VOLUME ONE: TOWNSHIPS

SECTION TWO: ISSUES, OBJECTIVES AND POLICIES, SECTION 3. PEOPLE'S HEALTH, SAFETY AND VALUES, SECTION 3.2 – HAZARDOUS SUBSTANCES

3.2 - HAZARDOUS SUBSTANCES

I - ISSUE

1. ***Adverse effects on the human and natural environments from the manufacture~~,~~ storage, transport on waterbodies or disposal of hazardous substances.***

2. ***Adverse effects on land and soils, waterbodies or other parts of the environment from accidental or deliberate spillage, leakage, or discharge of hazardous substances in the course of their manufacture, storage or disposal.***

3. ***Adverse effects on the amenity values of townships from activities involving the manufacture, storage or disposal of hazardous substances.***

~~Adverse effects on the environment from the manufacture, use, transport or disposal of hazardous substances.~~

i. What is a Hazardous Substance?

Hazardous substance is defined in section 2 of the Resource Management Act to include, but is not limited to, any substance defined in section 6 of the Hazardous Substances and New Organisms Act 1996 (HSNO) as a hazardous substance. ~~Act as being similar to, but wider than [R15.4] the definition in section 6 of the Hazardous Substances and New Organisms Act 1996 (HSNO). The definition in that Act is:~~

~~*"Any substance with one or more of the following characteristics: explosiveness, flammability, a capacity to oxidise, corrosiveness, toxicity (acute or chronic), ecotoxicity with or without bioaccumulation; or which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified above."*~~

HSNO Section 6 states:

"Hazardous substance means, unless expressly provided otherwise by regulations, any substance

(a) with one or more of the following characteristics:
- *(i) explosiveness,*
- *(ii) flammability,*
- *(iii) a capacity to oxidise,*
- *(iv) corrosiveness,*
- *(v) toxicity (acute or chronic),*
- *(vi) ecotoxicity with or without bioaccumulation;*

or

(b) which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified above."

ii. What are the Issues?

Hazardous substances of various kinds are in widespread use in the Selwyn District and are an essential part of everyday life. Common examples of hazardous substances are agrichemicals and animal remedies in the rural sector of

the community, timber preservatives and strong acids and alkalis in the industrial and commercial sector, and garden sprays in the domestic sector. Other substances such as LPG, petroleum hydrocarbon fuels and lubricants, solvents, paints, pool chemicals and household cleaning agents are in widespread use across all sectors. Wastes generated by all sectors also contain hazardous substance residues, such as industrial processing wastes, packaging and containers, dead batteries and waste oil, paints and solvents, depleted or surplus agrichemicals and garden sprays.

While the presence of hazardous substances in the community is generally accepted, there is potential for significant adverse effects to the natural, rural and urban environments if hazardous substances and their locations, storage, transport, use and disposal are not managed or controlled appropriately. The potential adverse effects if hazardous substances are spilled, leak or escape from their containment or are discharged into the environment in an uncontrolled manner by accident or during their application or use include

- effects on human health through skin contact, ingestion or inhalation
- effects on the health of farm stock and domestic animals
- damage to plant crops, windbreaks, plantations, landscape planting and other vegetation
- damage to natural flora and fauna
- contamination of the food chain, including chemical residues in farm stock and crops
- damage to the life-sustaining or aesthetic qualities of water and soil resources and ecosystems
- effects on ancestral lands, sites and other taonga of value to Tangata Whenua
- aesthetic and health effects arising from the development, improvement or occupation of land contaminated by hazardous substances
- devaluation of rural, residential, conservation and recreation amenity values of land that has been contaminated by hazardous substances
- perceived and actual risks and public concerns associated with the location of facilities and activities involving hazardous substances, with respect to residences, schools, conservation areas, recreational areas, waterbodies and other sensitive land use areas and sensitive environments
- reverse sensitivity effects on rural land use involving hazardous substances, from residential and other more sensitive activities establishing in rural areas

~~Small quantities of hazardous substances are used everyday in domestic cleaning and gardening; and larger quantities in industrial, manufacturing and agricultural activities. Activities involving hazardous substances can have potential adverse effects, depending on the type and quantity of the substance and how it is managed. Effects can include:~~

- ~~Effects on people's health if substances leak into air, soil or water. Effects may be from direct exposure to the contaminant or indirect exposure if it passes into food chains.~~
- ~~Effects on other species and the amenity values of areas, if substances leak into soil, water or air. [R15.2]~~
- ~~Combustible or explosive hazardous substances not appropriately stored and endangering people or property.~~
- ~~Anxiety among people who live close to areas where hazardous substances are manufactured, used, stored or disposed of, and perceive there may be risks to people's health or safety or the environment. [R15.2]~~

~~When hazardous substances are manufactured or used, any by products, unused substances and used containers need to be disposed of. The Selwyn District does not have any facilities for the collection or disposal of hazardous substances, by products or containers in the District. The geographic spread of people using hazardous substances in the District increases the cost of collecting hazardous substances and containers for appropriate disposal, relative to areas such as Christchurch City, where people and activities are more concentrated.~~

~~The Council has recently adopted the Canterbury Hazardous Waste Management Strategy. This Strategy promotes regionally co ordinated management of hazardous waste. In addition, the Council is currently in the process of setting aside land for the establishment of a Resource Recovery Centre. This is a major component in the District's goal of achieving Zero Waste to Landfill by 2015. Although this facility will not provide facilities for the disposal of hazardous substances, it will provide~~

~~environmentally sound facilities for the temporary storage of these wastes before they are transported to region wide waste disposal facilities. [R15.7]~~

~~**iii. Hazardous Substances and the Act**~~

~~Regional and District Councils have functions for managing the effects of the 'use, storage, transport and disposal' of hazardous substances, under the Act. Policy 1, Chapter 17 of the RPS (p. 261) sets out in more detail how those functions are shared between Environment Canterbury and District Councils (territorial local authorities) in Canterbury.~~

~~In summary, Environment Canterbury manages:~~

- ~~Any discharge of hazardous substances;~~
- ~~Hazardous substances in the Coastal Marine Area;~~
- ~~Transportation of particular [R15.2] hazardous substances through water bodies via a pipe; and~~
- ~~Has a role in co-ordinating the management of hazardous substances in the Region.~~
- ~~The use, storage, transportation and disposal of specified substances (including petrochemicals and timber treatment chemicals) where they may affect water quality. [R15.2]~~

~~District councils are responsible for the rest.~~

~~iv. **Other Legislation**~~

~~Other specific statutes which also address some issues associated with hazardous substances include:~~

- ~~The Hazardous Substances and New Organisms Act 1996 (HSNO) addresses effects on people's health and safety from the manufacture, use and storage of hazardous substances.~~
- ~~Transport Act 1962 addresses the transport of hazardous substances.~~
- ~~Clauses F3 and C1 of the Building Act 1991 contain requirements relating to the storage and containment of Hazardous Substances.~~

(iii) Regulatory controls

The Hazardous Substances and New Organisms Act 1996 (HSNO) and Hazardous Substances regulations are the principal legislation controlling the introduction, manufacture, use, storage and disposal of hazardous substances. Substances are classified numerically according to their hazardous characteristics, and the regulations and associated codes of practice and other instruments set specific baseline standards for storage, handling and emergency response for each class of substance and the facilities and activities involving them. HSNO has revoked earlier legislation, including the Dangerous Goods Regulations which the Council previously administered.

The Council has limited powers and responsibilities under HSNO, which is administered mainly by other agencies particularly in terms of the use and application of hazardous substances in working situations. It should be noted that HSNO protects health and safety within the immediate environment of the facility or activity, whereas community issues and concerns must be addressed through the provisions of the Resource Management Act via the Regional Policy Statement, the Regional Plan and District Plans.

Regional and District Councils have functions for managing the effects of the use, storage, transport and disposal of hazardous substances, under the Resource Management Act 1991. Chapter 17 (p. 261) of the Regional Policy Statement sets out in more detail how those functions are shared between Environment Canterbury and territorial local authorities in Canterbury.

In summary, Environment Canterbury has a co-ordinating role in the management of hazardous substances in the Region, with specific responsibilities to manage

- Any discharge of hazardous substances;
- Hazardous substances in the Coastal Marine Area;
- The use, storage, transportation and disposal of specified substances (including petrochemicals, agrichemicals, organic solvents, timber treatment chemicals, and toxic metals) where they may affect water quality.

The Draft Natural Resources Regional Plan (Air Quality and Water Quality chapters) control storage and use of the specified substances. Of particular significance to Selwyn District is the restriction of new development involving hazardous substances storage on land in the Christchurch Groundwater Recharge Zone which covers part of the District's north-east.

District and city councils in the Canterbury region are responsible for developing objectives, policies and rules relating to the control of the use of land for the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of any hazardous substances except where they are controlled by Environment Canterbury. In setting those objectives, policies and rules, the Council must ensure those provisions are consistent with the RMA and HSNO, and also be mindful of other legislation associated with the control of hazardous substances.

(iv) Other Legislation

- The Transport Act 1962 controls the transport of hazardous substances, through the Ministry of Transport's Land Transport Dangerous Goods Rule which is enforced by the NZ Police. Incompatible substances must be segregated, loads must be secured and commercial loads must be placarded appropriately. The Council has no involvement with the Rule, but can consider controlling routes for the transport of hazardous substances through its District Plan and resource consents for environmental effects reasons.
- The Radiation Protection Act 1965 and the 1982 Regulations control radioactive materials. They are administered by the National Radiation Laboratory, a business unit of the Ministry of Health. The Council may control the location of activities where radioactive materials are present, to address local concerns.
- The Building Act 1991 contains requirements relating to the storage and containment of Hazardous Substances. The Council applies these provisions through the building consent process, at which stage the requirements of the Building Code can be coordinated with District Plan considerations.
- The Health and Safety in Employment Act 1992 addresses workplace safety and is administered by the Department of Labour's Occupational Safety and Health Division (OSH). Workplaces are required to have health and safety plans in place, which must be consistent with HSNO with respect to hazardous substances management and emergency response.

(v) Hazardous waste management

Hazardous wastes may contain residues of hazardous substances in quantities or concentrations that have the same potential effects as those substances. The unauthorized disposal of hazardous wastes is often the cause of soil and water contamination. A number of hazardous waste collection, treatment and disposal operators are based in Christchurch or handle their business through there, and their services are available to the District's waste generators.

The Council has recently adopted the Canterbury Hazardous Waste Management Strategy, which promotes the regionally coordinated management of hazardous waste. Under that strategy, the Council has established a Resource Recovery Centre which is a major component in the District's goal of achieving Zero Waste to Landfill by 2015. The Centre provides environmentally sound facilities for the temporary storage of domestic hazardous wastes that are dropped off by the public, and for hazardous waste materials that are recovered from the landfill waste stream. The wastes are stored temporarily before they are transported to hazardous waste treatment and disposal contractors.

II - STRATEGY

The district plan uses the following basic strategy to address issues with Hazardous Substances:

- The Council accepts that HSNO controls immediate effects on people's health and safety from the manufacture, use and storage of hazardous substances, and that specific legislation administered by other agencies primarily controls use in workplace situations, transport, building development, and radioactive substances.
- The district plan focuses on matters that are not covered by other, more specific legislation or the functions of the Regional Council.

- Policies and rules are implemented to avoid hazardous substances being stored or disposed of in places where, if they spill or leak, serious environmental effects will occur.
- Controls are imposed over the manufacture, storage and disposal of hazardous substances to protect the amenity values of areas and people's sense of well-being.
- Ensuring that activities in the district that use or produce large quantities of hazardous substances have appropriate disposal plans.
- Managing the use of land which is contaminated by hazardous substances is addressed in Part 2, Section 1.1 – Land and Soil.

~~The district plan uses the following basic strategy to address issues with Hazardous Substances:~~

- ~~The plan focuses on matters that are not covered by other, more specific legislation or the functions of Regional Councils.~~
- ~~Policies and rules to avoid hazardous substances being used, stored or disposed of in places where, if they spill or leak, serious environmental effects will occur.~~
- ~~Controls over the manufacture, use, storage and disposal of hazardous substances to protect the amenity values of areas and people's sense of well-being.~~
- ~~Ensuring that activities in the district that use or produce large quantities of hazardous substances have appropriate disposal plans.~~
- ~~Managing the use of land which is contaminated by hazardous substances is addressed in Part 2, Section 1.1 – Land and Soil.~~

~~The Council is satisfied that regulations made under the HSNO 1996 are the appropriate methods to deal with actual effects on people's health and safety from the manufacture, use and storage of hazardous substances.~~

III - OBJECTIVES, POLICIES AND METHODS

i. Objectives

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.***

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.***

3. ***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 life-sustaining capacity and amenity values of waterbodies, land and soil resources.***

~~1. *To ensure that hazardous substances are manufactured, used, stored, transported and disposed of with minimal adverse effects on people or other parts of the environment.*~~

~~2. *To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects on health and safety arising from having quantities of hazardous substances in residential areas (Living zones).*~~

Explanation and Reasons

Hazardous substances of various kinds are in widespread use in the Selwyn District and are an essential part of everyday life. ~~Hazardous substances are necessary tools for many agricultural and industrial activities and some domestic ones.~~ By their nature, hazardous substances carry an inherent risk of adverse effects, should an accident occur. The accidental or deliberate spillage, leak or disposal or inappropriate use of hazardous substances could adversely affect the District's natural resources and primary production resources, and the health of humans, farm and domestic animals and flora and fauna. The presence of large quantities of hazardous substances may also adversely affect the amenity values of townships and rural areas, by their actual or perceived potential adverse effects.

Objectives 1 to 3 propose ~~is~~ to minimise that risk. This is achieved through the District Plan provisions to manage the locations where significant quantities of hazardous substances are manufactured and stored, including separation from 'sensitive' areas e.g. near waterbodies and residential areas, and to require the safe and secure containment of hazardous substances at those locations. In making those provisions, the Council recognises that the use, transport, discharge and disposal of hazardous substances are controlled by other statutory authorities through legislation and associated controls including the HSNO Act 1996; and through Environment Canterbury's Natural Resources Regional Plan.

~~i. Through regulations under HSNO 1996; and~~

~~ii. Through district plan provisions to manage the locations where large quantities of hazardous substances are manufactured, used and stored, to avoid 'sensitive' areas e.g. near waterbodies [R17A.2] or residential areas.~~

~~Objective 2 addresses the issue of health or safety or the pleasantness of the neighbourhood close to areas where hazardous substances are manufactured, used or stored. The objective recognises such adverse effects. The Council is satisfied that actual risks to people's health and safety are most appropriately managed under the HSNO Act 1996 and the Health and Safety in Employment Act 1992.~~

ii. Policies and Methods

Manufacture~~, Use~~ and Storage

1. Ensure any potential risk of adverse effects on the environment from spills, leaks or other mismanagement of hazardous substances is avoided or mitigated.

Explanation and Reasons

Hazardous substances should be manufactured, ~~used,~~ stored and disposed of in ways that avoid significant adverse environmental effects should a leak, spill or other mismanagement occur. Policy 1 requires any potential adverse effects to be avoided or mitigated~~. This may be achieved in several ways; for example: the type or quantity of hazard substances; the degree of risk of flooding or earthquake in the area; or conditions under which the hazardous substance is used or stored.~~

~~Policy 1 is~~ and is implemented using rules relating to the ~~site,~~ quantities and conditions for manufacturing, ~~using,~~ storing and disposing of hazardous substances at any site. Resource consents are required where specified threshold quantity limits for hazard substances are exceeded, and/or specific site controls or other performance criteria are not complied with. Activities that comply with the performance criteria and do not exceed the specified quantity limit thresholds have permitted status in terms of the hazardous substances rules of the Plan. ~~Regulations made under the HSNO Act 1996 manage the manufacture, use and storage of hazardous substances to protect people's health and safety. Any discharge of a hazardous substance on to land or into air or water is controlled by Environment Canterbury (the regional council).~~

~~The plan has rules for quantities of hazardous substances that may be used or stored in each zone as a *permitted activity* (without a resource consent). These quantities are based on [R15.6] those under the Dangerous Goods Licensing [R15.6] Regulations (DGL). It is a~~ The threshold quantity limits in Appendix 9 are a convenient measure to use to distinguish between small-scale activities where effects are likely to be minor, and larger scale activities that require resource consent. The classification system used in the Appendix is based on the provisions of the HSNO legislation. The quantity limits have been established with regard to local conditions and requirements, and with due consideration to the HSNO controls, to national guidelines and procedures published and advocated by the Ministry of the Environment and the Environmental Risk Management Authority, to the Natural Resources Regional Plan, and to District Plans published by other territorial local authorities. ~~The Hazardous Substances and New Organisms Act (HSNO) establishes national guidelines and procedures and is also of relevance in considering the use of hazardous substances. [R15.2]~~

Some HSNO classes are not listed in Appendix 9 because they are not considered to have a significant hazard rating in the land-use planning context. In this case, no restrictions apply under the District Plan. However, many hazardous substances have more than one HSNO class or category. Where this is the case, the most restrictive class or category will be applied, as this recognises the possible extent of the health and safety risks associated with the substance.

When assessing compliance with the provisions of the hazardous substances rules and when considering applications for resource consents involving storage, use, disposal or transportation of hazardous substances, the Council will consider the types and quantities of hazardous substances and the adequacy of controls and conditions on the hazardous substances at the application site, the location of the substances relative to sensitive environments and natural resources, and the degree of risk of flooding or earthquake in the area of the site. The Council will also have due consideration of any controls imposed by other legislation. This will include but will not be limited to the provisions of the Hazardous Substances and New Organisms Act 1996 and Regulations (including test certification, approved handler certificates, controlled substances licences and codes of practice issued by or recognised by ERMA), the Natural Resources Regional Plan and resource consents issued by the Canterbury Regional Council, and the Health and Safety in Employment Act 1992.

The Council recognises that the use, transport, discharge and disposal of hazardous substances are also controlled by other statutory authorities

through legislation and associated controls including the HSNO Act 1996; and through Environment Canterbury's Natural Resources Regional Plan.

Methods

- District Plan Rules - Hazardous Substances
- Other Legislation - To address specialist areas of health and safety
- Regional Council Rules - To control the discharge of hazardous substances

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.

Explanation and Reasons

Living Zones are areas with amenity values most compatible with residential activities.

Business 1 Zones are busier areas with larger-scale business activities than Living zones. They are also areas for high density residential activities, and areas which many people occupy for business and social activities.

Policy 2 does not prevent large quantities of hazardous substances being manufactured~~, used~~ or stored in these areas, provided that those activities cause no more than minor adverse effects on amenity values. ~~Many hazardous substances are likely to comply with Policy 3 because of their type, quantity or the conditions under which they are used or stored: for example; petroleum products.~~

Appendix 9 details higher quantity limits for Business 1 Zones than in Living Zones. This is to reflect that larger volumes may be required as part of Business activities carried out in these zones and can be accommodated without compromising the amenity values of such zones. [R15.2]

Method

- District Plan Rules - Hazardous Substances

3. Mitigate any adverse effects on the environment from the manufacture, ~~use~~ or storage of hazardous substances in Business 2 zones or the Business 3 zone.

Explanation and Reasons

Business 2 Zones and the Business 3 Zone are areas where manufacturing~~, use~~ or storage of hazardous substances may be an integral part of some activities. These Zones provide areas for these activities which may not be able to be located in Living or Business 1 Zones because of their effects. Other effects that may need managing include (but are not limited to) potential contamination of land; incompatibility of activities on adjoining sites; or offensive odours discharges or dust nuisances.

~~They are also zones in which other people are carrying out activities and some~~ Some Business 2 and 3 zones are located close to Business 1 or Living Zones, therefore~~. S~~some management of hazardous substances is needed to accommodate the requirements of business activities whilst ensuring ~~ensure~~ that adverse effects on people and activities at other sites ~~people, their activities~~ and on the rest of the environment are avoided, remedied or mitigated. The threshold quantities in Appendix 9 for hazardous substances are therefore higher for Business 2 and 3 zones, but are not unlimited, and site storage and location criteria also apply.

~~Regulations under the HSNO Act 1996 will protect people's health and safety in these zones. Other effects that may need managing include (but are not limited to) potential contamination of land; incompatibility of activities on adjoining sites; or offensive odours discharges or dust nuisances.~~

Method

- District Plan Rules - Hazardous Substances

Transport

4. Avoid transport of hazardous substances on the surface of waterbodies [R17A.2] in watercraft, if there is an alternative vehicular access to the site by land.

Explanation and Reasons

A hazardous substance spilled into a waterbody [R17A.2] can cause both immediate and delayed adverse effects to aquatic life and ecological, cultural, recreational and amenity values. Such a spill is also much harder to contain and clean up than when it is spilled on to land, and the effects may become widespread as contaminants are carried downstream or disperse on water surfaces. Policy 5 recognises that there is no need to risk transporting hazardous substances on the surface of a waterbody [R17A.2] when there is alternative access to a site, over land. The corresponding rule does not apply to spare fuel for motorised water craft or hazardous substances found in the motor of such craft.

~~A hazardous substance spilled into a waterbody [R17A.2] is much harder to contain and clean up than when it is spilled on to land. Areas of water often have aquatic life and ecological, cultural, recreational and amenity values, which are adversely affected by a spill. Policy 5 recognises that there is no need to risk transporting hazardous substances on the surface of a waterbody [R17A.2] when there is alternative access to a site, over land. The corresponding rule does not apply to spare fuel for motorised water craft or hazardous substances found in the motor of such craft.~~

Method

- District Plan Rule - Transport of Hazardous Substances

Disposal

5. Avoid disposing of hazardous substances into sewage systems or on to land in townships.

Explanation and Reasons

Hazardous substances can contaminate land and leach into groundwater if they are not appropriately disposed of. Disposing of hazardous substances into sewage systems can affect the system by killing the bacteria used to break down and treat sewage. Land in townships is in close proximity to people and to activities which put people in direct contact with land – such as residential activities and outdoor recreation.

Note Disposal of hazardous substances does not include applying it in accordance with manufacturer's instructions.

Method

- District Plan Policy - To assess plan change requests to rezone land for new residential or business areas, to ensure adequate facilities for the disposal of hazardous wastes are available.

6. Ensure parties who manufacture, store ~~or use~~ commercial ~~large~~ quantities or concentrations of hazardous substances have the means to dispose of hazardous substances and their containers without adversely affecting the environment.

7. Work toward obtaining access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.

Explanation and Reasons

Under Policies 6 and 7, the Council will work with Environment Canterbury and other District Councils, to develop solutions for disposing of hazardous substances

and hazardous waste, including empty hazardous substance containers. The Council will also encourage manufacturers and users of hazardous substances and generators of hazardous wastes to participate in identifying and developing waste disposal options.

Environment Canterbury, in conjunction with other local authorities including Selwyn District Council, has developed the Canterbury Regional Hazardous Waste Management Strategy for dealing with hazardous waste. It provides that basis for a co-ordinated region wide approach to the minimisation and management of hazardous waste. Under that strategy, facilities are being developed to receive and store domestic hazardous wastes from residents throughout Selwyn District.

Where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require that party to submit a disposal plan for approval by the consent authority before establishing in the District.

~~There are no facilities in the Selwyn District to collect or dispose of hazardous substances or their containers. Therefore, any party producing hazardous waste has to find their own means for disposing of it. Where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require that party to submit a disposal plan for approval by the consent authority before establishing in the District.~~

Methods

- District Plan Rule - Hazardous Substances
- Trade Waste Bylaws
- Advocacy - Continue to advocate for a co-ordinated approach to hazardous waste disposal in Canterbury as a signatory to the Canterbury Regional Hazardous Waste Management Strategy

~~***7. Obtain access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.***~~

~~**Explanation and Reasons**~~

~~There are currently no facilities in Selwyn District that either dispose of hazardous substances or containers, or to collect such items for disposal elsewhere.~~

~~The Council will continue to work with Environment Canterbury and other District Councils to develop solutions for disposing of hazardous waste. The Council will also encourage manufacturers and users of hazardous substances to participate in developing waste disposal options.~~

~~Environment Canterbury, in conjunction with other local authorities including Selwyn District Council, has developed a hazardous waste management strategy for dealing with hazardous waste. It provides that basis for a co-ordinated region wide approach to the minimisation and management of hazardous waste. [R15.7]~~

~~Method~~

- ~~Advocacy — Continue to advocate for a co-ordinated approach to disposing of hazardous waste in Canterbury~~

IV - ENVIRONMENTAL OUTCOMES

The following environmental results should occur from implementing Section 3.2 of the District Plan:

1. Adverse effects of hazardous substances on the environment are minimised.

2. Reduced instances of land becoming contaminated where hazardous substances have been - stored.

3. Reduced risk of waterbodies becoming contaminated from hazardous substances.

4. Access to facilities for the treatment and disposal of hazardous substances.

5. Users of large quantities of hazardous substances follow plans to minimise the amount of hazardous waste they produce and to dispose of that waste in ways that have minimal effects on the environment.

~~The following environmental outcomes should result from implementing Section 3.2 of the district plan:~~

~~i. Hazardous substances are managed, or stored or used in a manner which ensure that persons living nearby are not unduly affected by their proximity to those substances.~~

~~ii. Reduced instances of land becoming contaminated where hazardous substances have been used or stored.~~

~~iii. Reduced risk of waterbodies [R17A.2] becoming contaminated from hazardous substances.~~

~~iv. Access to facilities for the treatment and disposal of hazardous substances. [R15.7]~~

V - MONITORING

Please refer to Appendix 1.

VOLUME ONE: TOWNSHIPS

PART THREE: DISTRICT PLAN RULES, LAND USE RULES FOR LIVING ZONES, RULE 6 HAZARDOUS SUBSTANCES

Notes:

1. The storage, transport or disposal of any hazardous substance is a permitted activity (no resource consent required) if all the rules listed under the column headed 'Permitted Activities' are complied with.

2. The ~~use,~~ storage, transport or disposal of any hazardous substance which does not comply with the rules for permitted activities has the status set out in the corresponding rule(s) in the column headed 'Other Activities'.

3. Where more than one HSNO class or category applies to a hazardous substance, the class with the most restrictive thresholds will apply.

4. Rule 6 does not apply to the disposal of any hazardous substance by use of it in accordance with the manufacturer's instructions~~, nor to empty containers which are disposed of in accordance with the manufacturer's instructions~~.

5. Interpretation of words used in this rule is provided in Part 3, Section 7 of the Plan.

6. The disposal of any hazardous substances does not include the use of the substance in accordance with the manufacturer's instructions as a means of disposing of it.

7. The storage of any hazardous substances outdoors must also comply with Rule 17. (Outdoor storage of Goods and Materials)

8. Any activity involving the storage, use, disposal, discharge or transportation of a hazardous substance may require resource consent from Environment Canterbury. Therefore, Environment Canterbury should be consulted.

Rule 6	**Hazardous Substances**
Permitted Activities	Other Activities
~~Use and~~ Storage 6.1 The ~~use or~~ storage of any hazardous substance if the following conditions are met: 6.1.1 The quantity of any hazardous substance ~~used and/or~~ stored complies with the quantities listed in Appendix 9 for permitted	~~Use and~~ Storage 6.3 Any activity which does not comply with Rule 6.1.1 shall be a *non-complying activity,* except if the ~~use or~~ storage of hazardous substances complies with any quantity limit listed for Column B in Appendix 9 for Living zones, in which case the ~~use and~~ storage of hazardous substances is a *discretionary activity.*

activities in Living Zones, except as otherwise permitted by Rule 6.1.5 and 6.1.6 below [R15.6]; and 6.1.2 Any area used to store any hazardous substance or materials treated with any hazardous substance, except for Liquefied Petroleum Gas (LPG) is: i) separated from the ground by an impervious surface and: ii) the impervious surface is designed to contain any runoff of the substance or water contaminated with the substance; and iii) the amount of containment available is no less than 110% [R15.5] of the volume of stored hazardous substances where the area is roofed; or iv) the amount of containment available is no less than 120% of the volume of stored hazardous substances where the area is unroofed; and 6.1.3 Any hazardous substance is stored: i) in a sealed container; and: ii) the container is made of a material that is not weakened or corroded by the hazardous substance; and iii) the container is permanently labelled with the name of the contents; and iv) only one type of hazardous substance is stored in each container, and. 6.1.4 Any hazardous substance(s) is/are not stored within 20 m of anywaterbody. [R17A.2] 6.1.5 For schools located within the Living Zones, the quantity limits for the Business 1 zone shall apply. [R15.3] 6.1.6 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 6.1.2-6.1.4. 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	6.4 Any activity which does not comply with Rules 6.1.2 to 6.1.4 shall be a *discretionary activity.*

affected parties. [R15.6]	
	Manufacture 6.5 Any manufacture of any hazardous substance, as either a product or a by-product, shall be a *non-complying activity*.
Transport 6.2 The transport of any hazardous substance in a boat or other craft over the surface of any waterbody [R17A.2]if the following conditions are met: 6.2.1 The hazardous substance is contained in the motor or fuel tank of a motorised craft; or 6.2.2 The hazardous substance is spare fuel for the motorised craft and it is carried in a sealed container specifically designed for that purpose; or 6.2.3 There is no road or vehicular access to the site where the hazardous substance is to be used and: i) The hazardous substance is carried in a sealed container, specifically designed for that purpose, and ii) The container is permanently labelled with the name of the hazardous substance.	Transport 6.6 Any activity which does not comply with Rule 6.2 shall be a *non-complying activity.*
	Disposal 6.7 Any disposal of any hazardous substance shall be a *non-complying activity.*

~~**Notes**~~

~~1. The disposal of any hazardous substances does not include the use of the substance in accordance with the manufacturer's instructions as a means of disposing of it.~~

~~2. The storage of any hazardous substances outdoors must also comply with Rule 17. (Outdoor storage of Goods and Materials)~~

Reasons

It is recognised that codes of practice and other legislation (e.g. the Hazardous Substances and New Organisms Act 1996 and regulations, or 'HSNO') ensure that the use, storage, manufacture, transport and disposal of hazardous substances is usually carried out in ways that pose little risk to public health or safety.

The District Plan complements this legislation by addressing the potential adverse effects of hazardous substances on people's health and safety, ~~and~~ on prevailing and anticipated amenity values, and the wider potential environmental impact of those substances.

Rule 6 provides for the ~~use and~~ storage of small quantities of hazardous substances, such as those associated with residential activities. Appendix 9 sets out the classes of hazardous substances and the quantities allowable as *permitted* and *discretionary activities*. The classification system used in the Appendix is based on the provisions of the HSNO legislation. ~~for Dangerous Goods Licences. It is recognised that if the hazardous substance is of sufficient quantity to require a Dangerous Goods Licence, it may also be of sufficient quantity to:~~

- ~~Have potential adverse effects on residents of Living Zones; and~~
- ~~Create adverse effects if spilled or leaked in Living zones, which are considered sensitive receiving environments.~~

Rule 6.1 also sets out the specific conditions for the ~~use and~~ storage of hazardous substances as permitted activities. Rule 6.1.4 recognises that areas near waterbodies [R17A.2] are particularly sensitive to the storage of hazardous substances should there be any leakage.

The District Plan recognises that the transport of hazardous substances in craft over the surface of inland waterbodies [R17A.2] is generally inappropriate unless under specific conditions. In addition, the manufacture and disposal of hazardous substances are considered generally inappropriate in Living zones.

Two exceptions have been made to the quantity limits. The first is for schools in the living zones, to enable them to store quantities up to the levels of the Business 1 zone due to the nature of their activity, including science laboratories and other necessary on-site storage vessels, and the relative size and scale of the sites concerned. The second is for the installation of electrical transformers recognising the low risks associated with oil filled transformers and the importance of transformers as part of the electricity network. [R15.3]

Remember: 'Permitted Activities' are those that do not need a resource consent. See section 1 for Rule Guide.

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PART THREE: DISTRICT PLAN RULES, LAND USE RULES FOR BUSINESS ZONES, RULE 2 HAZARDOUS SUBSTANCES

Notes:

1. The storage, transport or disposal of any hazardous substance is a permitted activity (no resource consent required) if all the rules listed under the column headed 'Permitted Activities' are complied with.

2. The ~~use,~~ storage, transport or disposal of any hazardous substance which does not comply with the rules for permitted activities has the status set out in the corresponding rule(s) in the column headed 'Other Activities'.

3. Where more than one HSNO class or category applies to a hazardous substance, the class with the most restrictive thresholds will apply.

4. Rule 6 does not apply to the disposal of any hazardous substance by use of it in accordance with the manufacturer's instructions~~, nor to empty containers which are disposed of in accordance with the manufacturer's instructions~~.

5. Interpretation of words used in this rule is provided in Part 3, Section 7 of the Plan.

6. The disposal of any hazardous substances does not include the use of the substance in accordance with the manufacturer's instructions as a means of disposing of it.

7. The storage of any hazardous substances outdoors must also comply with Rule 10. (Outdoor storage of Goods and Materials)

8. Any activity involving the storage, use, disposal, discharge or transportation of a hazardous substance may require resource consent from Environment Canterbury. Therefore, Environment Canterbury should be consulted.

Rule 2	**Hazardous Substances**	
	Permitted Activities	Other Activities
2.1	~~Use and~~ Storage The ~~use and/or~~ storage of any hazardous substances if the following conditions are met:	2.3 Exceptions [R15.3]

2.1.1 The quantity of each hazardous substance ~~use and/or~~ stored complies with quantities listed in Appendix 9 for permitted activities in the Business 1, 1A, 2 & 3 zones, except for service stations and/or truck stops (see Rule 2.3); [R15.3] and 2.1.2 Any area used to store any hazardous substance or goods treated with any hazardous substance, except for Liquefied Petroleum Gas (LPG) is: i) separated from the bare ground area by an impervious surface; and ii) the impervious surface is designed to contain any runoff of the substance or water contaminated with the substance; and iii) the amount of containment available is [R15.5] no less than 110% [R15.5] of the total [R15.5] volume of [R15.5] stored hazardous substance where the area is roofed; or [R15.5] iv) the amount of containment available shall be no less than 120% of the volume of any stored hazardous substance where the area is unroofed; and 2.1.3 Any hazardous substance is stored: i) in a sealed container; and ii) the container is made of a material that is not weakened or corroded by the hazardous substance; and iii) the container is permanently labelled with the name of the contents; and iv) only one type of hazardous substance is stored in each container. Manufacture 2.2 The manufacture of any hazardous substance in the Business 3 Zone that complies with the quantities listed in Appendix 9.	(a) 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 activity and will not require the written consent of other persons and shall be non-notified, provided that the "Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems" (Department of Labour) is complied with. [R15.3] (b) The storage and sale of LPG (up to 6 tonnes, single vessel storage) at service stations and/or truck stops is a controlled activity and will not require the written consent of other persons and shall be non-notified, provided that the "Australian/New Zealand Standard 1596:1997, Storage and Handling of LP Gas" is complied with. [R15.3] (c) 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. [R15.6] (d) 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. [R15.6] In assessing resource consent for the above, consideration will be given to: [R15.3] (i) The extent to which the proposed activity can avoid or mitigate any undue risk, including site layout, site management, and spill contingency planning, monitoring and maintenance schedules. [R15.3] (ii) Any relevant codes of practice introduced, or approved by, the

	Environmental Risk Management Authority; and pending these, any relevant codes applicable to hazardous substances. [R15.3] ~~Use and~~ Storage [R15.8] 2.4 Any activity which does not comply with Rule 2.1 and 2.3 shall be a *discretionary activity.* Manufacture 2.5 The manufacture of any hazardous substance, as either a product or by-product, shall be in the: **Business 1 & 1A Zones**: a *non-complying activity*. **Business 2 Zone**: a *discretionary activity.* 2.6 The manufacture of any hazardous substance in the Business 3 Zone which does not comply with Rule 2.2 shall be a discretionary activity. [R15.8] Disposal 2.7 The use of any land or facility for [R7.12] disposal of any hazardous substance [R7.12] shall be a *non-complying activity.*

~~**Notes**~~

~~1. The outdoor storage of any hazardous substances must also comply with Rule 10. (Outdoor Storage of Goods and Materials)~~

~~2. Disposal of hazardous waste is a defined term (see Section 6). It does not include the intended use of the substance in accordance with manufacturer's instructions.~~

Reasons

Many of the potential effects on health and safety of the use and storage of hazardous substances are addressed through other legislation and that the use of these substances is adequately controlled by the Regional Council and other authorities. The district plan complements this legislation 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 ~~use and~~ storage of small quantities of hazardous substances, such as those associated with commercial, industrial and research activities, without requiring a resource consent. The ~~use and~~ 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. An exception has been made for service stations to ~~use and~~ store greater quantities of petrochemicals as a controlled activity 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. [R15.3] An exception is also made for the installation of electrical transformers recognising the low risks associated with oil filled transformers and the importance of transformers as part of the electricity network. [R15.6] Special provision is made for Lincoln University due to the large nature of its "site" and different range of departments and facilities within it. [R15.6]

The quantities of hazardous substances allowed to be ~~used or~~ stored as a *permitted activities* are detailed in Appendix 9. These are based on those quantities which reflect the general non residential nature of the Business zones. Special provisions apply to the Business 3 Zone where there may be large quantities of hazardous substances involved associated with tertiary education and research activities undertaken which may also involve the manufacture of them.

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. While accidental leaks and spills can be prosecuted as unlawful discharges, the damage to the environment has already occurred. The District Plan therefore adopts a preventative approach. Regional Councils control the intentional discharge of contaminants under the Resource Management Act.

~~The rules recognise that other legislation (e.g. Hazardous Substances and New Organisms Act) and Codes of Practice ensure that the use and storage of hazardous substances is usually carried out in ways which pose little actual risk to public health or safety.~~

Any party producing hazardous waste other than domestic hazardous waste must find their own means for disposing of it. Where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require that party to submit a disposal plan for approval by the consent authority before establishing in the District.

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PART THREE: DISTRICT PLAN RULES, APPENDIX 9 HAZARDOUS SUBSTANCES

The Tables in this Appendix are intended only for defining 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 Table should be identified in the first instance by reference to container labeling, Manufacturer's Safety Data Sheets (MSDS) 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.
- Many hazardous substances have more than one HSNO class or category. Where this is the case, the most restrictive class or category will apply.
- 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 1: Classification of Hazardous Substances

Hazardous substance type	**Examples (including but not limited to)**	**HSNO Class/ Category**	**UN Class**	**Description**	**Health and safety hazard**
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	1.1	Substances and articles that have a mass explosion hazard.	Fire/explosion (High hazard)
		1.2	1.2	Substances and articles that have a projection hazard but not a mass explosion hazard	Fire/explosion (Medium hazard)
		1.3	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	1.5	Very insensitive substances that have a mass explosion hazard	Fire/explosion (Low hazard)
Flammable gases	*LPG , acetylene, hydrogen, methane,*	2.1.1A	2.1	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	2.1	An aerosol comprising 45% or more bymass of flammable ingredients.	Fire/explosion (High hazard)
		LPG	2.1		Fire/explosion (Medium hazard)
Flammable liquids	*Liquid fuels, solvents, adhesives etc:* *Petrol, ethyl alcohol, methyl alcohol, Isopropyl alcohol, acetone, benzene, toluene, butylamine, MIBK*	3.1.A	3 PGI	A flash point of less than 23^{o}C and an initial boiling point of less than or equal to 35^{0}C.	Fire/explosion (Very high hazard)
		3.1B	3 PGII	A flash point of less than 23^{o}C and an initial boiling point of greater than 35^{o}C.	Fire/explosion (Medium hazard)
	Kerosene, styrene monomer, cyclohexanene, turpentine, butyl methacrylate, chlorobenzene, ethoxyethanol	3.1C	3 PGIII	A flash point of greater than or equal to 23^{o}C but less than or equal to 60^{o}C.	Fire/explosion (Medium hazard)
	Diesel, petroleum oils	3.1D	Combustible liquids	A flash point of greater than 60^{o}C but less than or equal to 93^{o}C.	Fire/explosion (Low hazard)
Liquid desensitised explosives	*Nitroglycerine mixture/solution* *Nitrocellulose solution*	3.2A 3.2B 3.2C	3 PGI 3 PGII 3 PG III	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	Fire/explosion (High hazard)

				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.	
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 eg sodium, potassium, lithium, calcium, magnesium, metal hydrides, metal carbides.*	4.1.1A 4.1.1B	4.1(a) PG II 4.1(a) PG III	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. A substance that has lower ratings than 4.1.1A in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (Medium hazard) Fire/explosion (Low hazard)
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	4.1(b) Type A Type B 4.1(b) Type C Type D 4.1(b) Type E Type F	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. A substance with lower ratings than the above two categories in the relevant tests. A substance with even lower ratings than the above two categories in the relevant tests.	Fire/explosion (High hazard) Fire/explosion (Medium hazard) Fire/explosion (Low hazard)
Solid desensitised explosives	*Nitroglycerine -solid, desensitised*	4.1.3A 4.1.3B 4.1.3C	4.1(c) PG I PG II PG III	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	*A variety of metallic, organic and inorganic compounds and mixtures*	4.2A Spontaneously combustible and pyrophoric substances	4.2 PG I	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	4.2 PG II	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	4.2 PG III	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.	Fire/explosion (Medium hazard)
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	4.3 PG I	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	4.3 PG II	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	4.3 PG III	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	*Water treatment chemicals e.g. pool chlorine granulesl* *Chromates, bromates, chlorates, chlorites, nitrates, permanganates*	5.1.1A	5.1 PG I	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	5.1 PG II	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	5.1 PG III	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	Fire/explosion (Medium hazard)

				exhibits a mean pressure rise time less than or equal to that of a specified reference material.	
Oxidising substances - gases	*Oxygen gas*	5.1.2A	2.2	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	*Any organic peroxide*	5.2A 5.2B	5.2 Type A Type B	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	5.2 Type C Type D	A substance with lower ratings than 5.2A orB in the relevant tests.	Fire/explosion (Medium hazard)
		5.2E 5.2F 5.2G	5.2 Type E Type F Type G	A substance with even lower ratings than 5.2A or B in the relevant tests.	Fire/explosion (Low hazard)
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:* *<u>Agrichemicals and Pesticides</u>*	6.1A	6.1 PGI 2.3 (gases)	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	6.1 PGII 2.3 (gases)	• Oral toxicity: LD50 of greater than 5 mg/kg but less than or equal to 50 mg/kg	Human health (High hazard)

	Bipyridyls, carbamates, dinitrophenols, organophosphates, organochlorines,. phenoxy compounds *<u>HSNO 'Controlled Substances'</u>* *Fumigant gases, vertebrate poisons e.g. chloropicrin, methyl bromide, cyanide baits, 1080* *<u>Toxic gases</u> (other than gases that are HSNO 'Controlled Substances'<u>)</u>* *Chlorine, ammonia* *<u>Timber treatment chemicals</u>* *Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.* *<u>Chlorinated hydrocarbons</u>* *Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane* *<u>Any other toxic substances</u>*	6.1C	6.1 PGIII	• 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 • 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)
		6.1D	Toxic Substances Regulations: Standard Poison	• Oral toxicity: LD50 of greater than 300 mg/kg but less than or equal to 2000 mg/kg • Dermal toxicity: LD50 of greater than 1000 mg/kg but less than or equal to 2000 mg/kg • Inhalation toxicity (gas): LC50 of greater than 2500 ppm but less than or equal to 5000 ppm • Inhalation toxicity (vapour) LC50 of	Human health (Low hazard)

				greater than 10 mg/l but less than or equal to 20 mg/l • Inhalation toxicity (dust/mist) LC50 of greater than 1.0 mg/l but less than or equal to 5.0 mg/l	
Radioactive material		N/A[1]	7		
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, hexyl-trichlorosilane, ethanolamine.*	8.2A 8.2B 8.2C	8 PG I 8 PG II 8 PG III	Data indicate irreversible destruction of dermal tissue following brief exposure Data indicate irreversible destruction of dermal tissue following moderate exposure Data indicate irreversible destruction of dermal tissue following lengthy exposure (up to four hours)	Human health (High hazard) Human health (Medium hazard) Human health (Low hazard)
Ecotoxic substances	*A wide 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	GHS GHS	Acute aquatic toxicity value[2] of less than or equal to 1 mg/l 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	Environment (High hazard) Environment (Medium 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.

		the aquatic environment		b) not rapidly degradable or is bioaccumulative, or is not rapidly degradable and is bioaccumulative.	
		9.1C Substances that are harmful in the aquatic environment	GHS	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	GHS	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)

TABLE 2: Land Use Zone Quantity Limits for Classes of Hazardous Substance

Hazardous substance type	Examples	HSNO Class/ Category	Quantity Limit			
			Living Zones		Business 1 Zone	Business 2 and 3 Zones
			A	B		
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 1.2 1.3 1.5	0 kg/litres 15 kg/litres 15 kg/litres 15 kg/litres	- - - -	2.5 kg/litres 15 kg/litres 75 kg/litres 75 kg/litres	50 kg/litres 50 kg/litres 100 kg/litres 200 kg/litres
Flammable gases	*LPG , acetylene, hydrogen, methane,*	LPG 2.1.1A 2.1.2A - Flammable Aerosols	300 kg 100 kg 100 kg	- 250 kg 250kg	2,000 kg 250 kg 250 kg	8,000 kg 250 kg 250 kg
Flammable liquids	*Liquid fuels, solvents, adhesives etc: Petrol, ethyl alcohol, methyl alcohol, Isopropyl alcohol, acetone, benzene, toluene, butylamine, MIBK* *Kerosene, styrene monomer, cyclohexanene, turpentine, butyl*	3.1.A, 3.1B Aboveground storage[4] Underground storage 3.1C	50 litres 0 litres 1,000 litres	- - -	3,000 litres 5,000 litres 3,000 litres	5,000 litres 50,000 litres 5,000 litres

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

	methacrylate, chlorobenzene, ethoxyethanol *Diesel, petroleum oils*	3.1D Aboveground storage[4] Underground storage	1,000 litres 1,000 litres		5,000 litres 30,000 litres	30,000 litres 30,000 litres
Liquid desensitised explosives	*Nitroglycerine mixture/ Solution* *Nitrocellulose solution*	3.2A, 3.2B, 3.2C	0 litres	-	30 litres	100 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 eg 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*	4.2A Spontaneously combustible and pyrophoric substances 4.2B Spontaneously combustible and self- heating substances 4.2C Spontaneously combustible and self- heating substances	1 kg 1 kg 1 kg	- - -	25 kg 25 kg 25 kg	50 kg 50 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, , potassium, phosphorus, sodium*	4.3A, 4.3B 4.3C	1 kg 1 kg	- -	25 kg 25 kg	50 kg 500 kg
Oxidising substances – liquids or solids	*Water treatment chemicals e.g. pool chlorine granules* *Chromates, bromates, chlorates, chlorites, nitrates, permanganates*	5.1.1A 5.1.1B, 5.1.1C	50 kg/litres 1 kg/litres	- -	1,000 kg/litres 25 kg/litres	2,000 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 5.2C, 5.2D 5.2E, 5.2F, 5.2G	1 kg/litres 1 kg/litres 1 kg/litres	- - -	25 kg/litres 25 kg/litres 25 kg/litres	200 kg/litres 500 kg/litres 2,000 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:* <u>*Agrichemicals and Pesticides*</u> *Bipyridyls, carbamates, dinitrophenols, organophosphates, organochlorines,. phenoxy*	6.1A, 6.1B, 6.1C, 6.1D <u>*Including the following subgroups:*</u> <u>*Agrichemicals and Pesticides*</u>	10 kg/litres	50 kg/litres	500 kg/litres	1,000 kg/litres

	compounds *HSNO 'Controlled Substances'* *Fumigant gases, vertebrate poisons e.g. chloropicrin, methyl bromide, cyanide baits, 1080* *Toxic gases (other than gases that are HSNO 'Controlled Substances')* *Chlorine, ammonia* *Timber treatment chemicals* *Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.* *Chlorinated hydrocarbons* *Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane* *Any other toxic substances*	*HSNO 'Controlled Substances'* *Toxic gases (other than gases that are HSNO 'Controlled Substances')* *Timber treatment chemicals* *Chlorinated hydrocarbons* *Any other toxic substances (that are not otherwise Class 3 flammable liquids)*	0 kg (0m^3 gas) 0 kg 20 litres 20 litres 1 kg/litres	- - - - - -	0 kg (0m^3 gas) 1,000 kg 200 litres 1,000 litres 200 kg/litres	100kg (5m^3 gas) 1,000 kg 200 litres 1,000 litres 2,000 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*	8.2A, 8.2B, 8.2C	10 kg/litres	-	1,000 kg/litres	2,000 kg/litres

	chlorides, silicon tetrachloride, phosphorus pentoxide, ferric chloride, phenolsuphanic acid, hydroxlamine sulphate, hexyl-trichlorosilane, ethanolamine.					
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	25 litres/kg	-	500 litres/kg	1000 litres/kg
		9.1B Substances that are ecotoxic in the aquatic environment	250 litres/kg	-	500 litres/kg	5,000 litres/kg
		9.1C Substances that are harmful in the aquatic environment	250 litres/kg	-	500 litres/kg	5,000 litres/kg
		9.1D Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	250 litres/kg	-	1,000 litres/kg	50,000 litres/kg

VOLUME TWO: RURAL

SECTION TWO: ISSUES, OBJECTIVES AND POLICIES, SECTION 3. PEOPLE'S HEALTH, SAFETY AND VALUES, SECTION 3.2 – HAZARDOUS SUBSTANCES

3.2 – HAZARDOUS SUBSTANCES

I - ISSUES

1. ***Adverse effects on the human and natural environments from the manufacture~~,~~ storage, transport on waterbodies or disposal of hazardous substances.***

2. ***Adverse effects on land and soils, waterbodies or other parts of the environment from accidental or deliberate spillage, leakage, or discharge of hazardous substances in the course of their manufacture, storage or disposal.***

3. ***Adverse effects on the amenity values of townships from activities involving the manufacture, storage or disposal of hazardous substances.***

~~***1. Hazardous substances may leak, spill or be dumped, affecting land, waterbodies [R17A.2] or other parts of the environment.***~~

~~***2. Effects on the amenity values of the rural area from activities involving the manufacture, storage or disposal of large quantities of hazardous substances.***~~

i What is a Hazardous Substance?

Hazardous substance is defined in section 2 of the Resource Management Act to include, but is not limited to, any substance defined in section 6 of the Hazardous Substances and New Organisms Act 1996 (HSNO) as a hazardous substance. ~~Act as being similar to, but wider than [R15.4] the definition in section 6 of the Hazardous Substances and New Organisms Act 1996 (HSNO). The definition in that Act is:~~

~~*"Any substance with one or more of the following characteristics: explosiveness, flammability, a capacity to oxidise, corrosiveness, toxicity (acute or chronic), ecotoxicity with or without bioaccumulation; or which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified above."*~~

HSNO Section 6 states:

"Hazardous substance means, unless expressly provided otherwise by regulations, any substance

(a) with one or more of the following characteristics:

- *(vii) explosiveness,*
- *(viii) flammability,*
- *(ix) a capacity to oxidise,*
- *(x) corrosiveness,*
- *(xi) toxicity (acute or chronic),*
- *(xii) ecotoxicity with or without bioaccumulation;*

or

(b) which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified above."

ii What are the Issues?

Hazardous substances of various kinds are in widespread use in the Selwyn District and are an essential part of everyday life. Common examples of hazardous substances are agrichemicals and animal remedies in the rural sector of the community, timber preservatives and strong acids and alkalis in the industrial and commercial sector, and garden sprays in the domestic sector. Other substances such as LPG, petroleum hydrocarbon fuels and lubricants, solvents, paints, pool chemicals and household cleaning agents are in widespread use across all sectors. Wastes generated by all sectors also contain hazardous substance residues, such as industrial processing wastes, packaging and containers, dead batteries and waste oil, paints and solvents, depleted or surplus agrichemicals and garden sprays.

While the presence of hazardous substances in the community is generally accepted, there is potential for significant adverse effects to the natural, rural and urban environments if hazardous substances and their locations, storage, transport, use and disposal are not managed or controlled appropriately. The potential adverse effects if hazardous substances are spilled, leak or escape from their containment or are discharged into the environment in an uncontrolled manner by accident or during their application or use include

- effects on human health through skin contact, ingestion or inhalation
- effects on the health of farm stock and domestic animals
- damage to plant crops, windbreaks, plantations, landscape planting and other vegetation
- damage to natural flora and fauna
- contamination of the food chain, including chemical residues in farm stock and crops
- damage to the life-sustaining or aesthetic qualities of water and soil resources and ecosystems
- effects on ancestral lands, sites and other taonga of value to Tangata Whenua
- aesthetic and health effects arising from the development, improvement or occupation of land contaminated by hazardous substances
- devaluation of rural, residential, conservation and recreation amenity values of land that has been contaminated by hazardous substances
- perceived and actual risks and public concerns associated with the location of facilities and activities involving hazardous substances, with respect to residences, schools, conservation areas, recreational areas, waterbodies and other sensitive land use areas and sensitive environments
- reverse sensitivity effects on rural land use involving hazardous substances, from residential and other more sensitive activities establishing in rural areas

~~Small quantities of hazardous substances are used everyday in domestic cleaning and gardening. In the rural area, larger quantities are used as part of many activities, for example, agriculture, horticulture, forestry and rural industries. Herbicides, pesticides, animal drenches, timber treatments and petroleum fuels are examples of products that contain hazardous substances. People in rural areas need to store hazardous substances on-site, to carry out their activities efficiently.~~

~~Hazardous substances used, stored or disposed of in the rural area, can affect the environment. For example:~~

- ~~If containers of hazardous substances are stored on bare ground and leak or spill, land and soil may be contaminated.~~
- ~~Many sites in the rural area contain waterbodies [R17A.2] and wetlands. These areas often have wildlife and can be important cultural sites for local runanga. If hazardous substances leak, spill or get dumped in these areas, the waterbodies [R17A.2] can be affected.~~
- ~~Much land in the rural area is used to grow crops or rear livestock. Some contaminants can be absorbed into food chains.~~
- ~~Many households in the rural area obtain drinking water from streams or shallow bores and some open watercourses. Leaked or dumped hazardous substances can affect these water supplies.~~
- ~~The release of hazardous substances, or their by products into the air, affecting the local air quality. [R15.2]~~

~~The rural area can be sought after for sites to manufacture, store or dispose of large quantities of hazardous substances. Sites are larger, land is cheaper, and there are fewer adjoining residents, than sites in urban areas. The rural area is also perceived by many people as a pleasant place to live – cleaner, greener and with less pollution than urban areas. Activities involving the manufacture, use, storage or disposal of large quantities of hazardous substances may affect people's perception of the rural area and its amenity values. There are no facilities in Selwyn District for the collection or disposal of hazardous substances, by-products or containers. The Burwood landfill in Christchurch accepts hazardous waste, but people need to take it there.~~

~~The Council has recently adopted the Canterbury Hazardous Waste Management Strategy. This Strategy promotes regionally co-ordinated management of hazardous waste. In addition, the Council is currently in the process of setting aside land for the establishment of a Resource Recovery Centre. This is a major component in the District's goal of achieving Zero Waste to Landfill by 2015. Although this facility will not provide facilities for the disposal of hazardous substances, it will provide environmentally sound facilities for the temporary storage of these wastes before they are transported to region-wide waste disposal facilities. [R15.7]~~

~~iii Hazardous Substances and the Act~~

~~Regional and district councils have functions for managing the effects of the use, storage, transport and disposal of hazardous substances, under the RMA. Policy 1, Chapter 17 of the Regional Policy Statement (p. 261) sets out in more detail how those functions are shared between Environment Canterbury and district councils (territorial local authorities) in Canterbury.~~

~~In summary, Environment Canterbury manages:~~

- ~~Any discharge of hazardous substances;~~
- ~~Hazardous substances in the Coastal Marine Area;~~
- ~~Transportation of particular [R15.2] hazardous substances through water bodies via a pipe; and~~
- ~~Has a role in co-ordinating the management of hazardous substances in the Region.~~
- ~~The use, storage, transportation and disposal of specified substances (including petrochemicals and timber treatment chemicals) where they may affect water quality. [R15.2]~~

~~District councils are responsible for the rest.~~

~~iv. Other Legislation~~

~~Other statutes address some issues associated with hazardous substances. They include:~~

- ~~The Hazardous Substances and New Organisms Act 1996 which addresses effects on people's health and safety from the manufacture, use and storage of hazardous substances.~~
- ~~Transport Act 1962 which addresses the transport of hazardous substances.~~
- ~~Clauses F3 and C1 of the Building Code contain requirements relating to the storage and containment of Hazardous Substances, under the Building Act 1991.~~

(iii) Regulatory controls

The Hazardous Substances and New Organisms Act 1996 (HSNO) and Hazardous Substances regulations are the principal legislation controlling the introduction, manufacture, use, storage and disposal of hazardous substances. Substances are classified numerically according to their hazardous characteristics, and the regulations and associated codes of practice and other instruments set specific baseline standards for storage, handling and emergency response for each class of substance and the facilities and activities involving them. HSNO has revoked earlier legislation, including the Dangerous Goods Regulations which the Council previously administered.

The Council has limited powers and responsibilities under HSNO, which is administered mainly by other agencies particularly in terms of the use and application of hazardous substances in working situations. It should be noted that HSNO protects health and safety within the immediate environment of the facility or activity, whereas community issues and concerns must be addressed through the provisions of the Resource Management Act via the Regional Policy Statement, the Regional Plan and District Plans.

Regional and District Councils have functions for managing the effects of the use, storage, transport and disposal of hazardous substances, under the Resource Management Act 1991. Chapter 17 (p. 261) of the Regional Policy Statement sets out in more detail how those functions are shared between Environment Canterbury and territorial local authorities in Canterbury.

In summary, Environment Canterbury has a co-ordinating role in the management of hazardous substances in the Region, with specific responsibilities to manage

- Any discharge of hazardous substances;
- Hazardous substances in the Coastal Marine Area;
- The use, storage, transportation and disposal of specified substances (including petrochemicals, agrichemicals, organic solvents, timber treatment chemicals, and toxic metals) where they may affect water quality.

The Draft Natural Resources Regional Plan (Air Quality and Water Quality chapters) control storage and use of the specified substances. Of particular significance to Selwyn District is the restriction of new development involving hazardous substances storage on land in the Christchurch Groundwater Recharge Zone which covers part of the District's north-east.

District and city councils in the Canterbury region are responsible for developing objectives, policies and rules relating to the control of the use of land for the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of any hazardous substances except where they are controlled by Environment Canterbury. In setting those objectives, policies and rules, the Council must ensure those provisions are consistent with the RMA and HSNO, and also be mindful of other legislation associated with the control of hazardous substances.

(iv) Other Legislation

- The Transport Act 1962 controls the transport of hazardous substances, through the Ministry of Transport's Land Transport Dangerous Goods Rule which is enforced by the NZ Police. Incompatible substances must be segregated, loads must be secured and commercial loads must be placarded appropriately. The Council has no involvement with the Rule, but can consider controlling routes for the transport of hazardous substances through its District Plan and resource consents for environmental effects reasons.
- The Radiation Protection Act 1965 and the 1982 Regulations control radioactive materials. They are administered by the National Radiation Laboratory, a business unit of the Ministry of Health. The Council may control the location of activities where radioactive materials are present, to address local concerns.
- The Building Act 1991 contains requirements relating to the storage and containment of Hazardous Substances. The Council applies these provisions through the building consent process, at which stage the requirements of the Building Code can be coordinated with District Plan considerations.
- The Health and Safety in Employment Act 1992 addresses workplace safety and is administered by the Department of Labour's Occupational Safety and Health Division (OSH). Workplaces are required to have health and safety plans in place, which must be consistent with HSNO with respect to hazardous substances management and emergency response.

(v) Hazardous waste management

Hazardous wastes may contain residues of hazardous substances in quantities or concentrations that have the same potential effects as those substances. The unauthorized disposal of hazardous wastes is often the cause of soil and water contamination. A number of hazardous waste collection, treatment and disposal operators are based in Christchurch or handle their business through there, and their services are available to the District's waste generators.

The Council has recently adopted the Canterbury Hazardous Waste Management Strategy, which promotes the regionally coordinated management of hazardous waste. Under that strategy, the Council has established a Resource Recovery Centre which is a major component in the District's goal of achieving Zero Waste

to Landfill by 2015. The Centre provides environmentally sound facilities for the temporary storage of domestic hazardous wastes that are dropped off by the public, and for hazardous waste materials that are recovered from the landfill waste stream. The wastes are stored temporarily before they are transported to hazardous waste treatment and disposal contractors.

II – STRATEGY

The district plan uses the following basic strategy to address issues with Hazardous Substances:

- The Council accepts that HSNO controls immediate effects on people's health and safety from the manufacture, use and storage of hazardous substances, and that specific legislation administered by other agencies primarily controls use in workplace situations, transport, building development, and radioactive substances.
- The district plan focuses on matters that are not covered by other, more specific legislation or the functions of the Regional Council.
- Policies and rules are implemented to avoid hazardous substances being stored or disposed of in places where, if they spill or leak, serious environmental effects will occur.
- Controls are imposed over the manufacture, storage and disposal of hazardous substances to protect the amenity values of areas and people's sense of well-being.
- Ensuring that activities in the district that use or produce large quantities of hazardous substances have appropriate disposal plans.
- Managing the use of land which is contaminated by hazardous substances is addressed in Part 2, Section 1.1 – Land and Soil.

~~The district plan uses the following basic strategy to address issues with Hazardous Substances:~~

- ~~The plan focuses on matters that are not covered by other, more specific legislation or the functions of Regional Councils.~~
- ~~Policies and rules to avoid hazardous substances being used, stored or disposed of in places where, if they spill or leak, serious environmental effects will occur.~~
- ~~Controls over the manufacture, use, storage and disposal of hazardous substances to protect the amenity values of areas and people's sense of well being.~~
- ~~Ensuring that activities in the district that use or produce large quantities of hazardous substances have appropriate disposal plans.~~
- ~~Managing the use of land which is contaminated by hazardous substances is addressed in Part 2, Section 1.1 – Land and Soil.~~

~~The Council is satisfied that regulations made under the HSNO 1996 are the appropriate methods to deal with actual effects on people's health and safety from the manufacture, use and storage of hazardous substances.~~

III OBJECTIVES, POLICIES AND METHODS

i. Objectives

1. ***To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects to human health, to the amenity of the rural environment, townships and to the natural environment arising from the manufacture, storage, transport on waterbodies and disposal of hazardous substances.***

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.***

3. 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 life-sustaining capacity and amenity values of waterbodies, land and soil resources.

~~***1. Hazardous substances are recognised as an integral part of rural activities, and they are [R15.2] used in ways that do not adversely affect people, wildlife, natural resources, or the amenity values of the rural area.***~~

Explanation and Reasons

Hazardous substances of various kinds are in widespread use in the Selwyn District and are an essential part of everyday life. By their nature, hazardous substances carry an inherent risk of adverse effects should an accident occur. The accidental or deliberate spillage, leak or disposal or inappropriate use of hazardous substances could adversely affect the District's natural resources and primary production resources, and the health of humans, farm and domestic animals and flora and fauna. The presence of large quantities of hazardous substances may also adversely affect the amenity values of townships and rural areas, by their actual or perceived potential adverse effects.

Objectives 1 to 3 minimise that risk. This is achieved through the District Plan provisions to manage the locations where significant quantities of hazardous substances are manufactured, ~~used~~ and stored, including separation from 'sensitive' areas e.g. near waterbodies and residential areas, and to require the safe and secure containment of hazardous substances at those locations. In making those provisions, the Council recognises that the use, transport, discharge and disposal of hazardous substances are controlled by other statutory authorities through legislation and associated controls including the HSNO Act 1996; and through Environment Canterbury's Natural Resources Regional Plan.

~~The objective recognises that hazardous substances are an integral part of may activities in the rural area. [R15.2]The rural area also [R15.2] has natural resources, wildlife and amenity values which may be adversely affected if hazardous substances spill, leak or are dumped or inappropriately used or [R15.2] disposed of. The District Plan provisions need to [R15.2]:~~

~~i. Allow the use and appropriate [R15.2] storage of hazardous substances on site for activities in the rural area; [R15.2] and~~

~~ii. Impose sufficient conditions on activities involving hazardous substances to mitigate the risk of affecting the environment.~~

~~The objective also recognises that the rural area may be a sought after location for people to manufacture, treat or dispose of hazardous substances. These activities must not adversely affect natural resources, wildlife and the amenity values of the rural area.~~

~~The objective is achieved through policies and rules to:~~

- ~~Manage the quantity of and conditions under which hazardous substances can be used or stored as permitted activities.~~
- ~~Manage the manufacture, disposal and large scale use or storage of hazardous substances through resource consents.~~
- ~~Work towards getting access to facilities to dispose of hazardous substances.~~

~~Regional councils control discharges of contaminants under Section 30(1)(c) of the Act. They may prosecute people for illegal or accidental discharges but by this stage, damage to the environment has occurred. The strategy in the District Plan is to manage the conditions for using or storing hazardous substances, so if leaks and spills do occur, damage to the environment will be reduced.~~

~~The Council is satisfied that risks to people's health and safety from the manufacture, use or storage of hazardous substances are most appropriately managed by regulations under the Hazardous Substances and New Organisms Act 1996.~~

(i) Policies and Methods

Manufacture~~, Use~~ and Storage

Policy 1

a) Allow appropriate [R15.2] quantities and classes of hazardous substances to be ~~used and~~ stored in the rural area ~~in sufficient quantities~~ [R15.2] to provide for land use ~~undertake~~ 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.

Explanation and Reasons

Many activities in the rural area use hazardous substances. The quantities ~~used and~~ stored are often sufficient to contaminate land and soil with significant adverse effects, therefore, the Plan provisions need to allow hazardous substances to be ~~used and~~ stored on site to be practical, but subject to conditions to protect the environment. **Policy 1** is implemented

using rules relating to the quantities and conditions for, manufacturing, storing and disposing of hazardous substances at any site. Resource consents are required where specified threshold quantity limits for hazard substances are exceeded, and/or specific site controls or other performance criteria are not complied with. Activities that comply with the performance criteria and do not exceed the specified quantity limit thresholds have permitted status in terms of the hazardous substances rules of the Plan.

The threshold quantity limits in Appendix 9 are a convenient measure to use to distinguish between small-scale activities where effects are likely to be minor, and larger scale activities that require resource consent. The classification system used in the Appendix is based on the provisions of the HSNO legislation. The quantity limits have been established with regard to local conditions and requirements, and with due consideration to the HSNO controls, to national guidelines and procedures published and advocated by the Ministry of the Environment and the Environmental Risk Management Authority, to the Natural Resources Regional Plan, and to District Plans published by other territorial local authorities.

Some HSNO classes are not listed in Appendix 9 because they are not considered to have a significant hazard rating in the land-use planning context. In this case, no restrictions apply under the District Plan. However, many hazardous substances have more than one HSNO class or category. Where this is the case, the most restrictive class or category will be applied, as this recognises the possible extent of the health and safety risks associated with the substance.

When assessing compliance with the provisions of the hazardous substances rules and when considering applications for resource consents involving storage, use, disposal or transportation of hazardous substances, the Council will consider the types and quantities of hazardous substances and the adequacy of controls and conditions on the hazardous substances at the application site, the location of the substances relative to sensitive environments and natural resources, and the degree of risk of flooding or earthquake in the area of the site. The Council will also have due consideration of any controls imposed by other legislation. This will include but will not be limited to the provisions of the Hazardous Substances and New Organisms Act 1996 and Regulations (including test certification, approved handler certificates, controlled substances licences and codes of practice issued by or recognised by ERMA), the Natural Resources Regional Plan and resource consents issued by the Canterbury Regional Council, and the Health and Safety in Employment Act 1992.

The Council recognises that the use, transport, discharge and disposal of hazardous substances are also controlled by other statutory authorities through legislation and associated controls including the HSNO Act 1996; and through Environment Canterbury's Natural Resources Regional Plan.

~~by rules which allow the appropriate [R15.2] use and storage of hazardous substances up to specified quantities as a *permitted activity* (no resource consent required). The rule includes conditions for how hazardous substances are used~~

~~and stored to contain any leaks or spills. Specific rules also restrict the storage of hazardous substances in close proximity to waterbodies, wetlands or areas of cultural significance. [R15.2] A resource consent is needed to use or store larger quantities of hazardous substances than the rule allows (See Appendix 15 for maximum quantities for permitted activities). The Dangerous Goods Licensing Regulations have been used as a guide where appropriate. It is a convenient measure to use to distinguish between small scale activities where effects are likely to be minor, and large scale activities. The rules are not intended to duplicate the Dangerous Goods Licensing Regulations which address people's health and safety. The Hazardous Substances and New Organisms Act (HSNO) establishes national guidelines and procedures and is also of relevance in considering the use of hazardous substances. [R15.2]~~

Method

- District Plan Rules — Hazardous Substances
- Other Legislation — To address specialist areas of health and safety
- Regional Council Rules — To control the discharge of hazardous substances

Policy 2. ***Limit [R15.2] manufacturing, and avoid [R15.2] disposing of hazardous substances near any of the following areas:***

(i) Waterbodies [R17A.2] or wetlands.
(ii) Areas of outstanding natural features and landscapes. [R37.2]
(iii) Significant ecological sites.
(iv) Sites of heritage or cultural values.
(v) Popular recreational areas.
(vi) Dwellings[V13], other than a dwelling[V13] on the same site as the activity.

Explanation and Reasons

[V13] Variation 13 – 2 November 2002

Policy 2 is intended to protect waterbodies [R17A.2], wildlife and areas with special values from potential adverse effects caused by the manufacture[R15.2] or disposal of hazardous substances. Policy 2 also avoids adverse effects on amenity values and concern among residents, from having activities involving large quantities of hazardous substances close by.

The policy and associated rules apply to significant ecological sites, heritage sites and outstanding natural features [R37.2] which are identified using the processes set out in the District Plan. The policy and rules [R15.2] also apply to all waterbodies [R17A.2]. In assessing a resource consent application to manufacture or dispose of hazardous substances, [R15.2] the consent authority shall also consider potential effects on any cultural or recreational values of the site and surrounds and the proximity of dwellings on surrounding sites.

Methods

- District Plan Rules - Hazardous Substances

Transport

Policy 3. Avoid transport of hazardous substances on the surface of waterbodies [R17A.2] in watercraft, if there is an alternative vehicular access to the site by land.

Explanation and Reasons

A hazardous substance spilled into a waterbody [R17A.2] can cause both immediate and delayed adverse effects to aquatic life and ecological, cultural, recreational and amenity values. Such a spill is also much harder to contain and clean up than when it is spilled on to land, and the effects may become widespread as contaminants are carried downstream or disperse on water surfaces. ~~Areas of water often have aquatic life and ecological, cultural, recreational and amenity values, which are adversely affected by a spill.~~ **Policy 3** recognises that there is no need to risk transporting hazardous substances on the surface of a waterbody [R17A.2] when there is alternative access to a site, over land. The corresponding

rule does not apply to spare fuel for motorised water craft or hazardous substances found in the motor of such craft.

Methods

- District Plan Rules - Transport of Hazardous Substances

Disposal

Policy 4.Ensure parties who manufacture store ~~or use~~ commercial ~~large~~ quantities of hazardous substances have the means to dispose of hazardous substances and their containers without adversely affecting the environment.

Policy 5 Work toward obtaining access to appropriate hazardous waste treatment and disposal facilities for residents and ratepayers of the District.

Explanation and Reasons

Under Policies 4 and 5, the Council will work with Environment Canterbury and other District Councils, to develop solutions for disposing of hazardous substances and hazardous waste, including empty hazardous substance containers. The Council will also encourage manufacturers and users of hazardous substances and generators of hazardous wastes to participate in identifying and developing waste disposal options.

Environment Canterbury, in conjunction with other local authorities including Selwyn District Council, has developed the Canterbury Regional Hazardous Waste Management Strategy for dealing with hazardous waste. It provides that basis for a co-ordinated region wide approach to the minimisation and management of hazardous waste. Under that strategy, facilities are being developed by the Council to receive and store domestic hazardous wastes from residents throughout Selwyn District.

Where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require that party to submit a disposal plan for approval by the consent authority before establishing in the District.

Methods

- District Plan Rule - Hazardous Substances
- Trade Waste Bylaws
- Advocacy - Continue to advocate for a co-ordinated approach to hazardous waste disposal in Canterbury as a signatory to the Canterbury Regional Hazardous Waste Management Strategy

~~There are no facilities in the Selwyn District to collect or dispose of hazardous substances or their containers. Therefore, any party producing hazardous waste has to find its own means for disposing of it. Where potentially large quantities or concentrations of hazardous waste are being generated, the Plan rules require that party to submit a disposal plan for approval by the consent authority before establishing in the District.~~

~~**Methods**~~

~~- District Plan Rule Hazardous Substances~~

~~- Trade Waste Bylaws~~

~~***Policy 5.Work towards obtaining access to hazardous waste treatment and disposal facilities for residents and ratepayers of the District.***~~

~~**Explanation and Reasons**~~

~~There are currently no specialist facilities in Selwyn District to dispose of hazardous substances or containers, or to collect such items for disposal elsewhere.~~

~~The Council is working with Environment Canterbury and other District Councils to develop solutions for disposing of hazardous waste. This includes a policy for hazardous waste disposal which has been adopted by Environment Canterbury. The Council will also encourage manufacturers and users of hazardous substances to participate in developing waste disposal options.~~

~~Environment Canterbury, in conjunction with other local authorities including Selwyn District Council, has developed a hazardous waste management strategy for dealing with hazardous waste. It provides the basis for a co-ordinated region wide approach to the minimisation and management of hazardous waste. [R15.7]~~

~~**Method**~~

- ~~Signatory to Environment Canterbury's Hazardous Waste Disposal Policy~~

IV - ENVIRONMENTAL RESULTS

The following environmental results should occur from implementing Section 3.2;

1. Adverse effects of hazardous substances on the environment are minimised. [R15.7]

2. Reduced instances of land becoming contaminated where hazardous substances have been ~~used or~~ stored.

3. Reduced risk of waterbodies [R17A.2] becoming contaminated from hazardous substances.

4. Access to facilities for the treatment and disposal of hazardous substances. [R15.7]

5. Users of large quantities of hazardous substances follow plans to minimise the amount of hazardous waste they produce and to dispose of that waste in ways that have minimal effects on the environment.

V - MONITORING

Please refer to Appendix 1.

VOLUME TWO: RURAL

PART THREE: DISTRICT PLAN RULES, RULE VII - HAZARDOUS SUBSTANCES

RULE VII - HAZARDOUS SUBSTANCES

Notes:

1. The ~~use,~~ storage, transport or disposal of any hazardous substance is a permitted activity (no resource consent required) if all the rules listed under the column headed 'Permitted Activities' are complied with.

2. The ~~use,~~ storage, transport or disposal of any hazardous substance which does not comply with the rules for permitted activities has the status set out in the corresponding rule(s) in the column headed 'Other Activities'.

3. Where more than one HSNO class or category applies to a hazardous substance, the class with the most restrictive thresholds will apply.

4. Rule VII does not apply to the disposal of any hazardous substance by use of it in accordance with the manufacturer's instructions~~, nor to empty containers which are disposed of in accordance with the manufacturer's instructions~~.

5. Underlined words are defined in Part 3, Section 3 of the Plan.

6. Any activity involving the storage, use, disposal, discharge or transportation of a hazardous substance may require resource consent from Environment Canterbury. Therefore, Environment Canterbury should be consulted.

7. **PERMITTED ACTIVITIES do not require a resource consent. OTHER ACTIVITIES do require a resource consent.**

Permitted Activities	Other Activities
~~Use and~~ Storage	**~~Use and~~ Storage**
1. The ~~use or~~ storage of any hazardous substance if all of the following conditions are met:	2.1 Any ~~use or~~ storage of hazardous substances which does not comply with Rule 1 shall be a *discretionary activity.*
1.1 The quantity of each individual sub-class of [R15.6] hazardous substance ~~used or~~ stored complies with the maximum quantities set out in Appendix	

Permitted Activities		Other Activities
	15;	
1.2	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: 1.2.1 Is separated from the bare ground; 1.2.2 Is designed to contain any runoff of the substance or water contaminated with the substance; 1.2.3 Has a minimum area able to be used to contain the hazardous substance amounting to: (i) the amount of containment available is no less than 110% [R15.5] of the total [R15.5] volume of [R15.5] stored hazardous substance where the area is roofed; or (ii) 120% of the volume of any stored hazardous substance where the area is unroofed;	
1.3	The hazardous substance is stored in a sealed container which: 1.3.1 Is made of a sound material that will not be weakened or corroded by the hazardous substance being stored in it; 1.3.2 Is permanently labelled with the name of the contents; and 1.3.3 Contains only one type of hazardous substance;	
1.4	The hazardous substance is not stored: 1.4.1 Within 20m of any waterway or any wetland which adjoins a waterway; and 1.4.2 In any area shown on the Planning Maps as a Silent File area, Wāhi	

Permitted Activities	Other Activities
[Cl 16(2), 1st Sch RMA] Taonga site, Wāhi [Cl 16(2), 1st Sch RMA] Taonga Management Area, or Mahinga Kai site.	
Transport 3. The transport of any hazardous substance in a boat or other craft over the surface of any waterway if any one of the following conditions is met: 3.1 The hazardous substance is contained in the motor or fuel tank of a motorised craft; or 3.2 The hazardous substance is spare fuel for a motorised craft and is carried in a sealed container specifically designed for that purpose; or 3.3 There is no road or vehicular access to the site where the hazardous substance is to be used and the hazardous substance is: 3.3.1 Carried in a sealed, waterproof container which is specifically designed to carry that substance; and 3.3.2 Permanently labelled with the name of the hazardous substance.	**Transport** 4.1 Any activity which does not comply with the Rule 3 shall be a *non-complying activity.*
	Manufacture 7.1 The manufacture of any hazardous substance, as either a product or by-product, shall be a *discretionary activity.*
	Disposal 6.1 The use of any land or facilities to dispose of any hazardous substance shall be a non-*complying activity*. *Note – disposal of any solid waste must comply with Rule VIII.*

Cross Referencing

The table below cross-references the rules in this section with objectives and policies in the plan. The cross-referencing is to assist plan users by indicating the objectives and policies which are likely to relate to each rule. There may be other objectives or policies in the plan (which are not listed in the cross-reference table) which will apply in some cases. The cross-reference table does not limit the application of any objective and policy in the plan to the rules with which it is cross-referenced; and it does not preclude the consent authority from considering any other relevant objective or policy in the plan, when making a decision on a resource consent application. **Any person making a resource consent application is advised to read all the objectives and policies in Part Two of the Plan.**

Rule Nos	**Topic**	**Part 2, Section**	**Objectives & Policies**
1.1, 1.2, 1.3, 1.4 & 2.1	~~Use &~~ Storage	1.1 1.3 1.4 3.2 3.3 3.4 4.2	Objectives 1 & 2, Policy 1 Objective 1, policies 1 & 2 Objective 1, policies 2 & 3 Objective 1, policies 1 & 2 Objectives 1 & 2, policies 2 to 5 & 8 Objectives 1 & 2, policies 1, 3 & 18 to 20 Objectives 1 & 2, Policy 8
3.1, 3.2, 3.3 & 4.1	Transport	1.4 3.2	Objective 1, Policy 4 Objective 1, Policy 3
5.1	Manufacture	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 4.2	Objective 2, Policy 1 Objective 1 Objective 1, policies 2 & 3 Objective 1, Policy 4 Objective 1 Objective 1 Objective 1, policies 2 & 4 Objectives 1 & 2, policies 2 to 4 & 8 Objectives 1 & 2, policies 1 to 3 & 18 to 20 Objectives 1 & 2, Policy 8

6.1	Disposal	1.1 1.2 1.4 1.5 3.1 3.2 3.3 3.4 4.2	Objective 2, Policy 10 Objective 2, Policy 5 Objective 1, Policy 3 Objective 1 Objective 1 Objective 1, policies 4 & 5 Objectives 1 & 2, policies 2 to 4 & 8 Objectives 1 & 2, policies 1 to 3 & 18 to 20 Objectives 1 & 2, Policy 8

Reasons for Rules

~~Potential effects on people's health or safety from the use, storage or transport of hazardous substances are addressed through other legislation. The Council is satisfied that regulations made under the Hazardous Substances and New Organisms Act 1996 are the most appropriate mechanisms to manage effects on people's heath and safety.~~

The District Plan provisions manage the effects of hazardous substances on the environment, including on amenity values. The Plan recognises that the use of hazardous substances is an every day part of many activities in the Rural Zone and that the use of these substances is adequately controlled by the Regional Council and other legislation. The Plan rules allow sufficient quantities of hazardous substances to be ~~used and~~ stored on-site for these such activities, as a *permitted activity* (no resource consent needed). The quantity limits have been established with regard to local conditions and requirements, and with due consideration to the HSNO controls, to national guidelines and procedures published and advocated by the Ministry of the Environment and the Environmental Risk Management Authority, to the Natural Resources Regional Plan, and to District Plans published by other territorial local authorities. ~~quantities of hazardous substances able to be used and stored as a *permitted activity* are based on the quantities in the Dangerous Goods Licensing [Cl 16(2), 1st Sch RMA] Regulations. 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 use of larger quantities of hazardous substances may be appropriate in the Rural Zone, however, a resource~~ Where those quantities are exceeded, resource consent is required to ensure that the hazardous substances are ~~is~~ appropriately controlled~~stored~~. Similarly, the manufacture of hazardous substances may be appropriate in the Rural Zone subject to a resource consent.

Many of the potential effects on health and safety of the use and storage of hazardous substances are addressed through other legislation and ~~that~~ the use of these substances is adequately controlled by the Regional Council and other authorities. The district plan complements this legislation by addressing the effects of hazardous substances on health and safety, on prevailing and anticipated amenity values, and the wider potential environmental impact of those substances.

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 ~~District Plan~~ rules apply to activities where there is no intentional discharge. While accidental leaks and spills can be prosecuted as unlawful discharges, the damage to the environment has already occurred. The District Plan therefore adopts a preventative approach. Regional Councils control the intentional discharge of contaminants under the Act.

The transport of hazardous substances over waterways and the disposal of hazardous substances are discouraged. Hazardous substances that leak or spill into water are more difficult to contain than on land, and the potential effects on wildlife, drinking water supplies, recreational and cultural values are much higher.

~~Selwyn District does not have any facilities for the appropriate disposal of hazardous substances. Therefore t~~ The disposal of hazardous substances in the District is a *non-complying activity*. Disposal does not include the application of hazardous substances in accordance with manufacturer's instructions, or the disposal of containers in accordance with manufacturer's instructions. In these cases, effects on the environment are likely to be minor.

VOLUME TWO: RURAL

PART THREE: DISTRICT PLAN RULES, APPENDIX 15 HAZARDOUS SUBSTANCES

The Tables in this Appendix are intended only for defining status of a proposed land use activity under the Selwyn District Plan, 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 Table should be identified in the first instance by reference to container labeling, Manufacturer's Safety Data Sheets (MSDS) 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.
- Many hazardous substances have more than one HSNO class or category. Where this is the case, the most restrictive class or category will apply.
- 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 1: Classification of Hazardous Substances

Hazardous substance type	Examples (including but not limited to)	HSNO Class/ Category	UN Class	Description	Health and safety hazard
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	1.1	Substances and articles that have a mass explosion hazard.	Fire/explosion (High hazard)
		1.2	1.2	Substances and articles that have a projection hazard but not a mass explosion hazard	Fire/explosion (Medium hazard)
		1.3	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	1.5	Very insensitive substances that have a mass explosion hazard	Fire/explosion (Low hazard)
Flammable gases	*LPG , acetylene, hydrogen, methane,*	2.1.1A	2.1	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	2.1	An aerosol comprising 45% or more bymass of flammable ingredients.	Fire/explosion (High hazard)
		LPG	2.1		Fire/explosion (Medium hazard)
Flammable liquids	*Liquid fuels, solvents, adhesives etc:* *Petrol, ethyl alcohol, methyl alcohol, Isopropyl alcohol, acetone, benzene, toluene, butylamine, MIBK*	3.1.A 3.1B	3 PGI 3 PGII	A flash point of less than 23°C and an initial boiling point of less than or equal to 35°C. A flash point of less than 23°C and an initial boiling point of greater than 35°C.	Fire/explosion (Very high hazard) Fire/explosion (Medium hazard)
	Kerosene, styrene monomer, cyclohexanene, turpentine, butyl methacrylate, chlorobenzene, ethoxyethanol	3.1C	3 PGIII	A flash point of greater than or equal to 23°C but less than or equal to 60°C.	Fire/explosion (Medium hazard)
	Diesel, petroleum oils	3.1D	Combustible liquids	A flash point of greater than 60°C but less than or equal to 93°C.	Fire/explosion (Low hazard)
Liquid desensitised explosives	*Nitroglycerine mixture/solution* *Nitrocellulose solution*	3.2A 3.2B 3.2C	3 PGI 3 PGII 3 PG III	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	Fire/explosion (High hazard)

				threshold for Class I; and (ii) is not listed in the UN Model Regulations and is not assigned a Packing Group.	
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 eg sodium, potassium, lithium, calcium, magnesium, metal hydrides, metal carbides.*	4.1.1A 4.1.1B	4.1(a) PG II 4.1(a) PG III	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. A substance that has lower ratings than 4.1.1A in the relevant tests of the UN Manual of Tests and Criteria.	Fire/explosion (Medium hazard) Fire/explosion (Low hazard)
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	4.1(b) Type A Type B 4.1(b) Type C Type D 4.1(b) Type E Type F	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. A substance with lower ratings than the above two categories in the relevant tests. A substance with even lower ratings than the above two categories in the relevant tests.	Fire/explosion (High hazard) Fire/explosion (Medium hazard) Fire/explosion (Low hazard)
Solid desensitised explosives	*Nitroglycerine -solid, desensitised*	4.1.3A 4.1.3B 4.1.3C	4.1(c) PG I PG II PG III	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		4.2A	4.2	a) A solid substance that does not meet	Fire/explosion

combustible substances	*A variety of metallic, organic and inorganic compounds and mixtures*	Spontaneously combustible and pyrophoric substances	PG I	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.	(High hazard)
		4.2B Spontaneously combustible and self- heating substances	4.2 PG II	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	4.2 PG III	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.	Fire/explosion (Medium hazard)
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	4.3 PG I	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	4.3 PG II	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	4.3 PG III	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	*Water treatment chemicals e.g. pool*	5.1.1A	5.1	a) A substance listed as 5.1 in the UN	Fire/explosion

substances – liquids or solids	*chlorine granulesl* *Chromates, bromates, chlorates, chlorites, nitrates, permanganates*		PG I	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.	(High hazard)
		5.1.1B	5.1 PG II	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	5.1 PG III	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	Fire/explosion (Medium hazard)

				than or equal to that of a specified reference material.	
Oxidising substances - gases	*Oxygen gas*	5.1.2A	2.2	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	*Any organic peroxide*	5.2A 5.2B	5.2 Type A Type B	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	5.2 Type C Type D	A substance with lower ratings than 5.2A orB in the relevant tests.	Fire/explosion (Medium hazard)
		5.2E 5.2F 5.2G	5.2 Type E Type F Type G	A substance with even lower ratings than 5.2A or B in the relevant tests.	Fire/explosion (Low hazard)
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:* *<u>Agrichemicals and Pesticides</u>* *Bipyridyls, carbamates,*	6.1A	6.1 PGI 2.3 (gases)	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	6.1 PGII 2.3 (gases)	• Oral toxicity: LD50 of greater than 5 mg/kg but less than or equal to 50 mg/kg • Dermal toxicity: LD50 of greater than	Human health (High hazard)

	dinitrophenols, organophosphates, organochlorines,. phenoxy compounds *<u>HSNO 'Controlled Substances'</u>* *Fumigant gases, vertebrate poisons e.g. chloropicrin, methyl bromide, cyanide baits, 1080* *<u>Toxic gases</u> (other than gases that are HSNO 'Controlled Substances'<u>)</u>* *Chlorine, ammonia* *<u>Timber treatment chemicals</u>* *Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.* *<u>Chlorinated hydrocarbons</u>* *Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane* *<u>Any other toxic substances</u>*	6.1C	6.1 PGIII	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 • 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)
		6.1D	Toxic Substances Regulations: Standard Poison	• Oral toxicity: LD50 of greater than 300 mg/kg but less than or equal to 2000 mg/kg • Dermal toxicity: LD50 of greater than 1000 mg/kg but less than or equal to 2000 mg/kg • Inhalation toxicity (gas): LC50 of greater than 2500 ppm but less than or equal to 5000 ppm • Inhalation toxicity (vapour) LC50 of greater than 10 mg/l but less than or	Human health (Low hazard)

				equal to 20 mg/l • Inhalation toxicity (dust/mist) LC50 of greater than 1.0 mg/l but less than or equal to 5.0 mg/l	
Radioactive material		N/A[5]	7		
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, hexyl-trichlorosilane, ethanolamine.*	8.2A 8.2B 8.2C	8 PG I 8 PG II 8 PG III	Data indicate irreversible destruction of dermal tissue following brief exposure Data indicate irreversible destruction of dermal tissue following moderate exposure Data indicate irreversible destruction of dermal tissue following lengthy exposure (up to four hours)	Human health (High hazard) Human health (Medium hazard) Human health (Low hazard)
Ecotoxic substances	*A wide 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	GHS GHS	Acute aquatic toxicity value[6] of less than or equal to 1 mg/l Chronic aquatic toxicity [7]of less than or equal to 1 mg/l and	Environment (High hazard) Environment (Medium hazard)

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

[6] '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.

[7] '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.

		are ecotoxic in the aquatic environment		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.	
		9.1C Substances that are harmful in the aquatic environment	GHS	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	GHS	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)

TABLE 2: Land Use Quantity Limits for Classes of Hazardous Substances

Hazardous substance type	**Examples (including 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* *Kerosene, styrene monomer, cyclohexanene, turpentine, butyl methacrylate, chlorobenzene, ethoxyethanol* *Diesel, petroleum oils*	3.1.A, 3.1B Aboveground storage[8] Underground storage 3.1C 3.1D Aboveground storage[9] Underground storage	 3,000 litres 3,000 litres 1,000 litres 5,000 litres 5,000 litres
Liquid desensitised explosives	*Nitroglycerine mixture/* *Solution* *Nitrocellulose solution*	3.2A, 3.2B, 3.2C	30 litres

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

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 eg 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 self-heating substances 4.2C Spontaneously combustible and self-heating substances	25kg 25kg 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	1kg 1kg
Oxidising substances – liquids or solids	*Water treatment chemicals e.g. pool chlorine granulesl* *Chromates, bromates, chlorates, chlorites, nitrates, permanganates*	5.1.1A 5.1.1B, 5.1.1C	50 kg/litres 1 kg/litres
Oxidising	*Oxygen gas*	5.1.2A	100 kg

substances - gases			
Organic Peroxides	*Any organic peroxide*	5.2A, 5.2B 5.2C, 5.2D 5.2E, 5.2F, 5.2G	1 kg/litres 1 kg/litres 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* *Toxic substances land use thresholds in this Table are identified in the following subgroups:* *Agrichemicals and Pesticides* *Bipyridyls, carbamates, dinitrophenols, organophosphates, organochlorines,. phenoxy compounds* *HSNO 'Controlled Substances'* *Fumigant gases, vertebrate poisons e.g. chloropicrin, methyl bromide, cyanide baits, 1080* *Toxic gases (other than gases that are HSNO 'Controlled Substances')* *Chlorine, ammonia* *Timber treatment chemicals* *Compounds derived from arsenic, copper, chromium, tin, boron, light organic solvent preservatives, anti sapstain chemicals.* *Chlorinated hydrocarbons* *Any compound containing carbon, hydrogen and chlorine including Trichloroethene, tetrachloroethene, 1,1,1–trichloroethane, tetrachloromethane, bromodichloromethane, trichloromethane* *Any other toxic substances*	6.1A, 6.1B, 6.1C, 6.1D (included in the following subgroups) Agrichemicals and Pesticides HSNO 'Controlled Substances' Toxic gases (other than gases that are HSNO 'Controlled Substances') Timber treatment chemicals Chlorinated hydrocarbons Any other toxic substances *(that are not otherwise Class 3*	 1,000 kg/litres 100 kg 10 kg 20 litres 20 litres 1 kg/litres

		flammable liquids)	
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, hexyl-trichlorosilane, 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 categories*	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