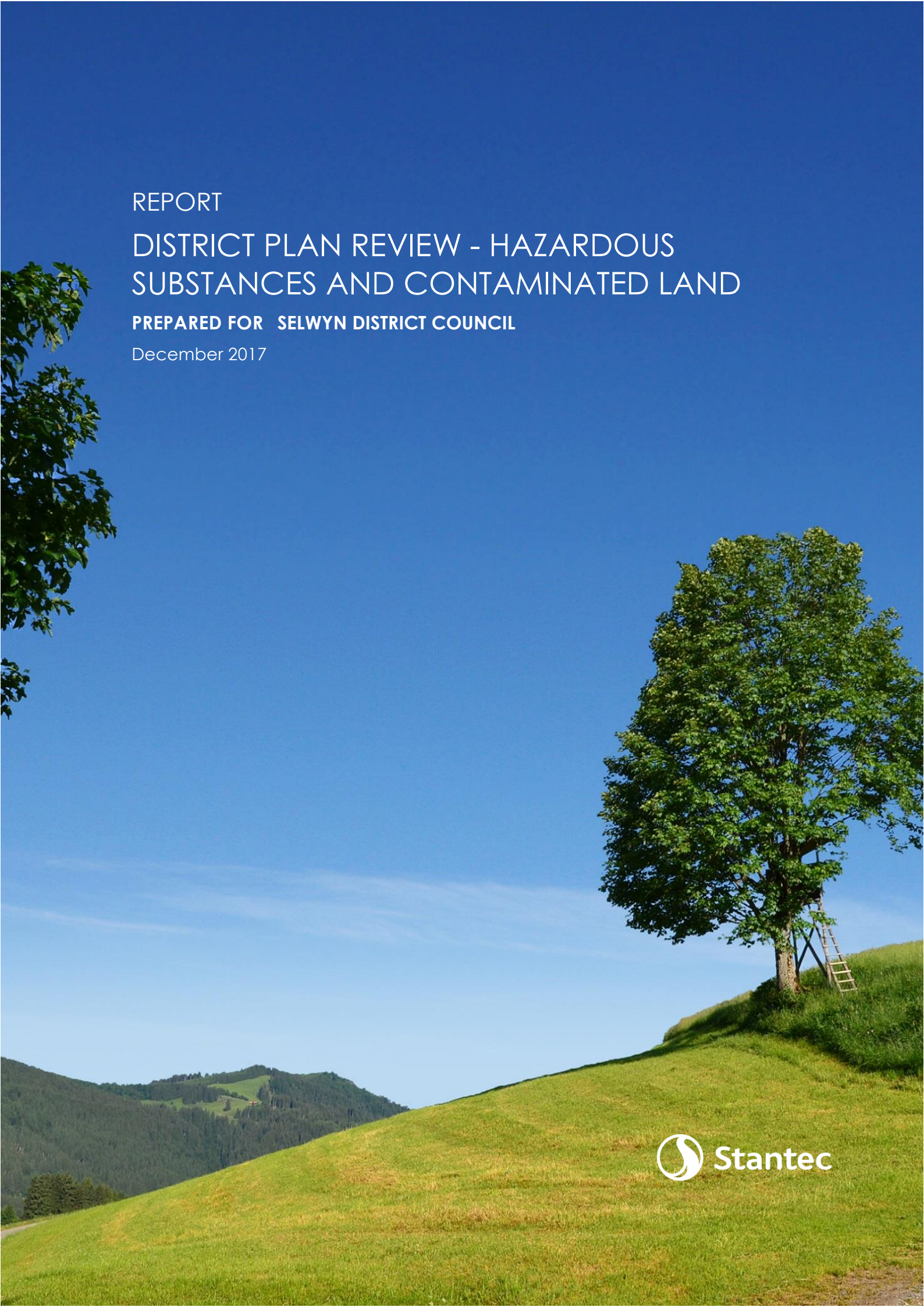
REPORT

DISTRICT PLAN REVIEW - HAZARDOUS SUBSTANCES AND CONTAMINATED LAND

PREPARED FOR SELWYN DISTRICT COUNCIL

December 2017



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REVISION SCHEDULE

Rev No.	Date	Description	Signature or Typed Name (documentation on file)			
			Prepared by	Checked by	Reviewed by	Approved by
0	22/11/17	Draft	FL			
1	22/11/17	Draft for client	FL	RP	RP	AC
2	8/12/17	Final	FL	RP	RP	AC

Selwyn District Council

District Plan Review - Hazardous Substances and Contaminated Land

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Appendix A Operative Selwyn District Plan Hazardous Substances and Contaminated Land Provisions

Appendix B Adjacent District Plan Provisions

1. Introduction

The purpose of this report is to review the provisions relevant to hazardous substances and contaminated land in:

- the Operative Selwyn District Plan (the District Plan)
- the District Plans of the four adjacent territorial authorities – Ashburton District Council, Hurunui District Council, Waimakariri District Council and Christchurch City Council
- the Mahaanui Iwi Management Plan 2013

and, considering the activities in Selwyn District that use and/or store hazardous substances and the occurrence of contaminated land, identify issues, gaps and opportunities in relation to the District Plan provisions, and recommend an approach to the management of hazardous substances and contaminated land in the Selwyn District. As part of the preparation of this report, examples of consent decisions that included consideration of the management of hazardous substances and contaminated land have also been reviewed.

2. Existing provisions

2.1 Operative Selwyn District Plan

Provisions relating to hazardous substances and contaminated land are spread throughout the District Plan, in both the Township Volume and the Rural Volume. There is also a considerable degree of interlinkage between the hazardous substances and contaminated land provisions, as hazardous substance spills, leaks and disposal are considered to be primary potential causes of contaminated land.

Sections 2.1.1 and 2.1.2 below provide a brief outline of the hazardous substances and contaminated land provisions, in order to provide context for the analysis contained in section 3. The provisions themselves, the appendices listing hazardous substances, and the relevant definitions, are contained in Appendix A.

2.1.1 Hazardous Substances

Township Volume

Section B3.2 is the major section of the Township Volume of the District Plan dealing with hazardous substances. Three issues are identified:

- adverse effects on the human and natural environment from manufacture, storage, transport or disposal of hazardous substances
- adverse effects on the environment from accidental or deliberate spillage, leakage or discharge of hazardous substances during their manufacture, storage or disposal
- adverse effects on amenity from activities involving the manufacture, storage or disposal of hazardous substances.

The District Plan acknowledges the role of other legislation in managing hazardous substances, and outlines the following strategy:

- The District Plan will focus on matters that are not covered by other, more specific legislation or the functions of the regional council;
- Policies and rules will be implemented to avoid hazardous substances being stored or disposed of in places where, if they spill or leak, serious environmental effects will occur;
- Controls will be imposed over the manufacture, storage and disposal of hazardous substances to protect amenity values;
- The Council will ensure that activities that use or produce hazardous substances have appropriate disposal plans.

Two objectives are included for hazardous substances:

- Objective B3.2.1: To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects to human health, to the amenity of townships, the rural environment and to the natural

environment arising from the manufacture, storage, transport on waterbodies and disposal of hazardous substances

- Objective B3.2.2: To ensure that adequate measures are taken during the manufacture, storage and disposal of hazardous substances to avoid, remedy or mitigate any adverse effects to the health of livestock and other farm animals, or domestic animals, and of flora and fauna, and to the life-sustaining capacity and amenity values of waterbodies, land and soil resources.

Seven policies are included under Issue B3.2, relating to manufacture and storage, transport and disposal of hazardous substances. Policies relating to manufacture and storage require:

- potential risks of adverse effects to be avoided or mitigated;
- manufacture, use or storage of large quantities of hazardous substances in Living or Business 1 Zones to be avoided (unless potential adverse effects on amenity values and people's well-being will be minor); and
- adverse effects to be mitigated in Business 2, 2A, 2B and 3 Zones.

These policies are achieved through rules that rely on threshold quantities specified in Appendix 9 of the District Plan.

Policy B3.2.4 seeks to avoid the transport of hazardous substances on the surface of waterbodies if there is alternative vehicular access to the site by land.

Three policies relate to the disposal of hazardous substances, and seek to:

- avoid disposal occurring into sewage systems or onto land in townships (Policy B3.2.5);
- ensure that commercial manufacturing or storage has the means to dispose of hazardous substances without affecting the environment (Policy B3.2.6); and
- work toward obtaining access to appropriate disposal facilities for residents and ratepayers (Policy B3.2.7).

Policies B3.2.5 and B3.2.7 are implemented by non-regulatory methods.

In relation to the rules, in broad summary, in Living Zones the storage of quantities of hazardous substances greater than those outlined in Appendix 9, and any manufacture or disposal of hazardous substances, is a non-complying activity.

A similar approach is taken in Business Zones for storage of hazardous substances, although with higher quantity thresholds for the permitted activity. A controlled activity rule is provided for storage and sale of petrol, diesel and LPG at service stations and/or truck stops. Manufacture of hazardous substances is permitted (within quantity thresholds) in Business 3 Zones and otherwise is a discretionary activity, and disposal of hazardous substances is a non-complying activity.

Links between hazardous substances and contaminated land are addressed in section B1 of the District Plan. Provisions relating to management of waste in section B2 of the District Plan also make reference to hazardous substances.

Rural Volume

Section B3.2 of the Rural Volume is also the principal section relating to hazardous substances. The introductory part of the section, including the discussion of issues and the outline of the strategic approach to management of hazardous substances in the Rural Zones, is identical to the text in the Township Volume. The objectives are also identical to those contained in the Township Volume.

The focus of hazardous substances policies in the Rural Volume is on:

- allowing appropriate quantities and classes of hazardous substances to be stored in the rural area to provide for rural activities;
- reducing the risk of leaks or spills contaminating land and water;
- limiting manufacturing; and
- avoiding disposal near specified areas.

Policies for transport and disposal are identical to those in the Township Volume, with the exception of avoiding discharge into sewerage systems, which are not present in the rural areas of the District. An identical approach is also taken to hazardous substances rules in the Rural Volume.

Hazardous substances are also referred to in Appendix E25 Porters Ski Area and Appendix E26 Dairy Processing Management Area (covering the Synlait and Fonterra plants). In the Porters Ski Area other rules in the Rural Zone (including those relating to hazardous substances) apply, whereas in the Dairy Processing Management Areas the rules are entirely self-contained. There are essentially no rules relating specifically to the storage, use, transport and disposal of hazardous substances in the Dairy Processing Management Areas.

2.1.2 Contaminated land

Township Volume

Issues identified in section B1.1 (Land and soil) include adverse effects of activities on soil, and a discussion of contaminated land then follows. As for hazardous substances, the District Plan identifies a strategy for addressing contaminated land, which is as follows:

- To manage activities to avoid creating contaminated land in the first instance;
- To keep and update a register of sites possibly contaminated from past activities, and record the information on the LIM
- To control activities on contaminated land in the district plan

One objective is included in the District Plan Township Volume in relation to contaminated land, Objective B1.1.1 – minimise adverse effects on people and their activities, ecosystems, and land and soil resources, from contaminated land.

Four policies are included in the District Plan to give effect to Objective B1.1.1:

- Ensure activities do not contaminate soil (Policy B1.1.1)
- Carry out all legal requirements to record information about possibly contaminated sites on LIMs (Policy B1.1.2)
- Avoid adverse effects on people's health and well-being from exposure to contaminated soil (Policy B1.1.3)
- Co-operate with Environment Canterbury to encourage clean-up (Policy B1.1.4)

Policies in section B2.4 (Waste Disposal) and section B3.4 (Quality of the Environment) are also relevant to contaminated land. Policy B2.4.7 states that the Council will regard any land used to treat or dispose of solid waste as potentially contaminated, until tested. Policy B3.4.13 is a specific policy to investigate the possibility of contaminated land at Arthurs Pass.

Rules relating to activities and contaminated land in the Living and Business Zones are contained in sections 10 and 22 of the District Plan. Rule 10.1.1 permits any activity on a site in a Living Zone which contains contaminated land or where activities listed in Appendix 10 have occurred, except for erection of a dwelling, educational facilities, outdoor recreation activities, and growing commercial food crops or rearing animals, which are restricted discretionary activities (under Rule 10.1.2). Discretion is restricted to the adequacy of methods proposed to reduce any potential adverse effects, controls on soil removed from the site, and any further investigations to determine whether a site is actually contaminated. Identical rules are contained in Chapter 22 for Business Zone sites.

Rural Volume

The strategy for management of contaminated land is subtly different in the Rural Volume of the District Plan, and consists of:

- A stated aim to avoid creating contaminated land, in the first instance by policies and rules to manage hazardous substances and waste disposal
- Policies and methods to protect people from contact with contaminated land
- Encouraging people to clean up contaminated sites

To give effect to this strategy, Objective B1.1.2 of the District Plan is that people and their property are not affected by contaminated soil and any adverse effects on the environment are avoided, remedied or mitigated.

The policy approach to management of contaminated land in the Rural Zone is also subtly different from the approach in the Township Volume, and consists of:

- Policy B1.1.1 - Ensure any activity involving hazardous substance or waste disposal is carried out in a way which reduces the risk of contaminating land or soil
- Policy B1.1.2 - Avoid adverse effects on people through exposure to contaminated land and mitigate or remedy any adverse effects on the environment
- Policy B1.1.3 - Encourage the management of contaminated sites so that effects on people's health or on the environment are avoided

Rules in the Rural Zone are also structured differently to those in the Township Volume, and appear in three sections of the Rural Zone rules – Earthworks (section C1), Buildings (section C3) and Activities (section C9). The rules relate to:

- earthworks and contaminated land, and make it a restricted discretionary activity to remove contaminated soil or earth from a site
- dwellings or buildings for a recreational or educational facility, which are restricted discretionary activities, with a different set of matters of discretion to those contained in the Township Volume
- activities and contaminated land, where Rule 9.6.1 is similar to, but not the same as, Rule 10.1.1 and its counterpart in Chapter 22, and controls residential, recreational and educational activities (and buildings) and growing commercial food crops or rearing animals. As with the dwellings rules, the matters of discretion are subtly different from those in the Township volume rules.

2.1.3 Definitions

Definitions are provided for the following terms in the District Plan:

- Agrichemical (Township and Rural volumes)
- Contaminated Land (Township and Rural volumes)[1]
- Fumigant (Rural volume only)
- Hazardous Substance (Township and Rural volumes)
- Vertebrate Toxic Agent (Rural volume only).

Three of the definitions (fumigant, hazardous substance and vertebrate toxic agent) refer to other legislation or statutory documents for all or part of their definitions.

2.2 Hazardous Substances and New Organisms Act 1996

The purpose of the Hazardous Substances and New Organisms (HSNO) Act 1996 is to protect the environment, and the health and safety of communities, by preventing or managing the adverse effects of hazardous substances and new organisms.

All hazardous substances are required to have approval under the HSNO Act. When a substance is approved, controls are applied that are designed to manage any risk from using, storing, transporting and disposing of the substance.

When the Environmental Protection Authority (EPA) approves a hazardous substance for use, it will usually impose controls with which everyone must comply. These controls apply throughout the life cycle of the substance.

Controls are based on specific regulations made under the Act, or codes of practice approved by the EPA. Regulations have been developed for each class of hazardous substance, and for particular phases of a substance's life cycle, e.g. labelling, packaging, disposal, emergency management, etc. The control regime is thus comprehensive and detailed.

[1] Note that the definition does not refer to the Listed Land Use Register or the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, which provides a meaning for a 'piece of land' in terms of those regulations.

2.3 Canterbury Regional Policy Statement and Canterbury Land and Water Regional Plan

2.3.1 Hazardous substances

Canterbury Regional Policy Statement

Chapter 2 of the Canterbury Regional Policy Statement (the RPS) sets out resource management issues of significance to Ngāi Tahu and their desired outcomes in addressing those issues. Issues and desired outcomes relating to hazardous substances are:

Table 2-1: Issues and desired outcomes for Ngāi Tahu for hazardous substances

Issues	Outcomes desired by Ngāi Tahu
Use, storage, disposal and transport of hazardous substances may have an effect on land and water, native flora and fauna and associated cultural values. Need to look for alternatives to the use of hazardous substances.	Avoid adverse effects on the environment and Ngāi Tahu cultural well-being. Protect areas identified by Ngāi Tahu as sensitive for cultural reasons from adverse effects associated with the use, storage and disposal of hazardous substances.

Issues identified in Chapter 2 are addressed throughout the other chapters of the Canterbury RPS so that they are integrated within the overall resource management framework, rather than being considered in isolation.

Chapter 18 is the principal chapter relating to hazardous substances in the RPS. The introduction to the chapter includes a statement of local authorities' responsibilities. Territorial authorities have the responsibility for specifying the objectives, policies and methods for the control of the use of land for the purpose of preventing or mitigating the adverse effects of the storage, use, transport or disposal of hazardous substances on the environment, with the exception of preventing or mitigating effects on the quality of air and water, which is the responsibility of the Canterbury Regional Council.

Policy 18.3.1 seeks to avoid actual or potential adverse effects from the use, storage or disposal of hazardous substances in, *inter alia*, high hazard areas and within any areas identified in a district plan as being sensitive to potential effects (although these areas should not include waterbodies, due to the statement of responsibilities). Method 2 under Policy 18.3.1 requires territorial authorities to set out objectives and policies, and consider whether to include methods, to avoid actual or potential effects of the use, storage, transport or disposal of hazardous substances in the locations identified in Policy 18.3.1(1) – (5).

Policy 18.3.2 is a more general policy to avoid, remedy or mitigate adverse effects on the environment from hazardous substances. Method 2 under Policy 18.3.2 requires territorial authorities to set out objectives and policies, and consider whether to include methods, to avoid, remedy or mitigate adverse effects of hazardous substances.

Policy 18.3.3 promotes an integrated approach to hazardous substance management within the region. Methods 1 and 2 set out how local authorities in Canterbury should work together to achieve the desired outcomes of the policy.

Policy 18.3.4 promotes hazardous substances management practices that prevent or mitigate adverse effects on the environment, including through reducing the use of hazardous substances. A series of methods are set out for local authorities to consider using for awareness and promotion activities.

Policy 18.3.5 encourages appropriate information to be made available to response agencies in the event of an emergency, so that adverse effects of hazardous substances can be addressed appropriately. Methods suggest that local authorities should share information and develop an information collection, storage and use strategy.

Chapter 11 of the Canterbury RPS includes Policy 11.3.2, which requires that any new subdivision, use and development of land subject to inundation by a 0.5% AEP flood event is avoided, unless *inter alia*, hazardous substances will not be inundated during a 0.5% AEP flood event. To implement this policy, territorial authorities are required to set out objectives and policies, and consider including methods, in district plans to avoid new subdivision, use and development of land (other than where, for example, hazardous substances will not be inundated during a 0.5% AEP flood event) in known areas subject to inundation.

Canterbury Land and Water Regional Plan

Section 4 of the Canterbury Land and Water Regional Plan (the CLWRP) outlines policies relating to a wide variety of resource management matters. Policy 4.16(d) requires that any reticulated stormwater system for any urban area is managed in accordance with a stormwater management plan that address, among other matters, the management of the discharge of stormwater from sites involving the use, storage or disposal of hazardous substances.

Policies 4.24 - 4.30 relate to hazardous substances and hazardous activities, but are focused on matters that fall within the regional council's jurisdiction (that is, primarily discharges). Policy 4.25 applies to land use, and sets priorities for the management of hazardous substances on sites.

Rules 5.179 – 5.184 relate to hazardous substances. The rules relate to the use of land for storage of hazardous substances, and for decommissioning containers that have been used to store hazardous substances.

2.3.2 Contaminated land

Canterbury Regional Policy Statement

Chapter 17 of the RPS contains policies relevant to the management of contaminated land.

Policy 17.3.1 is to identify potentially contaminated land. Territorial authorities should use the information provided by Environment Canterbury (ECan) to determine if land has been or is subject to a hazardous activity or industry when preparing LIMs or prior to making resource consent decisions. This is reflected in the current DP policies and methods.

Policy 17.3.2 sets out ECan's approach to considering new subdivision, use or development on actually or potentially contaminated land. Territorial authorities are to set out objectives, policies or methods to require site investigations, any actual or potential adverse effects to be avoided, remedied or mitigated in a manner that does not lead to further significant adverse effects, and for any remediation or mitigation works not to lead to further significant adverse effects.

Policy 17.3.3 states that where land has been identified as contaminated contaminants should only be allowed to remain if discharges of contaminants beyond the site will not result in significant risk to human health or the environment. Territorial authorities should engage with Ngai Tahu when determining actual or potential effects of contaminants in the soil.

Policy 17.3.4 promotes an integrated approach to the management of contaminated land. Local authorities should work together to consolidate information on the contaminated land register, support non-regulatory approaches by central and local government and other resource users, recognise and implement national guidelines on contaminated land, and engage with Ngai Tahu. Most of this can be done outside the District Plan, but recognition of national guidelines may require District Plan provisions.

Canterbury Land and Water Regional Plan

Policy 4.19 – Discharge of contaminants to groundwater from contaminated land is avoided or minimised by, *inter alia*, managing and monitoring contaminated land. Depending on what 'managing' means, there is an overlap with the District Plan.

Rules control a variety of discharges onto (and from and into in relation to stormwater discharges) contaminated land and taking of groundwater from contaminated or potentially contaminated land.

Rules 5.185 – 5.188 relate to the use of land for site investigations and to the passive discharge of contaminants from contaminated land. Rule 5.185 permits the use of land for a site investigation. Rule 5.187 permits the passive discharge of contaminants from contaminated land. This rule must cover all contaminated land in the region, and means that some sites may require consent from both ECan and Selwyn District.

2.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

It has been clearly established that the past use of hazardous substances in industry, agriculture and horticulture has left a legacy of soil contamination in New Zealand. This contamination has mainly resulted from sub-standard past practices, including storage and use of hazardous substances and the disposal of hazardous wastes. Contaminants in soil are a problem when they are present at a concentration and a place where they have, or are reasonably likely to have, an adverse effect on human health and the environment.

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 (the NESCS) has been promulgated to apply to certain activities undertaken on 'pieces of land' on which any potentially contaminating activity on the Ministry for the Environment's Hazardous Activities and Industries List (the HAIL) has, or is more likely than not to have occurred.

The NESCS provides a nationally consistent set of planning controls for contaminated land and ensures contaminated land is identified, assessed, and (if necessary) made safe for human activity. The NESCS was created in response to the acknowledged nationally inconsistent and often inadequate management of historical soil contamination that posed a risk to human health. Thus the NESCS only applies to human health and does not include criteria for environmental protection.

All territorial authorities are required to observe and enforce the requirements of the NESCS. In particular, regional councils are required to investigate land for the purposes of identifying and monitoring contaminated soils. To fulfil this function, most regional councils maintain a contaminated sites database (Environment Canterbury's Listed Land Use Register (LLUR) is the local example). The LLUR is available to, and is an important resource for, Selwyn District Council in the delivery of its obligations under the NESCS.

The NESCS applies to the following activities (unless a detailed site investigation exists that demonstrates that any contaminants in or on the piece of land are at, or below, background concentrations):

- Removing or replacing a fuel storage system;
- Sampling soil to determine whether it is contaminated;
- Disturbing the soil;
- Sub-dividing land;
- Changing the use of the piece of land, that because the land is as described below, is reasonably likely to harm human health.

The NESCS does not apply to production land unless the sampling or disturbance of the land will have an impact on residential buildings. However all production land is covered where a proposed change in use will cause the land to stop being used as production land (such as rural-residential subdivision, for example).

The NESCS stipulates the requirements for when consents will be required as a tool for councils to manage the potential adverse effects of activities on human health and the environment that can arise from contaminated soil. Authorities may impose the obligation on consent applicants to remediate or manage the land to a suitable standard. It should be noted however that the NESCS does not affect existing land uses; it applies only when certain activities are proposed to take place on land where there may be reason to suspect that the land has been contaminated.

Before the 2017 general election, the NESCS was under review. It is not clear currently whether this review will continue.

2.5 Resource Legislation Amendment Act 2017

2.5.1 Hazardous substances

Council's responsibilities with respect to controlling the storage, use and environmental effects of hazardous substances have changed substantially with the amendments to sections 30 and 31 of the RMA which have removed the control of hazardous substances as a specific function of councils. The intent of the amendments was to ensure that councils only place additional controls on hazardous substances if they are necessary to control effects under the RMA that are not dealt with by controls already imposed by the HSNO and Health & Safety at Work Acts.

Thus Council's amended responsibilities are altered to the application of controls that manage the residual risks associated with the storage, use or disposal of hazardous substances, including the minimisation of reverse sensitivity effects and the avoidance of sensitive activities being located in environmentally sensitive areas.

A critical matter with respect to the new direction of responsibilities for Council will be to manage the location of new facilities using, storing or disposing of hazardous substances so that they are established on appropriate sites to ensure that any residual risks are managed to acceptable levels. This includes particular consideration for sensitive activities such that they are established at suitable locations to minimise reverse sensitivity effects on and avoid unacceptable risks from established facilities using, storing or disposing of hazardous substances.

A further key matter will be management of the cumulative effects associated with facilities using, storing or disposing of hazardous substances.

2.5.2 Contaminated land

As the local authority for Selwyn District, the Selwyn District Council is required to provide property owners with consenting advice about their land. SDC has defined responsibilities under the requirements of the NESCS. Thus if a property owner wishes to undertake any of several activities on a site, resource consent may be required. These activities are:

- to subdivide land;
- change the land use;
- disturb the soil; sample the soil to determine contamination; or
- remove or replace an underground fuel storage system.

For each activity there are a set of criteria in the NESCS which determine the relevant consent status and whether or not the activity is permitted or if it will be subject to particular constraints and conditions.

The Selwyn District Council sometimes records information about hazardous activities or contaminated land on a Land Information Memorandum (LIM). However, the information on the Listed Land Use Register is not automatically or routinely added to LIMs by SDC. There is in fact no existing obligation on city or district councils to do this, although councils may choose to include such information on the LIM if there has been an investigation, site management activities or remediation undertaken at a particular site and the relevant reports or other details are available.

2.6 Adjacent District Plans

District Plans from the four adjacent territorial authorities were reviewed for hazardous substances and contaminated land provisions. The Ashburton and Christchurch District Plans became operative relatively recently (2014 and 2016 respectively) but the Waimakariri District Plan dates from 2005 and the Hurunui District Plan from 2003. A Proposed Hurunui District Plan was publicly notified in May 2015, with Council decisions released in October 2016. The proposed plan was therefore also reviewed as part of this project. The Waimakariri District Council has commenced a review of the Waimakariri District Plan but no provisions are available publicly.

An outline of the hazardous substances and contaminated land provisions for each district plan is contained in Appendix B.

The operative Ashburton, Selwyn and Hurunui District Plans all currently take a similar approach of specifying comprehensive lists of hazardous substances, with threshold volumes tied to rule classifications, and seeking to control many activities using, storing, manufacturing and disposing of hazardous substances. The Waimakariri District Plan takes a more constrained approach, including a much more limited list of hazardous substances and applying controls only in residential areas. The Proposed Hurunui District Plan and the Christchurch District Plan both reflect recent practice to substantially remove hazardous substances provisions from district plans (in order to avoid overlaps with other legislation, particularly HSNO), with very few policies and rules that relate only to specifically identified issues in each district.

In relation to contaminated land, only two of the district plans of adjacent territorial authorities (Proposed Hurunui District Plan and Christchurch District Plan) have objectives and policies specifically relating to management of contaminated land. Waimakariri District is currently reviewing its district plan, and is considering whether to include provisions on contaminated land (WDC, pers. comm.) None of the adjacent district plans have rules.

2.7 Mahaanui Iwi Management Plan 2013

2.7.1 Hazardous substances

The Mahaanui Iwi Management Plan does not specifically mention or consider hazardous substances as an issue per se. Instead the only matter of identified concern to iwi that (potentially) involves hazardous substances is that of weed and pest control where, in Issue TM4 "Weed and Pest Control", Policy TM4.2 requires that weed and pest control should be "addressed in a manner that is consistent with Ngāi Tahu values". Specifically, the approach must be to "Minimise the use of hazardous substances, and give preference to natural solutions (trapping possums, establishment of riparian margins for shading aquatic weeds)".

Further detail is provided under Issue TM5 where the use of 1080 for possum control is addressed, with Ngāi Tahu "continuing to have significant reservations about the use of 1080", in particular:

(a) Aerial application methods;
(b) Potential effects on waterways, particularly small and ephemeral streams;
(c) Tāngata whenua involvement in setting priorities and designing operations;
(d) Effective and appropriate monitoring of non-target impacts, and success rates; and
(e) Concern that 1080 will be used indefinitely in the region.

Stated policies with respect to 1080 use include in summary the following:

- TM5.1 - Papatipu Rūnanga will assess proposals for the use of 1080 as pest control on a case by case basis, allowing for different perspectives between hapū and different local scenarios
- TM5.2 - To require early consultation, with good quality, culturally relevant information for any proposal to use 1080 in the takiwā
- TM5.3 – which outlines a framework that Papatipu Rūnanga will use to assess the degree of cultural acceptability or unacceptability of 1080 use
- TM5.4 - To continue to advocate for research and investigation into alternatives to the use of 1080

It is clear that the use of 1080 is of significant concern to iwi, although its continued use may be sanctioned under defined circumstances.

No other hazardous substances issue receives specific attention in the Mahaanui Iwi Management Plan.

2.7.2 Contaminated land

Issue P10 of the Mahaanui Iwi Management Plan identifies Ngāi Tahu involvement in decision making about contaminated land as an issue. Stated policies to address Issue P10 include in summary the following:

- P10.1 – sets out specific cultural issues that must be recognised and provided for in the management of contaminated land
- P10.2 – to require appropriate and meaningful information sharing between management agencies and tāngata whenua on issues associated with contaminated sites
- P10.3 – to require investigation and monitoring of closed landfill sites to determine whether the site is a contaminated site and the level of environmental risk from leaching of contaminants
- P10.4 – to require that remedial work is undertaken at closed landfill sites where leaching of contaminants is occurring, to prevent contamination of groundwater, waterways, and coastal waters

While this section of the Mahaanui Iwi Management Plan is brief the requirements of Ngāi Tahu are clear in terms of management of contaminated sites, avoidance of environmental and cultural effects that may arise from contamination and full and open information sharing such that the risks can be fully understood.

The Mahaanui Iwi Management Plan also raises a particular issue (Issue A6) in relation to closed landfills in the Akaroa catchment and their potential impacts on coastal water quality, groundwater and wāhi tapu and wāhi taonga.

Associated policies (A6.1, A6.2) address the investigation, monitoring and possible remediation of closed landfill sites in this area and, specifically, the assessment of the feasibility of removing contaminated soil and fill from the Takapūneke closed landfill site (as opposed to the more conventional remediation approaches of capping or construction of barriers).

3. Selwyn District Context - Hazardous substances, contaminated land and their management in Selwyn District

3.1 Sites manufacturing, using, storing or disposing of hazardous substances

3.1.1 Scoping the issue

There is no list or schedule available with respect to sites storing or using hazardous substances in Selwyn District. In lieu of this, Stantec has used ECan's Listed Land Use Register (LLUR) overlaid onto Google Maps to prepare diagrammatic presentations of sites (or, at least, those known to ECan) which currently have or have had hazardous substances stored or used on them.

While the LLUR is aimed at identifying contaminated sites, it acts as a proxy for the identification of properties where hazardous substances are either currently being used or stored of where this has occurred historically. However the LLUR is by no means complete and is only as comprehensive as the information available to ECan, on the basis of which it has been developed

While this approach therefore can only be approximate in terms of mapping the extent of storage or use of hazardous substances it does provide an effective representation of the issue and the agglomerations of such sites in various parts of the Selwyn district. In this way descriptive data sets have been prepared for:

- Rolleston
- Leeston
- Southbridge
- Dunsandel
- Burnham
- Darfield
- Lincoln
- Prebbleton

3.1.2 Hazardous substances use within particular areas of the District

The LLUR data approach has been used to identify individual sites storing or using hazardous substances on an area-by-area basis within Selwyn District. In summary the following general comments can be made:

<u>Rolleston</u>

Rolleston and its environs have been further divided in this analysis into the Izone Business Park as one area and then the remainder of Rolleston as a second area.

Izone Business Park

The Izone Business Park has a spatially concentrated range of industrial manufacturing premises representing a wide range of facility types and hazardous substance uses. In summary the following activities are located within the Izone area:

- Westland Milk Products processing plant site (storage and use of corrosives for cleaning purposes; further brief details are provided in section 3.1.3)
- A fertiliser plant
- A seed coating facility with significant usage of pesticides
- Six sites where fuels or chemicals are stored in drums or tanks
- Four motor vehicle workshops
- Two timber treatment or treated timber storage sites
- Two engineering workshops

- Four scrap metal yard sites
- A landfill site.

It should be noted that the LLUR does not as yet include the recently established Port of Tauranga Inland Port site or the similar facility for the Lyttelton Port Company; these are briefly described in section 3.1.3.

Remainder of Rolleston

Activities in the general Rolleston area and environs where hazardous substances are stored or used, as identified in the LLUR, include:

- Various locations where pesticides and/or agrichemicals are identified in the LLUR as being stored or used, including for sports playing fields maintenance, a golf club, several research institutions and various areas of horticultural land.
- A premises where livestock dipping is undertaken
- A service station
- A motor vehicle workshop
- Two transport depots
- Three waste disposal sites
- Railway yards
- A scrap metal yard
- The Helpet wastewater treatment plant

Leeston

As a rural service town Leeston has a wide variety of light industrial and commercial activities where the storage or use of hazardous substances is likely, and also various agricultural-related activities in the immediate environs of the township. The following comments can be made:

- Four old landfill sites have been identified
- Approximately 12 sites are in use as motor vehicle workshops, service stations, fuel storage locations and related purposes
- Two scrap metal; yards and a metal fabrication workshop are located in or near Leeston
- A timber treatment site is in active use
- A number of agriculture-related businesses are operative; these include stock yards and sheep dipping activities, general agrichemicals use and pesticides application.

Southbridge

In Southbridge and its environs there are a small number of sites listed on the LLUR as storing or using hazardous substances; these include:

- An engineering workshop
- A number of sites at which pesticides have been used for turf maintenance, weed control and related purposes
- A transport depot
- A motor vehicle workshop
- An explosives store
- A service station.

Dunsandel

For the Dunsandel area the LLUR identifies the following locations where storage or use of hazardous substances occurs:

- Three individual motor vehicle garages where petroleum hydrocarbons will be present
- A "Reserve" site where use (and storage) of pesticides for weed control is probable
- A transport depot where fuels and other hydrocarbons will be present

- A Telecom exchange which is listed as having "storage drums for fuels, chemicals and liquid wastes"
- The Synlait milk processing site (see section 3.1.3 below).

Burnham

Sites listed on the LLUR in the Burnham area include:

- The Pines wastewater treatment plant
- Various properties where agricultural activities are undertaken of a broadly unknown nature but where agrichemicals, including pesticides, are likely to be used
- The Burnham Army Base itself where several activities involving hazardous substances are known to be carried out including fuels storage, a motor vehicle workshop, pesticides storage and use, a rifle range, the production or storage of explosive ordnance and two known landfills
- A gun club, with an associated firing range
- Burnham Golf Club, where pesticides storage and use is likely associated with ongoing maintenance and weed control for the course.

Darfield

The Darfield area is the location of the Fonterra milk processing plant which stores and uses a range of hazardous substances in bulk, typically for cleaning purposes (see section 3.1.3). Other hazardous substances storage or use locations include:

- Two individual timber treatment or treated timber storage sites
- Several motor vehicle workshops and service stations
- A number of sites at which pesticides have been used for turf maintenance, weed control and related purposes
- Four individual landfill sites
- The railway yards
- Telecom's exchange premises (see notes for Dunsandel above)
- Darfield gun club
- A scrap yard site.

Lincoln

Lincoln and its environs has the university and a number of research institutes as potentially significant sites of hazardous substances storage or use. In summary the following locations are pertinent:

- Various locations where pesticides and/or agrichemicals are identified in the LLUR as being stored or used, including for sports playing fields maintenance, a golf club, several research institutions and various areas of horticultural land
- The Lincoln wastewater treatment plant site
- A service station
- Three individual landfill sites
- Two transport depots
- Two engine reconditioning workshops
- A commercial analytical laboratory
- Two sites with above-ground storage tanks for "fuels, chemicals or liquid waste"
- A Transpower electrical transformer (oil-filled) and an electrical substation (on separate sites.

Prebbleton

The Prebbleton area has a small number of sites where hazardous substances storage or use occurs; these include:

- Various locations where pesticides and/or agrichemicals have been identified in the LLUR as being stored or used, including sports playing fields and a range of agricultural and horticultural sites

- Meadow Mushrooms production site (potential use of fumigants)
- A service station
- A scrap metal yard.

In many of the cases described above the scale of use of hazardous substances is unknown, although there are valid reasons for believing that the extent of hazardous substances storage and use at many of the locations identified is limited.

3.1.3 Scale of storage or use of hazardous substances

The scoping approach adopted does not allow a detailed assessment of the scale of use of hazardous substances on individual properties but some information on that matter is available from recent resource consent decisions (see section 3.4.3 for further details). The following examples are relevant to this matter of scale.

Rolleston (Izone Business Park):

- Port of Tauranga Inland Port. The storage of hazardous substances at this site complies with permitted activity thresholds of the District Plan; no further details were available.
- The Lyttelton Port Company Inland Port. The District Plan permitted activity limits for the B2A zone are exceeded for some hazardous substances at this site; however this situation is complicated by the fact that there are separate quantity limits in the consent conditions for substances held "in transit" as opposed to substances permanently stored on site.
- The Rolleston Pest Control Research Facility holds consent for the storage and manufacture of a variety of pest control bait products, including the following:
  - Brodifacoum - 1000kg compared to the permitted activity limit of 100kg
  - Cholecalciferol - 1000kg compared to the permitted activity limit of 2,000kg
  - Pindone - 1000kg; i.e. the same as the permitted activity limit of 1,000kg
  - Sodium fluoroacetate ("1080") - 1,500kg as compared to the permitted activity limit of 1,000kg
- The Westland Dairy Company milk processing site is consented for the storage of up to 90,000L of corrosive substances; the permitted activity limit is 2,000L.

Lincoln Area:

- Lincoln Maternity Hospital holds consent for the storage of 2,500L of diesel in an above-ground tank in the Living 1 zone, where 1,000L is the permitted activity limit.
- The Lincoln University hazardous substances store has a certificate of compliance. The quantities of hazardous substances held in the store are stated to be "comfortably within" the District Plan permitted activity limits. The various Crown Research Institutes based at Lincoln do not hold large quantities of hazardous substances – analytical laboratories do not hold hazardous substances at the scale of a commercial or industrial use, and no resource consents are held for any of the sites in relation to hazardous substances.

Burnham:

- The Burnham Military Camp is a designated site but is surrounded by rural land. Provision is made on site for the storage of 40,000L of fuel in above ground tanks and there are known to be other hazardous substances stored on site. The permitted activity limit for diesel storage on Rural zoned land is 5,000L.
- The Meadow Mushrooms composting facility at Norwood holds consent for the on-site storage of up to 22,000L of sulphuric acid in the Rural zone, where 10L is the permitted activity limit.

Dunsandel Area:

- Synlait Milk Processing Plant, Dunsandel. No details were available about the quantities of hazardous substances stored on site, except that the quantities exceed the permitted activity limits in the District Plan. The land use consent includes a condition that secondary containment (bunding) around storage containers for hazardous substances must meet a volume of 110% of the total volume of hazardous substances stored.

Leeston/Southbridge:

- The CRT Store, Leeston is located in the Business 1 zone. While the total quantity of hazardous substances (agrichemicals) being stored is unknown it is greater than the 500L permitted activity limit being stored.

Darfield/Kirwee Area:

- Fonterra Darfield. No details are available about the quantities of hazardous substances proposed to be stored at the site but the consent conditions require, inter alia, "compliance of hazardous substances storage systems with all relevant aspects of the HSNO regulatory requirements."
- No details are available on the quantity or type of hazardous substances stored or used at the timber processing/treatment sites. Storage requirements will be governed by HSNO and typically the quantities of substances stored and used are not large.
- The Tegel Foods site at Kirwee will have on-site storage of the following maximum quantities of hazardous substances
  - 6,000L diesel as compared to the permitted activity limit of 5000L
  - 5,000kg LPG compared to 600kg for a permitted activity; and
  - 200L or kg of "fumigants" as compared to the permitted activity limit of 100kg.

Each of the sites identified in section 3.1.2, where not listed above, are most likely to be storing hazardous substances in quantities compliant with the District Plan limits for business zones (outlined in Appendix 9 of the District Plan). It should be noted however that any site that predated the District Plan (27 July 2000) would have been subject to existing use rights under s10 of the RMA and so would not be caught by resource requirements even if the activity exceeds the Appendix 9 or 15 thresholds.

3.2 Hazardous substances and areas of particular sensitivity

Based on the review of sites manufacturing, using, storing or disposing of hazardous substances in the district, and as discussed in the preceding section, an assessment has been made of the extent to which significant quantities of hazardous substances are located in or adjacent to areas or features that have particular sensitivity.

For these considerations, areas of particular sensitivity have been identified from the District Plan as:

- Waterbodies or wetlands
- Areas of outstanding natural features and landscapes (as noted in the DP maps)
- Significant ecological sites
- Sites of heritage or cultural values (noted on the DP maps)
- Popular recreational areas (for example Port Hills, Te Waihora, Selwyn River, Rakaia and Waimakariri Rivers, high country, Southern Alps, and (potentially) townships directly adjacent to rivers and streams (examples are Arthur's Pass, Hororata, Lincoln, Tai Tapu, Whitecliffs)
- Dwellings, other than a dwelling on the same site as the activity
- Schools

The following significant aggregations or individual sites storing or using hazardous substances have been assessed against the various sensitivity issues listed above.

- The Izone Business Park is surrounded by rural-zoned land and is itself a mix of Business 2 and 3 zones. It is located directly across SH1from the outskirts of the Rolleston residential area, which is 350m away at its closest point. There is a rural-residential subdivision to the west, across the Midland Railway line, and some residential land use in the vicinity of the Lyttelton Inland Port site. Weedons School is located to the northeast of the Lyttelton Inland Port, but is well removed from it. The Izone Business Park represents the greatest concentration of hazardous substances storage and use within the District. There are no waterbodies or wetlands in the immediate vicinity of the Izone Business Park and none of the other areas of particular potential sensitivity identified above are relevant.
- The Fonterra milk processing plant is located on the northern outskirts of Darfield (4km distant), and is surrounded by rural-zoned land. No areas of particular sensitivity as defined above are located nearby and there are no waterbodies or wetlands in the immediate vicinity. In fact the closest are the Hawkins River and the Waimakariri River (each being about 4 – 5km from the plant boundary at the closest points, and well removed even in the event of a major spill).
- The Synlait milk processing plant is located about 6.5km south west of Dunsandel township, and is surrounded by rural-zoned land. No areas of particular sensitivity as defined above are located nearby, and there are no waterbodies or wetlands in the immediate vicinity. The closest rivers or streams are the Irwell (12.5km at its closest point) and Rakaia Rivers (8.5km away). These waterbodies are thus at negligible risk, even in the event of a major spill.

- The Meadow Mushrooms composting facility is located to the north east of Dunsandel, on the further side of the Selwyn River on rural zoned land. The site is noted as being within the Lower Plains Flood Area, and is relatively close to the Selwyn River (550m distant), a popular recreational area. No other aspects of particular sensitivity are located in the immediate vicinity.
- The Burnham army camp is located approximately 6km south-west of Rolleston. The site is designated, but is surrounded by rural-zoned land. There are various heritage buildings located on the site, and a school in reasonably close proximity (1.3km distance). There are a number of water races in the area associated with livestock farming and possibly irrigation but these are removed from the operational areas of the base. The closest major watercourse is the Selwyn River (5km distance), which is well removed even in the event of a major spill.
- Areas of Business 2 and Business 3 zoning are the Izone Business Park (as discussed above), Lincoln University and the adjacent Crown Research Institutes, and small areas in Leeston, Doyleston, Southbridge, Darfield and Colgate associated with rural supply businesses where agrichemicals and similar goods are sold via retail outlets. Each of these sites are in close proximity to residential areas. However none of these areas are close to waterbodies or any of the other identified aspects of particular sensitivity.

On the basis of this analysis it is clear that the storage or use of hazardous substances in Selwyn District does not currently involve matters of particular sensitivity, environmental risk or indeed human health and safety. It is essential that the District Plan ensures that this remains the case in the future by paying due attention to the continued dissuasion of activities storing or using hazardous substances from establishing in sensitive locations.

3.3 Contaminated land

In 2011 Tonkin & Taylor Ltd prepared a large-scale preliminary site investigation (PSI) report[2] with respect to land in Selwyn District potentially available for rezoning and ensuing residential development; this was part of Council's response to the anticipated outcomes of the Canterbury earthquakes of 2010 and 2011 in terms of demand for land for residential resettlement. The study centred on the Rolleston and Lincoln areas respectively and had the goal of assessing, at desk-top level, the suitability of land in Selwyn District for new residential use.

3.3.1 Rolleston area

For Rolleston the study include a total of six Outline Development Plan (ODP) areas covering an approximate area of 242 hectares. The typical tools of a PSI (as per the Ministry for the Environment's criteria) were utilised to assess the potential for contamination of the area's soils to have occurred, based on past land use history and other standard information resources utilised in a typical PSI investigation such as Environment Canterbury's Listed Land Use Register (LLUR), aerial photographs, Google Earth imagery, SDC records, previous investigations and site walkover inspections.

The consolidated information was summarised and showed that the majority of this Rolleston area was used for dry stock grazing and cropping since at least the earliest records available (late 1800s). These activities may have included the application of agrichemicals, as well as the storage and mixing of these chemicals and also fuels storage and use. A single possible sheep dip was identified on one property.

Activities associated with these identified land uses do have the potential to give rise to soil contamination, although this is likely to be at relatively low levels across the broad acreage of the various individual sites. Higher levels of contamination are likely to be found in localised areas around farm buildings, sheep dips, waste disposal excavations (farm dumps) and wherever agrichemicals may have been stored.

[2] Desk-based Ground Contamination Assessment – Plan Change Area 7. Tonkin and Taylor Ltd, 2011

Summary of potential sources of soil contamination – Rolleston area

Activity	Potential contaminants	Likely extent and level
Cropping and dry stock grazing	Metals and organochlorine pesticides (OCPs), including DDT for grass grub control and other insecticides	Low level over pasture cropping areas, predominantly within surface soils
Farm sheds, chemical storage sheds	Metals, OCPs, petroleum hydrocarbons	Level of contamination will depend on handling practices, typically will be localised around sheds and mixing/filling points, mostly confined to surface soils
Sheep dips	Specific metals (copper, arsenic, chromium, zinc) and OCPs	Limited to the land area surrounding the dip site, holding pens and locations of chemical disposal if undertaken on site. Concentrations can be significant, given the constrained nature of chemicals contact with the ground
ASTs or USTs	Petroleum hydrocarbons	Soils around tanks, likely to be limited to surface soils in vicinity of ASTs, deeper soils affected near USTs. Elevated concentrations can be expected if tanks have leaked or if poor filling practices were used.
Residential dwellings of a particular age – and other painted structures	Metals (principally lead) and possibly arsenic and DDT if vegetable gardens present.	Limited to surface soils adjacent to present or former structures, or the environs of former vegetable gardens
Waste disposal areas	Metals, OCPs, petroleum hydrocarbons	Potentially elevated concentrations of contaminants within waste and in soil underlying the waste

3.3.2 Lincoln area

In the case of Lincoln and its general environs the PSI study included six ODP areas having a total area of 352 hectares. The study methodology was the same as for the Rolleston investigations.

The majority of the land within these six ODP areas in and around Lincoln was used historically for stock grazing and cropping, with small areas of dairying and horticulture. These activities have been undertaken in the area since the mid to late 1800s and these types of land user are considered typical of pastoral farming and cropping land uses on the lower Canterbury Plains.

Activities associated with these land uses do have some potential to give rise to soil contamination, although this would be expected to occur at low levels in the general pastoral areas. Higher concentrations of contaminants may be found at localised hot spots around farm buildings, sheds, sheep dips, on-farm waste disposal sites and wherever fuels or agrichemicals have been stored or used.

Summary of potential sources of soil contamination – Lincoln area

Activity	Potential contaminants	Likely extent and level
Cropping and dry stock grazing	Metals and organochlorine pesticides (OCPs), including DDT for grass grub control and other insecticides	Low level over pasture cropping areas, predominantly within surface soils
Orchard areas	Metals and OCPs (insect and fungal control)	Low levels of contamination within orchard areas, with possible localised hot spots at ends of rows and in mixing/disposal areas
Farm sheds, chemical storage sheds	Metals, OCPs, petroleum hydrocarbons	Level of contamination will depend on handling practices, typically will be localised around sheds and mixing/filling points, mostly confined to surface soils
Sheep dips	Specific metals (copper, arsenic, chromium, zinc) and OCPs	Limited to the land area surrounding the dip site, holding pens and locations of chemical disposal if undertaken on site. Concentrations can be significant, given the constrained nature of chemicals contact with the ground
ASTs or USTs associated with farm buildings	Petroleum hydrocarbons	Soils around tanks, likely to be limited to surface soils in vicinity of ASTs, deeper soils affected near USTs. Elevated concentrations can be expected if tanks have leaked or if poor filling practices were used.
Railway line	Hydrocarbons, metals and PAHs	Along and beneath lines where oil or fuel may have leaked or been dumped
Residential dwellings of a particular age – and other painted structures	Metals (principally lead) and possibly arsenic and DDT if vegetable gardens present.	Limited to surface soils adjacent to present or former structures, or the environs of former vegetable gardens

3.3.3 Miscellaneous other contamination studies

The results of several individual site investigations have also been available and have enabled Stantec to draw similar conclusions to those above; i.e. that typical contaminant concentrations in the soils of Selwyn District are around background levels for trace elements in Canterbury.

Other potential contaminated sites in the Selwyn District worth noting include gun club ranges at Southbridge and Leeston, where soil may be contaminated with lead, and farm sites noted on the LLUR as having sheep dips located on them (as noted, for example, in the summary table on the Lincoln area above).

3.3.4 Summary and conclusions

While there may be contaminant hot spots in and around areas where concentrated farm chemicals and fuels have been stored or used it is unlikely that, in general, contamination of soils in these areas of Selwyn District are at levels that will cause any concerns with respect to sub-division or development of the land. The approach to future development should be to characterise the likely extent of contamination at the sub-division or land development stage by detailed site investigations to establish contaminant concentrations in site soils.

While the Tonkin and Taylor study focussed on the Lincoln and Rolleston areas, as these are the two areas of greatest activity in the District, there is no reason to suggest that the results found and the conclusions reached would be any different for other parts of the Selwyn District.

3.4 Selwyn District Council Hazardous Substances SWOT analysis and existing provisions effectiveness

3.4.1 SWOT analysis

SDC has completed a SWOT analysis of the manner in which the current District Plan deals with hazardous substances. This includes detailed assessments of the relevance of various legislative and regulatory instruments within which Council must work, the ways in which these influence the management of hazardous substances and contaminated land in the district and the approaches taken within the District Plan for achieving the desired outcomes.

A particular aspect of the SWOT analysis that provides important insights is the assessment of, and comments made on, a number of recent resource consent application examples where matters relevant to the management of hazardous substances were either central to or at least a significant part of each consent application decision. It is clear that recent applications have been adjudicated based on a mix of DP requirements and HSNO Act compliance, with little apparent consistency in the approaches that have been taken or the precedence of one approach over the other. The result is a mixed message to applicants over what is the preferred compliance approach in any particular case.

The SWOT analysis culminates in an assessment of the extent to which the District Plan achieves the various outcomes sought with respect to the management of hazardous substances and contaminated land. The important point is made that the current District Plan includes a number of objectives, policies and rules to manage the amenity effects associated with hazardous substances and their reverse sensitivity effects which may not be managed as satisfactorily under the HSNO Act.

On the other hand the SWOT analysis correctly identifies that there is a poor connection between the District Plan and the HSNO Act, various regional planning instruments and the peripheral legislation controlling the manufacture, storage and transport of hazardous substances. These disconnects are noted as creating issues with the interpretation and administration of the District Plan for Council officers and applicants alike.

A critical conclusion of the SWOT analysis is that the 2nd generation District Plan need only include provisions for managing hazardous substances that are more stringent than those that are provided for by the coverage of the HSNO Act. This might include removing all Activity Status Schedules from the District Plan's Appendices and relying on s17 to address amenity issues and nuisance effects where these are not dealt with by the HSNO Act.

With respect to the management of contaminated land in the district the conclusion of the SWOT analysis was that the NESCS provides all necessary control mechanisms relevant to Council's functions to enable the efficient and effective management of such land, and the analysis contained in this report concurs with that view. A key recommendation of the SWOT was that the consenting requirements of the NESCS should be cross-referenced with the 2nd generation District Plan, for the reason that district plans cannot duplicate the provisions contained in the NESCS, by virtue of s44A (4) and (5) of the RMA.

3.4.2 Effectiveness of existing provisions

In the District Plan the reasons for having rules with respect to hazardous substances are discussed, although an acknowledgement is made that many of the potential effects on health and safety of the use and storage of hazardous substances are already addressed through existing legislation and that the use of these substances is, in large part, adequately controlled by the Regional Council and other authorities.

The District Plan currently states that it complements HSNO by addressing the effects of hazardous substances on health and safety, and on the environment, including amenity values. The District Plan rules provide for the storage of small quantities of hazardous substances, such as those associated with commercial, industrial and research activities, without requiring a resource consent. The storage is subject to conditions to minimise the risk of leaks on to land and to minimise potential adverse effects should accidental spills or leaks occur. These conditions in general duplicate similar more rigorous conditions within the relevant aspects of the HSNO legislation, such as the specific requirements on secondary containment and similar matters.

The District Plan provides for service stations to store greater quantities of petrochemicals as a controlled activity over and above Plan permitted activity limits recognising their primary role as fuel providers,

acknowledging the amounts of such fuel generally stored on-site and recognising the industry standards and codes which have been adopted to address health and safety issues. Interestingly no acknowledgement is made of the critical role of the HSNO legislation in already providing a comprehensive regime of controls over service stations, fuels storage and related activities.

The quantities of hazardous substances allowed to be stored in Living and Business zones as permitted activities are detailed in Appendix 9 of the Plan, and quantities for the Rural zones are detailed in Appendix 15. Special provisions apply to the Business 3 Zone where large quantities of hazardous substances associated with tertiary education and research activities may be present, or specific activities may be undertaken involving the manufacture of hazardous substances. The quantities of hazardous substances contained in Appendix 9 and Appendix 15 are based on those which are considered to reflect the general nature of each zone, but appear to also be a relatively complicated refinement of HSNO provisions – potentially providing different volumes and covering only some substances. There is therefore the potential for considerable confusion for hazardous substance users in terms of dual compliance with HSNO and District Plan requirements, and there is no clear justification provided in the District Plan for an inconsistent approach having been adopted.

The District Plan Rules contain conditions to avoid or reduce the severity of effects on the environment from the accidental spillage or leakage of a hazardous substance. The rules apply to activities where there is no intentional discharge and the rules therefore adopt a preventative approach. Once again, the HSNO regulatory regime imposes a detailed and comprehensive set of controls which achieve, in large measure, the same performance objectives.

Under the District Plan, where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require the relevant party to submit a disposal plan for approval by the consent authority. There is no acknowledgement within the District Plan that disposal is a matter that is already dealt with in detail by the Hazardous Substances (Disposal) Regulations 2001. Compliance with these Regulations will in fact ensure that a disposal plan as required in the District Plan is redundant.

While the strategy for hazardous substances outlined in both the Township and Rural volumes of the District Plan states that the District Plan will focus on matters that are not covered by other, more specific legislation or the functions of the regional council, the objectives, policies and rules do not reflect this approach. They are instead much more wide-ranging, which results in significant overlap with Environment Canterbury's documents, and particularly with requirements under HSNO, and duplication of controls.

Existing contaminated land objectives, policies and rules suffer from the same problem, although in the case of these provisions (the rules in particular) the overlap and duplication is with the NESCS. The provisions are generally broad and often appear to be inconsistent with the NSECS. The NESCS provides a comprehensive regime to manage contaminated land. It deals with land use and subdivision consent applications, and covers off the requisite controls required on change of use of land, disturbance of soil and (as and where necessary) removal of soil off-site for disposal, although district plans can still include objectives and policies if they are seen as necessary.

For both the hazardous substances and contaminated land provisions, the current inclusion of provisions in both the Township and Rural volumes of the District Plan has caused unnecessary complications. Provisions which aim to achieve the same outcome are worded differently between the two volumes, for no apparent reason. Also, locating all of the provisions relevant to any particular activity is complex and time consuming.

In terms of definitions, depending on the use of the terms throughout any new District Plan, the existing definitions of Agrichemical, Fumigant and Vertebrate Toxic Agent are fit for purpose. The definition of Hazardous Substance is imprecise in its drafting with respect to the phrasing 'includes, but is not limited to…'. The definition contained in HSNO is fit for purpose and should be included as a direct reference in the definitions. The Ministry for the Environment defines Contaminated Land as 'land with hazardous substances in or on it that are reasonably likely to have significant adverse effects on the environment (including human health)'. This would be a more appropriate definition to use, in order to achieve consistency with current national approaches to the management of contaminated land.

3.4.3 Application of existing provisions

As part of a review of recent consents granted in the District where hazardous substances storage, manufacture or use were pertinent matters considered, Stantec has identified a total of nine relevant consent applications that have been processed in the past few years in the District; scrutiny of the applications, decisions and conditions imposed on each of these consents has been undertaken and the following discussion considers the relevant parameters of each of these.

3.4.3.1 Port of Tauranga Intermodal Freight Hub, Izone Business Park, Rolleston (RC145486), decision date October 2014

Condition 11 of this consent requires that "The quantities and storage of hazardous substances stored on site shall comply with the standards of Rule 20.1 of the District Plan." A reference is also given to Appendix 9, Table E9.2 of the District Plan which sets out maximum storage quantities and various other requirements for LPG, hazardous substance containers, and for storage to not take place within 20m of any surface waterbody.

Interestingly, the relevant objective of the District Plan cited in the decision (Objective B3.2.1 Hazardous Substances) requires "storage to be in accordance with the relevant standards contained within the District Plan **and the associated HSNO regulations**" [emphasis added]. Despite these statements in the decision, Condition 11 does not reflect the content of this objective, deferring to District Plan compliance alone as the requirement and being silent on any specific requirements for HSNO compliance.

3.4.3.2 Lyttelton Port of Christchurch; "To establish and operate an intermodal inland port/freight hub" (RC155101), decision date June 2015

Conditions 23 and 24 of this consent decision require the consent holder to "provide evidence of compliance with the Hazardous Substances and New Organisms Act". This includes various nominated HSNO-related positions (e.g. approved handlers), evidence of training of key personnel in HSNO compliance matters and certification of the site as a transit depot.

Prescriptive requirements are also included in a condition with respect to the upper limits on the numbers of containers holding specified classes of hazardous substances to be "held in transit on site".

A further condition sets upper bounds on quantities allowed to be held permanently on the site (which is within the Business 2 Zone); it is notable that these quantity limits differ markedly from those established in Table E9.2 of the District Plan for permitted activities in the various zones. The quantities do not in fact accord with any established zone permitted activity limits (although some reflect limits for Living Zone A). The limits are also not in accordance with HSNO storage limits. It is unclear from the decision text just how these quantity limits have been derived.

Further conditions are imposed on LPG storage, notwithstanding that these typically reflect just some of the matters that HSNO deals with in far greater detail in the Hazardous Substances (Compressed Gases) Regulations 2004.

The conditions on this consent with respect to hazardous substances are thus a confused mix of HSNO compliance requirements (which appear from the context to take precedence) and prescriptive Plan-based conditions, although these are in fact inconsistent with the detailed Plan requirements.

3.4.3.3 Fonterra Cooperative Group Ltd, Darfield Milk Powder Plant, SH73, Racecourse Hill (RC105211), hearing date October 2010

Conditions 2 – 8 of this consent relate to hazardous substances matters. Once again these are a mixture loosely based on District Plan requirements, with the inclusion of HSNO test certification as a particular requirement for bulk storage systems for hazardous substances.

Several of the conditions are specifically concerned with spills and leaks of hazardous substances and protection of the environment, particularly waterbodies. Storage "shall not occur within 50m of any ephemeral or flowing surface waterbody" which is stricter than the general requirement of Rule 20.1 of the District Plan which allows a 20m minimum separation distance. As discussed in section 3.2, the Fonterra site is at least 4km away from any surface waterbodies.

3.4.3.4 Tegel Foods, Kirwee "Storage of hazardous substances" Application date April 2014

Hazardous substances stored/used at this site include LPG, diesel and various disinfection-type products. The quantities of hazardous substances were considered in the decision to be reflective of the scale of the operation and conditions were based on risk mitigation through management practices. The assessment and decision were each made against the District Plan rules, with no consideration of HSNO requirements.

3.4.3.5 Lincoln Maternity Hospital – installation of a replacement above-ground diesel storage tank (RC075042), application and planning report, October 2017

This application was to replace a 2,000L underground storage tank for diesel with a 2,500L above-ground tank. The application and planner's report each discuss the hazardous substances issues in terms of District Plan compliance (the proposed activity is non-compliant with requirements for maximum volumes in the Living 1 zone).

The applicant and Council planner went on to agree that this non-complying activity could be granted consent provided that a "Hazardous Operation Plan" is prepared and reviewed for the storage and use of diesel on the site. While this Plan has not been sighted there is no mention in the general discussion of its content nor in the application or the Planner's Report of HSNO Act compliance.

3.4.3.6 Meadow Mushrooms Ltd, Norwood Composting Facility (RC095052), April 2008

This was an application to store and use a hazardous substance (sulphuric acid) with respect to its use in a compost production facility. The proposal was for 22,000 litres of sulphuric acid to be stored/used; this can be compared to the District Plan Rural Zone permitted activity limit of 10 litres.

The application was treated entirely as a District Plan compliance issue and no mention was made at all in the decision and conditions about the requirements of the HSNO legislation. Instead there was discussion about storage being in "an appropriate facility" and "a large distance away from any waterbody". A bund to contain "140% of the capacity of the tank(s) sealed with an epoxy coating" was a specific requirement; this is neither a District Plan nor a HSNO requirement.

3.4.3.7 Rolleston Pest Control Research Facility (RC145650), April 2015

This consent application concerned a proposal to establish and operate a facility to manufacture and store a range of pest control baits, including 1080, which failed to meet the minimum standards prescribed in Table E9.2. Consent was granted, with conditions imposed to reduce risk and manage any potentially adverse effects. The applicant also required approval from the EPA with respect to HSNO Act compliance. Thus the conditions placed on this consent reflected a dual approach combining the two sets of District Plan and HSNO requirements.

3.4.3.8 Synlait Dairy Processing Plant, Dunsandel (RC307717), March 2006

The hazardous substances storage proposals of this consent application "significantly" exceeded the permitted activity criteria of the District Plan. The application stated that "all aspects of the storage and containment of hazardous substances will comply with New Zealand regulations and the District Plan."

The Plan states, inter alia, that "the quantities of hazardous substances able to be stored and used are based on the quantities in the Dangerous Goods Licencing Regulations **1985** [emphasis added]. The rule does not attempt to duplicate these regulations. Rather, it uses these quantities as a guide because they are a simple and familiar measure to distinguish between small amounts and larger amounts where increased management of potential effects may be needed." The decision goes on to record that, on this basis, "all other aspects related to use and storage will be in accordance with the [District Plan] standards and any other relevant standards and requirements." The "other standards and requirements" are clearly those of the Dangerous Goods Licencing Regulations.

There is thus no acknowledgement that the HSNO requirements (dating from 2001) were in place at the time of this application in 2006, had superseded the old Dangerous Goods legislation and thus represented a new (and quite different) compliance regime.

3.4.3.9 CRT Store, Leeston (RC125467), October 2017

This rural supply store wished to supply agrichemicals on an over-the-counter retail basis, although the quantities involved exceeded the permitted activity requirements of Table E9.2 of the District Plan.

Consent was granted as a discretionary activity on the grounds that any potential adverse effects would be avoided by storing the agrichemicals in "appropriately sealed" containers, and with the store area protected against the off-site effects of spillages by bunding. The decision took no regard of the HSNO requirements for packaging and secondary containment.

3.4.4 Summary

Overall, while SDC's SWOT analysis identifies that there is a potential role for the District Plan in terms of managing amenity and reverse sensitivity effects, the existing provisions are too wide ranging and significantly overlap and duplicate other measures that are potentially more effective at managing the majority of issues. Conditions on consents issued to date do not appear to have specifically addressed amenity considerations. The separation of the provisions into the Township and Rural volumes has also led to a series of inconsistencies between the provisions themselves and between the provisions and other legislative documents that are not justified and which may cause significant confusion for users of the District Plan.

Both of these issues are highlighted by the processing of various consent applications, which have adopted a wide ranging and often inconsistent approach to the consideration of similar issues in relation to management of hazardous substances.

4. Hazardous substances: issues, gaps and opportunities

4.1 The HSNO Act and District Plans

Historically, District Plans have included separate chapters on hazardous substances, with detailed controls on their use and storage. However, the recent amendments to the RMA (effective from 1 April 2017) have amended sections 30 and 31 so that local authorities no longer have any statutory obligation under the RMA to control hazardous substances. The reason for this is that there are other statutory regimes (including the Hazardous Substances and New Organisms Act 1996 and the Health and Safety and Work Act 2015) that already deal with this issue in a comprehensive manner.

The only circumstance where it may be appropriate to include additional controls in a District Plan is where they are necessary to control effects that are not covered by the HSNO or HSW Acts. A possible example may be the proximity of hazardous substances to particularly sensitive local environments or facilities. A second example is where cumulative effects may arise from storage and/or use of hazardous substances adjacent to sites(s) where significant existing storage/use is already in place.

4.2 Summary of hazardous substance sites in Selwyn District

Sections 3.1 and 3.2 of this report outline the analysis of sites in Selwyn District using, storing or manufacturing hazardous substances and also identifies their locations in relation to any particularly sensitive areas.

The majority of sites storing or using hazardous substances in the District are small in scale and non-complex in terms of the types of hazardous substances involved. The analysis using ECan's LLUR shows, for example, that many identified sites appear on the Register by virtue only of the fact that an activity is occurring at a particular site that nominally uses hazardous substances. An example of this is motor vehicle garages where repair of vehicles inevitably involves the use (and storage) of petroleum hydrocarbons. The quantities involved are likely to be small but the use of such substances means that the LLUR records the site.

Similarly the application of pesticides is highly unlikely to be widespread or in significant quantities in the District, even though the LLUR records suggest that pesticides use is widespread. The fact is that the application of pesticides, for example for playing fields management, means that the subject site is noted on the LLUR.

At the other end of the hazardous substances storage and use spectrum there are a number of clearly identified and well known sites in the District where significant quantities of hazardous substances are present. The details of many of these sites are well known and the circumstances of storage and use are similarly closely identified. In a similar way, the cumulative issues surrounding hazardous substances locations in the District can also be clearly identified from existing data.

The advent of significant concentrations of industrial and commercial activity in specific areas of the District, notably the Izone Business Park in Rolleston, means that the major users of hazardous substances have been clearly identified and their facilities have been subjected to close scrutiny during the consenting process. Increasingly, reliance in setting provisions for the effective management of hazardous substances on these types of sites is being vested by councils in the HSNO legislative regime, backed up to the extent necessary in particular circumstances by some reliance on existing District Plan requirements as and where appropriate.

4.3 Potential effects on sensitive activities and/or sensitive natural environments

The District Plan currently considers, in a broad context, the potential environmental impacts of hazardous substances on sensitive areas by rule provisions relating to location restrictions based on quantities of various classes of hazardous substances and by prescriptive measures such as not allowing the storage or use of hazardous substances within 20m of a waterbody.

Based on the analysis contained in section 3, there are no significant concentrations of hazardous substances storage and use close to sensitive areas/activities in the District. The Izone Business Park at Rolleston is separated from the closest residential areas by the railway line, the state highway, and the location of the Rolleston business district directly opposite. At Lincoln, where there are a number of sites

storing or using hazardous substances associated with research and university activities, the quantities being used or stored have not been sufficient to trigger existing District Plan rules and so are not likely to be significant. The sites are also generally large, meaning sufficient separation exists between them to reduce the risk of cumulative effects. The only other location in the District where there is a significant number of sites is Leeston, with a wide variety of small sites located there. However, the small size of the sites and the lack of consents issued for use or storage of hazardous substances again suggests that risks to nearby residential areas will be low.

It will be important for the District Plan to identify any particularly sensitive locations (the RPS currently suggests sites such as wāhi tapu and urupa) that are relevant to the Council's functions[3] and associated restrictions on activities in their vicinity. While these restrictions would be likely to include reference to the storage or use of hazardous substances, this is unlikely to be the only matter that would need to be controlled to manage effects on sensitive activities. A co-ordinated approach between the topic leads for multiple chapters of the District Plan will therefore be needed to address the issue.

4.4 Reverse sensitivity

The establishment of sensitive activities in close proximity to existing major facilities using, storing or disposing of hazardous substances must also be avoided in the first instance when that facility or area includes strategic infrastructure or where the sensitive activity may be exposed to unacceptable risk; and minimised to allow such facilities to carry out their operations without unreasonable reverse sensitivity constraints.

It is important that the District Plan ensures that sensitive activities are only established at suitable locations that are able to ensure that reverse sensitivity effects on, and unacceptable risks from established facilities using, storing or disposing of hazardous substances are avoided or minimised.

The District Plan could contain provisions to provided buffer zones against the possible encroachment of sensitive activities; this may be particularly relevant for the Izone Business Park with its (relative) concentration of sites having significant quantities of hazardous substances.

4.5 Substances not controlled by HSNO

The HSNO Act does not apply to radioactive materials (UN Class 7), medicines (including animal remedies), infectious substances (UN Class 6) and manufactured articles (unless they have explosive properties). For each of these categories other regulatory instruments are in place that provide specific and focussed controls.

Asbestos is also not covered by the HSNO Act and has its own regulatory regime, including several codes of practice and prescriptive regulations.

In each of these cases the specific control regimes take precedence over District Plan requirements.

4.6 Risks from hazardous facilities in natural hazard events

The controls on hazardous substances provided by the HSNO regulatory regime protect facilities against the adverse consequences of potential incidents; thus, compliance with the packaging, identification, secondary containment, emergency management, disposal and more general hazard management requirements of the HSNO regulations are intended to prevent the hazardous outcomes of loss of containment of the substances under foreseeable circumstances, including natural hazard events.

However HSNO compliance alone cannot account for all circumstances contributing to the risks posed by hazardous substances. For example, the Meadow Mushrooms composting site is located in a flood zone. The CRPS requires subdivision, use and development to be avoided in areas affected by a 0.5% AEP event, unless hazardous substances are safe from inundation. Rules relating to subdivision, use and development of land in these areas should therefore include conditions about ensuring hazardous substances are provided with sufficient protection from inundation.

[3] Note that while the current District Plan includes prescriptive measures such as not allowing the storage or use of hazardous substances within 20m of a waterbody, an identical restriction is contained in the CLWRP, and it is arguably more within Environment Canterbury's functions to impose such restrictions.

4.7 Cumulative effects

Facilities storing or using hazardous substances that are situated close to each other may generate cumulative risks that are greater than the sum of the risk of each individual facility. An aggregation of such facilities may result in adverse effects on other adjacent facilities if standard operational procedures in one facility do not comply with defined requirements, or a malfunction in a process at a facility cannot be remedied by existing emergency management equipment and procedures. This could lead to cumulative adverse effects more significant than those caused by the initial event.

Where there are a number of separate facilities storing or using hazardous substances within a constrained area, each facility must be designed and managed in a manner to minimise adverse effects on each other, as well as beyond the area occupied by the hazardous facilities. Compliance with the requirements of the HSNO regulatory regime will be an essential aspect of risk minimisation in such circumstances. This could extend to requiring certificates of HSNO compliance to be provided to Council by such facilities situated in identified areas where the cumulative quantities of hazardous substances are considered to warrant such a requirement. The most likely area for this to apply to presently would be the Izone Business Park at Rolleston, and rules in the relevant business zones could be adjusted to require this. Council does not appear to have taken this approach to date however, and if it is not considered necessary at the Izone Business Park then there are no other concentrations of sites in Selwyn District where it should be considered.

4.8 Canterbury Regional Policy Statement, Canterbury Land and Water Regional Plan and Selwyn District Plan

The RPS was operative at the time the Resource Legislation Amendment Act 2017 was passed, and so does not reflect the removal of the explicit references to management of the effects of the use, storage, transportation and disposal of hazardous substances. The methods contained in the RPS require Selwyn District Council to include objectives and policies relating to avoiding actual or potential effects of the use, storage, transport or disposal of hazardous substances within any area identified in the district plan as being sensitive to potential effects of hazardous substances, which may include areas such as wāhi tapu, urupā, institutions and residential areas. There is no requirement to include rules in the District Plan. Methods also require Selwyn District Council to include objectives and policies to avoid, remedy or mitigate adverse effects associated with the use, storage, transport or disposal of hazardous substances, although again there is no requirement to include rules.

The CLWRP includes a wide ranging permitted activity rule related to the storage of hazardous substances. Rules covering discharges from industrial and trade processes, and a 'catch-all' discretionary rule relating to all discharges not covered by other rules in the CLWRP, provide a mechanism for addressing disposal of hazardous substances. Risks arising from use of hazardous substances are addressed under HSNO.

The analysis contained in sections 3 and 4.3 to 4.7 of this report suggests that there are no major issues in relation to hazardous substances in Selwyn District. The most appropriate approach for the District Plan would therefore be to recognise that HSNO and the CLWRP address the majority of the issues, and to manage any effects through zoning provisions, which can control activities using hazardous substances in areas of particular concern. For example, in Living zones, rules can require consent for industrial activities as a fully discretionary activity, and effects of any hazardous substances storage or use can then be considered through the consent process. Zone provisions can also be used to control any reverse sensitivity effects by, for example, requiring sensitive activities such as residences to be set back an appropriate distance from boundaries with the Business zones where activities using or storing hazardous substances are more likely to be occurring.

4.9 Future control of hazardous substances in Selwyn District

With recent amendments to the RMA, Council's responsibilities with respect to controlling the storage, use and environmental effects of hazardous substances have changed substantially. Amendments to sections 30 and 31 of the RMA have removed specific hazardous substances controls from regional councils and territorial authorities. The intent of the amendments was to ensure that councils only place additional controls on hazardous substances if they are necessary to control effects under the RMA that are not dealt with by controls already imposed by the HSNO and Health & Safety at Work Acts.

Therefore, if Council decides to include any provisions relating to hazardous substances within the revised District Plan, these should be restricted to the application of controls that manage the residual risks associated with the storage, use or disposal of hazardous substances, including the minimisation of reverse

sensitivity effects and the avoidance of sensitive activities locating close to hazardous facilities, as discussed in sections 4.3 and 4.4 above.

A critical matter with respect to an amended approach for Council will be to manage the location of new facilities using, storing or disposing of hazardous substances so that they are established on appropriate sites to ensure that any residual risks can be managed to acceptable levels. As noted earlier, this is probably most effectively done through the zone provisions (for example by not permitting industrial activities within residential areas) where hazardous substances can be considered as a matter in the processing of a consent, rather than through a series of specific hazardous substances rules.

Cumulative effects should be addressed through the rule standards applied to activities, particularly in the Business zones, where activities using and storing hazardous substances are more likely to occur.

5. Contaminated land: issues, gaps and opportunities

5.1 The NESCS and District Plans

The inclusion of references to contaminated land in the District Plan sends a signal that the Council does not hold complete information on this matter and that landowners and developers have an onus to carry out their own investigations, preferably before commencing development of a site.

Two recent factors that have changed the district circumstances pertaining to contaminated land are:

- The introduction of the NES for Contaminated Land;
- The development of the Listed Land Use Register (LLUR) by ECan

The combined effect of these changes is that there is now very little need for Council to include detailed provisions about contaminated land in the District Plan. Section 30 of the RMA makes it clear that regional councils (not territorial authorities) are responsible for the investigation of land for the purposes of identifying and monitoring contaminated land. This is achieved in Canterbury through ECan's LLUR, thus removing the need to identify contaminated sites within the District Plan itself.

Under s30 of the RMA, SDC remains responsible for the prevention or mitigation of any adverse effects of the development, subdivision or use of contaminated land. However, this is now achieved by the provisions of the NESCS, which SDC is required to administer. This therefore removes the need for the inclusion of any contaminated land rules within the District Plan, with section 44A of the RMA specifically requiring that a district plan may not duplicate or conflict with a National Environmental Standard.

The approach that Christchurch City adopted in its District Plan Review was to include a simple chapter dealing with contaminated land, which included some brief objectives and policies about the outcomes that were being sought. There are no rules, with the methods deferring instead to the LLUR and the requirements of the NESCS.

5.2 Canterbury Regional Policy Statement, Canterbury Land and Water Regional Plan and Selwyn District Plan

The RPS and CLWRP contain provisions relevant to contaminated land. While most of the methods in the RPS that require Selwyn District Council to adopt specified approaches to contaminated land do not require provisions to be included in the District Plan, methods to implement Policy 17.3.2 require Selwyn District Council to set out objectives, policies or methods to require site investigations, any actual or potential adverse effects to be avoided, remedied or mitigated in a manner that does not lead to further significant adverse effects, and for any remediation or mitigation works not to lead to further significant adverse effects. This requirement is problematic, as it would be likely to lead to a direct overlap between the District Plan and the NESCS, which addresses all of these matters comprehensively. Selwyn District Council should undertake discussions with Environment Canterbury to clarify the requirements of this method in relation to the new District Plan, as any overlap with the NESCS is not recommended.

5.3 Future control of contaminated land in Selwyn District

The only further matter the Council may wish to include in the District Plan is a reference in the "methods" to the use of consent conditions or advice notes on resource consents for subdivision and earthworks. Such conditions/advice notes may be appropriate in circumstances where there is no known contamination,

but the Council wishes to make it clear that in the event contamination is discovered, the consent holder will be responsible for obtaining any further resource consents and funding any site remediation that may be required.

6. Recommendations

On the basis of the analysis contained in this report, the following approach is recommended to the management of the storage, use, transportation and disposal of hazardous substances, and to the management of contaminated land through the new District Plan:

1. The Council should rely principally on the provisions of the Hazardous Substances and New Organisms Act 1996 and the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

2. Management of the residual risks from sites using or storing hazardous substances should be managed by the zone provisions, ensuring that activities that are not compatible with the primary purpose of a zone are not permitted, and that buffer areas are provided to zones that are more suitable for sites using or storing hazardous substances (such as Business zones) in order to avoid reverse sensitivity issues. From the analysis contained in sections 3.2 and 4.3 of this report, current sites using or storing hazardous substances are not of such density, or in such proximity to sensitive receivers, that specific buffers need to be specified in the District Plan. The only areas where there is a potential for this situation to change are the Izone at Rolleston and the university/research institute conglomeration at Lincoln. In these areas, through the zone provisions that are still to be developed, the Council may wish to establish buffers in the zoning around the Business zones (if these are retained) within which new sensitive activities (such as residential dwellings) need consent in order to manage residual risks of hazardous substance storage and use occurring in close proximity.

   The different planning environments of the various territorial authorities around New Zealand mean that specifying a standard buffer zone is not possible. Christchurch, for example, buffers its heavy industrial sites (which are the most likely users of large quantities of hazardous substances and therefore pose a greater risk) by enclosing them within general industrial zones and then commercial zones, but this reflects the land development pattern in Christchurch. In the case of Selwyn a determination should be made as each of the zone provisions are developed and the existing and potential future uses in those zones and the adjacent zones considered. Distances can be defined based on the types of activity permitted in the business zones and the corresponding likely risk to sensitive activities in adjacent zones.

3. Appendices 9 and 15 and their associated rules should not be carried through into the new District Plan. The volumes of hazardous substances contained in these appendices both overlap and conflict (by being more stringent) with those contained in the Hazardous Substances Regulations and lead to an unhelpful level of confusion for District Plan users. Analysis of a sample of consent decisions shows that the provisions are not being applied consistently, and are not achieving additional levels of protection to those contained in the Hazardous Substances and New Organisms Act 1996 regime.

4. Through other District Plan topics, sensitive areas or activities are likely to be identified. The rule framework for these areas and activities should include a consideration of the allowable proximity to sites using or storing hazardous substances (noting that this is likely to be only one of a number of considerations for sensitive areas or activities). Provisions in the existing District Plan provide for setbacks from waterbodies, which is duplicated in the Canterbury Land and Water Regional Plan, and for setbacks in some instances from 'Sensitive Activities', from silent file areas and identified cultural sites. Storage of hazardous substances within these setbacks currently requires consent, as a fully discretionary activity. While these types of provisions should be retained, they cannot be defined or drafted until sensitive sites have been identified for the new District Plan. Each type of site and its particular vulnerability should then be considered in developing appropriate setback distances. While compliance with HSNO requirements will address the majority of risks associated with the storage of hazardous substances close to sensitive sites, the imposition of a setback allows a further layer of control to be applied and provides an additional safeguard.

5. Provisions should be included in relation to hazardous substances in rules relating to subdivision, use and development of land within 0.5% AEP flood areas

6. Some, limited, policy guidance should be provided within the District Plan where activities that use or store hazardous substances trigger consent requirements because of their location in incompatible zones. Policy guidance on the management of residual risk should point processing officers and decision makers to a consideration of only those risks that remain after HSNO requirements have been met. Residual risks can only be determined on a case by case basis, depending on the site location, its

surrounding environment and the quantities of hazardous substances being stored or used. Managing activities storing or using hazardous substances through the zone provisions means that, in areas where residual risks may remain (such as residential areas), consent will be required and a comprehensive assessment of residual risk can be undertaken as part of the considering the consent application.

7. Provisions relating to hazardous substances and contaminated land should be located in one place in the District Plan or, if the current Township/Rural volume approach is continued, the wording should be consistent between the two volumes

8. The existing definitions of Agrichemical, Fumigant and Vertebrate Toxic Agent are fit for purpose, and should be retained if the terms are used frequently in any new District Plan. The definition of Hazardous Substance is imprecise in its drafting with respect to the phrasing 'includes, but is not limited to…'. The definition contained in HSNO is fit for purpose and should be included as a direct reference in the definitions. The Ministry for the Environment defines Contaminated Land as 'land with hazardous substances in or on it that are reasonably likely to have significant adverse effects on the environment (including human health)'. This would be a more appropriate definition to use, in order to achieve consistency with current national approaches to the management of contaminated land.

Appendices

Appendix A Operative Selwyn District Plan Hazardous Substances and Contaminated Land Provisions

Hazardous substances – objectives and policies

Township	Rural
Objective B3.2.1 To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects to human health, to the amenity of townships, the rural environment and to the natural environment arising from the manufacture, storage, transport on water bodies and disposal of hazardous substances.	Objective B3.2.1 To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects to human health, to the amenity of townships, the rural environment and to the natural environment arising from the manufacture, storage, transport on water bodies and disposal of hazardous substances.
Objective B3.2.2 To ensure that adequate measures are taken during the manufacture, storage and disposal of hazardous substances to avoid, remedy or mitigate any adverse effects to the health of livestock and other farm animals, of domestic animals, and of flora and fauna, and to the life-sustaining capacity and amenity values of waterbodies, land and soil resources.	Objective B3.2.2 To ensure that adequate measures are taken during the manufacture, storage and disposal of hazardous substances to avoid, remedy or mitigate any adverse effects to the health of livestock and other farm animals, to domestic animals, to flora and fauna, and to the life-sustaining capacity and amenity values of waterbodies, land and soil resources.
Policies – Manufacture and storage	
Policy B3.2.1 Ensure any potential risk of adverse effects on the environment from spills, leaks or other mismanagement of hazardous substances is avoided or mitigated.	Policy B3.2.1 (a) Allow appropriate quantities and classes of hazardous substances to be stored in the rural area to provide for land use activities that are consistent with the District Plan objectives and policies for those areas; and (b) Ensure hazardous substances are used and stored under conditions which reduce the risk of any leaks or spills contaminating land or water.
Policy B3.2.2 Avoid the manufacture, use or storage of large quantities of hazardous substances in Living or Business 1 Zones, unless potential adverse effects on people's well-being and the amenity values of these zones will be minor.	Policy B3.2.2 Limit manufacturing, and avoid disposing of hazardous substances near any of the following areas: (a) Waterbodies or wetlands. (b) Areas of outstanding natural features and landscapes. (c) Significant ecological sites. (d) Sites of heritage or cultural values. (e) Popular recreational areas. (f) Dwellings, other than a dwelling on the same site as the activity.

Township	Rural
Policy B3.2.3 Mitigate any adverse effects on the environment from the manufacture, use or storage of hazardous substances in Business 2, 2A and 2B zones or the Business 3 zone.	
Policies – Transport	
Policy B3.2.4 Avoid transport of hazardous substances on the surface of waterbodies in watercraft, if there is an alternative vehicular access to the site by land.	Policy B3.2.3 Avoid transport of hazardous substances on the surface of waterbodies in watercraft, if there is an alternative vehicular access to the site by land.
Policies – Disposal	
Policy B3.2.5 Avoid disposing of hazardous substances into sewage systems or on to land in townships.	Policy B3.2.4 Ensure parties who manufacture or store commercial quantities of hazardous substances have the means to dispose of hazardous substances and their containers without adversely affecting the environment.
Policy B3.2.6 Ensure parties who manufacture or store commercial quantities or concentrations of hazardous substances have the means to dispose of hazardous substances and their containers without adversely affecting the environment.	Policy B3.2.5 Work toward obtaining access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.
Policy B3.2.7 Work toward obtaining access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.	

<u>Hazardous substances – rules</u>

Living	Business	Rural
Storage		
8.1.1 The storage of any hazardous substance shall be a permitted activity if all of the following conditions are met:	20.1.1 The storage of any hazardous substance shall be a permitted activity if all of the following conditions are met:	7.1.1 The storage of any hazardous substance shall be a permitted activity if all of the following conditions are met.

Living	Business	Rural
8.1.1.1 The quantity of each subclass of hazardous substances listed in Appendix 9 Table E9.2 complies with the maximum storage quantities set out in Appendix 9 Table E9.2.	20.1.1.1 The quantity of each subclass of hazardous substances listed in Appendix 9 Table E9.2 complies with the maximum storage quantities set out in Appendix 9 Table E9.2.	7.1.1.1 For all hazardous substances (except agrichemicals, fumigants and vertebrate toxic agents) the quantity of each subclass of hazardous substances listed in Appendix 15 Table E15.2 complies with the maximum storage quantities set out in Appendix 15 Table E15.2. 7.1.1.2 For agrichemicals, fumigants and vertebrate toxic agents: (a) The quantity of each substance complies with the maximum storage quantities set out in Appendix 15 Table E15.3 apply; and (b) The substance shall not be stored within 30 metres of any boundary with a site containing a Sensitive Activity (except where the sensitivity activity occurs on the same site as the storage of the substance), or the boundary of any Living or Business 1 Zone; and (c) The storage shall comply with clauses 4.2.2.4, 4.2.3, 4.3.3, 4.5.2, and 4.6.2 of "New Zealand Standard 8409:2004 Management of Agrichemicals".
8.1.1.2 Any area used to store any hazardous substance or materials treated with any hazardous substance, except for Liquefied Petroleum Gas (LPG) is: (a) Separated from the ground by an impervious surface; and (b) The impervious surface is designed to contain any runoff of the substance or water contaminated with the substance; and	20.1.1.2 Any area used to store any hazardous substance or goods treated with any hazardous substance, except for Liquefied Petroleum Gas (LPG) is: (a) separated from the bare ground area by an impervious surface; and (b) the impervious surface is designed to contain any runoff of the substance or water contaminated with the substance; and (c) the amount of containment available is no less than 110% of the total volume of stored hazardous substance where the area is roofed; or	7.1.1.3 Any area used to store the hazardous substance or goods treated with the hazardous substance except for Liquefied Petroleum Gas (LPG) has an impervious surface which: (a) Is separated from the bare ground; (b) Is designed to contain any runoff of the substance or water contaminated with the substance; (c) Has a minimum area able to be used to contain the hazardous substance amounting to no less than 110% of the total volume of any

Living	Business	Rural
(c) The amount of containment available is no less than 110% of the volume of stored hazardous substances where the area is roofed; or (d) The amount of containment available is no less than 120% of the volume of stored hazardous substances where the area is unroofed.	(d) the amount of containment available shall be no less than 120% of the volume of any stored hazardous substance where the area is unroofed.	stored hazardous substance where the area is roofed; or (d) Has a minimum area able to be used to contain the hazardous substance amounting to no less than 120% of the total volume of any stored hazardous substance where the area is unroofed.
8.1.1.3 Any hazardous substance is stored: (a) In a sealed container; and (b) The container is made of a material that is not weakened or corroded by the hazardous substance; and (c) The container is permanently labelled with the name of the contents; and (d) Only one type of hazardous substance is stored in each container; and	20.1.1.3 Any hazardous substance is stored: (a) in a sealed container; and (b) the container is made of a material that is not weakened or corroded by the hazardous substance; and (c) the container is permanently labelled with the name of the contents; and (d) only one type of hazardous substance is stored in each container. 20.1.1.4 In the case of the Business 3 Zone (Lincoln University only) the quantity standards shall apply to any individual department or facility within the zone containing hazardous substances whether or not there is more than one department or facility within the site.	7.1.1.4 The hazardous substance is stored in a sealed container which: (a) Is made of a sound material that will not be weakened or corroded by the hazardous substance being stored in it; (b) Is permanently labelled with the name of the contents; and (c) Contains only one type of hazardous substance;
8.1.1.4 Any hazardous substance(s) is/are not stored within 20m of any waterbody (excluding aquifers). ***Note:*** *Rule 8.1.1.4 shall apply only to hazardous substances that are:* *–Substances other than those that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS); and*	20.1.1.5 Any hazardous substance(s) is/are not stored within 20 metres of any waterbody. **Note:** Rule 20.1.1.5 shall apply only to hazardous substances that are: (i) substances other than those that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS); and	7.1.1.5 The hazardous substance is not stored: (a) Within 20m of any waterbody (excluding aquifers), and (b) In any area shown on the Planning Maps as a Silent File Area, Wāhi Taonga Site, Wāhi Taonga Management Area, or Mahinga Kai Site. ***Note:*** *Rule 7.1.1.5 shall apply only to hazardous substances that are:*

Living	Business	Rural
–Substances that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS) and are transported by means other than through a pipe. *The substances listed in Policy 1(a)(ii) of the RPS are:* *(a) Pesticides.* *(b) Chlorinated solvents* *(c) Timber preservatives* *(d) Petroleum products* *(f) Substances containing the following chemicals: arsenic, cadmium, chromium, cyanide, lead, mercury, nickel or selenium.* 8.1.1.5 For schools located within the Living Zones, the quantity limits for the Business 1 Zone shall apply. 8.1.1.6 Any electrical transformer installation operated by a network utility operator, as defined under Section 166, Resource Management Act 1991, is a permitted activity with an oil capacity of no more than 1,500 litres, subject to meeting Rules 8.1.1.2 to Rule 8.1.1.4.	(ii) substances that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS) and are transported by means other than through a pipe. The substances listed in Policy 1(a)(ii) of the RPS are: (a) Pesticides. (b) Chlorinated solvents (c) Timber preservatives (d) Petroleum products (e) Substances containing the following chemicals: arsenic, cadmium, chromium, cyanide, lead, mercury, nickel or selenium.	*(i) substances other than those that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS); and* *(ii) substances that are listed in Policy 1(a)(ii) of Chapter 17 of the Canterbury Regional Policy Statement (RPS) and are transported by means other than through a pipe.* *The substances listed in Policy 1(a)(ii) of the RPS are:* *(a) Pesticides.* *(b) Chlorinated solvents* *(c) Timber preservatives* *(d) Petroleum products* *(e) Substances containing the following chemicals: arsenic, cadmium, chromium, cyanide, lead, mercury, nickel or selenium.*
	20.1.2 The following activities shall be controlled activities in the Business 1, 1A, 2, 2B and 3 Zones: 20.1.2.1 The storage and retail sale of petrol (up to 100,000 litres storage in underground tanks) and diesel (up to 50,000 litres in underground tanks) at service stations and/or truck stops shall be a controlled	

Living	Business	Rural
	activity and will not require the written consent of other persons and shall be non-notified. 20.1.2.2 The storage and sale of LPG (up to 6 tonnes, single vessel storage) at service stations and/or truck stops shall be a controlled activity and will not require the written consent of other persons and shall be non-notified. 20.1.2.3 Any consent application for the installation of any electrical transformer, where operated by a network utility operator, as defined under Section 166 of the Resource Management Act 1991, shall be non-notified and not require the written consent of directly affected parties. 20.1.2.4 In assessing any application made under Rule 20.1.2 consideration will be given to the following matters: (a) The extent to which the proposed activity can avoid or mitigate any undue risk, including sitelayout, site management, and spill contingency planning, monitoring and maintenance schedules. (b) Any relevant codes of practice introduced, or approved by, the Environmental Risk Management Authority; and pending these, any relevant codes applicable to hazardous substances.	

Living	Business	Rural
8.1.2 Any activity which does not comply with Rules 8.1.1.2 to Rule 8.1.1.4 shall be a discretionary activity.	20.1.3 Any activity which does not comply with Rule 20.1.1 and 20.1.2 shall be a discretionary activity.	7.1.2 Any storage of hazardous substances which does not comply with Rule 7.1.1 shall be a discretionary activity.
8.1.3 Any consent application for the installation of any electrical transformer over 1,500 litres shall be assessed as a discretionary activity and shall not be notified and shall not require the written consent of directly affected parties.		
8.1.4 Any activity which does not comply with Rule 8.1.1.1 shall be a non-complying activity, except if the storage of hazardous substances complies with any quantity limit listed in Column B in Appendix 9 for Living Zones, in which case the storage of hazardous substances is a discretionary activity.		
Transport		
8.2.1 The transport of any hazardous substance in a boat or other craft over the surface of any waterbody (excluding aquifers) shall be a permitted activity if the following conditions are met: 8.2.1.1 The hazardous substance is contained in the motor or fuel tank of a motorised craft; or 8.2.1.2 The hazardous substance is spare fuel for the motorised craft and it is carried in a sealed container specifically designed for that purpose; or		7.2.1 The transport of any hazardous substance in a boat or other craft over the surface of any waterbody shall be a permitted activity if any one of the following conditions is met: 7.2.1.1 The hazardous substance is contained in the motor or fuel tank of a motorised craft; or 7.2.1.2 The hazardous substance is spare fuel for a motorised craft and is carried in a sealed container specifically designed for that purpose; or 7.2.1.3

Living	Business	Rural
8.2.1.3 There is no road or vehicular access to the site where the hazardous substance is to be used and: (a) The hazardous substance is carried in a sealed container, specifically designed for that purpose; and (b) The container is permanently labelled with the name of the hazardous substance.		There is no road or vehicular access to the site where the hazardous substance is to be used and the hazardous substance is: (a) Carried in a sealed, waterproof container which is specifically designed to carry that substance; and (b) Permanently labelled with the name of the hazardous substance.
8.2.2 Any activity which does not comply with Rule 8.2.1 shall be a non-complying activity.		7.2.2 Any activity which does not comply with Rule 7.2.1 shall be a non-complying activity.
Manufacture		
	20.2.1 The manufacture of any hazardous substance in the Business 3 Zone that complies with the quantities listed in Appendix 9 shall be a permitted activity.	
	20.2.2 The following shall be discretionary activities: 20.2.2.1 The manufacture of any hazardous substance in the Business 2, 2A or 2B Zone as either a product or by-product. 20.2.2.2 The manufacture of any hazardous substance in the Business 3 Zone which does not comply with Rule 20.2.1.	7.3.1 The manufacture of any hazardous substance, as either a product or by-product, shall be a discretionary activity.
8.3.1 The manufacture of any hazardous substance, as either a product or by-product, shall be a non-complying activity.	20.2.3 The manufacture of any hazardous substance, as either a product or by-product, in the Business 1 and 1A Zones shall be a non-complying activity.	

Living	Business	Rural
Disposal		
8.4.1 Any disposal of any hazardous substance shall be a non-complying activity.	20.3.1 Any disposal of any hazardous substance shall be a non-complying activity.	7.4.1 The use of any land or facilities to dispose of any hazardous substance shall be a non-complying activity.

Contaminated land – objectives and policies

Township	Rural
Objective B1.1.1 Adverse effects on people, and their activities, ecosystems and land and soil resources from contaminated soil or unstable land, are minimised.	Objective B1.1.1 Adverse effects of activities on the District's land and soil resources are avoided, remedied or mitigated.
Objective B1.1.2 New residential or business activities do not create shortages of land or soil resources for other activities in the future.	Objective B1.1.2 People and their property are not affected by contaminated soil or unstable land and any adverse effects on the environment are avoided, remedied or mitigated.
	Objective B1.1.3 Promote the sustainable management of the soil resources of the District.
Policy B1.1.1 Ensure activities do not contaminate soil.	Policy B1.1.1 Ensure any activity involving hazardous substance or waste disposal is carried out in a way which reduces the risk of contaminating land or soil.
Policy B1.1.2 Carry out all legal requirements to record information about possibly contaminated sites on Land Information Memoranda.	
Policy B1.1.3 Avoid adverse effects on people's health or well–being from exposure to contaminated soil.	Policy B1.1.2 Avoid adverse effects on people through exposure to contaminated land and mitigate or remedy any adverse effects on the environment.
Policy B1.1.4 Co–operate with Environment Canterbury to encourage people to contain or 'clean up' contaminated sites.	Policy B1.1.3 Encourage the management of contaminated sites so that effects on peoples' health or on the environment are avoided.

Contaminated land – rules

Living	Business	Rural
Activities and Contaminated Land		
10.1.1 Any activity shall be a permitted activity on any site which contains contaminated land or	22.1.1 Any activity shall be a permitted activity on any site which contains contaminated land or	9.6.1 Any activity on land which is contaminated shall be a permitted activity provided that none of the following activities are undertaken on that land:

Living	Business	Rural
where past activities on that site include those listed in Appendix 10 except for the following: 10.1.1.1 Erecting any dwelling; 10.1.1.2 Educational facilities; 10.1.1.3 Outdoor recreation activities; and 10.1.1.4 Growing commercial food crops or rearing animals.	when past activities on that site include those listed in Appendix 10, except for the following: 22.1.1.1 Erecting any dwelling; 22.1.1.2 Educational facilities; 22.1.1.3 Outdoor recreation activities; and 22.1.1.4 Growing commercial food crops or rearing animals.	9.6.1.1 Erecting any dwelling or undertaking residential activities; 9.6.1.2 The use of land for educational activities or erecting any educational facilities; 9.6.1.3 Outdoor recreation activities; and 9.6.1.4 Growing or rearing of food crops or livestock;
10.1.2 Any dwellings, educational facilities, outdoor recreation activities, and growing commercial food crops or rearing animals on any site which contains contaminated land, or when past activities on that site include those listed in Appendix 10, shall be a restricted discretionary activity. 10.1.3 Under Rule 10.1.2 the Council shall restrict the exercise of its discretion to: 10.1.3.1 The adequacy of any methods proposed to reduce any potential adverse effects on people or animals. 10.1.3.2 If the soil is to be removed from the site, where it is to be disposed to, the level of risk to human health and the environment and how it is to be disposed of. 10.1.3.3 Where the site is not confirmed as contaminated, but has been used for one or more of the activities listed in Appendix 10, further investigation to determine whether the site is contaminated and the extent of that contamination.	22.1.2 Any dwellings, educational facilities, outdoor recreation activities, and growing commercial food crops or rearing animals on any site which contains contaminated land, or when past activities on that site include those listed in Appendix 10, shall be a restricted discretionary activity. 22.1.3 Under Rule 22.1.2 the Council shall restrict the exercise of its discretion to: 22.1.3.1 The adequacy of any methods proposed to reduce any potential adverse effects on people or animals. 22.1.3.2 If the contaminated material is to be removed from the site, where and how it is to be disposed of, the level of risk to human health and the environment. 22.1.3.3 Where the site is not confirmed as contaminated, but has been used for one or more of the activities listed in Appendix 10, further investigation to determine whether the site is contaminated and the extent of that contamination.	9.6.2 Any activity which does not comply with Rule 9.6.1 shall be a restricted discretionary activity. 9.6.3 Under Rule 9.6.2, the Council shall restrict its discretion to consideration of: 9.6.3.1 The effectiveness of any proposed mitigation measures that reduce the risk of any adverse effects on people or the environment from contaminated land; 9.6.3.2 The effectiveness of any mitigation measures proposed to reduce the risk of effects on people or to remove or contain the area of contaminated land; 9.6.3.3 Any effects on the environment or other people resulting from any mitigation measures, including where any contaminated soil removed from the site will be disposed to and how; 9.6.3.4 Any positive effects which may offset any adverse effects; and 9.6.3.5 Any monitoring or review conditions.

Living	Business	Rural
Earthworks and Contaminated Land		
		1.2.1 Any earthworks which meet the following condition shall be a permitted activity: 1.2.1.1 Any soil or earth to be removed from the site is not contaminated.
		1.2.2 The removal of contaminated soil or earth from a site shall be a restricted discretionary activity. 1.2.3 Under Rule 1.2.2, the Council shall restrict its discretion to the consideration of: 1.2.3.1 Where the contaminated soil will be disposed to and how; and 1.2.3.2 Any monitoring conditions.
Buildings and Contaminated Land		
		3.5.1 Erecting any building or any additions or alterations to, or modification or demolition of, any building shall be a permitted activity if the following condition is met: 3.5.1.1 No dwelling or building designed for or used as a recreational facility or an educational facility is erected on a site which is contaminated.
		3.5.2 Erecting any dwelling or any building designed for or used as a recreational facility or an education facility on any site which is contaminated shall be a restricted discretionary activity. 3.5.3 Under Rule 3.5.2, the Council shall restrict its discretion to consideration of:

Living	Business	Rural
		3.5.3.1 The effectiveness of any proposed mitigation measures that reduce the risk of any adverse effects on people or the environment from contaminated land; 3.5.3.2 The effectiveness of any mitigation measures proposed to reduce the risk of effects on people or to remove or contain the area of contaminated land; 3.5.3.3 Any effects on the environment or other people resulting from any mitigation measures, including where any contaminated soil removed from the site will be disposed to and how; 3.5.3.4 Any positive effects which may offset any adverse effects; and 3.5.3.5 Any monitoring or review conditions.

PART E

APPENDIX 9

HAZARDOUS SUBSTANCES

The Tables in this Appendix are intended only for defining the status of a proposed land use activity under the Resource Management Act, and not for any purpose under HSNO or other legislation.

The full description of HSNO classes, sub-classes and categories as well as explanations of terms used are contained in the Hazardous Substances Regulations. Detailed information on the application of the HSNO classification system to individual substances is available from the Environmental Risk Management Authority (ERMA).

Substances being evaluated against the Tables should be identified in the first instance by reference to container labelling, Safety Data Sheets (SDS) or information published by ERMA. Substances not assigned a HSNO classification may need to be identified by their UN Class, however HSNO classes and categories do not always correspond perfectly with the UN Classification. Consultation with the supplier or manufacturer of the substance may be necessary.

It is important to note that:

- A number of HSNO classes or sub-classes that do not have a significant hazard rating in the land-use planning context are omitted from the Tables.

- Where a substance has more than one HSNO subclass applied the quantity limit for storage as a permitted activity will be based on the most restrictive threshold for that substance in Table E9.2.

- Examples of common substances are given only as an indication of substances with hazardous characteristics that may be associated with land use in the District.

Table E9.1 — Classification of Hazardous Substances

Hazardous Substance Type	**HSNO Class/ Category**	**Description**	**Health and Safety Hazard** (Source: Land use Planning Guide for Hazardous Facilities Appendix A: HFSP Rating Criteria for Hazardous Substances, Ministry for the Environment)
Explosive Substances	1.1	Substances and articles that have a mass explosion hazard.	Fire/explosion (High hazard)
	1.2	Substances and articles that have a projection hazard but not a mass explosion hazard.	Fire/explosion (Medium hazard)
	1.3	Substances and articles that have a fire hazard and either a minor blast hazard or a minor projection hazard or both.	Fire/explosion (Low hazard)

	1.5	Very insensitive substances that have a mass explosion hazard.	Fire/explosion (Low hazard)
Flammable gases	2.1.1A	a) Ignitable when in a mixture of 13% or less by volume with air; or b) Has a flammable range with air of at least 12%, regardless of the lower flammability limit.	Fire/explosion (High hazard)
	2.1.2A Flammable Aerosols	An aerosol comprising 45% or more by mass of flammable ingredients.	Fire/explosion (High hazard)
	LPG		Fire/explosion (Medium hazard)
Flammable liquids	3.1A	A flash point of less than 23°C and an initial boiling point of less than or equal to 35°C.	Fire/explosion (Very high hazard)
	3.1B	A flash point of less than 23°C and an initial boiling point of greater than 35°C.	Fire/explosion (Medium hazard)
	3.1C	A flash point of greater than or equal to 23°C but less than or equal to 60°C.	Fire/explosion (Medium hazard)
	3.1D	A flash point of greater than 60°C but less than or equal to 93°C.	Fire/explosion (Low hazard)
Liquid desensitised explosives	3.2A 3.2B 3.2C	a) A substance that: (i) is listed as a liquid desensitized explosive and is assigned Packing Group I, II or III in the UN Model Regulations; or b) A liquid desensitised explosive that: (i) is formed from an explosive of Class I by adding a desensitizing agent to form a liquid that no longer meets the threshold for Class I; and (ii) is not listed in the UN Model Regulations and is not assigned a Packing Group.	Fire/explosion (High hazard)
Flammable solids – readily combustible solids and solids	4.1.1A	A substance that burns rapidly or the reaction spreads rapidly or may cause fire through low	Fire/explosion (Medium hazard)

that may cause fire through friction		friction in the relevant tests of the UN Manual of Tests and Criteria.	
	4.1.1B	A substance that has lower ratings than 4.1.1A in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (Low hazard)
Self-reactive substances	4.1.2A 4.1.2B	A thermally unstable substance that propagates a detonation or rapid deflagration or violent effect or thermal explosion in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (High hazard)
	4.1.2C 4.1.2D	A substance with lower ratings than the above two categories in the relevant tests.	Fire/explosion (Medium hazard)
	4.1.2E 4.1.2F 4.1.2G	A substance with even lower ratings than the above two categories in the relevant tests.	Fire/explosion (Low hazard)
Solid desensitised explosives	4.1.3A 4.1.3B 4.1.3C	a) A substance with one of the specified UN serial numbers listed in the UN Model Regulations; or b) A solid desensitised explosive that is formed from an explosive of Class I by adding a desensitising agent to form a solid substance that no longer meets the threshold for Class I.	Fire/explosion (High hazard)
Spontaneously combustible substances	4.2A Spontaneously combustible and pyrophoric substances	a) A solid substance that does not meet the criteria for subclass 4.1.2, but ignites within 5 minutes on contact with air under the relevant test conditions in the UN Manual of Tests and Criteria; or b) A substance that does not meet the criteria for subclass 4.1.2, but is a liquid which ignites or chars the filter paper under the relevant test conditions.	Fire/explosion (High hazard)
	4.2B Spontaneously combustible and self- heating substances	A substance that does not meet the criteria for subclass 4.1.2 but meets specified	Fire/explosion (High hazard)

		criteria under the relevant test conditions.	
	4.2C Spontaneously combustible and self- heating substances	A substance that does not meet the criteria for subclass 4.1.2, which, depending on quantity, meets specified criteria under the relevant test conditions.	A substance that does not meet the criteria for subclass 4.1.2, which, depending on quantity, meets specified criteria under the relevant test conditions.
Solids that emit flammable gas when in contact with water	4.3A	a) A substance that emits a gas that ignites when a small quantity of the substance is brought into contact with water; or b) A substance that reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is >10 litres/kg over any 1 minute.	Fire/explosion (High hazard)
	4.3B	A substance that reacts readily with water at ambient temperatures such that the maximum rate of evolution is >20 litres/kg per hour.	Fire/explosion (High hazard)
	4.3C	A substance that reacts slowly with water at ambient temperatures so that the maximum rate of evolution of flammable gas is >1 litre/kg per hour.	Fire/explosion (Medium hazard)
Oxidising substances – liquids or solids	5.1.1A	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group I; or b) A solid that when mixed with dry cellulose either spontaneously ignites or exhibits a mean burning time less than that of a specified reference material; or c) A liquid that when mixed with dry cellulose forms a mixture that either spontaneously ignites or exhibits a mean pressure rise time less than that of a specified reference material.	Fire/explosion (High hazard)
	5.1.1B	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group II; or	Fire/explosion (High hazard)

		b) A solid that does not meet the criteria of 5.1.1A and that when mixed with dry cellulose forms a mixture that exhibits a mean burning time equal to or less than a specified reference material; or c) A liquid that does not meet the criteria of 5.1.1A and that when mixed with dry cellulose forms a mixture that exhibits a mean pressure rise time less than or equal to that of a specified reference material.	
	5.1.1C	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group III; or b) A solid that does not meet the criteria of 5.1.1A or B and that when mixed with dry cellulose forms a mixture that exhibits a mean burning time equal to or less than that of a specific reference material; or c) A liquid that does not meet the criteria of 5.1.1A or B and that when mixed with dry cellulose forms a mixture that exhibits a mean pressure rise time less than or equal to that of a specified reference material.	Fire/explosion (Medium hazard)
Oxidising substances – gases	5.1.2A	a) A gas that is listed as 5.1 in the UN Model Regulations; or b) A gas that causes or contributes to combustion of other material at a faster rate than air.	Fire/explosion (High hazard)
Organic Peroxides	5.2A 5.2B	A substance that propagates a detonation or rapid deflagration or violent effect or thermal explosion in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (High hazard)
	5.2C 5.2D	A substance with lower ratings than 5.2A or B in the relevant tests.	Fire/explosion (Medium hazard)
Toxic substances	6.1A	Oral toxicity: LD50 of less than or equal to 5 mg/kg Dermal toxicity: LD50 of less than or equal to 50 mg/kg	Human health (High hazard)

		Inhalation toxicity (gas): LC50 of less than or equal to 100 ppm Inhalation toxicity (vapour): LC50 of less than or equal to 0.5 mg/l Inhalation toxicity (dust/mist): LC50 of less than or equal to 0.05 mg/l	
	6.1B	Oral toxicity: LD50 of greater than 5 mg/kg but less than or equal to 50 mg/kg Dermal toxicity: LD50 of greater than 50 mg/kg but less than or equal to 200 mg/kg Inhalation toxicity (gas): LC50 of greater than 100 ppm but less than or equal to 500 ppm Inhalation toxicity (vapour) LC50 of greater than 0.5 mg/l but less than or equal to 2.0 mg/l Inhalation toxicity (dust/mist) LC50 of greater than 0.05 mg/l but less than or equal to 0.5 mg/l	Human health (High hazard)
	6.1C	Oral toxicity: LD50 of greater than 50 mg/kg but less than or equal to 300 mg/kg Dermal toxicity: LD50 of greater than 200 mg/kg but less than or equal to 1000 mg/kg Inhalation toxicity (gas): LC50 of greater than 500 ppm but less than or equal to 2500 ppm Inhalation toxicity (vapour) LC50 of greater than 2.0 mg/l but less than or equal to 10.0 mg/l Inhalation toxicity (dust/mist) LC50 of greater than 0.5 mg/l but less than or equal to 1.0 mg/l	Human health (Medium hazard)
Radioactive material	N/A [1]		

Corrosive substances	8.2A	Data indicate irreversible destruction of dermal tissue following brief exposure.	Human health (High hazard)
	8.2B	Data indicate irreversible destruction of dermal tissue following moderate exposure.	Human health (Medium hazard)
	8.2C	Data indicate irreversible destruction of dermal tissue following lengthy exposure (up to four hours).	Human health (Low hazard)
Ecotoxic substances	9.1A Substances that are very ecotoxic in the aquatic environment	Acute aquatic toxicity value[2] of less than or equal to 1 mg/l	Environment (High hazard)
	9.1B Substances that are ecotoxic in the aquatic environment	Chronic aquatic toxicity[3] of less than or equal to 1 mg/l and a) acute aquatic toxicity value of greater than 1 mg/l but less than 10 mg/l; and b) not rapidly degradable or is bioaccumulative, or is not rapidly degradable and is bioaccumulative.	Environment (Medium hazard)
	9.1C Substances that are harmful in the aquatic environment	Chronic aquatic toxicity of less than or equal to 1 mg/l and: a) acute aquatic toxicity value of greater than 10 mg/l but less than 100 mg/l; and b) not rapidly degradable or is bioaccumulative or, is not rapidly degradable and is bioaccumulative.	Environment (Medium hazard)
	9.1D Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	a) Acute aquatic toxicity value of greater than 1 mg/l but less than 100 mg/l, but does not meet classification criteria for 9.1A, 9.1B or 9.1C; or b) Chronic aquatic toxicity value is less than or equal to 1 mg/l but does not meet classification criteria for 9.1B or 9.1C; or c) Not rapidly degradable and is bioaccumulative but does not meet classification criteria for 9.1A, 9.1B or 9.1C.	Environment (Low hazard)

[1] Radioactive substances are controlled under the Radiation Protection Act by the National Radiation Laboratory of the Ministry of Health.

[2] Acute aquatic toxicity value' means the lowest value expressed in units of milligrams of a substance per

(a) fish LC50 data after a 96-hour exposure period; or

(b) crustacean EC50 data after a 48-hour exposure period; or

(c) algal, or other aquatic plant EC50 data after a 72-hour exposure period.

[3] 'Chronic aquatic toxicity' means the lowest value expressed in units of milligrams of a substances per litre of water from chronic fish, crustacean, algal, or other aquatic plant NOEC (no observed effect concentration) data.

Table E9.2 - Land Use Zone Quantity Limits for Classes of Hazardous Substances

Hazardous Substance Type	Examples (included but not limited to)	HSNO Class/Category	Living Zone A	Living Zone B	Quantity Limit Business 1 Zone	Quantity Limit Business 2 and 3 Zones
Explosive substances	Nitrate mixtures, nitro compounds, chlorate mixtures, ammunition/detonators (excluding those purchased for sporting or recreational small arms use); gunpowder, or nitro compound adapted and exclusively used in the preparation or manufacture of cartridges for small arms, or for flares.	1.1	0 kg/litres	-	2.5 kg/litres	50 kg/litres
		1.2	15 kg/litres	-	15 kg/litres	50 kg/litres
		1.3	15 kg/litres	-	75 kg/litres	100 kg/litres
		1.4	15 kg/litres	-	75 kg/litres	200 kg/litres
Flammable gases	LPG, acetylene, hydrogen, methane	LPG	300 kg	–	2,000 kg	8,000 kg
		2.1.1A	100 kg	250 kg	250 kg	250 kg
		2.1.2A Flammable Aerosols	100 kg	250 kg	250 kg	250 kg
Flammable liquids	Liquid fuels, solvents, adhesives etc: Petrol, ethyl alcohol, methyl alcohol, Isopropyl alcohol, acetone, benzene, toluene, butylamine, MIBK	3.1.A, 3.1B Aboveground storage	50 litres	–	3,000 litres	5,000 litres
		Underground storage	0 litres	-	5,000 litres	50,000 litres
	Kerosene, styrene monomer, cyclohexanene, turpentine, butyl methacrylate,	3.1C	1,000 litres	–	3,000 litres	5,000 litres

	chlorobenzene, ethoxyethanol					
	Diesel, petroleum oils	3.1D	Above-ground storage [1]	1,000 litres	5,000 litres	30,000 litres
			Under-ground storage [2]	1,000 litres	30,000 litres	30,000 litres
Liquid desensitised explosives	Nitroglycerine mixture/Solution	3.2A 3.2B 3.2C	0 litres	–	30 litres	100 litres
	Nitrocellulose solution					
Flammable solids– readily combustible solids and solids that may cause fire through friction	Red phosphorus, ammonium picrate, picric acid, monomethylamine nitrate, nitrocellulose, trinitrobenzene, magnesium and aluminium powders Alkali metals e.g. sodium, potassium, lithium, calcium, magnesium, metal hydrides, metal carbides	4.1.1A, 4.1.1B	1 kg	–	25 kg	50 kg
Self-reactive substances	Azocarbamides, benzene sulphohydrazine, diazonium salts	4.1.2A, 4.1.2B, 4.1.2C, 4.1.2D, 4.1.2E, 4.1.2F, 4.1.2G	0 kg	–	5 kg	50 kg
Solid desensitised explosives	Nitroglycerine -solid, desensitised	4.1.3A, 4.1.3B, 4.1.3C	0 kg	–	5 kg	50 kg
Spontaneously combustible substances	A variety of metallic, organic and inorganic compounds and mixtures					
	Spontaneously combustible and pyrophoric substances	4.2A	1 kg	-	25 kg	50 kg
	Spontaneously combustible and self-heating substances	4.2B	1 kg	-	25 kg	50 kg
	Spontaneously combustible and self-heating substances	4.2C	1 kg	-	25 kg	500 kg
Solids that emit flammable gas when in contact with water	Compounds derived from reactive metals e.g. compounds of aluminium, calcium, lithium, magnesium,	4.3A, 4.3B	1 kg	-	25 kg	50 kg
		4.3C	1 kg	-	25 kg	500 kg

	potassium, phosphorus, sodium					
Oxidising substances– liquids or solids	Water treatment chemicals e.g. pool chlorine granules	5.1.1A	50 kg/litres	-	1,000 kg/litres	2,000 kg/litres
	Chromates, bromates, chlorates, chlorites, nitrates, permanganates	5.1.1B, 5.1.1C	1 kg/litres	-	25 kg/litres	200 kg/litres
Oxidising substances – gases	Oxygen gas	5.1.2A	10 kg	250 kg	250 kg	1,000 kg
Organic Peroxides	Any organic peroxide	5.2A, 5.2B	1 kg/litres	-	25 kg/litres	200 kg/litres
		5.2C, 5.2D	1kg/litres	-	25/litres	500 kg/litres
		5.2E, 5.2F, 5.2G	1kg/litres	-	25/litres	2000 kg/litres
Toxic substances	A wide range of industrial and commercial chemicals including compounds derived from arsenic, cadmium, copper, chromium, lead, nickel, mercury (including amalgams), zinc. Cyanides, methyl bromide, acrylamide, phenols, chlorophenols, aniline, oxalates Toxic substances land use thresholds in this Table are identified in the following subgroups:	6.1A, 6.1B, 6.1C, 6.1D Including the following subgroups:				
	Agrichemicals and Pesticides Bipyridyls, carbamates, dinitrophenols, organophosphates, organochlorines, phenoxy compounds	Agrichemicals and Pesticides	10 kg/litres	50 kg/litres	500 kg/litres	1,000 kg/litres
	Fumigant gases and vertebrate poisons.	Fumigant gases and vertebrate poisons	0 kg	-	0 kg	100 kg
	Fumigant gases (e.g. chloropicrin, methyl bromide) and vertebrate poisons (e.g. cyanide baits, 1080)	Fumigant gases and vertebrate poisons	(0m^3 gas)	-	(0m^3gas)	(5m^3 gas)
	Toxic gases (other than gases that are HSNO 'Controlled Substances') Chlorine, ammonia	Toxic gases (other than gases that are HSNO	0 kg	–	1,000 kg	1,000 kg

		'Controlled Substances')				
	Timber treatment chemicals. Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.	Timber treatment chemicals	20 litres	–	200 litres	200 litres
	Chlorinated hydrocarbons Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane	Chlorinated hydrocarbons	20 litres	–	1,000 litres	1,000 litres
	Any other toxic substances [5]	Any other toxic substances (that are not otherwise Class 3 flammable liquids)	1 kg/litres	_	200 kg/litres	2,000 kg/litres
Radioactive material		N/A	1013 bequerel per kilogram			
Corrosive substances	Acids e.g. nitric, sulphuric, hydrochloric, hydrofluoric acids; tricholoro acetic acid. Alkalis e.g. sodium, potassium and lithium hydroxides, zinc chloride, zirconium tetrachloride, sulphur chlorides, silicon tetrachloride, phosphorus pentoxide, ferric chloride, phenolsuphanic acid, hydroxlamine sulphate, hexyltrichlorosilane, ethanolamine	8.2A, 8.2B, 8.2C	10 kg/litres		1,000 kg/litres	2,000 kg/litres
Ecotoxic substances	Variety of organic and inorganic compounds, mixtures and materials that may or may not be classified in other HSNO catgeories					
	Substances that are very ecotoxic in the aquatic environment	9.1A	25 litres/kg		500 litres/kg	1,000 litres/kg
	Substances that are ecotoxic in the aquatic environment	9.1B	250 litres/kg		500 litres/kg	5,000 litres/kg

	Substances that are harmful in the aquatic environment	9.1C	250 litres/kg	-	500 litres/kg	5,000 litres/kg
	Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	9.1D	250 litres/kg	-	1,000 litres/kg	50,000 litres/kg

[1] Not applicable to fuel tanks connected to motors of road vehicles, farm vehicles, farm machinery and locomotives.

[2] "Any other toxic substances" means any toxic substance of classes 6.1A, 6.1B, 6.1C, 6.1D that is not in any other sub groups of toxic substances.

PART E

APPENDIX 15
HAZARDOUS SUBSTANCES

The Tables in this Appendix are intended only for defining the status of a proposed land use activity under the Resource Management Act, and not for any purpose under HSNO or other legislation.
The full description of HSNO classes, sub-classes and categories as well as explanations of terms used are contained in the Hazardous Substances Regulations. Detailed information on the application of the HSNO classification system to individual substances is available from the Environmental Risk Management Authority (ERMA).
Substances being evaluated against the Tables should be identified in the first instance by reference to container labelling, Safety Data Sheets (SDS) or information published by ERMA. Substances not assigned a HSNO classification may need to be identified by their UN Class, however HSNO classes and categories do not always correspond perfectly with the UN Classification. Consultation with the supplier or manufacturer of the substance may be necessary.
It is important to note that:

- A number of HSNO classes or sub-classes that do not have a significant hazard rating in the land-use planning context are omitted from the Tables.

- Where a substance has more than one HSNO subclass applied the quantity limit for storage as a permitted activity will be based on the most restrictive threshold for that substance in Table E15.2.

- Examples of common substances are given only as an indication of substances with hazardous characteristics that may be associated with land use in the District.

Table E15.1 — Classification of Hazardous Substances

Hazardous Substance Type	**HSNO Class/ Category**	**Description**	**Health and Safety Hazard**(Source: Land use Planning Guide for Hazardous Facilities Appendix A: HFSP Rating Criteria for Hazardous Substances, Ministry for the Environment)
Explosive Substances	1.1	Substances and articles that have a mass explosion hazard.	Fire/explosion (High hazard)
	1.2	Substances and articles that have a projection hazard but not a mass explosion hazard.	Fire/explosion (Medium hazard)
	1.3	Substances and articles that have a fire hazard and either a minor blast hazard or a minor projection hazard or both.	Fire/explosion (Low hazard)
	1.5	Very insensitive substances that have a mass explosion hazard.	Fire/explosion (Low hazard)
Flammable gases	2.1.1A	a) Ignitable when in a mixture of 13% or less by volume with air; or b) Has a flammable range with air of at least 12%, regardless of the lower flammability limit.	Fire/explosion (High hazard)

	2.1.2A Flammable Aerosols	An aerosol comprising 45% or more by mass of flammable ingredients.	Fire/explosion (High hazard)
	LPG		Fire/explosion (Medium hazard)
Flammable liquids	3.1A	A flash point of less than 23°C and an initial boiling point of less than or equal to 35°C.	Fire/explosion (Very high hazard)
	3.1B	A flash point of less than 23°C and an initial boiling point of greater than 35°C.	Fire/explosion (Medium hazard)
	3.1C	A flash point of greater than or equal to 23°C but less than or equal to 60°C.	Fire/explosion (Medium hazard)
	3.1D	A flash point of greater than 60°C but less than or equal to 93°C.	Fire/explosion (Low hazard)
Liquid desensitised explosives	3.2A 3.2B 3.2C	a) A substance that: (i) is listed as a liquid desensitized explosive and is assigned Packing Group I, II or III in the UN Model Regulations; or b) A liquid desensitised explosive that: (i) is formed from an explosive of Class I by adding a desensitizing agent to form a liquid that no longer meets the threshold for Class I; and (ii) is not listed in the UN Model Regulations and is not assigned a Packing Group.	Fire/explosion (High hazard)
Flammable solids – readily combustible solids and solids that may cause fire through friction	4.1.1A	A substance that burns rapidly or the reaction spreads rapidly or may cause fire through low friction in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (Medium hazard)
	4.1.1B	A substance that has lower ratings than 4.1.1A in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (Low hazard)
Self-reactive substances	4.1.2A 4.1.2B	A thermally unstable substance that propagates a detonation or rapid deflagration or violent effect or thermal explosion in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (High hazard)
	4.1.2C 4.1.2D	A substance with lower ratings than the above two categories in the relevant tests.	Fire/explosion (Medium hazard)

	4.1.2E 4.1.2F 4.1.2G	A substance with even lower ratings than the above two categories in the relevant tests.	Fire/explosion (Low hazard)
Solid desensitised explosives	4.1.3A 4.1.3B 4.1.3C	a) A substance with one of the specified UN serial numbers listed in the UN Model Regulations; or b) A solid desensitised explosive that is formed from an explosive of Class I by adding a desensitising agent to form a solid substance that no longer meets the threshold for Class I.	Fire/explosion (High hazard)
Spontaneously combustible substances	4.2A Spontaneously combustible and pyrophoric substances	a) A solid substance that does not meet the criteria for subclass 4.1.2, but ignites within 5 minutes on contact with air under the relevant test conditions in the UN Manual of Tests and Criteria; or b) A substance that does not meet the criteria for subclass 4.1.2, but is a liquid which ignites or chars the filter paper under the relevant test conditions.	Fire/explosion (High hazard)
	4.2B Spontaneously combustible and self- heating substances	A substance that does not meet the criteria for subclass 4.1.2 but meets specified criteria under the relevant test conditions.	Fire/explosion (High hazard)
	4.2C Spontaneously combustible and self- heating substances	A substance that does not meet the criteria for subclass 4.1.2, which, depending on quantity, meets specified criteria under the relevant test conditions.	A substance that does not meet the criteria for subclass 4.1.2, which, depending on quantity, meets specified criteria under the relevant test conditions.
Solids that emit flammable gas when in contact with water	4.3A	a) A substance that emits a gas that ignites when a small quantity of the substance is brought into contact with water; or b) A substance that reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is >10 litres/kg over any 1 minute.	Fire/explosion (High hazard)
	4.3B	A substance that reacts readily with water at ambient temperatures such that the maximum rate of evolution is >20 litres/kg per hour.	Fire/explosion (High hazard)
	4.3C	A substance that reacts slowly with water at ambient temperatures so that the maximum rate of evolution of	Fire/explosion (Medium hazard)

		flammable gas is >1 litre/kg per hour.	
Oxidising substances – liquids or solids	5.1.1A	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group I; or b) A solid that when mixed with dry cellulose either spontaneously ignites or exhibits a mean burning time less than that of a specified reference material; or c) A liquid that when mixed with dry cellulose forms a mixture that either spontaneously ignites or exhibits a mean pressure rise time less than that of a specified reference material.	Fire/explosion (High hazard)
	5.1.1B	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group II; or b) A solid that does not meet the criteria of 5.1.1A and that when mixed with dry cellulose forms a mixture that exhibits a mean burning time equal to or less than a specified reference material; or c) A liquid that does not meet the criteria of 5.1.1A and that when mixed with dry cellulose forms a mixture that exhibits a mean pressure rise time less than or equal to that of a specified reference material.	Fire/explosion (High hazard)
	5.1.1C	a) A substance listed as 5.1 in the UN Model Regulations and assigned Packing Group III; or b) A solid that does not meet the criteria of 5.1.1A or B and that when mixed with dry cellulose forms a mixture that exhibits a mean burning time equal to or less than that of a specific reference material; or c) A liquid that does not meet the criteria of 5.1.1A or B and that when mixed with dry cellulose forms a mixture that exhibits a mean pressure rise time less than or equal to that of a specified reference material.	Fire/explosion (Medium hazard)
Oxidising substances – gases	5.1.2A	a) A gas that is listed as 5.1 in the UN Model Regulations; or	Fire/explosion (High hazard)

		b) A gas that causes or contributes to combustion of other material at a faster rate than air.	
Organic Peroxides	5.2A 5.2B	A substance that propagates a detonation or rapid deflagration or violent effect or thermal explosion in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (High hazard)
	5.2C 5.2D	A substance with lower ratings than 5.2A or B in the relevant tests.	Fire/explosion (Medium hazard)
Toxic substances	6.1A	Oral toxicity: LD50 of less than or equal to 5 mg/kg Dermal toxicity: LD50 of less than or equal to 50 mg/kg Inhalation toxicity (gas): LC50 of less than or equal to 100 ppm Inhalation toxicity (vapour): LC50 of less than or equal to 0.5 mg/l Inhalation toxicity (dust/mist): LC50 of less than or equal to 0.05 mg/l	Human health (High hazard)
	6.1B	Oral toxicity: LD50 of greater than 5 mg/kg but less than or equal to 50 mg/kg Dermal toxicity: LD50 of greater than 50 mg/kg but less than or equal to 200 mg/kg Inhalation toxicity (gas): LC50 of greater than 100 ppm but less than or equal to 500 ppm Inhalation toxicity (vapour) LC50 of greater than 0.5 mg/l but less than or equal to 2.0 mg/l Inhalation toxicity (dust/mist) LC50 of greater than 0.05 mg/l but less than or equal to 0.5 mg/l	Human health (High hazard)
	6.1C	Oral toxicity: LD50 of greater than 50 mg/kg but less than or equal to 300 mg/kg Dermal toxicity: LD50 of greater than 200 mg/kg but less than or equal to 1000 mg/kg Inhalation toxicity (gas): LC50 of greater than 500 ppm but less than or equal to 2500 ppm	Human health (Medium hazard)

		Inhalation toxicity (vapour) LC50 of greater than 2.0 mg/l but less than or equal to 10.0 mg/l Inhalation toxicity (dust/mist) LC50 of greater than 0.5 mg/l but less than or equal to 1.0 mg/l	
Radioactive material	N/A [1]		
Corrosive substances	8.2A	Data indicate irreversible destruction of dermal tissue following brief exposure.	Human health (High hazard)
	8.2B	Data indicate irreversible destruction of dermal tissue following moderate exposure.	Human health (Medium hazard)
	8.2C	Data indicate irreversible destruction of dermal tissue following lengthy exposure (up to four hours).	Human health (Low hazard)
Ecotoxic substances	9.1A Substances that are very ecotoxic in the aquatic environment	Acute aquatic toxicity value [2] of less than or equal to 1 mg/l	Environment (High hazard)
	9.1B Substances that are ecotoxic in the aquatic environment	Chronic aquatic toxicity[3] of less than or equal to 1 mg/l and a) acute aquatic toxicity value of greater than 1 mg/l but less than 10 mg/l; and b) not rapidly degradable or is bioaccumulative, or is not rapidly degradable and is bioaccumulative.	Environment (Medium hazard)
	9.1C Substances that are harmful in the aquatic environment	Chronic aquatic toxicity of less than or equal to 1 mg/l and: a) acute aquatic toxicity value of greater than 10 mg/l but less than 100 mg/l; and b) not rapidly degradable or is bioaccumulative or, is not rapidly degradable and is bioaccumulative.	Environment (Medium hazard)
	9.1D Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	a) Acute aquatic toxicity value of greater than 1 mg/l but less than 100 mg/l, but does not meet classification criteria for 9.1A, 9.1B or 9.1C; or b) Chronic aquatic toxicity value is less than or equal to 1 mg/l but does not meet classification criteria for 9.1B or 9.1C; or c) Not rapidly degradable and is bioaccumulative but does not	Environment (Low hazard)

		meet classification criteria for 9.1A, 9.1B or 9.1C.	

[1] Radioactive substances are controlled under the Radiation Protection Act by the National Radiation Laboratory of the Ministry of Health.

[2] Acute aquatic toxicity value' means the lowest value expressed in units of milligrams of a substance per

(a) fish LC50 data after a 96-hour exposure period; or

(b) crustacean EC50 data after a 48-hour exposure period; or

(c) algal, or other aquatic plant EC50 data after a 72-hour exposure period.

[3] 'Chronic aquatic toxicity' means the lowest value expressed in units of milligrams of a substances per litre of water from chronic fish, crustacean, algal, or other aquatic plant NOEC (no observed effect concentration) data.

Table E15.2 - Land Use Zone Quantity Limits for Classes of Hazardous Substances

HSNO classes or subclasses not listed in Table E15.2 are exempt from the quantity limit requirements of Storage of Hazardous Substances Rule 7.1.1.1.

Hazardous Substance Type	Examples (included but not limited to)	HSNO Class/ Category	Quantity Limit
Explosive substances	Nitrate mixtures, nitro compounds, chlorate mixtures, gunpowder, or nitro compound adapted and exclusively used in the preparation or manufacture of cartridges for small arms, or for flares; ammunition/detonators (excluding those purchased for personal sporting or recreational small arms use)	1.1 1.2 1.3 1.5	2.5 kg/litres 15 kg/litres 75 kg/litres 75 kg/litres
Flammable gases	LPG, acetylene, hydrogen, methane	LPG 2.1.1A 2.1.2A - Flammable Aerosols	600 kg 100 kg 100 kg
Flammable liquids	Liquid fuels, solvents, adhesives etc: Petrol, ethyl alcohol, methyl alcohol, Isopropyl alcohol, acetone, benzene, toluene, butylamine, MIBK	3.1.A, 3.1B Above ground storage[4] Underground storage	 3,000 litres 3,000 litres
	Kerosene, styrene monomer, cyclohexanene, turpentine, butyl methacrylate, chlorobenzene, ethoxyethanol	3.1C 3.1D	1,000 litres
	Diesel, petroleum oils	Aboveground storage [4] Underground storage	5,000 litres 5,000 litres
Liquid desensitised explosives	Nitroglycerine mixture/Solution Nitrocellulose solution	3.2A, 3.2B, 3.2C	30 litres
Flammable solids – readily combustible solids and solids that may cause fire through friction	Red phosphorus, ammonium picrate, picric acid, monomethylamine nitrate, nitrocellulose, trinitrobenzene, magnesium and aluminium powders Alkali metals e.g. sodium, potassium, lithium, calcium, magnesium, metal hydrides, metal carbides	4.1.1A, 4.1.1B	1 kg
Self-reactive substances	Azocarbamides, benzene sulphohydrazine, diazonium salts	4.1.2A, 4.1.2B, 4.1.2C, 4.1.2D, 4.1.2E, 4.1.2F, 4.1.2G	1 kg

Solid desensitised explosives	Nitroglycerine – solid, desensitised	4.1.3A, 4.1.3B, 4.1.3C	5 kg
Spontaneously combustible substances	A variety of metallic, organic and inorganic compounds and mixtures	4.2A Spontaneously combustible and pyrophoric substances 4.2B Spontaneously combustible and seld-heating substances 4.2CB Spontaneously combustible and seld-heating substances	25 kg 25 kg 25kg
Solids that emit flammable gas when in contact with water	Compounds derived from reactive metals e.g. compounds of aluminium, calcium, lithium, magnesium, potassium, phosphorus, sodium	4.3A, 4.3B, 4.3C	1 kg
Oxidising substances – liquids or solids	Water treatment chemicals e.g. pool chlorine granules	5.1.1A	50 kg/litres
	Chromates, bromates, chlorates, chlorites, nitrates, permanganates	5.1.1B, 5.1.1C	1 kg/litres
Oxidising substances – gases	Oxygen gas	5.1.2A	100 kg
Organic Peroxides	Any organic peroxide	5.2A, 5.2B	1 kg/litres
		5.2C, 5.2D	1 kg/litres
		5.2E, 5.2F, 5.2G	1 kg/litres
Toxic substances	A wide range of industrial and commercial chemicals including compounds derived from arsenic, cadmium, copper, chromium, lead, nickel, mercury (including amalgams), zinc. Cyanides, methyl bromide, acrylamide, phenols, chlorophenols, aniline, oxalates	6.1A, 6.1B, 6.1C, 6.1D	
	Toxic substances land use thresholds in this Table are identified in the following subgroups:	*Including the following subgroups:*	
	Toxic gases (other than gases that are HSNO 'Controlled Substances') Chlorine, ammonia	**Toxic gases** (other than gases that are HSNO 'Controlled Substances')	10 kg
	Timber treatment chemicals Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.	**Timber treatment chemicals**	20 litres
	Chlorinated hydrocarbons Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane	**Chlorinated hydrocarbons**	20 litres
	Any other toxic substances [5]	**Any other toxic substances** (that are not otherwise Class 3 flammable liquids)	1 kg/litres

Radioactive material		N/A	10^{13}bequerel per kilogram
Corrosive substances	Acids e.g. nitric, sulphuric, hydrochloric, hydrofluoric acids; tricholoro acetic acid. Alkalis e.g. sodium, potassium and lithium hydroxides, zinc chloride, zirconium tetrachloride, sulphur chlorides, silicon tetrachloride, phosphorus pentoxide, ferric chloride, phenolsuphanic acid, hydroxlamine sulphate, hexyltrichlorosilane, ethanolamine	8.2A, 8.2B, 8.2C	10 kg/litres
Ecotoxic substances	Variety of organic and inorganic compounds, mixtures and materials that may or may not be classified in other HSNO catgeories	9.1A Substances that are very ecotoxic in the aquatic environment 9.1B Substances that are ecotoxic in the aquatic environment 9.1C Substances that are harmful in the aquatic environment 9.1D Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	1,000 litres/kg 5,000 litres/kg 5,000 litres/kg 50,000 litres/kg

[4] Not applicable to fuel tanks connected to motors of road vehicles, farm machinery or locomotives.

[5] "Any other toxic substances" means any toxic substance of classes 6.1A, 6.1B, 6.1C and 6.1D that is not in any of the other subgroups of toxic substances.

Table E15.3: Land Use Quantity Limits for Agrichemicals, Fumigants and Vertebrate Toxic Agents

This table relates to substances controlled by Rule C7 – Storage Clause 7.1.1.2

Hazradous Substance Type	**Quantity Limit**
Agrichemicals	3,000 kg/litres
Fumigants	100 kg
Vertebrate Toxic Agents	100 kg

Definitions

Agrichemical: means any substance, whether inorganic or organic, man-made or naturally occurring, modified or in its original state, used to eradicate, modify or control flora and fauna. This excluded fertilisers, lime, vertebrate toxic agents, and oral nutrition compounds. [Rural/Township]

Contaminated Land: includes any land which contains hazardous substances at concentrations above recognised guidelines which pose or are likely to pose an immediate or long term risk to human health and/or the environment. [Rural/Township]

Fumigant: means any substance listed in Schedule 1 of the "Environmental Risk Management Authority Hazardous Substances (Fumigants) Transfer Notice 2004 (as amended)". [Rural]

Hazardous Substance: includes, but is not limited to, any substance as defined in section 2 of the Hazardous Substances and New Organisms Act 1996 as a hazardous substance. [Rural/Township]

Sensitive Activity: includes any of the following activities:

- Residential Activity;
- Travelling Accommodation;
- Community Facility;
- Recreational Facility or Recreational Activity;
- Place of Assembly;
- Restaurant;
- Educational Facility;
- Camping Ground Facility;

but excludes Temporary Accommodation. [Rural]

Vertebrate Toxic Agent: means any substance listed in Schedule 1 of the "Environmental Risk Management Authority Hazardous Substances (Vertebrate Toxic Agents) Transfer Notice 2004 (as amended)" and includes 1080 (Sodium fluoroacetate). [Rural]

Appendix B Adjacent District Plan Provisions

Hazardous substances

Objectives and policies

	Ashburton District Plan	Waimakariri District Plan	Operative Hurunui District Plan	Proposed Hurunui District Plan as Amended by Decisions 2016	Christchurch District Plan
Haz subs objective	**Objective 16.1: Management of Hazardous Substances** To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects during the manufacture, storage, transport and disposal of hazardous substances to: • human health, • the health of livestock and other farm animals or domestic animals, • the health of flora and fauna, • the amenity of residential or other similarly sensitive areas, • the natural environment, and • the life-sustaining capacity and amenity values of waterbodies, land and soil resources	**Objective 12.1.1** Maintain the amenity values and a quality of environment appropriate for different parts of the District which protects the health, safety and wellbeing of present and future generations, and ensure that any potential adverse environmental effects from buildings and structures, signs, glare, noise and hazardous substances are avoided or mitigated.	**Objective 15** Minimised risk of damage to people, communities and environment from hazardous activities and the use of hazardous substances.	**Objective 17** The risks of hazardous substances to human health and the environment are minimised.	**4.1.2.1 Objective – Adverse environmental effects** a. The residual risks associated with the storage, use, or disposal of hazardous substances in the district are managed to acceptable levels to not adversely affect people, property and the environment while recognising the benefits of facilities using hazardous substances.
					4.1.2.2 Objective – Risk and reverse sensitivity effects a. Sensitive activities are established at suitable locations to minimise reverse sensitivity effects on and avoid unacceptable risks from established facilities using, storing or disposing of hazardous substances.
					4.1.2.3 Objective – Acceptable slope stability risks in relation to hazardous substances a. Residual risks of adverse effects from the use, storage, or disposal of hazardous substances are managed to acceptable levels in areas affected by slope instability.
Haz subs policies	**Policy 16.1A** To control classes of hazardous substances which have the potential to cause adverse effects on the environment, recognising that the quantities of hazardous substances requiring control will vary depending on the proximity of sensitive activities, and the susceptibility and sensitivity of the surrounding environment to adverse effects from hazardous substances.			**Policy 17.2** To manage the design, establishment and operation of major hazardous facilities to ensure the community and the environment are protected from the risks of hazardous substances.	**4.1.2.1.1 Policy – Location of new facilities using, storing or disposing of hazardous substances** a. Locate new facilities using, storing, or disposing of hazardous substances on appropriate sites to ensure that any residual risks to strategic infrastructure are managed to acceptable levels. **4.1.2.2.1 Policy – Establishment of sensitive activities** a. The establishment of sensitive activities in close proximity to existing major facilities using, storing or disposing of hazardous substances shall be: i. avoided in the first instance when that facility or area includes strategic infrastructure or where the sensitive

	Ashburton District Plan	Waimakariri District Plan	Operative Hurunui District Plan	Proposed Hurunui District Plan as Amended by Decisions 2016	Christchurch District Plan
					activity may be exposed to unacceptable risk; and ii. minimised, to allow such facilities to carry out their operations without unreasonable reverse sensitivity constraints.
			Policy 15.4 To control the potential adverse effects of the use of land for the storage, use, disposal or transportation of hazardous substances.		**4.1.2.1.2 Policy – Identifying and managing individual and cumulative effects of facilities using, storing, or disposing of hazardous substances** a. Identify the individual and cumulative effects associated with facilities using, storing or disposing of hazardous substances and manage residual risks to people, property and the environment to acceptable levels.
	Policy 16.1B To allow appropriate quantities and classes of hazardous substances to be stored to provide for land use activities that are consistent with the District Plan objectives and policies for those areas.	**Policy 12.1.1.16** Hazardous substances should be used in locations and by methods that avoid or mitigate adverse effects on the environment and health and safety.			
	Policy 16.1C To ensure hazardous substances are stored under conditions which reduce the risk of any leaks or spills contaminating land or water.	**Policy 12.1.1.15** Hazardous substances should be securely contained during storage, use, or transportation, and monitoring and contingency procedures established, to minimise the risk of spillage or leakage and contamination of land and water.			
	Policy 16.1D To limit manufacturing and storage, and avoid disposing of hazardous substances near any of the following areas: • Waterbodies or wetlands. • Significant ecological sites. • Sites of particular heritage or cultural value. • Popular recreational areas. • Residential units, other than a residential unit on the same site as the activity.				
	Policy 16.1E To promote the disposal of hazardous substances at facilities that are designed to dispose of hazardous substances safely and to avoid or mitigate any adverse effects on the environment of the disposal.				
	Policy 16.1F To ensure parties who manufacture or store commercial quantities of hazardous substances have the means to dispose of hazardous substances and their				

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	containers without adversely affecting the environment.				
	Policy 16.1G To promote the efficient management of the manufacture, storage, transport and disposal of hazardous substances through a co-ordinated approach between agencies responsible for the management of hazardous substances, and to liaise with other agencies involved in the management of hazardous substances in order to develop effective relationships with which to prevent or mitigate the adverse effects of the manufacture, storage, transport or disposal of these substances.	**Policy 12.1.1.18** Co-ordinate with national and regional organisations and adjoining District Councils in the management of hazardous substances.	**Policy 15.1** To coordinate with national and regional organisations in the management of hazardous substances at the District level. **Policy 15.2** To recognise that hazardous activities and the use of hazardous substances is a crossboundary issue.	**Policy 17.1** To coordinate with national and regional organisations in the management of hazardous substances at the district level, in order to avoid regulating hazardous substances where adequate levels of community and environmental protection is already provided.	
	Policy 16.1H To control the manufacture, storage, transport and disposal of hazardous substances so as to avoid, remedy or mitigate adverse environmental effects due to accidental spillages or poor management practices.				
	Policy 16.1I To increase public awareness of the potential adverse environmental effects that may arise from the manufacture, storage, transport and disposal of hazardous substances				
	Policy 16.1J To work toward obtaining access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.				
		Policy 12.1.1.17 Facilities that store or use hazardous substances should be sited so as to minimise adverse effects on the community's use of the road network.			
			Policy 15.3 To gather information, monitor effects and keep records to identify and assess the relative risks to the environment from hazardous substances which will enable informed policy to be made.	**Policy 17.3** To encourage appropriate information to be made available to response agencies, to ensure that in the event of an emergency, the adverse effects of hazardous substances may be prepared for, responded to, mitigated, and recovered from as effectively as practicably possible.	
			Policy 15.5 To minimise the effects of radiation by requiring sources of radiation to comply		

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			with appropriate standards of environmental protection.		
					4.1.2.2.2 Policy – Risk Management Areas a. Avoid sensitive activities locating within Risk Management Areas where these have the potential to be exposed to unacceptable risk and/or may otherwise constrain the development, operation, upgrading or maintenance of bulk fuel and gas terminals.
					4.1.2.3.1 Policy – Risks and adverse effects within areas affected by natural hazards a. Design, construct and manage any proposal involving use, storage or disposal of hazardous substances within areas affected by slope instability to ensure residual risks are managed to acceptable levels.

Rules

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Haz subs rules	**16.7.1 Permitted Activities** The following activities shall be Permitted Activities, provided that they comply with all of the Site Standards and all relevant Zone and District Wide rules: a) The storage of hazardous substances which are not identified in Appendix 16-1, Table 16-1; b) The storage of hazardous substances identified in Appendix 16-1, Table 16-1, in quantities not exceeding those specified in Column A of Table 16-2 for the relevant zone; c) The storage of the following hazardous substances at service stations in the Business zones or the Commercial Area of the Aquatic Park Zone: • Petrol – up to 200,000 litres in underground storage tanks. • Diesel – up to 120,000 litres in underground storage tanks. • LPG – up to 7.5 tonnes single-vessel in above ground storage tanks, or up to 12 tonnes single-vessel in underground storage tanks.	**31.14 Permitted Activities** Any land use is a permitted activity if it: i. is not otherwise listed as a controlled or discretionary activity (restricted) under Rules 31.15 and 31.16; ii. complies with the conditions under Rule 31.14.1; and iii. complies with all the conditions and provisions for permitted activities in this and all other chapters Note that volumes of listed hazardous substances (Class 3a, Class 3c, chlorine gas, chlorites, LPG and timber treatment preservatives) are imposed by Table 31.3, but these are the only volumes that are imposed. Exemptions are also provided for: • Mixing and application of hazardous substances solely for the purpose of controlling plant and animal pests on the site	**A10.1.1** Unless otherwise specified in this Section, the use, transportation, storage, manufacture or disposal of any hazardous substance listed in the Schedule under Appendix A10.1 that complies with the conditions within Section A10.2 is permitted, provided it also complies with all other district-wide rules and rules for Environments of Special Concern in Section B. [conditions set threshold volumes and design standards to provide protection against spills, prohibit the discharge of hazardous substances into the stormwater system, and set requirements for activities involving the emission of radiation] **A10.1.3** The use, transportation or storage of any hazardous substance listed in the schedule under the Appendix A10.1 for any temporary military training activity, is permitted, provided that it also complies with all other district-wide rules and rules for Environments of Special Concern in Section B.		**P1** The use, storage or disposal of any hazardous substance (unless otherwise specified in this plan).

	d) The removal of underground petroleum storage systems and associated impacted soil at service stations, subject to the standards set out in 16.7.9.	• Use, transportation, or storage of any hazardous substance for any temporary military training activity • Transportation of any hazardous substance in any zone • Domestic use and storage of hazardous substances • Petroluem products, diesel or LPG stored or used as fuel in any vehicle or machinery, vessel, rail locomotive or aircraft • Land uses listed as controlled under Rule 31.15	Appendix A10.1 lists 94 hazardous substances or classes of substances		
	16.7.2 Restricted Discretionary Activities The following activities shall be Restricted Discretionary Activities with the exercise of the Council's discretion being restricted to the matter(s) specified in the assessment matters in 16.8: a) Any activity specified as a permitted activity which does not comply with anyone or more of the Site Standards specified below.	**31.15 Controlled Activity** Within any Residential Zone or Mapleham Rural 4B Zone the construction and use of any facility for the storage of petrol, diesel or LPG that does not comply with Rule 31.14, is a controlled activity except in the following circumstances: a. the construction and use of any facility for the storage of petrol, diesel or LPG is a discretionary activity (restricted) under Rule 31.16.1 or Rule 31.16.2.			
	16.7.3 Discretionary Activities The following activities shall be Discretionary Activities: a) The storage of hazardous substances identified in Appendix 16-1, Table 16-1, in quantities exceeding those specified in Column A, but not exceeding those specified in Column B (where specified), of Table 16-2 for the relevant zone; Note: Where Column B of Table 16-2 is denoted by a dash (-), the storage of hazardous substances identified in Schedule 1, in any quantities exceeding those specified in Column A of Table 16-1 shall be a Discretionary Activity. b) The manufacture of any hazardous substance, as either a product or by-product.	**31.16 Discretionary Activities (Restricted)** Any activity that does not comply with one or more of Rules 31.14.1.1 to 31.14.1.5 is a discretionary activity (restricted), except where exempted under Rule 31.14.2 or provided for as a controlled activity under Rule 31.15.1. The construction and use of any facility for the storage of petrol, diesel or LPG which does not comply with one or more of the standards or terms under Rule 31.15.1 (for Rural and Business Zones) or Rule 31.15.1 (for Residential or Mapleham Rural 4B Zones) is a discretionary activity (restricted).	**A10.3 Discretionary activities (unrestricted)** (a) The use, storage, manufacture or disposal of any hazardous substance that does not comply with one or more of the conditions within Section A10.2, except as specified as a non-complying activity. … (c) Individual movements of hazardous substances to or from sites, in quantities above the Level I thresholds, excluding the movement of fuel, oil and petroleum products.	**17.4.2 Discretionary activities (unrestricted)** The following activity is a discretionary activity: 1. The establishment of a major hazardous facility.	
	16.7.4 Non-Complying Activities The following activities shall be Non-Complying Activities: a) The storage of hazardous substances identified in Appendix 16-1, Table 16-1 in quantities exceeding those specified in Column B of Table 16-2 for the relevant zone. b) The use of any land or facilities to dispose of any hazardous substance. Note: this clause does not apply to the disposal of any hazardous substance by use of it in accordance with the manufacturer's instructions		**A10.4 Non-complying activities** (a) The use, transportation, storage, manufacture or disposal of radioactive substance above the threshold limit specified in Appendix A10.1. (b) Any activity which involves the emission of radiation, other than radiofrequency, that does not meet the requirements of any relevant New Zealand standard.		Non-complying activities are included in the CDP for new storage or use of hazardous substances with explosive or flammable properties within specified distances, and for any sensitive activity within a Risk Management Area (up until 31 March 2019)

Contaminated land

Objectives and policies

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Contaminated land objective	No provisions, rely on the NESCS provisions	No provisions, rely on the NESCS provisions	No specific objectives and policies, although noted as a matter that potentially requires management in explanation of some provisions.	**Objective 18** The risk to people and the environment from contaminated land is managed to an acceptable level having regard to the potentially affected environment and the intended use of the land	**4.2.2.1 Objective – Contaminated land – managing effects** a. Land containing elevated levels of contaminants is managed to protect human health and the environment, which includes significant natural and Ngāi Tahu cultural values from the adverse effects of subdivision, development and use of contaminated land and natural hazards, including from site investigations, earthworks and soil disturbance, and to enable the land to be used in the future
Contaminated land policies				**Policy 18.1** To ensure that the Canterbury Regional Council's Listed Land Use Register is checked for all resource consent and building consent applications so that the risks to people and the environment from potentially contaminated land are appropriately managed.	**4.2.2.1.1 Policy – Best practice approach** a. Require any proposal to subdivide, use or develop contaminated land or potentially contaminated land to apply a best practice approach to investigate the risks, and either remediate the contamination or manage activities on contaminated land to protect people and the environment.
				Policy 18.2 To ensure the use, subdivision and development of contaminated land manages risks to people and the environment, and minimises any residual risk by requiring: 1. A site investigation of any land identified as actually or potentially contaminated, prior to any new subdivision or change of use of land that could result in an increase in any adverse effect resulting from any contamination of the land; 2. That any actual or potential adverse effects of contaminated land are managed in a manner that does not lead to further significant adverse effects on the environment; and 3. That any management works for contaminated land do not lead to further significant adverse effects on the environment.	**4.2.2.1.2 Policy – Remediation** Remediation of contaminated land should not pose a more significant risk to human health or the environment than if remediation had not occurred.
				Policy 18.3 To avoid or manage the risk of the migration of contaminants to adjacent land by working with the Canterbury Regional Council to ensure contaminated land is managed to an appropriate level,	**4.2.2.1.3 Policy – Future use** Use or development of contaminated land that has been remediated or has an existing management plan in place, must not damage or destroy any containment

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				or the contaminants are contained or disposed of to an authorised off-site facility.	works, unless comparable or better containment is provided.

Rules

None of the district plans for adjacent councils have rules in relation to contaminated land.

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