The adequacy of the detailed site investigation (contaminated land), including:
 - a. site sampling
 - b. laboratory analysis
 - c. risk assessment.
2. The suitability of the land for the proposed activity, given the extent and type of soil contamination.
3. The approach to the remediation or ongoing management of the site, including the:
 - a. remediation or management methods to address the risk posed by the contaminants to the environment
 - b. timing of the remediation
 - c. standard of the remediation on completion
 - d. mitigation measures for the site, including the frequency and location of monitoring of specified contaminants.
4. The adequacy of the site management plan (contaminated land) or the site validation report (contaminated land) or both, as applicable.
5. The transport, disposal and tracking of soil and other materials removed in the course of the activity.
6. The timing and nature of the review of the conditions in the resource consent.

The Proposed Auckland Unitary Plan (notified 30 September 2013)