



## 4. Hazardous Substances

### 4.1 Issues

Adverse effects arising from discharges, accidental spills and/or excessive or unprotected exposure resulting from the transportation, storage, use, treatment and disposal of hazardous substances pose a risk to the health and safety of people and communities, and the natural and physical resources of the Region.

Hazardous substances are any substances<sup>1</sup>:

a) Which have one or more of the following intrinsic properties:

- ▶ Explosiveness.
- ▶ Flammability.
- ▶ A capacity to oxidise.
- ▶ Corrosiveness.
- ▶ Toxicity (both acute and chronic).
- ▶ 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 in paragraph a. of this definition.

c) Include environmentally damaging substances.

Hazardous substances include hazardous wastes which are: hazardous substances which are unwanted and economically unusable.

Hazardous substances may contribute to the economic and social well-being of the community. They are important to agricultural, horticultural, forestry, industrial and domestic sectors, which is generally why they are found close to people and the environment.

Their use can add considerably to the health, prosperity, and quality of life of people. Common examples of hazardous substances include paints, fuels, oils, cleaners, agrichemicals etc. Many common substances can be hazardous at some stage during their existence and benign at others. The degree of risk depends on the quantity, concentration and form of the substance and how it is managed. There is no overall inventory of the hazardous substances being used and disposed of in the Region. The fact that adverse environmental effects, such as the contamination of water, air or soils can result from the use, transport, storage, treatment and disposal of hazardous substances cannot be ignored.

A number of interrelated planning mechanisms are available for the management of hazardous substances, their manufacture, use, storage, transport, treatment and disposal.

Under the Resource Management Act, 1991 the discharge of substances may be addressed.

Provisions controlling these types of activities are provided in this chapter.

<sup>1</sup>This definition is taken from the Hazardous Substances and New Organisms Act 1996, and may, in the future, be subject to thresholds that are currently being developed by the Environmental Risk Management Authority (ERMA). When these thresholds are published they will be incorporated into this plan accordingly. Control of effects of use, development or protection of land (section 31) and the control of the use of land (section 30) for the purposes of prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances is provided for.

The Combined Regional Land and District Plan contains provisions to this effect. The Local Government Act may also be used as a means of regulating waste (discharge of hazardous substances for the purposes of disposal is considered as subset of waste) through the development of a Waste Management Plan under section 539, and by making bylaws under section 542 and 684. The Hazardous Substances and New Organisms Act also has some overlap with the provisions of the Resource Management Act. The Hazardous Substances and New Organisms Act will put in place performance based regulation to manage environmental risks through the life cycle of each substance.

The discharge of hazardous substances into the environment may occur for a number of reasons.

Discharges may be released for the purposes of use, e.g. drenching and weed spraying, or may be a by-product of use which is subsequently discharged into the environment as a means of disposal of the substance. The hazardous nature of these substances means that the effects of discharge need to be managed appropriately.

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The reason for discharge (use, intentional or accidental release or disposal) does not alter the hazardous nature of the discharge and the effects that these may have on the environment. However, the reason for discharge may alter the manner in which the chemicals are released and this will subsequently alter the adverse effects which may occur.

The degree of control over discharge of the substance, the location of discharge and the quantity, type, rate and amount of chemical released all will determine what type of adverse effects may occur. It is important therefore that policy addresses not just discharge of hazardous substances generally, but also provides for accidental release and spills and discharge for disposal.

Inappropriate final disposal can be a particular problem if the last owner of the substance no longer acknowledges responsibility for it, or if the owner is unable to be identified, located, or is not in a financial position to address the adverse effects of disposal. Effects may persist for a considerable period of time after disposal and may pass into air, land or water by leaching or decay.

There will continue to be a need for the disposal of hazardous substances. As at March 1998, there is a lack of safe disposal sites within the Gisborne region for hazardous substances. Insufficient or nonexistent leachate controls at existing landfill sites make these sites suitable only for the co-disposal of some hazardous substances.

## **4.2 Objectives**

1. Avoidance of the actual or potential adverse effects on human health and the environment arising from the production, transport, storage, use, treatment and disposal of hazardous substances.

### Principal Reason

The production, storage, use, treatment, transportation and disposal of hazardous substances have the potential to create adverse environmental effects. These may include contamination of water or soils and adverse impacts on people's health. These environmental effects while being of low probability are often of large magnitude. It is important therefore to ensure appropriate management of these activities.

2. Minimise the number of spills and consequential adverse environmental effects that may occur during transportation, storage, use and disposal of hazardous substances.

### Principal Reason

Misuse or unintentional release may adversely impact upon the environment and human health especially if the release is occurring in a manner that is not controlled or regulated, or is occurring in an inappropriate location. The impacts of these unplanned activities may be particularly adverse. Any response to these events will be reactive although emergency contingency plans may be in place. Minimising the potential occurrence of these events is therefore the most appropriate objective.

3. The adoption of cleaner production practices by the Council and by industries involved in the production, transportation, storage, use or disposal of hazardous substances in order to reduce the quantity and concentrations of waste.

Principal Reason

Cleaner production promotes efficient use of energy and resources, avoids or reduces the amount of waste produced and promotes production of environmentally sound products and services. Implementation of cleaner production methods also avoids actual or potential adverse effects on the environment. Implementation of cleaner production may be assisted by following guidelines such as Ministry for the Environment Cleaner Production Guidelines 1994.

4. To improve knowledge and information in regard to the extent of hazardous substance use and disposal in the Gisborne Region.

Principal Reason

Currently an overall assessment of hazardous substance use, storage and disposal in the region, does not exist. A more comprehensive understanding of the scope of the issue will mean that the Council will have an enhanced ability to manage, and prevent future occurrences of, adverse effects arising from hazardous substances.

### **4.3 Policies**

1. To minimise the potential occurrence of hazardous substance spills and ensure that the adverse environmental effects associated with these events are avoided, remedied or mitigated.

Principal Reason

Discharge of hazardous substances can have significant adverse environmental effects especially when this is occurring in an unplanned, uncontrolled or unexpected manner. Avoidance of these events occurring in the first instance is important for addressing adverse effects. Mitigation of adverse effects through implementation of appropriate response plans is also an important means of addressing adverse effects. The use of educational methods will ensure users have the knowledge and skills to avoid spills in the first instance. Regulation including enforcement will provide the necessary framework for compliance.

2. All hazardous wastes generated in the district must be stored at or disposed of in a facility or manner approved by the Consent Authority and receive treatment prior to disposal appropriate for the proposed method and timing of the disposal.

Principal Reason

Due to the adverse effects which may occur when discharging hazardous substances for disposal, it is essential that the discharge is occurring at an approved site which is being managed in a manner appropriate for the materials discharged. This will ensure that the effects are avoided or mitigated. In addition, the substances being discharged may also need to undergo treatment to ensure that they are in a form in which they are able to be received by the disposal facility.

3. To encourage users of hazardous substances to use cleaner production methods where these alternatives exist.

Principal Reason

Potential or adverse effects of use of hazardous substances may be avoided or mitigated through appropriate selection of the types of hazardous substances used.

4. When assessing an application for a resource consent to discharge hazardous substances, Consent Authorities shall include have particular regard to the following matters for consideration, amongst others:

See Regional air Plan for provisions pertaining to discharges to air (odors etc)

- a) Whether the proposal to avoid, remedy or mitigate discharges of contaminants to surface water, groundwater or land is the best practicable option.
- b) The nature and the extent of adverse effects on surface or coastal water or ground water.
- c) Whether there will be long term contamination of soil.
- d) Whether there will be short term, long term, irreversible or cumulative ecotoxic or adverse health effects.
- e) Whether there will be short term or long term effects on indigenous vegetation or habitats of indigenous fauna.
- f) Whether the substance will break down to safe by-products and/or be immobilised or be otherwise contained indefinitely.
- g) The sensitivity of the receiving environment and the existing landuse including any values important to tangata whenua.

Principal Reason

Criteria are required to guide decisions on applications to discharge hazardous substances. The criteria selected are considered necessary to deal with the issue in a manner consistent with the Act.

5. The Council will take into account and rely on relevant national legislation, national guidelines, industry codes of practice and other relevant documents wherever appropriate in regard to hazardous substances decision making.

Principal Reason

Where relevant national guidelines for the management of hazardous substances have been developed they should be implemented where appropriate. Relying on guidelines will ensure that consistent decisions are made and that the information known is used in an efficient manner.

6. When considering a resource consent application for hazardous waste disposal facilities, consideration shall be given to the desirability of excluding hazardous wastes from the incoming waste stream redirecting them so that alternative use or disposal is undertaken in a manner suitable for the substance.

See Chapter 9.A of the Combined District Plan.

Principal Reason

Hazardous wastes will often require more specialised management than other wastes. Handling hazardous substances along with other wastes may increase the volume of contaminated waste, and may make it less feasible to provide the special treatment needed to avoid or mitigate the hazardous effects.

## 4.4 Methods

### EDUCATION

1. The Council may monitor industries and organisations for implementation of and compliance with appropriate national or government guidelines.

See Chapter 9.A of the Combined District Plan.

Principal Reason

Where guidelines have been produced for the prevention of adverse effects from specific processes it is important that these are implemented and monitored to ensure compliance.

2. Establish and maintain a register of codes of practice, national standards and guidelines for the storage, use, transport and disposal of hazardous substances that meet the requirements of the relevant objectives, policies and rules of this plan.

Principal Reason

Such a register would aid decision makers to determine the appropriateness of the relevant code, standard or guideline for the circumstances, and help identify and give status to codes that define good management practices.

3. The Council will carry out research and work with industry and communities to develop, implement and maintain a 'Hazardous Substances Site Register' (HSSR) using accurate information to identify and evaluate sites associated with the storage or use of hazardous substances. Pertinent information contained in this register will be incorporated into Project and Land Information memoranda.

See Chapter 9.A of the Combined District Plan.

Principal Reason

This will be used as a management tool to enable Council to monitor where hazardous substances have been used in the Region. The register will increase the Council's ability to identify and manage sites where contamination can potentially occur. Information released to the public in the form of LIM or PIM reports will clearly state that this is merely a record of the fact that a landuse is recorded as once occurring or having occurred at the site and that the particular landuse was likely to involve the use, storage or disposal of hazardous substances.

4. The Council, in conjunction with relevant agencies and industry, will:
  - ▶ Develop and implement education programmes targeting:
    - a) Minimisation of the use of hazardous substances through the use of cleaner technology and reuse /recycling techniques.
    - b) The safe storage, use, transportation, treatment and disposal of hazardous substances;

- ▶ Prepare and administer management guidelines for handling and disposal of hazardous substances not currently targeted by regulations or guidelines and will target as a priority:
  - a) Installers and extractors of CFC's.
  - b) Users of heavy metals (such as battery suppliers, boat builders, cement processors).
  - c) Producers of solvent wastes (such as boat builders, car painters, laboratories).
  - d) Waste oil generators (such as contractors, garages and transport operators).

Programmes should be designed to ensure information collected is compatible with, and contributes to current national monitoring strategies, where appropriate.

Principal Reason

The use of non-regulatory mechanisms is an important and proactive means of minimising the effects of hazardous substances. Reducing the amount of hazardous substances in use and ensuring that appropriate handling and storage techniques are used for substances in circulation may be achieved with the co-operation of industry. Priority will be given to developing guidelines for the identified substances as these are commonly used within the district. The collection of any information should be performed in a manner that assists Gisborne district, but is also able to amalgamate with any national initiatives which may be undertaken under The Hazardous Substances and New Organisms Act or transitional provisions.

5. The Council will directly, or via any community based group with an interest in waste minimisation, raise public awareness through information and education programmes targeting:

See Chapter 2.1 of this Plan.

- a) What types of household waste are hazardous, how to minimise the amount of this waste produced, and how it should be disposed of.
- b) The environmental effects associated with the inappropriate disposal of waste oil, where and how oil could be appropriately disposed of and the use of re-refined oil.
- c) Encourage the return of unwanted hazardous substances and their containers to manufacturers for reuse by others.

Principal Reason

Education and raising public awareness should lead to more responsible disposal of hazardous substances.

6. The Council will, through the Hazardous Substances Technical Liaison Committee, adopt an inter-agency co-ordinated approach to the prevention, management and clean up of hazardous spills and provide technical assistance to emergency services dealing with hazardous spills.

See Chapter 9.A of the Combined District Plan.

Principal Reason

The Hazardous Substances Technical Liaison Committee has been operative for many years providing advice during incidents. There are also a number of other agencies with duties in the management and clean up of hazardous spills. It is efficient and effective to co-ordinate responses to ensure that all relevant expertise is used in a co-ordinated way.

7. The Council, in consultation with relevant industries and organisations, will:
- ▶ Develop emergency preparedness plans, for activities for which it has responsibilities or obligations, including spill contingency plans, and in doing so will have regard to guidelines detailed in Part 3, Section 7 of the report "Our Waste: Our Responsibility", Centre for Advanced Engineering, University of Canterbury, 1992.
  - ▶ Provide an advisory education service on minimising the potential for hazardous spills and what to do in the event of a spill.

Principal Reason

Prompt, effective emergency response reduces accidental losses and the consequences of unexpected events. There is often not enough time during an emergency to decide who is in charge, to identify sources of help or to train people. These actions must be taken prior to the emergency. Educating those using or storing hazardous substances on what to do in the case of a spill, will help to mitigate or remedy potential adverse effects that may arise from these spills.

**ADVOCACY**

8. The Council will advocate that Central Government urgently develop national policies, guidelines and facilities for:
- ▶ Long term storage, treatment and disposal of intractable wastes.
  - ▶ The development of a national register of hazardous substances.
  - ▶ The development of a national tracking system for highly hazardous substances.
  - ▶ Promotion of waste minimisation.

Principal Reason

It is not cost-effective for this to be carried out at a district or regional level except as part of a national system.

**FINANCIAL**

9. Disposal charges will be levied on those disposing of hazardous substances to ensure costs of disposal are met by appropriate parties. Charging should be based, as far as practical, on recovering costs of appropriate disposal. Consideration will be given to the effect charging may have on participation.

See Chapter 9.A of  
the Combined District  
Plan.

Principal Reason

Charging for disposal of hazardous substances works as an incentive for producers of waste to implement mechanisms to reduce the amount of waste being produced. It is anticipated that this will result in the reduction of the use of hazardous substances by generators. These charges should be set annually as part of the Annual Plan process.

**SERVICES**

See Chapter 9.A of  
the Combined District  
Plan.

10. The Council will liaise with any local authorities in whose district hazardous substances from the Gisborne District are proposed to be stored or disposed of so as to ensure the suitability of the site for such storage or disposal.

Principal Reason

The Council needs to be aware of options for disposal of hazardous substances. It is also essential that external agencies disposing of these substances have adequate and accurate information available to them.

11. The Council will encourage industry groups to develop and implement voluntary take back schemes where vendors take back from users or retail vendors, any used, spent or otherwise unwanted quantities of that substance or its container; including the following:

- ▶ Lubricating oils.
- ▶ Timber treatment chemicals.
- ▶ Pesticides.
- ▶ Animal remedies.
- ▶ Chlorinated solvents.

The Council will expand the list of substances included in voluntary take back schemes if noticeable adverse environmental effects arising from inappropriate disposal of other substances become evident.

Principal Reason

The take back schemes should be at least as convenient to the purchaser as the method of purchase. This should put hazardous wastes back in the hands of those with the knowledge to dispose of them safely. It will encourage producers to minimise the production of such materials.

See Chapter 9.A of  
the Combined District  
Plan.

12. The Council will investigate the feasibility of providing facilities for the treatment and disposal of hazardous wastes and will develop and operate a hazardous substances disposal approval system for disposal of all hazardous substances. This will encompass advice or systems to provide for the collection, drop off, treatment, disposal, exchange, temporary storage and redirection of hazardous substances.

Principal Reason

At present only very limited types of hazardous substances are able to be accepted for disposal in the Paokahu Landfill and nowhere else in the Region. In the interim while the feasibility of disposal sites is being determined Council needs to ensure that hazardous substances are correctly disposed of.

Council will also ensure that information is retained about the types and quantities of hazardous substances disposed of so that the sites can be monitored in the long term. If these facilities are available people will be more able to dispose of hazardous wastes responsibly.

A hazardous substances disposal approval system is a procedure or a system for council to seek the best methods to dispose of selected hazardous substances, in a way that matches the hazardous characteristics of that substance.

13. The Council will provide assistance to appropriate agencies on matters related to the storage and disposal of hazardous substances that have been removed from use, i.e. asbestos wastes and PCBs.

This assistance may include:

- ▶ The production and distribution of information packages.
- ▶ Liaison with other agencies regarding future handling and disposal methods.

Principal Reason

These products were once common and are now being removed from use. They are hazardous to human health. The Council is in a good position to pass on knowledge and liaise with other bodies on the safe disposal of these substances.

14. The Council will encourage the development of, and will develop and publicise methods to render certain hazardous substances as harmless as possible before disposal.

See Chapter 9.A of the Combined District Plan.

Principal Reason

This will reduce the adverse effects of hazardous substances disposal on the natural and physical environment.

## 4.5 Rules for Hazardous Substances

### Permitted Activities

#### Rule 4.5.1 Agrichemicals and Industrial Chemicals

The discharge of agrichemicals or industrial chemicals, or herbicides to land or water for purposes other than disposal shall be a **Permitted Activity** provided that:

- ▶ The substance is approved under the Pesticides Act 1979, Hazardous Substances and New Organisms Act 1996 for the use it is being put to, or is a permitted or restricted material listed in, and used in accordance with, the Bio-Gro New Zealand Organic Production Standards 1998.
- ▶ Application is in accordance with manufacturers instructions on the label (application rates lower than those specified on the label are also permitted.)

Principal Reason

Application of agrichemicals or industrial chemicals for the purpose for which they are designed and in accordance with manufacturer's instructions is not likely to create adverse effects.

**Note:** See the Gisborne Regional Air Quality Plan for discharges to air.

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**Note:** This rule may be amended after new regulations are published, probably in 1997.

## **Discretionary Activities**

### **Rule 4.5.2 Waste Oil**

The use of waste oil as a dust suppressant on roads shall be a **Discretionary Activity**.

#### Principal Reason

Waste oil has the potential to contaminate soil and water with a number of toxic substances. Its use needs to be controlled so that the factors at each site can be assessed.

### **Rule 4.5.3 Disposal of Hazardous wastes**

The disposal of hazardous wastes by discharge to land or water shall be a **Discretionary Activity**.

#### Principal Reason

The use of consent procedures will ensure that any adverse effects of the disposal can be assessed. The disposal by discharge of hazardous substances has potential short term and long-term effects on human health and the environment. These must be assessed before any discharge is permitted to proceed. The Gisborne District has sites where the land is now contaminated due to the discharge of hazardous substances and presents an environmental hazard.