

## Chapter 14: Hazardous Substances

### 14.1 Introduction

The Council has responsibility under section 31 of the Resource Management Act to manage any actual or potential effects from the use, development or protection of land, including the prevention or mitigation of any adverse effects from the storage, use, disposal or transportation of hazardous substances. The district plan provisions aim to prevent or mitigate adverse effects at sites that use, store, transport or dispose of hazardous substances. These activities can include industrial operations (for example chemical warehousing, manufacturing plants or bulk storage facilities), workshops, agricultural and horticultural activities, and some occupations that are carried out from home.

### 14.2 Issue – Care of Hazardous Substances

The use, storage, transportation and disposal of hazardous substances can threaten the environment and people's health, safety and property.

OBJECTIVE	POLICIES
14.2.1 Environment, people and property are protected from the adverse effects of hazardous substances.	<p>14.2.2</p> <p>Activities that use, store, transport and dispose of hazardous substances should avoid risk to the environment, human health, safety and property by:</p> <ul style="list-style-type: none"> <li>(a) being separated from sensitive natural environments, schools, recreational venues and residential areas</li> <li>(b) being located away from incompatible activities</li> <li>(c) being designed and constructed to contain any hazardous substances that may be accidentally released</li> <li>(d) disposing of hazardous substances in an environmentally safe manner</li> <li>(e) not causing contamination of land, its soil resource, or bio-accumulation of toxic substances in plants, animals and ecosystems</li> <li>(f) containing all accidental or uncontrolled releases of hazardous substances on-site</li> <li>(g) having procedures for storing and handling hazardous substances</li> <li>(h) having a hazardous substances management plan to deal with accidental or uncontrolled releases</li> <li>(i) using non-hazardous substances and technologies where possible.</li> </ul> <p>14.2.3</p> <p>Sensitive land uses should avoid locations where they may be adversely affected by transportation of hazardous substances, particularly along energy corridors, railway lines or major transport routes.</p>

### 14.3 Reasons and Explanations

Under the Resource Management Act, land use activities and sites containing hazardous substances must be managed to avoid, remedy or mitigate the adverse effects on the environment and this is achieved primarily through the district plan. The potential adverse effects from hazardous substances that need to be addressed include:

- effects on 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 risks to people and communities.

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. The use of hazardous substances may provide benefits to people and communities by meeting the needs for products and services. However, the use and storage of hazardous substances without taking adequate precautions can have adverse effects on water, soil and ecosystems, and the health, safety and social and economic wellbeing of people and communities. To protect the community it is important to allow for the desired benefits while managing the risks and potential adverse effects on the environment.

#### **14.3.1 Potential Adverse Effects and Risks from Hazardous Substances**

All activities that involve the manufacture, storage, use, transportation and disposal of hazardous substances have the potential to create adverse effects if the substances escape as a result of inadequate management or accidental release. Failures of containment or process facilities, operational malfunctions or human error can cause the release or loss of control of hazardous substances and cause:

- fire resulting in heat exposure
- explosion resulting in over pressure and or missile projection
- hazardous substances release resulting in acute toxic or ecotoxic exposure
- corrosive spill resulting in irritative exposure.

In some cases, particular concerns may arise from the proximity to sensitive, people intensive activities, such as schools, recreational venues or residential areas. The control of the location and design of buildings or sites that use, store, transport or dispose of hazardous substances, will help avoid and reduce the potential risks to the environment, human health, property and safety. To avoid and mitigate potential adverse effects, these activities need to be managed correctly and located appropriately.

#### **14.3.2 Location, Design and Operation of Activities**

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. The level of risk to the environment is affected by, for example whether storage areas are roofed or bunded to contain leaks, or whether washdown water carrying hazardous substances is kept separate from wastewater or stormwater systems. Management practices, such as procedures for handling hazardous substances, can also affect the likelihood of substances escaping into the environment.

#### **14.3.3 Sensitive Environments**

Near sensitive environmental areas such as wetlands or activities such as residential areas, schools and kindergartens the release of a hazardous substance may have far-reaching adverse effects. Separation of incompatible activities is necessary to ensure that the potential adverse effects of low-probability but high-potential impact are avoided (e.g. explosive events, fire and corrosive spills).

The requirement for hazardous substances management plans is an important measure to ensure that potential effects are avoided. Performance standards relating to the use and storage of hazardous substances, in particular site design, layout and operational management procedures, should prevent and mitigate the risks of hazardous substances escaping into the environment and creating adverse effects. The provisions in the Hazardous Substances and New Organisms Act 1996 will also provide an important regulatory framework. New Zealand standards, codes of practice and regulations will also guide best practice for the safe use, handling and storage of hazardous substances.

#### **14.3.4 Disposal of Hazardous Substances**

Hazardous substances require careful disposal to avoid adverse effects on the environment, for example to avoid creating contaminated areas. Disposal may involve a range of technologies such as incineration, reprocessing and landfill. It is important therefore to use technologies and disposal methods that minimise environmental risk.

The disposal of hazardous waste involves risks to the health of the people involved, as well as risks for the receiving environment. Authorised facilities and operators will need to comply with legislative provisions, Waikato Regional Council requirements and codes of practice for hazardous waste management.

#### **14.3.5 Off-Site Effects**

Assessment of site suitability may include consideration of the risks to nearby land uses and along transport corridors. This is particularly important where existing large-scale industrial or processing plants already exist within the district and the opportunity to avoid or mitigate residual risks cannot be completely eliminated.

#### **14.3.6 Alternative Non-Hazardous Substances**

This policy encourages the use of alternative technology or non-hazardous substances in order that risks to the environment may be avoided altogether.

### **14.4 Methods of Implementation**

#### **14.4.1 Regulatory Methods**

- (a) Rules based on performance standards to address site design and layout, storage and drainage, spill containment, wash-down areas, underground storage tanks, signage and waste management.
- (b) Zoning to identify specific areas or activities (e.g. industries).
- (c) Application of appropriate resource consent conditions.

#### **14.4.2 Deleted**

#### **14.4.3 Council Works and Services**

- (a) Appropriate management of council-owned sites and operations that use, store and transport hazardous substances.

#### **14.4.4 Information, Education and Advocacy**

- (a) Support and promote increased public awareness and knowledge about identifying and managing the environmental effects and risks of hazardous substances, and avoiding and mitigating these by adopting appropriate codes of practice and cleaner production technologies.
- (b) Information will be provided to encourage resource users to take responsibility for their own health and safety, and to manage the effects of their activities on the public and the environment.
- (c) Support and promote the use of industry codes of practice, New Zealand standards and guidelines.
- (d) Produce and distribute relevant information guides to industries, organisations and the public on the level of hazardous substances that are acceptable as permitted activities and performance standards that have to be met.
- (e) Promote cleaner production programmes and recycling principles, including methods and processes to improve operating efficiency and minimise the release of hazardous substances, or the use of alternative non-hazardous substances or technologies.

- Waste disposal guidelines will be used for the appropriate disposal of hazardous waste to local authority-approved facilities to protect human health and the receiving environment from potential adverse effects.
- Liaison with parties involved with use of hazardous substances such as regional and territorial authorities, Government departments, the Environmental Risk Management Authority (ERMA), and hazardous substance users, will allow more effective risk management coordination and raise awareness of the appropriate practice procedures and industry codes of practice.

## 14.5 Reasons for Methods

### 14.5.1 Regulatory Methods

Regulatory methods are necessary to protect the environment, human health, safety and property from the adverse effects and risks from hazardous substances. Rules are necessary in order to determine the level of risk associated with the types of hazardous substances being used, stored, transported or disposed of, and to ensure the design and layout of the site is suitable for the intended use.

### 14.5.2 Deleted

### 14.5.3 Council Works and Services

Council-owned sites such as wastewater treatment plants that use, store and transport hazardous substances will continue to be appropriately managed to minimise adverse effects and risks of harm to human health, property or the environment.

### 14.5.4 Information, Education and Advocacy

Lack of public awareness, especially of the nature and properties of hazardous substances and the risks they pose, means that people unintentionally take unnecessary risks when they use, store, transport or dispose of hazardous substances. Information and education about the proper use, storage, transportation and disposal of hazardous substances is a useful way to help protect and mitigate adverse effects.

## 14.6 Anticipated Environmental Results

ISSUE	ANTICIPATED ENVIRONMENTAL RESULTS
14.6.1 Care of hazardous substances	(a) Avoidance of harm to people, property and the environment from the use, storage, transportation and disposal of hazardous substances. (b) Reduction in the number of accidents and incidents and the extent of adverse environmental effects due to the release of hazardous substances. (c) Reduction in risk associated with hazardous substances due to: <ul style="list-style-type: none"> <li>▪ increased industry and community awareness of risks posed by activities using, storing and disposing of hazardous substances</li> <li>▪ better operational practices and improved design and site management of hazardous facilities in the district.</li> </ul> (d) Protection of community and people from contamination. (e) Increased use of non-hazardous substances and technology.