

# 17.0 Hazardous Substances and Facilities

## 17.1 Introduction

---

Hazardous substances are a part of our everyday lives. Activities that use, store or transport a hazardous substance, or which generate hazardous waste include:

- Manufacturing or processing industries (eg; timber treatment, drycleaning, spraypainting, engineering, boat building and repair);
- Rural industries (eg; pest control);
- Domestic activities (eg; household cleaning, house construction, maintenance and repair); and
- Transport related activities (eg; storage, handling and movement of hazardous substances).

Common examples of hazardous substances are: petroleum products such as petrol, diesel, LPG, oils and solvents; household chemicals such as bleaches, pesticides, paints, adhesives and fuels; and chemical products such as acids, alkalis, pesticides and herbicides.

Control of hazardous substances is necessary to manage the risk of adverse effects arising from their inappropriate storage, use, or disposal. Transport of hazardous substances is adequately covered by transport legislation.

The Environmental Risk Management Authority, under the Hazardous Substances and New Organisms Act 1996 is responsible for managing hazardous substances, and their importation and manufacture.

## 17.2 Issue

---

### **Adverse effects on the environment arising from the storage, use, transport and disposal of hazardous substances.**

Under the Act the Council has the functions of controlling land use to prevent or mitigate the adverse effects from hazardous substances and controlling discharges of contaminants to land, water or air. This includes planning for disposal sites that receive hazardous wastes and issuing resource consents for discharges to the environment.

In the Plan, the management of hazardous substances focuses on those facilities and activities that use, store or dispose of hazardous substances rather than on the substances themselves. In other words the Plan is concerned with the risks posed by the circumstances surrounding hazardous substances and their use rather than the substances in isolation.

Hazardous substance management depends on the immediate environment being protected, the hazardous substance, and the risks involved. Where the risk and potential consequences are low and cumulative effects are unlikely, then storage, use, transport and disposal is a permitted activity. Where the risks from hazardous substances are greater the activity is managed as either discretionary or prohibited activities.

Activities involving the use of hazardous substances and facilities can contaminate and reduce water quality. Topography, soil type and vegetation can affect the amount of contamination that occurs. Runoff from land can carry contaminants into streams, rivers, aquifers and coastal water. The extensive coastal area of the Marlborough Sounds is particularly vulnerable to contamination from hazardous substances. Groundwater is also at risk of contamination. If not controlled, hazardous substances could cause significant damage to the district's waters.

Many industrial operations and the majority of residential developments are close to coastal water. Many industrial activities are close to residential areas. The quality of the environment and health and safety of the community are at risk from hazardous facilities. Adequate controls for hazardous facilities are needed to ensure community health and safety.

The Plan establishes a management regime that minimises the risk of hazardous substances to the community and the environment.

**17.2.1 Objectives and Policies**

<b>Objective 1</b>	<b>Avoidance or mitigation of adverse effects on the environment and community health caused by facilities and activities involving the use, and storage of hazardous substances.</b>
Policy 1.1	Locate facilities that store and use hazardous substances so that they do not pose an actual or potential risk to the environment or community health and safety.
Policy 1.2	Avoid the adverse effects resulting from the discharge of hazardous substances to land and water.

*The improper release of hazardous substances into the environment presents a major threat to the life-supporting capacity of the environment and community health. Minimising the risks from use is necessary for preventing or mitigating adverse effects on the environment. Definition of this risk occurs through the Hazardous Facility Screening Procedure (see Appendix C, Volume Two) which determines appropriate locations for hazardous facilities.*

*Important for hazardous facility planning is the avoidance of adverse effects caused by spillage or other accidents. Contingency planning and relevant training are essential to facilitate efficient and co-ordinated emergency responses.*

*Rural activities may involve discharges of chemicals to land, for example pesticides, herbicides and fertilisers. This discharge may result in chemical residues entering and remaining in water and is of particular concern in the Marlborough Sounds area. The contamination of the marine environment by chemicals and nutrients could have significant effects on activities using the marine environment, for example marine farming and recreational activities.*

*The use of hazardous substances provides benefits to the community by providing products and services. However, any facilities or activities involving hazardous substances represent a risk. It is important to achieve appropriate environmental protection before accepting the risks and securing the benefits of hazardous substance use.*

**17.2.2 Methods of Implementation**

Assessment	<p>The Council will assess and manage hazardous facilities with a focus on the hazard potential of those facilities and activities that use and store hazardous substances, including the intrinsic properties of the substances themselves. This risk assessment will be based on the combined assessment of the hazard of a substance, its physical form and the manner in which it is used or stored.</p>
Zoning	<p>Zones will appropriately locate activities involving similar levels of risk associated with the use and storage of hazardous substances.</p> <p>Zone based rules define threshold levels for hazardous substance risk and require all hazardous facilities that are permitted activities to comply with performance standards.</p>
Rules	<p>The Hazardous Facility Screening Procedure will be used to assess the risk of from an activity or facility and take taking into account risks associated with the transport of hazardous substances to determine whether the proposal will be permitted or require a consent.</p> <p>The Council will monitor existing facilities to ensure compliance with other relevant legislation. Existing facilities will be subjected to the Hazardous Facility Screening Procedure when they expand or alter their operations. Where it is considered that an existing facility is operating at a level of risk which has or may have a significant adverse effect on the environment, the Council will consider using its enforcement powers under the Act.</p> <p>Conditions will be imposed on resource consents, as appropriate, to take into account relevant standards and Codes of Practice as part of the Hazardous Facility Screening Procedure. Site management plans may be required as a condition of consent. Such plans will put in place measures to reduce the likelihood of accidents occurring while spill contingency or other emergency plans allow the facilitation of efficient and well co-ordinated responses to any accidents.</p> <p>The Plan requires all hazardous facilities that either exceed the threshold effects ratio for the zone or fail to meet the permitted performance standards to be considered as Discretionary Activities.</p>
Monitoring	<p>The Council will maintain a list of all consented users of hazardous substances and facilities as part of the Hazardous Facility Screening Procedure and will monitor changes to their operations or facilities that may pose an increased risk to the environment or community health.</p> <p>The Council will monitor compliance with section 97 of the Hazardous Substances and New Organisms Act 1996 and carry out enforcement functions.</p>

	<p>The Council will monitor hazardous facilities to determine the cumulative effects of activities and ensure they do not create adverse environmental effects or reduce community health.</p>
Agency Cooperation	<p>The Council will cooperate with the Land Transport Safety Authority, New Zealand Police, and Department of Labour to monitor the movement of hazardous substances and to ensure that transportation of hazard substances is undertaken in a safe and efficient manner.</p> <p>The Council will act as a local co-ordinating body for agencies responsible for legislation, guidelines and codes of practice, to ensure that effective management of hazardous substances and facilities occurs.</p> <p>The Council will co-ordinate with Environmental Risk Management Authority to ensure effective management of hazardous substances and facilities.</p>
Consultation	<p>The Council will ensure public participation in any significant decisions involving hazardous substances or facilities which exceed specified threshold levels, fail to meet environmental standards, or pose a significant risk to the community.</p>
Education	<p>The Council will develop an education program to inform users about safe methods for the transport, use, storage and disposal of hazardous substances. The Council will promote knowledge on hazardous substances and facilities, and relevant regulatory controls.</p> <p>The Council will promote a clean production ethic aimed at reducing the quantity and type of hazardous substances used and the risks associated with that use.</p> <p>The Council will undertake education programs in conjunction with other organisations to inform users of hazardous substances about ways of reducing risks and adverse effects caused by hazardous substances and facilities. The Council will also act as a local source for information about hazardous substances.</p> <p>The Council will promote national industrial standards, codes of practice, and guidelines for the management of hazardous facilities to avoid, remedy or mitigate adverse environmental effects.</p>

*It is important to distinguish between the hazard and risk posed by the substance. Hazard is defined by the intrinsic properties of the substance, such as flammability or toxicity. Hazard determines what environmental effect the substance is likely to have. Risk is defined by the probability or likelihood of an effect occurring. In other words, risk is a combination of three factors, being the intrinsic hazard of the substance, the manner of use of the substance and the environmental sensitivity to the substance. The hazard is usually fixed while the use and environment can be modified. The manner in which the substance*

*is stored or handled, and in what quantities can alter the level of risk (i.e. the design of industrial sites and site management practices, safety controls and contingency and emergency provisions and transportation procedures).*

*The Hazardous Facility Screening Procedure is a tool for determining the status of an activity. Other essential and complementary elements include consents and performance standards for hazardous facilities. Compliance with industrial standards, codes of practice and guidelines, and site management plans will minimise the risks of adverse environmental or community health effects arising from hazardous substances and facilities.*

*Proposals involving the use, storage, or transportation of hazardous substances that do not meet the standards prescribed in the Plan may still be acceptable given their individual circumstances including the nature of the substance, proposed operational practices, and local environmental conditions. Such proposals will be considered as non complying activities and assessed in terms of the objectives and policies of the Plan and specific criteria for hazardous substances.*

*Cleaner production and waste minimisation practices will reduce the quantities of hazardous wastes produced by activities using hazardous substances. Improved information and understanding about improvements and cost savings associated with cleaner production systems can reduce the risk associated with hazardous facilities.*

*One of the most effective ways of achieving safe use of hazardous substances, including agricultural and garden chemicals, is to ensure that users fully understand the adverse effects of misuse and therefore appreciate the use of best operational practices.*

*Monitoring hazardous facilities, including storage, use and transport of hazardous substances will identify activities that can have adverse effects on the environment or community health. Monitoring can also determine if several hazardous facilities are producing a cumulative adverse effect. Monitoring will reduce the likelihood of dangerous or unauthorised activities which can have adverse effects on the environment or community health.*

*Promotion of knowledge will enable the community to identify hazardous substances and know how they should be managed to avoid adverse effects on, and risks to, the environment. Community participation is an important element in the assessment of environmental risk. It is important to provide an opportunity for community consultation in respect of proposals that have wide community significance.*

**17.2.3 Objectives and Policies**

<b>Objective 1</b>	<b>Avoidance or mitigation of adverse effects on the environment and community health presented by the disposal of hazardous substances.</b>
Policy 1.1	Facilities for disposal of waste hazardous substances must avoid the discharge of contaminants into the environment which are likely to produce adverse effects.

*Waste hazardous substances require careful disposal to avoid adverse effects on the environment. Effects include contaminated sites. Disposal involves a range of technologies including incineration, reprocessing and co-disposal in landfills. None of these options will be available in the Marlborough Sounds area.*

*The present landfills are not suitable for co-disposal and are to be closed before the year 2000. The Blenheim transfer station accepts some hazardous wastes and in the future some hazardous wastes will also be accepted at other transfer stations.*

*It is necessary to have information in order to ensure that adverse effects arising from the transport of hazardous wastes can be identified and managed. There is a need for national agreement on requirements for transporting hazardous substances and hazardous substance information systems.*

**17.2.4 Methods of Implementation**

Rules	Rules prohibit the disposal of hazardous wastes in the Marlborough Sounds plan area.
Education	The Council will co-ordinate hazardous waste disposal operations and develop associated management strategies, including fostering a cleaner production ethic and promoting industry based waste management programs.
Incentives	The Council may initiate pick up and disposal programs for unwanted hazardous substances.  The Council will provide transfer stations for the collection and temporary storage of hazardous wastes, including domestic hazardous wastes, before they are transported to more appropriate facilities.
Information	The Council will participate in national initiatives to develop compatible inter-regional hazardous waste tracking systems.
Liaison	The Council will co-operate with national and inter-regional initiatives for managing transport of hazardous wastes and developing waste tracking systems.

*There are no facilities in the Marlborough Sounds area capable of safely receiving and disposing of hazardous wastes. The Hazardous Substances and New Organisms Act 1996 provides for the development of a nationally co-ordinated hazardous substances tracking system.*

**17.2.5 Objectives and Policies**

<b>Objective 1</b>	<b>Remedying the adverse effects on the environment and community health caused by contamination from past discharges of hazardous substances and avoidance of future contamination of sites.</b>
Policy 1.1	Promote the management of contaminated sites to avoid, remedy or mitigate any adverse environmental effects or risks to community health resulting from the use of the site or discharges from the site.



<b>Policy 1.2</b>	Promote the rehabilitation of contaminated land with effective site control measures, including monitoring, prior to future redevelopment, change of use, or occupation.
-------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

*There are a number of known contaminated sites in the Marlborough Sounds resulting from past activities involving the use of hazardous substances. The identification and investigation of all contaminated sites is a priority, along with the establishment of a monitoring programme for the more seriously contaminated sites.*

*Contaminated sites need to be managed to avoid adverse effects on the environment. This management is especially important before redevelopment takes place. Any clean up activities need to avoid or mitigate any adverse effects on the environment and be appropriate to the end use of the site.*

**17.2.6 Methods of Implementation**

<b>Rules</b>	<p>Rules require site management practices which ensure that risks to the environment and community health are avoided, remedied or mitigated.</p> <p>Resource consent for a discretionary activity will be required before any contaminated site is redeveloped, or the use or occupation of the land changes.</p> <p>The Council will require all users of hazardous substances and producers of hazardous wastes to adopt measures aimed at minimising quantities of waste produced and controlling the adverse effects on the environment of discharges and disposal of any such materials (particularly to avoid creating future contaminated sites).</p>
<b>Guidelines</b>	The Council will promote the use of the Australia and New Zealand Environment and Conservation Council (ANZECC) guidelines for the management of contaminated sites.
<b>Information</b>	<p>The Council will compile a database of contaminated sites and prioritise them in terms of degree of contamination and associated risk to the environment and community health.</p> <p>Risk assessment procedures for identified contaminated sites will be carried out in conjunction with owners and occupiers and other interested parties.</p>
<b>Monitoring</b>	The Council will monitor seriously contaminated sites and determine the need for any special rehabilitation and site control measures.

*The establishment of a database listing and ranking contaminated sites is a prerequisite to the management of those sites. Contaminated sites must be managed and cleaned up in a manner that prevents adverse effects on the environment and community health.*

*Monitoring seriously contaminated sites is a priority for assessing the adverse effects of those sites.*

*Public consideration and assessment of changes in the use of contaminated sites are necessary to ensure adequate clean up procedures are undertaken. This will ensure that adverse effects of contaminated sites are avoided or mitigated prior to redevelopment.*

### **17.3 Anticipated Environmental Results**

---

Implementation of the policies and methods relating to hazardous substances will result in:

- The avoidance or minimisation of adverse environmental and human health effects and risks associated with the use, storage or transport of hazardous substances;
- A greater public and user understanding of the need for, and risks associated with, hazardous substances and facilities, including the need for safe and effective management practices;
- A reduction in the quantities of waste generated through the adoption of cleaner production methods; and
- Increased knowledge of, and control over, actual and potential contaminated sites in the Marlborough Sounds, including requirements for ongoing monitoring and active cleanup of seriously contaminated land.