

SECTION 10 - HAZARDOUS SUBSTANCES

Introduction

Hazardous substances are defined in this Plan as any substances which may impair human, plant or animal health or may adversely affect the health or safety of any person or the environment. Well known substances that are hazardous to people or the environment include petrol or LPG, pesticides, explosives, acids or radioactive substances.

Issue

The Council is now required under 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.

There are two issues arising from the use of hazardous substances in the District. The first issue is concerning the safe day to day use of hazardous substances and the second issue is the possible effects hazardous substances have on the environment. The District Plan is more specifically concerned with the adverse effects of hazardous substances on the environment rather than the safety issues associated with the correct packaging, handling, use and disposal of hazardous substances. However, the two issues do overlap and the Council believes its policies should promote a greater awareness of the dangers of hazardous substances being used incorrectly.

At this stage the issues of safety are being addressed by central government under legislation called the Hazardous Substances and New Organisms Act.

Mackenzie District is fortunate that many classes of hazardous substances are not used extensively in the District. Nevertheless, the Council would like to ensure that the manufacture, storage, use, transportation, and disposal of hazardous substances in the District is carried out in an appropriate manner and provisions reflect this accordingly. In built up residential areas the amounts of hazardous substances that can be used, disposed or stored is restricted compared to other zones of the district.

Objectives And Policies

Objective - Hazardous Substances

Avoid or mitigate adverse environmental effects arising from the use, storage, transportation, manufacture, and disposal of hazardous substances.

Policies

- 1 To control the use, storage, manufacture and disposal of hazardous substances so to minimise adverse environmental effects due to accidental spillage or poor management practices.
- 2 To promote the efficient management of the use, storage, transportation, manufacture, and disposal of hazardous substances through a coordinated approach between agencies responsible for the management of hazardous substances.
- 3 To ensure that adverse effects on the environment from a hazardous substances spillage are, where possible, avoided or mitigated.

- 4 To promote public awareness about the potential adverse environmental effects that may arise through the use, storage, transportation, manufacture, and disposal of hazardous substances.
- 5 To promote the disposal of hazardous substances at facilities that are designed to dispose of hazardous substances safely and with minor adverse effects to the environment.
- 6 To ensure that any disposal of hazardous substances into any reticulated sewers is appropriately controlled through the use of trade waste bylaws.
- 7 To establish and regularly update a hazardous substances inventory for the Mackenzie District which will be a record of the amounts and patterns of hazardous substance use, storage, transportation and disposal in the District.
- 8 To prepare 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.
- 9 To encourage the use of hazardous substances in accordance with appropriate Codes of Practice, and Regional/National Standards or guidelines, any relevant regulations and with the Council's bylaws.
- 10 To liaise with other agencies involved in the management of hazardous substances in order to develop effective relationships with which to prevent or mitigate the adverse effects of the use, storage, transport or disposal of these substances.
- 11 To encourage both central government departments and the Canterbury Regional Council to develop methods and facilities to dispose of hazardous substances found in the district that cannot be disposed of effectively and efficiently by individuals or district agencies.
- 12 To increase public awareness on the potential environmental effects of hazardous practices and the guidelines and codes of practice available when dealing with hazardous substances.

Implementation Methods

- 1 Provision of performance standards to control the manufacturing, storage, use and disposal of hazardous substances in the District.
- 2 To control the manufacturing of hazardous substances by way of resource consent.
- 3 To use enforcement provisions under the Act where hazardous substances are manufactured, stored, used, transported or disposed of in such a way that has or is likely to be either noxious, dangerous, offensive or objectionable to such an extent that it has or is likely to have an adverse effect on the environment.
- 4 Through the annual plan process:
 - i Liaison with the Canterbury Regional Council, Government Departments, and Crown Research Institutes to ensure that any research from these organisations on use, disposal, transportation and storage of hazardous substances and their effects on the environment can be used to make sound planning decisions.
 - ii Advocate to both central government departments and the Canterbury Regional Council on developing methods and facilities to dispose of hazardous substances found in the district that presently can not be disposed of.

- iii Regularly update a hazardous substances inventory for the Mackenzie District which will be a record of the amounts and patterns of hazardous substance use, storage, transportation and disposal in the District.
- iv Preparation of 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.
- v Provision of information and advice, including appropriate Codes of Practice, any Regional\National Standards or guidelines, or any relevant regulations and Council's bylaws to:
 - manufacturers;
 - importers;
 - contractors; and
 - general public

so to promote the correct procedures for the manufacture, storage, use, disposal or transportation of hazardous substances.
- vi Check in-coming refuse to landfills in the District to guard against inappropriate disposal of hazardous substances in its District. This will be achieved through appropriate controls.

Explanation and Reasons

The Council recognises that the community transports, uses and stores on many occasions very small quantities of hazardous substances, such as glue for wood work or pesticides for spraying home gardens. Accordingly, the Council has permitted the storage, use, and disposal of hazardous substances as of right subject to site standards to ensure the necessary environmental protection. The quantity permitted as of right is dependent on the nature of the particular substance and the "risk" it poses to the environment, and in addition, on how sensitive a particular environment is. For example, a built up residential area is considered to be more sensitive than an industrial area. Where quantities of specific hazardous substances exceed the limit set by the Council for various zones a land use consent will be required.

The Council also considers that any new industrial processes that are involved in 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 to ensure protection to the public and the environment.

The Council recognises that the safe disposal of many types of hazardous substances (waste) is difficult, or in some cases impossible. Accordingly, the Council will promote safer disposal practises through public education and advice. This will include advice as to whether hazardous substances can be recycled. A common example of hazardous substances that can be recycled are agrochemicals. Where recycling is not possible the Council may be able to advise whether the hazardous substances can be co-disposed at an appropriate landfill or other facility. If the hazardous substances cannot be disposed of in this way the Council may be able to advise how such substances can be stored.

In addition, the Council will check in-coming refuse to all landfills in the District to guard against inappropriate disposal of hazardous substances at these places.

In cases of accidental spill, contingency measures would be required by both major users of hazardous substances and the Council, so to minimise adverse effects to people or the environment. An emergency response plan will be considered as items to be resourced by the Council when necessary

through the annual plan process.

The Council does not consider that any consent is necessary for the transportation of hazardous substances in the District. At present the Dangerous Goods Act controls the transportation of over 250 litres of any gases, flammable liquids, hydrogen peroxides or corrosives. The transportation of any explosives commercially requires approval under the Explosives Act, with routes being defined for over 1,000kg of explosives. In addition, all transportation of hazardous substances is required to follow New Zealand Standard 5433, which is administered by the Ministry of Transport. Operators who fail to comply with this standard face significant penalties.

Notwithstanding the above, the Council will have an emergency procedure plan in place for accidental spillage. In addition, operators which intend to transport hazardous substances, as part of a wider operation, will be required to consider the possible adverse effects to the environment associated with the transportation of hazardous substances as part of any application for a resource consent.

The District Council envisages that any strategic controls on transportation routes for hazardous substances would need to be coordinated regionally as many routes cross the District's boundaries and transportation bases of companies carrying hazardous substances generally occur in the larger centres.

The control of hazardous substances will only be made possible with a good information base, research, and with the cooperation of people of the District. Accordingly, the provision of a hazardous inventory, liaison with other agencies and educative or advisory methods will be considered as items to be resourced when necessary through the annual plan process.

Environmental Results Anticipated

- A reduction in the potential risk to the environment from poor management practices during the use, storage, transportation, manufacture and disposal of hazardous substances.
- Establishment of a hazardous substances inventory, recording of the amounts and patterns of hazardous substances used, stored, transported and disposed of in the District.
- Greater control on the manufacture, use, storage, and disposal of hazardous substances, in order to minimise adverse effects to the environment.
- Periodic review of emergency response procedures so as to reduce the risk of hazardous substances injuring people or damaging property.

Hazardous Substances Rules

STATUS OF ACTIVITIES

1 Permitted Activities

The following activities shall be **Permitted Activities**, provided that they comply with all of the Standards specified below in 5:

- 1.a The use and/or storage of hazardous substances which are **not** identified in Schedule 1; attached to these rules;
- 1.b The use and/or storage of hazardous substances identified in Schedule 1 to these rules, in quantities **not** exceeding those specified in Column A of Table 1 for the relevant zone with the following exception:

Notwithstanding this rule and Table 1, the use and/or storage of up to 100,000 litres of petrol, 50,000 litres of diesel and 6 tonnes of LPG by service stations within any Commercial and Mixed Use or Industrial zones shall be a Permitted Activity.
- 1.c The use of explosives (Classes 1(a) and (b) in Schedule 1).
- 1.d The use and/or storage of hazardous substances associated with temporary military training activities.

2 Discretionary Activities

- 2.a The following activities shall be **Discretionary Activities**:
 - i The use and/or storage of hazardous substances identified in Schedule 1, to these rules, in quantities exceeding those specified in Column A but not exceeding those specified in Column B (where specified) of Table 1 for the relevant zone;
 - ii The manufacturing of any hazardous substance.
 - iii The use and/or storage of petrol, diesel or LPG by service stations within any Commercial and Mixed Use or Industrial zones greater than the volumes specified in Rule 1b above.

Note: Where Column B of Table 1 is denoted by a dash (-), the use and/or storage of hazardous substances identified in Schedule 1, in any quantities exceeding those specified in Column A of Table 1 shall be a **Discretionary Activity**.
- 2.b The following activities 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 which does not comply with any one or more of the Standards specified below.

3 Non-Complying Activities

The following activities shall be **Non-Complying Activities**:

- 3.a The use and/or storage of hazardous substances identified in Schedule 1 to these rules in quantities exceeding those specified in Column B of Table 1 for the relevant zone.

4 Non-Notified Resource Consents

Resource consents in relation to the following matters shall not be notified and the written approval of affected persons need not be obtained:

- | | | |
|-----|--|--|
| 4.a | Non-compliance with Standards: | 5 a, b, c, d or e |
| 4.b | Table 1 - Exceeding Column A Quantity Limits, but not exceeding Column B Quantity Limits | Commercial and Mixed Use zones, Industrial zones and Rural Zones |

5 Standards

- 5.a Primary and secondary containment systems shall be employed wherever 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 purpose 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 of diesel or petrol in underground tanks.

- 5.b To achieve a, the following specifications are required:
- i 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;
 - ii 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;
 - iii 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 (eg. tank), and the containment from the direct leakage from any container;
 - iv 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;
 - v the integrity of the primary and secondary containment systems shall be maintained at all times.

- 5.c The storage of petrol or diesel in above ground tanks in Rural Zones shall be exempt from standards a and b, providing the tank is at least 20m away from any natural water course or water race.
- 5.d The storage of diesel in above ground tanks in association with residential activities shall be exempt from standards a and b.
- 5.e Collection of hazardous substances for disposal purposes, or for subsequent use, shall be in containers that seal and contain the hazardous substances collected. All hazardous substance containers shall clearly and correctly identify their contents.
- 5.f Any use and/or storage of radioactive material, including radiation machines, shall comply with conditions set by the National Radiation laboratory.
- 5.g All explosives used for temporary military training activities shall be removed from the site of those activities.
- 5.h Any electrical transformer installation with an oil capacity of less than 1000 litres is excluded from the provisions of Rule 5a and 5b above, where operated by a network utility operator as defined in the Resource Management Act 1991.

Note: *The Standards are in addition to, and not in substitution for the Standards of the relevant zone, and other legislation that deals with hazardous substances, including the Dangerous Goods Act, Explosives Act, Toxic Substances Act, Medicines Act, Pesticides Act, Health and Safety in Employment Act or any subsequent legislation.*

Note: *Containment structures (whether above or below ground) for specified volumes of petroleum compounds, chlorinated hydrocarbons, brominated hydrocarbons and timber treatment chemicals are subject to land use rules contained in Change 2 of the Transitional Regional Plan Bylaw No 2 - Underground Water 1990.*

ASSESSMENT MATTERS

6 Resource Consents - Assessment Matters

6.1 General

- a The matters contained in Section 104 and Part II of the Act apply to the consideration of resource consents for landuse activities.
- b In addition to the applicable provisions of the Act, the Council shall also apply the relevant *Assessment Matters* set out below.
- c In the case of *Discretionary Activities where the exercise of the Council's discretion is restricted to the matters specified in a particular standard*, the assessment matters taken into account shall only be those relevant to that/those standard(s).

6.2 Assessment Matters

In considering whether or not to grant consent or impose conditions, the Council shall have regard to, but not be limited by, the following assessment matters:

- 6.2.a The extent to which the proposed activity and the proposed site poses a risk to the environment, and in particular:
 - The sensitivity of the surrounding natural and physical environment. Depending on the scale of the proposal this may include separation distances to people-sensitive activities (particularly activities such as schools, rest homes, hospitals, shopping centres etc) or to sensitive natural resources (eg. Aquifers, streams, wetland, habitats).
 - The number of people potentially at risk from the site.
 - Cumulative effects of the use, storage, manufacture, disposal and transportation of hazardous substances.
 - Cumulative effects of hazardous facilities in the area.
 - Site drainage and off site infrastructure (eg stormwater, sewer type and capacity).
 - Transportation safety – including method of transportation, quantities and types of hazardous substances transported, and proposed transport routes.
 - The likelihood of the site being affected by natural hazards.
- 6.2.b The extent to which the proposed activity can avoid or mitigate any undue risk. Methods can include site lay out, site management and spill contingency planning, transport methods and routes, monitoring and maintenance schedules.
- 6.2.c The ability of the proposed activity to be established at an alternative location or for the activity to undertake alternative methods, when it is likely that an activity will result in any significant adverse effects on the environment.

- 6.2.d The extent to which the proposed site is accessible from the major roading network to avoid heavy traffic volumes in local roads (particularly residential local roads); and the extent to which the proposed site's entry and exit points may pose a problem with existing intersections.
- 6.2.e The extent to which the activity can comply with the Standards and conditions for the relevant zone in question.
- 6.2.f The need for the site to be adequately signed.
- 6.2.g Any other matters that may need conditions to ensure that particular measures are undertaken so that any risk posed by the proposal is avoided or satisfactorily mitigated.
- 6.2.h Any relevant codes of practice applicable to hazardous substances.

7 Reasons For Rules

The hazardous substances characterised in Schedule 1 generally follow those identified in the Explosives Act, Dangerous Goods Act and the Pesticides Act. There are also two categories of miscellaneous hazardous substances that have been listed. These are timber preservatives which have received public attention as a result of their potential adverse effects to the environment, and chlorinated solvents which can potentially contaminate groundwater unless managed carefully.

There are, however, a large range of chemicals that are widely used in domestic households, commercial or industrial sites (ie household cleaners, medicines) that have not been included in Schedule 1, but yet are known to be poisonous to humans, animals or plants. In humans, for example, many household items can be toxic if ingested. Given the use of these substances is usually in small quantities, Schedule 1 has not specified these substances as requiring control within any zone. The storage, packaging and labelling of these substances will, in any event, be continued to be controlled under the Toxic Substances Act, Medicines Act or in the proposed Hazardous Substances and New Organisms Act. The storage and use of such substances will also be subject to the specified Standards.

The quantities of hazardous substances which can be used or stored as-of-right, as shown in Table 1, were determined by Council taking account of the following:

- a community expectations within the various zones of the district;
- b the existing controls that are in place from existing legislation such as the Dangerous Goods Act, Explosives Act, Toxic Substances Act and the Pesticides Act, and;
- c the implementation of Standards to ensure containment of all hazardous substances.

The different zones, and activities permitted in these zones, had a considerable influence in determining the quantities specified in Table 1. The reasons for this are given below:

Residential Zone

The residential zones cater for predominantly residential activity. Experience has shown that the storage or use or disposal of hazardous substances is acceptable when used for domestic use or for limited use for home occupations. For these reasons the permitted quantities of hazardous substances for storage or use is limited. Any quantities exceeded in Column A of Table 1 for these zones is not contemplated by this Plan, and any applications for resource consents will be notified.

Commercial and Mixed Use zones, Industrial zones and Rural Zones

The Commercial and Mixed Use and Industrial zones have historically been the zones in the town where hazardous substances are stored (ie. warehouses or retail shops), or are used in manufacturing or industry. Similarly, the Rural Zones are dominated by farming activities that will store or use hazardous substances such as agrochemicals. In addition, the rural areas by nature do not have high residential dwelling densities. For these reasons the quantities of hazardous substances used or stored as-of-right in Table 1 are generally larger for the Commercial and Mixed Use, Industrial and Rural Zones. Any applications for resource consents for quantities exceeding those in Column A of Table 1 will be treated as non-notified applications. The Council will give consideration to notifying any applications if the use or storage of the hazardous substances is in close proximity to residential dwelling(s) or occurs in areas which have, for example, specific ecological values.

The Council will monitor and review the appropriateness of the classification and quantities defined in Schedule 1 and Table 1. In particular, the Council will monitor the development of the proposed Hazardous Substances and New Organisms Act in relation to these controls, and also monitor evolving community concerns. It is noted the disposal of hazardous substances is not controlled in Table 1. The Council has separate by-laws and policies in the disposal of these substances to landfills or sewers. Any disposal of hazardous substances directly into the environment may require a consent from the Canterbury Regional Council. The Council will, however, require information on where hazardous substances are to be disposed if an application for resource consent indicates the use of hazardous substances.

Irrespective of Schedule 1 and Table 1 provided in this Plan, the Council considers that the manufacturing of hazardous substances will require a land use consent. This is because the manufacturing of hazardous substances is often a complex process which involves using large quantities of hazardous substances.

Schedule 1: Classification Of Hazardous Substances

Class	Characteristics	Examples Including but not limited to:
1 EXPLOSIVES	<p>1 Explosives</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 Flammable Gases</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 Toxic Gases 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 Non-flammable, Non-toxic Gases 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 • 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. 	<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>
3 FLAMMABLE LIQUIDS	<p>3 Flammable Liquids 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>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>

Class	Characteristics	Examples Including but not limited to:
	3u Storage of 3a, b and/or c in underground tanks.	
4 FLAMMABLE SOLIDS	<p>4.1 Flammable Solids Solids or wastes other than those classified as explosives, which under suitable conditions, ie impact, friction, heat, ignition, will burn or self react with extreme intensity.</p> <p>4.2 Substances or wastes liable to spontaneous combustion 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 Substances which in contact with water, emit flammable gases 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, monomethylamine nitrate, nitrocellulose, trinitrobenzene, magnesium alloys.</p> <p>4.2 Yellow or white phosphorus, magnesium alkyls, dithionites.</p> <p>4.3 Alkali metals eg sodium, potassium, lithium; calcium, magnesium, metal hydrides, metal carbides.</p>
5 OXIDISING SUBSTANCES	<p>5.1 Oxidising Substances 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 Organic Peroxides 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, bromate, chlorates, chlorites, nitrates, permanganate.</p> <p>5.2 Any organic peroxide (includes peroxy and per compounds). Perdicarbonates, butyl peroxyphthalate, cumene hydroperoxide, benzoyl peroxide.</p>
6 CORROSIVES	<p>6 Corrosives 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.</p>	<p>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.</p>
7 AGROCHEMICALS	<p>7 Agrochemicals 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.</p>	<p>7 Bipyrindyls, di-nitrophenols, phenoxy compounds, organophosphates, carbamate, organochlorines.</p>
8 MISCELLANEOUS	<p>8.1 Timber Preservatives Preservatives used in the treatment of timber.</p> <p>8.2 Chlorinated Solvents</p>	<p>8.1 Copper, chromium, arsenic, boron, and other water-borne preservatives. Light organic solvent preservatives, anti sapstain chemicals.</p> <p>8.2 Bromodichloromethane, Trichloroethane, Chlorodibromomethane 1,1,1-Trichloroethene, Tetrachloroethene, Trichloromethane, Tetrachloromethane, Tribromomethane.</p>

Table 1: Quantity Limits For Hazardous Substances Identified In Schedule 1**Residential, Rural-Residential, Recreation A & P, Open Space H & G, And Pukaki Village Zones**

Schedule 1 Class	Column A	Column B
1a ¹ - storage only	Nil	Nil
1b ¹ - storage only	15kg	15kg
2	250 litres	10,000 litres
3a	50 litres ²	50 litres ²
3b, 3c	1200 litres	1200 litres
3u	Nil	Nil
4.1	10 kg	10 kg
4.2, 4.3	100 kg	100 kg
5.1	100 kg	100 kg
5.2	5 kg	5 kg
6	20 litres	20 litres
7 Residential & Open Space Only	10 litres	10 litres
7 Rural Residential Only	50 litres	50 litres
8.1	20 litres	20 litres
8.2	20 litres	20 litres

Commercial and Mixed Use and Industrial Zones

Schedule 1 Class	Column A	Column B
1a ¹ - storage only	25kg	-
1b ¹ - storage only	50 kg	-
2	250 litres	40,000 litres
3a	3,000 litres	-
3b, 3c	3,000 litres	-
3u	20,000 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	5000 litres	-
8.1	20 litres	-
8.2 - Other than Industrial Zone	200 litres	-
8.2 - Industrial Zones Only	1,000 litres	-

RURAL, AIRPORT AND OPUHA DAM ZONES

Schedule 1 Class	Column A	Column B
1a ¹ - storage only	2.5 kg	-
1b ¹ - storage only	15 kg	-
2	250 litres	10,000 litres
3a	2,000 litres	-
3b, 3c	3,000 litres per tank with a maximum of 10,000 litres per site	-
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	1,000 litres	-
7	1,000 litres or 100kg of powder or gel	-
8.1	20 litres	-
8.2	20 litres	-

- Note:**
- The use of high explosives is a permitted activity in all zones, but is subject to the Explosives Act and any subsequent legislation.
 - The 50 litre restriction does not apply to petrol and other 3a flammable liquids contained in a fuel tank of an internal combustion engine.