

13 HAZARDOUS SUBSTANCES

13.1 INTRODUCTION

Many substances are critical to manufacturing, construction, primary production or domestic activities. Examples include cleaning solvents, agrichemicals, fuel and explosives. These substances can be "hazardous" to the environment because they may impair human, plant, or animal health, or adversely affect the environment. These substances are commonly called "hazardous substances".

ISSUES, OBJECTIVES AND POLICIES

13.2 ISSUE - Environmental Effects

To establish a flexible hazardous control regime which establishes effective standards, so that the potential adverse effects on the environment from the use or storage of hazardous substances is avoided or mitigated.

Explanation

The Council is required by the Resource Management Act to control any actual or potential effects of the use, development, or protection of land, including the prevention and mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances.

Two issues arise from the use of hazardous substances. The first concerns the safe day to day use of hazardous substances. The second is the possible effects on the environment.

The District Plan is specifically concerned with the adverse effects of hazardous substances on the environment rather than safety issues associated with the correct labelling, packaging, handling, use and disposal of hazardous substances. The Hazardous Substances and New Organisms Act 1996 also addresses the safety and environmental effects of hazardous substances.

13.2.1 Objective

The avoidance or mitigation of adverse effects and risks caused by activities involving the use and/or storage of hazardous substances.

13.2.2 Policies

- To avoid or mitigate the potential for adverse effects to the environment from the use of land for the storage and/or use of hazardous substances; while recognising that the quantities of hazardous substances, which are acceptable in different areas of the District, will vary depending on the proximity of residential use, on community expectation and the sensitivity of the surrounding environment.*
- To promote the effective management of the use, storage, transportation, manufacture, and disposal hazardous substances through a co-ordinated approach between agencies responsible for the management of hazardous substances.*
- To ensure hazardous substances are securely contained during storage, and to ensure that adverse effects on the environment from a hazardous substances spillage are, where possible, minimised.*

4. *To promote the disposal of hazardous substances at landfills or other facilities that are designed to dispose of hazardous substances safely while avoiding or mitigating adverse effects on the environment.*
5. *To ensure that any disposal of hazardous substances into any reticulated sewers is appropriately controlled through the use of trade waste bylaws.*

13.2.3 Implementation Methods

To achieve policies 1 - 5 through:

1. the provision of rules and performance standards to control the storage and use of hazardous substances in the District;
2. the use of enforcement provisions under the Act where hazardous substances are manufactured, stored, used, transported or disposed of in such a way that is or is likely to be noxious, dangerous, offensive or objectionable to such an extent that it has or is likely to have a significant adverse effect on the environment;
3. liaising with the Hawke's Bay Regional Council, Government Departments, and research institutes to ensure that there is a co-ordinated approach to the management of hazardous substances, including the recording of the amounts and patterns of hazardous substance use, storage, transportation and disposal in the District;
4. advocating to both central government departments and the Hawke's Bay Regional Council on developing methods and facilities to dispose of hazardous substances found in the District that presently can not be disposed of;
5. updating an emergency response plan, in conjunction with appropriate agencies, for a major spill of a hazardous substance that directly threatens the public and the environment; and,
6. liaising with the Hawke's Bay Regional Council to facilitate the collection of unwanted hazardous substances and to implement a strategy to identify contaminated sites.

13.2.4 Explanation and Reasons

The community often transports, uses and stores hazardous substances in small quantities, such as glue or pesticides. The Council permits the storage, use, and disposal of hazardous substances as-of-right subject to site standards to ensure the necessary environmental protection. The quantity permitted depends on the nature of the substance, the "risk" it poses to the environment, and on the sensitivity of the particular environment. A residential area is more sensitive than an industrial area. Where quantities of hazardous substances exceed the limit for various zones a resource consent will be required.

The Council considers that new industrial processes involving the production of hazardous substances, or any operations that mix different types of hazardous substances, should only be established in appropriate locations and have adequate operational safeguards which protect the public and the environment.

The Council considers no consent is necessary for the transportation of hazardous substances in the District. The Dangerous Goods Act controls the transportation of over 250 litres of any gases, flammable liquids, hydrogen peroxides or corrosives. The commercial transportation of any explosives requires approval under the Explosives Act, with routes being defined for over 1,000kg of explosives. Additionally, all transportation of hazardous substances must comply with New Zealand Standard 5433, administered by the Ministry of Transport. Operators who fail to comply with this standard face prosecution.

The District Council expects that any strategic controls on transportation routes for hazardous substances would be co-ordinated regionally as many routes cross the District boundaries and transport companies carrying hazardous substances are generally in the larger centres.

Control of hazardous substances is only possible with a good information base, research, and the co-operation of people of the District. Accordingly, liaison with other agencies is promoted so that there is a co-ordinated approach for managing hazardous substances, including the recording of the amounts and types of hazardous substances, educative or advisory methods to be used, and the means to collect unwanted hazardous substances and identify contaminated sites.

The Council will update continually an emergency response plan, to be implemented if a major spill of hazardous substances occurred. It is expected that major users of hazardous substances have contingency plans.

13.3 ENVIRONMENTAL RESULTS ANTICIPATED

- Hazardous substances collected and disposed of safely and with minor adverse effects on the environment.
- Avoidance or mitigation of adverse effects from the storage and use of hazardous substances in the District.
- The implementation, in conjunction with other affected parties, of emergency response procedures, if there is ever a risk to people or property from hazardous substances in the District.

HAZARDOUS SUBSTANCES RULES

13.4 Definitions

In this section of the Plan, unless the context otherwise requires:

Storage of Hazardous Substances	means the containment of a substance or mixture of substances, either above ground or underground, and includes the filling and emptying of the container. Storage does not include substances in use, or those used as a cooling or heating medium.
Use of Hazardous Substances	means the manufacturing, processing or handling of a substance or mixture of substances for a particular activity without necessarily changing the physical state or chemical structure of the substance. Use includes mixing, blending and packaging operations, but does not include the filling or drawing of substances from bulk storage tanks unless the processing is permanently connected to the bulk storage, and does not include loading out and dispensing of petroleum products.

See Section 2.2 for the definition of Hazardous Substance.

13.5 ACTIVITIES

13.5.1 Permitted Activities

The following activities shall be **Permitted Activities**, provided that they comply with all of the Performance Standards specified below.

- (a) The use and/or storage of hazardous substances which are not identified in Schedule 1,
- (b) The use and/or storage of hazardous substances identified in quantities not exceeding those specified in Column A of Table 1 for the relevant zone.
- (c) The use of explosives (Class 1a and 1b in Schedule 1) in all Zones.
- (d) The use or storage of hazardous substances during temporary military training activities.

13.5.2 Discretionary Activities

The following activities shall be **Discretionary Activities** in respect of the matters specified below.

- (a) The use and/or storage of hazardous substances identified in Schedule 1, in quantities exceeding those specified in Column A of Table 1.
- (b) The manufacturing of hazardous substances.
- (c) The following shall be **Discretionary Activities** with the exercise of the Council's discretion being restricted to the matter(s) specified in the standard which is not complied with:
 - i Any activity specified as a permitted activity and which does not comply with any one or more of the Performance Standards specified below.

Note: *The Council, when assessing an application for a discretionary activity, will use the hazardous substances screening procedure set out in Appendix G. The results of*

the procedure will be a consideration when determining whether an application will be granted or declined and in determining the conditions required for any consent.

13.6 PERFORMANCE STANDARDS

- 13.6.1** (i) Primary and secondary containment systems shall be employed whenever hazardous substances (including hazardous waste) are used or stored on all or part of a site.

For the purposes of this Plan containment means the retention of a hazardous substance in a way that prevents the hazardous substance from uncontrolled entry into the surrounding environment. Primary containment means the primary container; for example, the primary containment for a can of petrol would be the can. Secondary containment means a structure or installation that contains the hazardous substance should the primary container fail; for example, secondary containment for a can of petrol could be the building it is stored in.

For the purposes of this rule secondary containment systems are not required for the use or storage of any Class 2 Hazardous Substances (gases), as referred to in Schedule 1 to these rules, or for the storage petrol or diesel in underground tanks.

- (ii) The volume of any secondary containment system shall be 100% of the maximum volume of the hazardous substance to be stored, used, loaded or unloaded when the site is roofed or;
- (iii) The volume of any secondary containment system shall be 120% of the maximum volume of the hazardous substance to be stored, used, loaded or unloaded when the site is unroofed;
- (iv) The secondary containment system shall be designed in such a way as to ensure containment of any hazardous substance that spills due to the collapse of any container (e.g. tank), and the containment from the direct leakage from any primary container;
- (v) The primary and secondary containment systems shall be sealed with impervious materials that are resistant to breakdown from the particular hazardous substances, which they are designed to contain;
- (vi) The integrity of the primary and secondary containment systems shall be maintained at all times.

- 13.6.2** Collection of hazardous substances for disposal purposes, or for subsequent use, shall be in containers that seal and contain the hazardous substances collected.

- 13.6.3** All hazardous substance sites shall be adequately signposted according to the Code of Practice for "Warning Signs for Premises Storing Hazardous Substances" of the New Zealand Chemical Industry Council.

- 13.6.4** Any use, storage of radioactive material, including radiation machines, shall obtain a license under the Radiation Act 1965, and Regulation to that Act, and shall comply with conditions set by the National Radiation laboratory.

Note: *These Rules are in addition to, and not in substitution for the Performance Standards of the relevant zone, and other legislation that deals with hazardous*

substances, including the Hazardous Substances and New Organisms Act, Dangerous Goods Act, Explosives Act, Toxic Substances Act, Medicines Act, Pesticides Act, Health and Safety in Employment Act or any subsequent legislation.

13.7 NON-NOTIFIED RESOURCE CONSENTS

Resource consents in relation to the following matters shall be non-notified:

- (a)** The use, storage, or disposal of hazardous substances in Table 1 - exceeding Column A Quantity Limits for the Business Zones.
- (b)** Where the activity does not comply with Performance Standards 13.6.1-13.6.4

SCHEDULE 1: CLASSIFICATION OF HAZARDOUS SUBSTANCES

Class	Characteristics	Examples Including but not limited to:
1 Explosives	<p>1 <u>Explosives</u></p> <p>1a An explosive substance or waste is a solid or liquid that is, in itself, capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings (other than those specified in 1b below).</p> <p>1b as in 1a but with restricted use in the manufacture or reloading of small arms cartridges; or for the storage of flares.</p>	<p>1a Nitrate mixtures, nitro compounds, chlorate mixtures, ammunition/ detonators (excluding those for small arms use).</p> <p>1b gunpowder, or nitro compound adapted and exclusively used for cartridges for small arms; or for flares.</p>
2 Gases	<p>2.1 <u>Flammable Gases</u></p> <p>2.1a LPG</p> <p>2.1b Any other Gases which at 20°C and a standard pressure of 101.3 kPa:</p> <ul style="list-style-type: none"> • are ignitable when in a mixture of 13% or less by volume with air, or • have a flammability range with air of at least 12% regardless of the lower flammability limit. <p>This class includes aerosols containing flammable propellants if the contents include more than 45% by mass or more than 250g of flammable components.</p> <p>2.2 <u>Toxic Gases</u></p> <p>Gases which are known or are presumed to be toxic or corrosive to humans because they have an LC₅₀ value equal to or less than 5,000 ml/m³ (ppm) when tested in accordance with procedures defined in Para 6.5(c) of the United Nations Recommendations on the Transport of Dangerous Goods, 7th revised edition, or its subsequent revisions</p> <p>2.3 <u>Non-flammable, Non-toxic Gases</u></p> <p>Gases which are stored or transported under a pressure not less than 280kPa at 20°C, or as refrigerated liquids, and which:</p> <ul style="list-style-type: none"> • are asphyxiant-gases which dilute or replace the oxygen normally in the atmosphere, or 	<p>2.1a LPG</p> <p>2.1b Acetylene, hydrogen, methane.</p> <p>2.2 Chlorine, sulphur dioxide, ammonia, methyl bromide.</p> <p>2.3 Argon, helium, oxygen, nitrogen, carbon dioxide, freons, nitrous oxide</p>

Class	Characteristics	Examples Including but not limited to:
Gases	<ul style="list-style-type: none"> are oxidising-gases which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does, or have neither asphyxiant nor oxidising characteristics 	
3 Flammable Liquids	<p>3 <u>Flammable Liquids</u> Liquids, or mixtures of liquids, or liquids containing solids in solution or suspension, having the following flammability limits:</p> <p>3a Flash point <23°C</p> <p>3b Flash point >23°C - <61°C</p> <p>3c Flash point >61°C</p> <p>3u Storage of 3a, b and/or c in underground tanks.</p>	<p>3a Petrol, adhesives, ethyl and methyl alcohols, acetone, benzene, butylamine, MIBK.</p> <p>3b Kerosene, styrene monomer, cyclohexanone, turpentine, butyl methacrylate, chlorobenzene, ethoxyethanol.</p> <p>3c Diesel, petroleum oils.</p>
4 Flammable Solids	<p>4.1 <u>Flammable Solids</u> Solids or wastes other than those classified as explosives, which under suitable conditions, i.e. impact, friction, heat, ignition, will burn or self react with extreme intensity.</p> <p>4.2 <u>Substances or wastes liable to spontaneous combustion</u> Substances or wastes that are liable to spontaneous heating during transport, or heating up on contact with air, and then being liable to catch fire.</p> <p>4.3 <u>Substances which in contact with water, emit flammable gases</u> Substances or wastes, which by interaction with water, are liable to become spontaneously flammable or give off flammable gases in dangerous quantities.</p>	<p>4.1 Red phosphorus, ammonium picrate, picric acid, monomethamine nitrate, nitrocellulose, trinitrobenzene, magnesium alloys.</p> <p>4.2 Yellow or white phosphorus, magnesium alkyls, dithionites.</p> <p>4.3 Alkali metals e.g. sodium, potassium, lithium; calcium, magnesium, metal hydrides, metal carbides</p>
5 Oxidising Substances	<p>5.1 <u>Oxidising Substances</u> Substances or wastes which, in themselves, are not necessarily combustible, but may, generally by yielding oxygen, cause or contribute to the combustion of other materials.</p> <p>5.2 <u>Organic Peroxides</u> Organic substances or wastes which contain the bivalent O=O structure and are thermally unstable substances which may undergo exothermic self-accelerating decomposition.</p>	<p>5.1 Chromates, bromates, chlorates, chlorites, nitrates, permanganates.</p> <p>5.2 Any organic peroxide (includes peroxy and per compounds). Perdicarbonates, butyl peroxyphthalate, cumene hydroperoxide, benzoyl peroxide</p>

Class	Characteristics	Examples Including but not limited to:
6 Corrosives	6 <u>Corrosives</u> Substances or wastes which by chemical action, will cause severe damage when in contact with living tissue or, in the case of leakage will damage or destroy other material and goods or cause other hazards.	6 Acids such as; nitric, sulphuric, hydrochloric, hydrofluoric acids; trichloro acetic acid. Alkalis such as; sodium, potassium and lithium hydroxides. Zinc chloride, zirconium tetrachloride, sulphur chlorides, silicon tetrachloride, phosphorus pentoxide, ferric chloride. Phenolsulphonic acid, hydroxylamine sulphate, hexyl-trichlorosilane, ethanolamine.
7 Agrichemicals	7 <u>Agrichemicals</u> Substances formulated specifically for agricultural and horticultural activities (including aquaculture) and including but not limited to herbicides and fungicides. For the purpose of this Plan an agrichemical is considered a hazardous substance when it is at a concentration such that it requires mixing with water, oil, any other liquid prior to an application.	7 Bipyridyls, di-nitrophenols, phenoxy compounds, organophosphates, carbamates, organochlorines.
8 Miscellaneous	8.1 <u>Timber Preservatives</u> Preservatives used in the treatment of timber. 8.2 <u>Chlorinated Solvents</u>	8.1 Copper, chromium, arsenic, boron, and other water-borne preservatives. Light organic solvent preservatives, anti sapstain chemicals. 8.2 Bromodichloromethane, Trichloroethane, Chlorodibromomethane 1,1,1 - Trichloroethene, Tetrachloroethene, Trichloromethane, Tetrachloromethane, Tribromomethane.

TABLE 1: CONSENT STATUS FOR HAZARDOUS SUBSTANCES IDENTIFIED IN SCHEDULE 1

RESIDENTIAL ZONE

District Plan Category	Column A
1a	Nil ¹
1b	15kg
2.1a, 2.1b, 2.2, 2.3	250 litres
3a	50 litres ²
3b, 3c	3,000 litres
3u	10,000 litres
4.1	10 kg
4.2, 4.3	100 kg
5.1	100 kg
5.2	5 kg
6.1	20 litres
7	10 litres
8.1	20 litres
8.2	20 litres

BUSINESS ZONES

District Plan Category	Column A
1a	25 kg
1b	50 kg
2.1a	12,000 litres
2.1b, 2.2, 2.3	12 000litres
3a	3,000 litres
3b, 3c	3,000 litres
3u	100,000 litres
4.1	50 kg
4.2, 4.3	1,000 kg
5.1	1,000 kg
5.2	25 kg
6	1000 litres
7	5,000 litres
8.1	20 litres
8.2 Business 1	200 litres
8.2 Business 2	1,000 litres

Notes ¹ The use of explosives is permitted in all zones but is subject to the Explosives Act and any subsequent legislation. The storage and disposal of explosives is a non-complying activity in the, Residential, Zone.

² The 50 litres restriction does not apply to flammable liquids contained in a fuel tank of an internal combustion engine.

RURAL ZONE

District Plan Category	Column A
1a	2.5 kg
1b	15 kg
2.1a	12,000 litres
2.1b, 2.2, 2.3	250 litres
3a	2,000 litres
3b , 3c	3,000 litres
3u	10,000 litres
4.1	10 kg
4.2, 4.3	1,000 kg
5.1	1,000 kg
5.2	10 kg
6	100 litres
7	1,000 litres
8.1	20 litres
8.2	20 litres

TOWNSHIP ZONE

District Plan Category	Column A
1a	Nil
1b	15kg
2.1a	12000 litres
2.1b, 2.2, 2.3	250 litres
3a	2,000 litres
3b, 3c	3,000 litres
3u	10,000 litres
4.1	10 kg
4.2, 4.3	100 kg
5.1	100 kg
5.2	5 kg
6	100 litres
7	1000 litres
8.1	20 litres
8.2	20 litres