

**Chapter 8:  
Model District Plan  
Section on the HFSP**

## 8 Model District Plan Section on the HFSP

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### Key Points

- Under the RMA, controls on hazardous facilities and activities are primarily exercised through district plans.
- This section presents a model planning chapter on hazardous substances to guide councils in the preparation of their district plans. It includes relevant definitions, an issue statement, objectives and policies, expected outcomes and a series of rules for hazardous facilities and activities.
- The design of the model planning chapter is general and requires translation into the context of particular districts. District councils may adopt all or part of it.
- If the HFSP is adopted, the setting of Consent Status Indices for the Consent Status Matrix in particular needs to be carried out by each council, taking into account its own land use planning strategy.

### 8.1 Background

Under the RMA, controls for hazardous facilities and activities are primarily exercised through district plans. However, an overriding management framework may be set out in Regional Policy Statements, if regional councils choose to exercise this function.

To provide a context for the HFSP and assist councils with developing suitable planning and management controls, this section offers a model chapter on hazardous substances and facilities management which councils may wish to consider for inclusion in their plans.

The suggested model planning and management controls for district plans focus on addressing the effects of the use, storage, transportation and disposal of hazardous substances. It should be noted that transportation and disposal of hazardous substances may also be controlled by other measures. The model includes:

- relevant definitions
- introduction
- a brief issue statement
- objectives and policies
- explanation and reasons
- anticipated environmental results
- a detailed management strategy outlining:
  - minimum performance standards for hazardous facilities
  - assessment criteria for consent applications
  - the Hazardous Facility Screening Procedure
  - the Consent Status Matrix.

The design of this chapter is general and will require translation into the context of particular regions and districts. Similarly, if the HFSP is adopted, the setting of Consent Status Indices for the Consent Status Matrix needs to be carried out by each TA for its own requirements. However, because the HFSP has been assessed, peer-reviewed and endorsed in this form by

technical and scientific experts, it is strongly recommended that the procedure itself is adopted without modification.

In adopting the model planning provisions and methods for hazardous facilities (such as the HFSP) outlined in this chapter, each TA will need to give careful thought to the costs and benefits of doing so, as outlined in Section 32 of the RMA. Appendix F provides a suitable explanation to justify the scope and use of the HFSP in a district plan. Further explanation may need to be provided by individual TAs in terms of the broader issues, objectives and policies of the district plan in relation to hazardous facilities.

Also addressed in this section are other aspects of hazardous facility management planning that should be provided for in a district plan, examples of facilities and activities that should be excepted from the HFSP and possible exemptions.

## 8.2 Definitions

It is recommended that the following definitions are inserted into the district plan:

- Hazardous substance** For the purposes of this district plan, hazardous substances are defined as:
- a) substances with one or more of the following intrinsic properties
    - an explosive nature
    - an oxidising nature
    - a corrosive nature
    - flammability
    - acute and chronic toxicity
    - ecotoxicity with or without bioaccumulation.
  - b) substances which in contact with air or water (other than air and water where the temperature or pressure has been artificially increased or decreased) generates a substance with any or more of the properties specified in paragraph a) of this definition
  - c) substances that, when discharged to surface or ground waters, have the potential to deplete oxygen as a result of the microbial decomposition of organic materials (for example, milk or other foodstuffs)
  - d) radioactive substances except smoke detectors.
- Hazardous facility** A hazardous facility means any activity involving hazardous substances and their sites where hazardous substances are used, stored, handled or disposed of, and any installations or vehicles parked on site that contain hazardous substances. Hazardous facility does not include:
- the incidental use and storage of hazardous substances in domestic quantities
  - fuel in motor vehicles, boats and small engines
  - retail outlets for the domestic usage of hazardous substances (i.e. supermarkets, hardware shops, pharmacies, home garden centres)
  - gas and oil pipelines
  - trade waste sewers.

Hazardous sub-facility      A sub-facility is any hazardous facility that operates separately, being more than 30 metres from any other hazardous facility on the same site; for example, a university or research centre.

### **8.3 Other aspects of hazardous facilities management**

There are other matters that need to be considered in preparing the District Plan which may not be part of the Hazardous Substances Chapter, such as cross boundary matters and monitoring. Each territorial authority will have a different approach to these matters, as they relate to wider issues than simply hazardous substances. For this reason, these matters are not included in the Model District Plan Section – Hazardous Substances, and are instead, described below:

#### **8.3.1 Cross-boundary effects**

The Hazardous Facility Screening Procedure and the management strategy of which it is a part, focus on the potential off-site effects a hazardous facility may have on the environment, people and property, including surrounding land uses.

Liaison between neighbouring district/regional councils to ensure that zoning or land use strategies are compatible is therefore essential. This is of particular importance where a hazardous facility is located at district/regional boundaries and has the potential to affect the neighbouring district/region.

Cross-boundary liaison is also important with respect to the transport of hazardous substances. Where a council identifies specific transport routes it needs to ensure that this is compatible with district/regional plans of other affected authorities.

Each council is to decide how to address cross boundary issues in their District Plan, for example by way of a separate section on cross boundary issues for hazardous substances, or with a comprehensive chapter on all cross boundary issues.

#### **8.3.2 Monitoring**

Monitoring by the consent authority is an integral component of any management strategy, to establish the effectiveness or otherwise of the adopted system. With respect to land use planning for hazardous facilities, the following matters should be considered for inclusion in monitoring programmes:

- information on the location and layout of the facility
- the quality and availability of plant documentation, including operating procedures
- information about the nature and quantity of the hazardous substances used, stored and transported
- process description and design
- emergency planning for the facility
- transport movements and routes
- information on waste management
- a review of the hazards and safeguards in place.

Where deemed appropriate, council may require the consent holder to undertake self-monitoring.

Each council is to decide how to address monitoring in their District Plan, for example by way of a separate section on monitoring for hazardous substances, or with a comprehensive chapter on all monitoring issues.

## Model HSFP for your District Plan

### Section X - Hazardous Substances

#### Introduction

The use, storage, transportation and disposal of potentially hazardous substances are an integral part of the normal activities of a community. These substances whether singularly or in combination have the potential to adversely affect the health and safety of the community, and the wellbeing and sustainability of the local natural and physical environment.

Territorial Authorities have responsibility under Section 31 of the RMA to control any actual or potential effects of the use, development or protection of land including the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances in the context of the environment in which they occur. Under Section 30 of the RMA, Regional Councils are to control the use of land for the purpose of prevention or mitigation of any adverse effects of the storage, use, disposal and transportation of hazardous substances.

There are other legislative requirements for hazardous substances, such as the Hazardous Substances and New Organisms Act 1996 (HSNO). The focus of the HSNO legislation and regulations is on the characteristics of the substance itself regardless of the location. This includes containment, packaging, identification, tracking, competency handling, emergency preparedness and disposal. The HSNO Act provides the means to set conditions on the management of hazardous substances which apply irrespective of location. The control of potential adverse environmental effects at a particular site will be set under the RMA.

There are three main types of potential adverse effects from hazardous substances that need to be controlled:

- effects on the physical and natural resources caused by fire and explosion
- effects on the receiving environment caused by pollution, contamination and poisoning
- effects on human health, including risk to people and communities.

The controls need to be implemented at the site where the activities and facilities involved with hazardous substances are to be located.

## **X.1 Issue statement**

The use, storage, transportation and disposal of hazardous substances are associated with primary production, manufacturing and processing activities, as well as retail, business and domestic activities. There are risks associated with hazardous substances that could adversely affect the environment and human health. The risks are the likelihood of occurrence of an adverse effect from a hazard and the resulting consequences adversely affecting people and the environment. These hazards include explosiveness, flammability, corrosiveness, toxicity and ecotoxicity.

Hazardous substances should be managed in a safe manner to avoid, remedy or mitigate any adverse effects on human health and the environment caused by an accidental or deliberate release of hazardous substances. Measures should also be taken to reduce the risk to the local community and environment from the location of hazardous facilities.

## **X.2 Objectives and policies**

### ***X.2.1 Objective***

X.2.1.1 To avoid, remedy, or mitigate adverse effects on the environment, including risk, associated with the use, storage, transportation and disposal of hazardous substances.

### ***X.2.2 Policies***

- X.2.2 (i) Hazardous facilities are to be located, designed, constructed and managed to avoid, remedy or mitigate adverse effects and unacceptable risks to the environment.
- X.2.2 (ii) Appropriate facilities and systems are to be provided to avoid the pollution of soil, groundwater, watercourses and air in the event of accidents (such as spills, gas escapes, etc) involving hazardous substances.
- X.2.2 (iii) Transportation of hazardous substances, including wastes, should be undertaken in a safe manner, by modes and transport routes which prevent or minimise the risk of adverse effects on residents, on the natural and physical environment, and on other transport users.
- X.2.2 (iv) Disposal of hazardous wastes is to be undertaken in an environmentally safe manner at authorised facilities to avoid the risk of hazardous substances escaping into the environment thereby creating adverse environmental effects.

### *Explanation and principal reasons for this approach*

Hazardous substances could be toxic, flammable, highly reactive, corrosive, and ecotoxic. Therefore all activities involving the manufacture, storage, use, transportation and disposal of hazardous substances have the potential to create adverse environmental effects if the substances escape into the environment as a result of inadequate management or an accidental spillage. To avoid, remedy, or mitigate these effects, hazardous facilities and activities need to be managed correctly and located appropriately.

The nature and scale of environmental effects resulting from a discharge of hazardous substances is influenced by the location of the hazardous facility or activity. For example, near sensitive ecological areas, a discharge of hazardous substances may have far reaching adverse effects. The location of hazardous facilities must be addressed carefully in relation to the surrounding community and environment.

Reverse sensitivity, that is the effects of neighbouring activities on the ability of a hazardous facility in question to carry out its operations effectively, may also need to be taken into account for existing areas of particularly large hazardous facilities where residual risks cannot be completely eliminated.

Specific controls relating to the use and storage of hazardous substances, in particular site design, layout and operational management procedures should prevent/mitigate the risk of hazardous substances escaping into the environment thereby creating adverse environmental effects. This involves the on-site storage requirements and also the statutory requirements of the HSNO Act provisions. There are also New Zealand standards, Codes of Practice and Regulations for the storage of hazardous substances.

An aggregation of such hazardous facilities may generate adverse effects if operational procedures do not conform to defined minimum conditions or malfunctions occur in the process/facility. The location, site design and operation of each hazardous facility are to be managed wisely to avoid or mitigate off-site effects. Where there are a number of separate hazardous operations within one site, each operation is to be managed in a safe manner to avoid adverse effects on each other and off-site. Such operations are known as hazardous sub-facilities. A typical example would be a University Campus or Research Centre.

The transport of hazardous substances poses risks that are similar to those posed by use and storage, in terms of uncontrolled releases, but require substantially different methods of control. Other legislation, regulations and codes of practice address the transportation of hazardous substances. For example, the Transport Act establishes classes of substances and places a duty on transporters of goods to label and provide documentation for hazardous substances, as well as requiring the training of drivers who transport hazardous substances. Other provisions include the Land Transport Rule and the New Zealand Standard 5433:1999. The land transport legislation is administered by the Land Transport Safety Authority.

The disposal of hazardous wastes involve risks to the health of the transporter, landfill operators, and the community; as well as risk for the receiving environment. The disposal of hazardous wastes to authorised facilities or those serviced by an approved waste contractor should avoid the risk of hazardous substances escaping into the environment thereby creating adverse environmental effects. Authorised facilities and operators will need to comply with other legislative provisions, regional council requirements and codes of practice for hazardous waste management.

### ***X.2.3 Methods***

The objective and policies will be implemented through the following methods:

#### *District Plan*

- Appropriate zoning.
- Hazardous Facilities Screening Procedure (HFSP) and Rules - which ensure that the level of control of hazardous substances and facilities using them is commensurate with the scale of the likely environmental effects. Each facility using or storing hazardous substances will be screened using the HFSP and the consent status determined, i.e. permitted or require a resource consent. Minimum performance standards will apply to all such activities. See Appendix A for details on the HFSP Strategy.
- Use of Consent Status Matrix to identify the appropriate level of scrutiny to process an application for a proposed hazardous facility.
- Use of buffer area provisions to address interface situations, particularly to deal with incompatible land use activities.
- Application of appropriate resource consent conditions.
- Monitoring of compliance with rules and resource consent conditions.
- Monitoring of compliance with codes of practice, New Zealand Standards, Guidelines and Regulations for hazardous substances.

#### *Other methods*

- **Hazardous Substances and New Organisms Act** - sets out technical standards for the use, storage, inspection, identification and regulation of hazardous substances.
- **Legislation, regulations and codes of practice addressing the transportation of hazardous substances** - imposes relevant controls on the transportation of hazardous substances. See Appendix E.
- **Education** - will be used to promote public awareness about the costs and benefits of hazardous substances and facilities, to encourage resource users to take responsibility for their own health and safety, and for management of the effects of their activities on the public and the environment.

- **Industry Codes of Practice, New Zealand Standards and Guidelines** - will be used to avoid, remedy or mitigate environmental effects and in managing risks associated with hazardous facilities. Industry Codes will be utilised in some circumstances to provide the basis for controls on the use of hazardous substances.
- **Develop specific guidelines** to assist operators of hazardous facilities in achieving compliance with relevant management requirements.
- **Prepare and operate site management systems and emergency plans** to avoid or mitigate the risk of hazardous substances escaping into the environment.
- **Promotion of "Cleaner Production" and recycling principles.**
- **Waste Disposal Guidelines** will be used for the disposal of hazardous waste to Local Authority approved facilities to protect human health and the receiving environment from potential adverse effects. Advice may be given on pre-treatment requirements or alternative methods of disposal for non- acceptable wastes.
- **Liaison with parties involved with hazardous substance use** - such as the regional council and adjoining territorial authorities, Ministry of Health, Ministry for the Environment, the Environmental Risk Management Authority (ERMA), the New Zealand Police and owner/operators who use hazardous substances, will allow more effective risk management co-ordination.

#### ***X.2.4 Anticipated Environmental Results***

- a) Protection of the life supporting capacity of air, water, soil and ecosystems from adverse environmental effects and an unacceptable level of risk from the location and operation (use, storage, transportation and disposal of hazardous substances) of hazardous facilities and activities.
- b) Protection of the natural and physical resources from adverse environmental effects and an unacceptable level of risk from the location and operation (use, storage, transportation and disposal of hazardous substances) of hazardous facilities and activities.
- c) Protection of human health from potential adverse effects associated with the use, storage, transportation and disposal of hazardous substances and hazardous wastes.
- d) Reduction in the number of accidents, incidents and extent of adverse environmental effects related to hazardous facilities and hazardous substances.
- e) Reduction in risk associated with hazardous substances due to:
  - increased industry and community awareness of risks posed by activities using, storing, transporting and disposing of hazardous substances
  - better operational practices and improved design and management of hazardous facilities in the district.

### X.3 Hazardous facilities rules

#### ***Rule statement***

Rules for hazardous facilities are based on controlling the location, design, construction, operation and management of hazardous facilities in a manner that avoids, remedies or mitigates risks and adverse effects to human health, property and sensitive environments. This will be achieved through the use of the Hazardous Facility Screening Procedure (HFSP), which determines the necessary level of scrutiny based on the risk and potential environmental effects presented by hazardous facilities, and through rules based on a series of Minimum Performance Standards. For the avoidance of doubt, all rules pertaining to hazardous facilities apply to hazardous sub-facilities, unless otherwise stated.

#### ***Means of compliance***

The following rules shall be read in conjunction with the standards and performance assessments in the relevant zone, and all other rules within *(your Council's Plan)*.

The activity status of a Permitted or Controlled Activity will be altered from the activity list below where the activity cannot meet one or more of the standards in the rule and a resource consent will be required.

#### ***X.3.1 Hazardous facilities - Consents Status Matrix***

- X.3.1 (i) The activity status of any hazardous facility is determined by the effects ratio as indicated in the Consents Status Matrix below.

Insert your Councils Consent Status Matrix here.

**Table I:** Consent Status Matrix - Consent Status Index

<b>Zone</b>	<b>Effects Ratio Trigger Level for Permitted Activities</b>	<b>Effects Ratio Trigger Level for Controlled Activities</b>	<b>Effects Ratio Trigger Level for Restricted Discretionary Activities</b>	<b>Effects Ratio Trigger Level for Discretionary Activities</b>

*See example provided below.*

Table X: Consent Status Matrix (example only)

Zone	Consent status index for permitted activities	Consent status index for controlled activities	Consent status index for discretionary activities
Heavy industrial	<1	1-2	>2
Industrial	<0.75 <0.1 (if within 30 m of a residential zone)	0.75-1.5 0.1-0.2 (if within 30 m of a residential zone)	>1.5 >0.2 (if within 30 m of a residential zone)
Light industrial	<0.5 <0.1 (if within 30 m of a residential zone)	0.5-1 0.1-0.2 (if within 30 m of a residential zone)	>1 >0.2 (if within 30 m of a residential zone)
Special purpose	<0.3	0.3-0.6	>0.6
Business	<0.2	0.2-0.4	>0.4
Residential	≤0.02	-	>0.02
Open space	≤0.1	-	>0.1

X.3.1 (ii) Exemptions from the Hazardous Facility Screening Procedure (HFSP): The following activities shall be exempted from compliance with the HFSP and do not require an effects ratio trigger level calculation. They are not exempt from other requirements relating to hazardous substances, including compliance with Permitted Activity Standards:

- a) The retail sale of fuel, up to a storage of 100,000 litres of petrol and up to 50,000 litres of diesel in underground storage tanks, provided it can be demonstrated that the *"Codes of Practice for the Design, Installation and Operation of Underground Petroleum Systems"* published by the Department of Labour (Occupational Safety and Health) 1995 is adhered to.
- b) The retail sale of LPG, with a storage of up to six tonnes (single vessel storage) of LPG, provided it can be demonstrated that the most recent edition of the *"Australian Standard (AS 1596-1997) for LP Gas Storage and Handling - Siting of LP Gas Automotive Retail Outlets"* is adhered to.
- c) Existing facilities will not be subject to the HFSP unless they significantly expand or alter their operations. A significant alteration occurs when the effects of the use are not the same or similar in character, intensity or scale as previously, as defined in Sections 10, 10A and 20 of the Resource Management Act 1991.
- d) Teaching and research laboratories excluding any activities that are undertaken by such laboratories outside of the laboratory (including bulk hazardous substances storage facilities, field tests, etc).

- e) Radioactive substances.
- f) Milk or any organic liquid substances with the potential to deplete oxygen in receiving waters.

X.3.1 (iii) Exceptions from the Hazardous Facility Screening Procedure (HFSP): The following activities do not require an effects ratio trigger level calculation and do not have to comply with the Permitted Activity Standards:

- a) Trade waste sewers, or waste treatment and disposal facilities (this exception does not apply to the storage of hazardous substances or waste associated with these facilities).
- b) Domestic storage and use of hazardous consumer products for domestic purposes.
- c) Retail outlets for the sale of hazardous substances for the domestic use (e.g. supermarkets, hardware shops, pharmacies).
- d) Facilities using genetically modified organisms.
- e) Dust explosion.
- f) Gas or oil pipelines.
- g) Fuel in motor vehicles, boats and small engines.
- h) Developments that are or may be hazardous but do not involve hazardous substances (e.g. radio masts, electrical substations).
- i) The occasional loading and unloading of hazardous substances on a site where this forms only a minor part of site operations.

### ***X.3.2 Permitted activities***

The following activities are permitted activities provided they comply with the standards in Rule X.3.3:

(i) Any hazardous facility which has been assessed as having an Effects Ratio (Quantity Ratio) which is below the Effects Ratio (Consent Status Index) for Permitted Activities in the Consent Status Matrix in Table I.

- (ii) Any storage of milk or other organic liquids in quantities below 10,000 litres.
- (iii) Any use or storage of radioactive materials with an activity below that specified as an exempt activity in the Radiation Protection Regulations 1982.

### ***X.3.3 Permitted activity standards (minimum performance standards)***

The following minimum performance standards apply to all hazardous facilities and activities.

#### ***a) Hazardous facilities site design***

Any part of a hazardous facility which is involved in the manufacture, mixing, packaging, storage, loading, transfer, usage or handling of hazardous substances shall be designed, constructed and operated in a manner that prevents:

- i) the occurrence of any off-site adverse effects from the above listed activities on people, ecosystems, physical structures and/or other parts of the environment unless permitted by a resource consent
- ii) the contamination of air, land and/or water (including groundwater and potable water supplies and surface waters) in the event of a spill or other type of release of hazardous substances.

Details for site design, construction and operation (including emergency spill procedures) are to be certified by a suitably qualified engineer, to achieve the above.

#### ***b) Hazardous facilities site layout***

The hazardous facility must be designed in a manner to ensure that separation between on-site facilities and the property boundary is sufficient for the adequate protection of neighbouring facilities, land uses and sensitive environments.

Details for site design, type and volume of hazardous substances, nature of operation and safe separation distances are to be certified by a suitably qualified engineer, to achieve the above.

#### ***c) Storage of hazardous substances***

The storage of any hazardous substances must be carried out in a manner that prevents:

- (i) the unintentional release of the hazardous substance
- (ii) the accumulation of any liquid or solid spills or fugitive vapours and gases in enclosed off-site areas, resulting in potentially adverse effects on people, ecosystems or built structures.

Compliance with specific performance requirements for the storage of hazardous substances covered by HSNO Regulations, will assist in achieving the above.

d) *Site drainage systems*

Site drainage systems must be designed, constructed and operated in a manner that prevents the entry or discharge of hazardous substances into the stormwater and/or sewerage systems unless permitted by a network utility operator.

Compliance can be achieved using precautionary methods, including clearly identified stormwater grates and access holes, roofing, sloped pavements, interceptor drains, containment and diversion valves, oil-water separators, sumps and similar systems.

e) *Hazardous facilities spill containment system*

Any parts of the hazardous facility site where a hazardous substance spill may occur must be serviced by a suitable spill containment system that is:

- i) constructed from impervious materials resistant to the hazardous substances used, stored, manufactured, mixed, packaged, loaded, unloaded or otherwise handled on the site; and for liquid hazardous substances:
  - able to contain the maximum volume of the largest tank present plus an allowance for stormwater or fire water
  - for drums or other smaller containers, able to contain half of the maximum volume of substances stored, plus an allowance for stormwater or fire water
- ii) able to prevent any spill or other unintentional release of hazardous substances, and any stormwater and/or fire water that has become contaminated, from entering the stormwater drainage system, unless permitted by a network utility
- iii) able to prevent any spill or other unintentional release of hazardous substances, and any stormwater and/or fire water that has become contaminated from discharging into or onto land and/or water (including drainage systems, groundwater and potable water supplies) unless permitted by a resource consent.

Details of the spill containment system are to be certified by a suitably qualified engineer, to achieve the above. Suitable means of compliance include graded floors and surfaces, bunding, roofing, sumps, fire water catchments, overfill protection and alarms, and similar systems.

f) *Hazardous facilities stormwater drainage*

All stormwater grates on the site shall be clearly labelled "Stormwater Only".

g) *Hazardous facilities washdown areas*

Any part of the hazardous facility site where vehicles, equipment or containers that are or may have become contaminated with hazardous substances are washed must be designed, constructed and managed to prevent any contaminated wash water from:

- (i) entry or discharge into the stormwater drainage or the sewerage system unless permitted by a network utility operator

- (ii) discharge into or onto land/or water (including groundwater and potable water supplies) unless permitted by resource consent.

Details of design, construction and management of washdown areas are to be certified by a suitably qualified engineer, to achieve the above. Suitable means of compliance include roofing, sloped pavements, interceptor drains, containment and diversion valves, oil-water separators, sumps and similar systems.

*h) Hazardous facilities underground storage tanks*

Underground tanks for the storage of petroleum products must be designed, constructed and managed to prevent leakage and spills and resulting adverse effects on people, ecosystems and property. Underground storage tanks shall be:

- (i) constructed from impervious materials resistant to the hazardous substances to be stored
- (ii) equipped with secondary containment facilities in areas of environmental sensitivity
- (iii) serviced by a leak detection or monitoring system which is capable of detecting a failure or breach in the structural integrity in the primary containment vessel.

In addition to complying with the above requirements for underground tanks, the Code of Practice for "Design, Installation and Operation of Underground Petroleum Systems - Department of Labour - Occupational Safety and Health (1995)" shall also be adhered to.

*i) Hazardous facilities signage*

- (i) Any hazardous facility must be adequately signposted to indicate the nature of the substances stored, used or otherwise handled.

Compliance can be achieved by adherence to the Code of Practice for "Warning Signs for Premises Storing Hazardous Substances" of the New Zealand Chemical Industry Council (1988), HAZCHEM signage system, or any other Code of Practice approved by the New Zealand Fire Service.

*j) Hazardous facilities waste management*

- (a) Any process waste or waste containing hazardous substances will be managed in accordance with rules X.3.3(a) Hazardous Facilities Site Design to X.3.3(e) Hazardous Facilities Spill Containment Systems. All storage and management activities of hazardous wastes shall at all times comply with all relevant performance standards specified for hazardous facilities and activities.

- (b) The storage of any waste containing hazardous substances shall be in a manner that prevents:
  - i) the exposure to ignition sources
  - ii) the corrosion or other alteration of the containers used for the storage of the waste
  - iii) the unintentional release of the waste.
- (c) Any hazardous facility generating waste containing hazardous substances shall dispose of these wastes to authorised facilities or be serviced by an acceptable waste disposal contractor formally approved by the Local Authority. *(Insert your Council policy or protocol for approved disposal sites and contractors here.)*

Details of storage, management and disposal of hazardous wastes will be certified by a suitably qualified engineer, to achieve the above.

#### ***X.3.4 Controlled activities***

The following activities are Controlled Activities provided they comply with the Permitted Activity Standards in Rule X.3.3 and will be controlled in respect of the matters identified in rule X.3.5:

- (i) Any hazardous facility which has been assessed as having an Effects Ratio (Quantity Ratio) which is within the Effects Ratio (Consent Status Index) range for a Controlled Activity in the Consent Status Matrix: Table I.
- (ii) Teaching and research laboratories and the associated use, handling, storage and disposal of hazardous substances (not including bulk hazardous storage facilities).
- (iii) Any use or storage of radioactive materials with an activity in excess of that specified as an exempt activity in the radioactive Protection Regulations 1982 and below 100 TeraBequerel.
- (iv) The retail sale of fuel, up to a storage of 100,000 litres of petrol and up to 50,000 litres of diesel in underground storage tanks, provided it can be demonstrated that the "Codes of Practice for the Design, Installation and Operation of Underground Petroleum Systems" published by the Department of Labour (Occupational Safety and Health) 1995 is adhered to.
- (v) The retail sale of LPG, with a storage of up to six tonnes (single vessel storage) of LPG, provided it can be demonstrated that the most recent edition of the "*Australian Standard (AS 1596-1997) for LP Gas Storage and Handling - Siting of LP Gas Automotive Retail Outlets*" is adhered to.

### ***X.3.5 Assessment criteria - controlled activities***

#### ***a) The council reserves control over the following matters:***

- The proposed operation and site layout.
- Demonstration that safe routes have been selected and will be utilised for the transport of hazardous substances on and off-site.
- The sensitivity of the surrounding natural, human and physical environment.
- Separation distances and the type of environment/number of people potentially at risk from the proposed facility.
- Potential hazards and exposure pathways arising from the proposed facility.
- Potential cumulative hazards presented in conjunction with neighbouring facilities.
- Proposed fire safety and fire water management.
- Proposed spill contingency and emergency planning.
- Proposed monitoring and maintenance schedules.
- Proposed waste disposal management.
- Compliance with relevant Codes of Practice.
- Compliance with relevant standards for the use, storage and transport of hazardous substances by retail fuel outlets for petrol (up to 100,000 litres in underground tanks) and diesel (up to 50,000 litres in underground tanks), including adherence to the "*Codes of Practice for the Design, Installation and Operation of Underground Petroleum Systems*" published by the Department of Labour (Occupational Safety and Health) 1995.
- Compliance with relevant standards for the use, storage and transport of hazardous substances by retail fuel outlets for LPG, including adherence to the most recent edition of the "*Australian Standard (AS 1596-1997) for LP Gas Storage and Handling - Siting of LP Gas Automotive Retail Outlets*".
- Compliance with relevant standards for the use, storage and transport of hazardous substances by teaching and research laboratories, including the following:
  - AS 2982.1:1997 (or more recent amendments/editions) - Laboratory Design and Construction
  - AS 2243.1:1997 (or more recent amendments/editions) - Safety in Laboratories - General
  - AS 2243.2:1997 (or more amendments/recent editions) - Safety in Laboratories - Chemical Aspects
  - AS 2243.3:1995 (or more recent amendments/editions) - Safety in Laboratories - Microbiology
  - AS 2243.5:1993 (or more recent amendments/editions) - Safety in Laboratories - Non-ionising Radiation
  - AS 2243.6:1990 (or more recent amendments/editions) - Safety in Laboratories - Mechanical Aspects

- AS 2243.8:2001 (or more recent amendments/editions) - Safety in Laboratories - Fume Cupboards
- AS 2243.9:1991 (or more recent amendments/editions) - Safety in Laboratories - Recirculating Fume Cabinets
- AS 2243.10:1993 (or more recent amendments/editions) - Safety in Laboratories - Storage of Chemicals.

**b) *Standards and terms for controlled activities***

Applications for controlled activities are to be accompanied by an Assessment of Environmental Effects (AEE) according to the Fourth Schedule of the RMA. The AEE must be appropriate to the nature and scale of the proposed facility and its associated potential or actual environmental effects, and must include the following matters:

- (i) a description of the nature and scale of the proposed facility and associated operations
- (ii) an inventory of hazardous substances proposed to be used, stored, transported and disposed of on the site
- (iii) the bio-physical characteristics of the site and surrounding area and relevant infrastructure on and off site (e.g. drainage, roads)
- (iv) the location of the facility in relation to people oriented activities (e.g. child care facilities, schools, rest homes, hospitals), sensitive environments (e.g. natural waters, ecosystems) and infrastructures (neighbouring roads, buildings etc.)
- (v) description of the environment actually or potentially affected by the proposal, including pathways and receptors.
- (vi) preliminary hazard and risk analysis
- (vii) management of wastes containing hazardous substances
- (viii) the transport of hazardous substances, where this forms a significant part of the operations
- (ix) emergency and contingency planning.

**X.3.6 *Restricted discretionary activities***

The following activities are restricted discretionary activities:

- (a) Any hazardous facility which has been assessed as having an Effects Ratio (Quantity Ratio) which is within the Effects Ratio (Consent Status Index) range specified as Restricted Discretionary for the zone in which it proposes to locate, as indicated in the Consent Status Matrix - Rule X.3.1(i) Table I.
- (b) Permitted or controlled activities which do not comply with one or more standards in Rule X.3.3.

### ***X.3.7 Assessment criteria - restricted discretionary activities***

- (a) Restricted discretionary activities, as defined by the Consent Status Matrix will be assessed with discretion restricted to:
- the extent to which the activity meets the relevant zone performance standards under (*Your Council's Plan*)
  - the extent to which the activity complies with the objectives and policies of (*This section*) and the relevant zone in (*Your Council's Plan*)
  - whether the activity complies with the Standards in rule X.3.3
  - the extent to which the risks presented by the proposal to people, the environment and property are to be avoided, remedied or mitigated.
- (b) Restricted discretionary activities, as defined by Rule X.3.6 (b) will be assessed only in respect of the subject matter of the standard(s) with which the activity was unable to comply.
- (c) All applications for Restricted Discretionary Activities shall be accompanied by an Assessment of Environmental Effects (AEE) pursuant to the Fourth Schedule of the RMA.

The AEE must be appropriate to the nature and the scale of the proposed facility and its associated actual or potential environmental effects, and must address the following matters:

- (i) The proposed site and layout, with a description of the nature and scale of the proposed facility and associated operations
- (ii) Quantities of hazardous substances proposed to be used, stored, transported and disposed of on the site.
- (iii) Site drainage and off-site infrastructure, including the biophysical characteristics of the site and surrounding area (e.g. drainage, roads).
- (iv) Transfer/transport of hazardous substances on and off the site and the selection of the least risk routes.
- (v) The sensitivity of the surrounding human, natural and physical environment and proposed measures to protect them.
- (vi) Separation distances from neighbouring activities and people potentially at risk from the hazardous facility, including consideration of the proximity to people oriented activities (e.g. childcare, schools, rest homes, hospitals).
- (vii) Identification of on-site hazards and exposure pathways from the proposed facility, including a description of the environment actually or potentially affected by the proposal.
- (viii) Potential cumulative effects with neighbouring facilities.
- (ix) Preliminary hazard and risk analysis.
- (x) Management of wastes containing hazardous substances.

- (xi) Fire safety and fire water management.
- (xii) Proposed contingency measures and emergency plans.
- (xiii) Proposed monitoring and maintenance schedules.

### ***X3.8 Discretionary activities***

The following activities are discretionary activities:

- Any hazardous facility which has been assessed as having an Effects Ratio (Quantity Ratio) which is greater than the Effects Ratio (Consent Status Index) for Discretionary Activities, for the zone in which it proposes to locate, as indicated in the Consent Status Matrix, Rule X.3.1(i) Table I.
- Any storage facility for milk or other liquid organic food produced in quantities above 10,000 litres.
- Any use or storage of radioactive materials with an activity in excess of that specified as an exempt activity in the Radiation Protection Regulations 1982 and above 100 terabecquerel.
- Any other hazardous facility that is not identified as a Permitted, Controlled, Restricted Discretionary or Non Complying Activity.

### ***X3.2.9 Assessment criteria - discretionary activities***

Discretionary activities will be assessed against, but not limited to, the assessment criteria below.

#### **a) Assessment of environmental effects**

- **Impact assessment:** all applications for discretionary activities will be assessed in respect of the Assessment of Environmental Effects prepared according to Rule X.3.7(c).
- **Alternatives:** for any discretionary activity the AEE must also contain an evaluation of alternatives (sites/locations, substances, quantities, processes/equipment, site management, etc.) to determine whether there are any alternatives to the proposal particularly where it is possible that the activity is likely to result in significant environmental effects.
- **Risk assessment:** for any discretionary activity the AEE must also contain a risk assessment that systematically addresses site hazards, likely accident scenarios, exposure pathways, receiving environments and potential environmental effects. The detailed hazard and risk analysis of installations, operations and processes involving hazardous substances is to be appropriate to the type and scale of the proposed facility.

- **Risk mitigation and management:** a qualitative or, in some cases, a quantitative risk assessment may be required, depending on the scale or potential effects of the proposed development. This assessment should place emphasis on the following issues:
    - identification of potential hazards, failure modes and exposure pathways
    - assessment of the probability and potential consequences of an accident leading to a release of a hazardous substance or loss of control, including, as applicable, cumulative and/or synergistic effects
    - acceptability of the assessed risks, including cumulative risks
    - proposed risk control and environmental mitigation measures, with emphasis on sensitive activities and environments, including, as applicable, fire safety and site management systems, engineered safety measures such as containment devices, spill contingency and emergency plans, monitoring and maintenance schedules as well as training programmes.
- b) Performance assessment

In assessing discretionary activities council will evaluate the following additional matters:

- i) Whether a proposal complies with the Performance Standards outlined in Rule X.3.3.
- ii) The extent to which the proposed site design, construction and operation of hazardous facilities are appropriate to prevent the accidental release, or loss of control, of hazardous substances, and whether adequate emergency and spill contingency plans are provided.
- iii) The extent to which the proposed site design, construction and operation of hazardous facilities are appropriate to prevent and mitigate any adverse effects resulting from activities on the site involving hazardous substances on people, property and environmentally sensitive areas.
- iv) Whether off-site transport of hazardous substances has been adequately addressed.
- v) The preparation of waste management plans for significant quantities of wastes containing hazardous substances, including procedures for disposal practices and use of waste contractors.
- vi) Whether other alternatives have been considered adequately.
- vii) Whether the risks presented by the hazardous facility to humans, the environment and property have been assessed fully and systematically, and whether they are able to be avoided, remedied and mitigated satisfactorily.
- viii) Whether a suitable site management system has been proposed.

The Council will consider the use of a national or international site management standard and any subsequent amendments to these standards, such as the New Zealand Chemical Industry Council (NZCIC) responsible Care Programme, the ISO 9000 and ISO 14001 systems.

### *Advisory note*

In addition to the provisions of this Plan's rules for hazardous substances, the following provisions for hazardous substances must also be adhered to:

- Relevant rules and provisions of a Regional Plan or the Regional Policy Statement.
- Transitional and future regulations for hazardous substances under the Hazardous Substances and New Organisms Act 1996.
- The Land Transport Act 1962 and the relevant NZ Standard for the land transport of hazardous substances.

## **Appendix X.A - Hazardous Facilities Screening Procedure Strategy**

Hazardous substances, by their very nature, present a number of complex issues. Council has adopted an approach to managing hazardous facilities that focuses on assessing potential adverse effects of three kinds:

- effects caused by fire and/or explosion
- effects on human health
- environmental effects.

Possible adverse effects of hazardous substances can be predicted by the hazard of the substance and the anticipated consequences of its release. Adverse effects include:

- contamination of water, soil and air
- short and long term damage to ecosystems
- damage to communities
- accumulation of persistent substances in the bodies of humans and animals, resulting in chronic and/or long term damage to their health
- acute damage to human health through exposure to substances affecting skin, mucous membranes, respiratory and digestive systems
- damage to the environment, human health and property from fire or explosion events
- road accidents and traffic delays.

In order to assess the hazard posed by various substances and the risk they present, Territorial Authorities have adopted the Hazardous Facility Screening Procedures (HFSP) for use in assessing hazardous activities or facilities.

The HFSP is a tool which assesses the site-specific effects of a hazardous facility within a given community or environment.

The Consent Status Matrix is the main link between the District Plan and the Hazardous Facility Screening Procedure. The matrix contains a range of numerical values. These values serve as trigger levels to determine the consent status of an activity involving hazardous substance in a specific land use zone.

They are effectively benchmarks against which the numerical values calculated by the Hazardous Facility Screening Consent Status Table vary in accordance with the sensitivity of the different land use zones, buffer areas and the types and quantities of hazardous substances which can be used or stored in these.

The HFSP has undergone extensive technical review and scrutiny by local and overseas experts and has been successfully tested in court.

The Consents Status Matrix provides a signal to the hazardous facilities operator as to which zones are best suited for a proposed development, what controls will apply and the likely outcome of the consent application. In addition, communities will be given some certainty over where hazardous facilities are likely to be located.

### **Appendix X.B - Hazardous Facilities Screening Procedure - Step by Step Guide**

(You should insert your HFSP Step by Step Guide here.)

### **Appendix X.C - Hazardous Facilities Screening Procedure - Tables**

(You should insert your HFSP tables here.)

### **Appendix X.D - Hazardous Facilities Screening Procedure - Worksheets**

(You should insert your HFSP worksheets here.)

## Appendix X.E - Hazardous Facilities Screening Procedure - Transportation Provisions

The legislation, regulations and Codes of Practice addressing the transport of hazardous substances include:

- Civil Aviation Act 1964
- Civil Aviation Regulations 1953
- Dangerous Goods Act 1974 and associated regulations
- Explosives Act 1957
- Explosives Regulations 1959
- Toxic Substances Act 1979
- Toxic Substances Regulations 1983
- Transport Act 1962 and Transport Amendment Act 1989
- Traffic Regulations 1976
- Truck Loading Code (Ministry of Transport, 1985)
- Instructions for the Safe Carriage of Hazardous Goods Traffic (New Zealand Railways, 1980)
- NZS 5417:1988: Transportation Labels for Hazardous Substances (New Zealand Standards Association)
- NZS 5418:1983: Transportation Containers for Hazardous Substances (Parts 1 & 2) (New Zealand Standards Association)
- NZS 5433:1999: Code of Practice for the Transport of Dangerous Goods on Land (New Zealand Standards Association)
- Code of Practice for Vehicles Transporting LP Gas in Bulk by Road (Department of Labour)
- Corrosive Tank Wagon Code (Department of Labour, 1986)
- Flammable Tank Wagon Code (Department of Labour, 1986)
- LPG Tank Wagon Code (Department of Labour, 1986)

These controls are mainly technically orientated and do not directly address risk-related aspects. It is therefore important that local authorities recognise the risk associated with the transport of hazardous substances and utilise such tools available to them to prevent or mitigate such risks.