E30. Contaminated land

E30.1. Background

This section addresses the effects of the discharge of contaminants from contaminated land or land containing elevated levels of contaminants into air, or into water, or onto or into land pursuant to section 15 of the Resource Management Act 1991. This is separate from and different to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 provides a national environmental standard for activities on pieces of land where soil may be contaminated in such a way as to be a risk to human health. The activities are removing or replacing a fuel storage system, sampling the soil, disturbing the soil, subdividing land, and changing the use of the piece of land. The activities are classed as permitted activities, controlled activities, restricted discretionary activities, or discretionary activities.

Consent required for activities under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 is separate from and different to the resource consent required for the discharge of contaminants under this section of the Plan.

This section contains thresholds beyond which a risk assessment process is required to assess whether the discharge will result in significant adverse effects, or whether it can be remediated or managed. All assessments and related reports are to be carried out in in accordance with the Ministry for the Environment's Contaminated Land Management Guidelines.

This section focuses on all of the following:

- the direct discharges arising from investigation activities on land containing elevated levels of contaminants;
- discharges associated with soil disturbance that may liberate contaminants;
- longer term discharges occurring as a result of residual contaminants, often known as passive discharges;
- legacy discharges associated with past incidents; and
- the assessment of risk around ongoing discharges.

This section does not address initial discharges. These are addressed by E31 Hazardous substances and E33 Industrial and trade activities.

E30.2. Objective [rp]

(1) The discharge of contaminants from contaminated land into air, or into water, or onto or into land are managed to protect the environment and human health and to enable land to be used for suitable activities now and in the future.

E30.3. Policies [rp]

(1) Identify and record the details of land containing elevated levels of contaminants in a public register.

(2) Require any use or development of land containing elevated levels of contaminants resulting in discharges to air, land or water to manage or remediate the contamination to a level that:

(a) allows contaminants to remain in the ground/groundwater, where it can be demonstrated that the level of residual contamination is not reasonably likely to pose a significant adverse effect on human health or the environment; and

(b) avoids adverse effects on potable water supplies; and

(c) avoids, remedies or mitigates significant adverse effects on ecological values, water quality, human health and amenity values; while

taking into account all of the following:

(d) the physical constraints of the site and operational practicalities;

(e) the financial implications of the investigation, remediation, management and monitoring options;

(f) the use of best practice contaminated land management, including the preparation and consideration of preliminary and detailed site investigations, remedial action plans, site validation reports and site management plans for the identification, monitoring and remediation of contaminated land; and

(g) whether adequate measures are in place for the transport, disposal and tracking of contaminated soil and other contaminated material removed from a site to prevent adverse effects on the environment.

E30.4. Activity table

Table E30.4.1 Activity table specifies the activity status for the discharge of contaminants from contaminated land into air, or into water, or onto or into land pursuant to section 15 of the Resource Management Act 1991.

Rules for the accidental discovery of contaminated land are contained in the following sections:

- E11 Land disturbance – Regional – Standard E11.6.1 Accidental discovery rule; and
- E12 Land disturbance – District - Standard E12.6.1 Accidental discovery rule.

Table E30.4.1 Activity table

Activity		Activity status
(A1)	Discharges of contaminants into air, or into water, or onto or into land from intrusive investigations, including sampling	P

	soil, that involve either chemical testing or monitoring, excluding soil fertility testing	
(A2)	Discharges of contaminants into air, or into water, or onto or into land from disturbing soil on land containing elevated levels of contaminants	P
(A3)	Discharges of contaminants into air, or into water, or onto or into land from land currently used for rural production activities	P
(A4)	Discharges of contaminants into air, or into water, or onto or into land from land not used for rural production activities	P
(A5)	Discharges of contaminants into air, or into water, or onto or into land from a fuel storage system	P
(A6)	Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity Standard E30.6.1.1; E30.6.1.2; E30.6.1.3; E30.6.1.4; or E30.6.1.5	C
(A7)	Discharges of contaminants into air, or into water, or onto or into land not meeting controlled activity Standard E30.6.2.1	D

E30.5. Notification

(1) An application for resource consent for a controlled activity listed in Table E30.4.1 Activity table will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.

(2) Any application for resource consent for an activity listed in Table E30.4.1 Activity table and which is not listed in Rule E30.5(1) above will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

(3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).

E30.6. Standards

E30.6.1. Permitted activity standards

All activities listed as a permitted activity in Table E30.4.1 Activity table must comply with the following permitted activity standards.

E30.6.1.1. Discharges of contaminants into air, or into water, or onto or into land from intrusive investigations, including sampling soil, that involve either chemical testing or monitoring, excluding soil fertility testing

(1) Prior to the activity commencing the Council must be advised of the activity in writing, including details of the measures or controls to be implemented to minimise discharges of contaminants to the environment,

and such controls are to be effective for duration of the activity and until the soil is reinstated to an erosion-resistant state.

E30.6.1.2. Discharges of contaminants into air, or into water, or onto or into land from disturbing soil on land containing elevated levels of contaminants

(1) The volume of soil disturbed must not exceed:

(a) $200m^3$ per site; or

(b) $200m^3$ per project for sites or roads with multiple concurrent land disturbance projects, where the cumulative total volume of soil disturbance associated with each given project will be used when determining activity status; or

(c) an average depth and width of 1m for linear trenching by network utilities in the road or rail corridor. For the purpose of this rule the railway corridor does not include land more than 10m from the rail tracks.

(2) Prior to the activity commencing:

(a) the Council must be advised of the activity in writing if the volume of soil disturbed on land containing elevated levels of contaminants exceeds $25m^3$, including details of the measures and controls to be implemented to minimise discharges of contaminants to the environment, and such controls are to be effective for duration of the activity and until the soil is reinstated to an erosion-resistant state; and

(b) controls on linear trenching must be implemented to manage discharges to the environment from trenches acting as migration pathways for contaminants.

(3) Any discharge from land containing elevated levels of contaminants must not contain separate phase liquid contaminants including separate phase hydrocarbons.

(4) The duration of soil disturbance on a site must not exceed two months.

(5) Any contaminated material removed from the site must be disposed of at a facility or site authorised to accept such materials.

E30.6.1.3. Discharges of contaminants into air, or into water, or onto or into land from land currently used for rural production activities

(1) The land must have been previously used only for rural production activities.

(2) The land must not be redeveloped or used for non-rural production activities.

(3) The discharge must not have adverse effects on potable water supplies.

E30.6.1.4. Discharges of contaminants into air, or into water, or onto or into land from land not used for rural production activities

(1) For in-situ soil and fill material, the concentrations of contaminants (relevant to the site's history) in soil or fill material, or the 95 per cent upper confidence limit of the mean, determined in accordance with the Ministry for the Environment Contaminated Land Management Guidelines No.5 – Site Investigation and Analysis of Soils (Revised 2011), must not exceed:

(a) the criteria specified in Table E30.6.1.4.1 Permitted activity soil acceptance criteria; or

(b) for contaminants not included in Table E30.6.1.4.1:

(i) the tier 1 soil acceptance criteria for the protection of groundwater quality in sensitive aquifers specified in Table 4.20 Soil acceptance criteria for protection of groundwater quality in the Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand, Ministry for the Environment (Revised 2011); or

(ii) for contaminants not included in Table 4.20 Soil acceptance criteria for protection of groundwater quality in the Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand by the Ministry for the Environment (Revised 2011):

- 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); or
- for dieldrin and lindane only, the soil guideline values in Table A.5 Summary of soil guideline values (mg/kg) for individual pathways in Identifying, Investigating and Managing Risks Associated with Former Sheep Dip Sites: A Guide for Local Authorities, by the Ministry for the Environment November 2006; or

(c) the natural background levels for that soil or fill material or the relevant background levels specified in Table E30.6.1.4.2 Background ranges of trace elements in Auckland soils sources from Table 3 of TP153:

2001 Background Concentrations of Inorganic Elements in Soils from the Auckland Region.

(2) Any discharge from land containing elevated levels of contaminants must not contain separate phase liquid contaminants including separate phase hydrocarbons.

Table E30.6.1.4.1 Permitted activity soil acceptance criteria

Contaminant	Permitted activity criteria (mg/kg)
Arsenic	100.0
Benzo (a) pyrene (equivalent)	20
Cadmium	7.5
Chromium (total)	400.0
Copper	325.0
Total DDT	12.0
Lead	250.0
Mercury	0.75
Nickel	105.0
Zinc	400.0

Note 1
Total DDT includes the sum of DDT (dichlorodiphenyltrichloroethane), DDD (dichlorodiphenyldichloroethane) and DDE (dichlorodiphenyldichloroethylene).

Table E30.6.1.4.2 Background ranges of trace elements in Auckland soils sources from Table 3 of TP153:2001 Background Concentrations of Inorganic Elements in Soils from the Auckland Region

Element (total recoverable)	Non-volcanic range mg/kg	Volcanic range mg/kg
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

***** Work suggests special cases have been found to apply for Ti Point Basalts (Cr), Mt Smart Volcanics (Pb) and as such these lithologies need to be considered individually.

E30.6.1.5. Discharges of contaminants into air, or into water, or onto or into land from a fuel storage system

(1) For discharges of contaminants into air, or into water, or onto or into land from a fuel storage system:

(a) the concentration of soluble contaminants in any of the following:

(i) overland stormwater at the site boundary;

(ii) surface water within the site; or

(iii) groundwater at the site boundary;

must not exceed Table 3.4.1 Trigger values for toxicants at alternative levels of protection in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000 Guidelines) for marine or freshwater, where relevant, at the level of protection of 80 per cent of species, except for benzene where 95 per cent of species shall apply; and

(b) the discharge must not contain separate phase hydrocarbons.

(2) For discharges of contaminants into air, or into water, or onto or into land during and following the removal or replacement of a fuel storage system:

(a) the concentration of soluble contaminants in any of the following:

(i) overland stormwater at the site boundary;

(ii) surface water within the site, and

(iii) groundwater at the site boundary

must not exceed the Table 3.4.1 Trigger values for toxicants at alternative levels of protection in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000 Guidelines) for marine or freshwater, where relevant, at the level of protection 80 per cent of species, except for benzene where 95 per cent of species shall apply;

(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 in sensitive aquifers specified in Table 4.20 Soil acceptance criteria for protection of groundwater quality in the Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand by the Ministry for the Environment (Revised 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 Ministry for the Environment Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand, (Revised 2011).

E30.6.2. Controlled activity standards

All activities listed as a controlled activity in Table E30.4.1 Activity table must comply with the following controlled activity standards.

E30.6.2.1. Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity standards E30.6.1.1; E30.6.1.2; E30.6.1.3; E30.6.1.4; or E30.6.1.5

(1) A detailed site investigation (contaminated land) must be prepared and submitted to Council for consideration.

(2) A site management plan (contaminated land) must be prepared and submitted to Council for consideration.

(3) A remedial action plan (contaminated land), relevant to the site and the proposed disturbance or remediation must be prepared and submitted to Council for consideration.

(4) The report on the detailed site investigation (contaminated land) must state either that:

(a) the concentrations of soluble contaminants in any of the following:

(i) overland stormwater at the site boundary,

(ii) surface water within the site, or

(iii) groundwater at the site boundary

must not exceed the guideline values specified in Table 3.4.1 Trigger values for toxicants at alternative levels of protection in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000 Guidelines) for marine or freshwater, where relevant, at the level of protection for 80 per cent of species, except for benzene where 95 per cent of species shall apply; or

(b) discharges from the land are highly unlikely to cause significant adverse effects on the environment; 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.

E30.7. Assessment – controlled activities

E30.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

(1) the adequacy of the detailed site investigation report including:

(a) site sampling;

(b) laboratory analysis; and

(c) risk assessment.

(2) the need for and adequacy of a site management plan (contaminated land);

(3) the need for and adequacy of a remedial action plan (contaminated land);

(4) how the discharge is to be:

(a) managed;

(b) monitored, including frequency and location of monitoring; and

(c) reported on.

(5) the physical constraints of the site and operational practicalities;

(6) the transport, disposal and tracking of soil and other materials taken away in the course of the activity;

(7) the effect on potable water supplies;

(8) methods to identify contaminant risks prior to works commencing such as qualitative assessments of risk;

(9) protocols around notifying the Council of contaminant risks;

(10) how stormwater is to be managed;

(11) soil management during work and at the completion of the works;

(12) odour control;

(13) vapour control;

(14) groundwater management;

(15) contingency plans;

(16) remediation or ongoing management of the site, its timing and standard;

(17) the nature and type of close out criteria if proposed;

(18) the need for a financial bond;

(19) the need for any review conditions in the event that standards to be achieved are not achieved;

(20) the timing and nature of the review conditions; and

(21) the duration of resource consent.

E30.7.2. Assessment criteria

The Council will consider the relevant assessment criteria for controlled activities from the list below:

(1) whether the reports and information provided adequately address the effects of discharges into air, or into water, or onto or into water from contaminated land.

E30.8. Assessment – Restricted discretionary activities

There are no restricted discretionary activities in this section.

E30.9. Special information requirements

There are no special information requirements in this section.