



3. Solid Discharges

3.1 Issues

- ▶ The transportation, treatment, disposal and storage of solid waste, can have adverse effects or pose a risk to the environment.
- ▶ Applications of materials to land for purposes other than disposal, such as fertilisers, weedicides and pesticides, stockpiles or solid fill, can have adverse effects or pose a risk to the environment.

Many materials that are commonly applied to land come within the meaning of “contaminant” under the Resource Management Act. These include fertilisers and agricultural chemicals solid or liquid. They can also include solid fill and storage heaps of materials such as silage, woodchips, soil or bark. Effects can include contaminants being washed off land by rain or blown off by wind and entering surface or ground water. Leachate can accumulate in the base of storage heaps and pass into surface or ground water.

Earthworks and vegetation removal disturb the surface of the land and allow sediment to be washed or blown off. This is either deposited on other land or passes into water where it can be a contaminant. (Refer also to Chapter 6 of the Proposed Combined Regional Land and District Plan.)

Solid wastes are transported, treated, stored and disposed of. All of these stages can create adverse effects. These can include:

- ▶ Contamination of water by direct discharges or spills and from leachate.
- ▶ Contamination of land with toxic substances.
- ▶ Odours and dust and other forms of air pollution.
- ▶ Visual degradation.
- ▶ Loss of amenity values.
- ▶ Problems with birds and vermin.
- ▶ Health risks.
- ▶ Loss of the natural character of the coastal environment (excluding the CMA), wetlands, lakes and rivers and their margin.
- ▶ Loss of habitat for indigenous flora and fauna.

The District's waste disposal sites, including some sites now closed, are often poorly sited and have the potential to contaminate land and water resources. Some are sited in areas where natural hazards occur, such as stream beds and the coast. Their continual management needs to deal with these issues. The largest site, at Paokahu has limited life as at January 1997 and extensions are proposed.

Environmental problems associated with the original site's operation will need addressing, including leachate control, odour, control of wind blown debris, disposal of hazardous wastes and loss of visual amenity.

Burning of waste is carried out at refuse tips to reduce the volume of waste. Often the substances being burnt are unknown and the burning temperature means some materials may release toxic emissions. The burning of waste in residential areas and as a land clearing practice can cause localised air pollution problems.

The dumping of rubbish on roadsides or reserves is a continual problem which has adverse effects on the environment.

Land disposal of solid agricultural wastes such as poultry shed manure and food processing wastes is practised around Gisborne. While this can be a valuable soil nutrient it can also cause odours and flies, and also may cause eutrophication of waterways.

3.2 Objectives

1. Any adverse effects from transportation, treatment, disposal and storage of solid wastes are avoided, remedied or mitigated

Principal Reason

This objective is to ensure that all the stages of solid wastes handling occur in a way that avoids, remedies or mitigates adverse effects.

2. Adverse effects caused by solid discharges to land or water from activities are avoided, remedied or mitigated.

Principal Reason

This objective is to ensure that activities on land or in water avoid, remedy or mitigate adverse effects caused by discharges. There are numerous activities which can create such effects. These include agriculture, industry, forestry and construction.

3.3 Policies

1. Siting of new facilities for handling, processing, treating storing or disposing of solid waste, and associated contaminated or potentially contaminated materials (including landfills, transfer stations, treatment or bulk storage facilities) should be avoided in or near the areas set out below, if they would create adverse effects.
 - (a) Areas vulnerable to natural hazards, including:
 - ▶ Areas susceptible to flooding.
 - ▶ The margins of lakes and rivers and wetlands.
 - ▶ Areas with active geological faulting.
 - ▶ Unstable or erosion-prone land
 - ▶ Areas susceptible to coastal hazards including erosion, flooding, landslip and slumping.
 - (b) Areas which support ecosystems that are particularly vulnerable to the effects of contaminants, including:
 - ▶ Wetlands.
 - ▶ Intertidal areas, estuaries and coastal dunes and their margins.
 - ▶ Areas of significant indigenous vegetation and significant habitats of indigenous fauna.
 - ▶ Ecological corridors.
 - ▶ The margins of lakes and rivers.
 - (c) Areas valued for other reasons or used for other purposes which are incompatible with the effects of contaminant discharges, including:
 - ▶ National, regional and local parks and reserves.
 - ▶ Waahi tapu, cemeteries and other sacred sites.
 - ▶ The coastal environment.
 - ▶ Outstanding natural features or landscapes.
 - ▶ Existing residential and commercial land.
 - ▶ Water supply catchments.
 - ▶ Recharge areas for groundwater aquifers.
 - ▶ Areas in proximity to airfields or flight paths.
 - ▶ Areas of historic, scenic or cultural significance.
 - ▶ Areas with watercourses which cannot be diverted in an environmentally acceptable manner.

Principal Reason

Natural hazards could enable contaminants to escape or spread from the facilities listed. Ecologically sensitive areas should be avoided because it would be impossible to preserve their values in or close to these facilities. The same applies to areas with high natural or cultural values or which are close to places where people live or gather for any reason. Transfer stations are less likely to create some of these effects but should still be carefully assessed before they proceed in or close to such areas.

2. The adverse effects of any existing landfill or waste disposal site will be avoided, remedied or mitigated to the fullest extent practicable.

Principal Reason

Existing landfill sites include closed sites where waste is still present.

These sites have the potential to discharge contaminants to water (including coastal and groundwater, land and air, create nuisance by vermin or scavengers and have adverse effects on landscape.

3. When planning for future waste disposal facilities in the Gisborne District, the Council will take into account the costs and benefits of various site and technology options to the District community as a whole, including:

- ▶ Energy efficiency.
- ▶ Economies of scale in relation to design and costs.
- ▶ Making the best use of the limited number of cost-effective potential landfill sites in the District.
- ▶ The ability of the community to pay for waste disposal options which benefit the District as a whole.
- ▶ Whether the use of waste minimisation techniques could avoid or defer the need for new landfills.

Principal Reason

This policy will ensure that new proposals can proceed if they are the best and most sustainable options for the District. The policy is necessary to meet the requirements of sections 5 and 32 of the Act.

4. To give particular consideration to the following matters when assessing applications for consents to dispose of solid materials or to discharge solid contaminants to land or water.

- (a) The nature of the materials to be discharged.
- (b) Any actions which may be required in order to address any risks posed by the hydro-geological conditions at and around the site.
- (c) The potential for any long-term contamination or other long term or cumulative effects arising from the operation.
- d) Any actions planned or required in order to avoid, remedy or mitigate any adverse effects of the site when it is no longer used for the disposal or discharge.
- e) Any effects of leachate and stormwater on groundwater, surface water and coastal water.
- f) The effects of any discharge of landfill gas, odour or other contaminant to air, and the desirability of recovering landfill gas where practicable.
- g) Any actual or potential effects of any discharges on human health or amenity and on the health and functioning of plants, animals or ecosystems.

- h) Whether the discharge will attract pest populations and the potential effects of the pests on sensitive land uses and significant indigenous flora and fauna and their habitats.
- i) Any values placed on the site by tangata whenua.
- j) Any other uses or values of the site and surrounding area.
- k) Any classification of receiving waters pursuant to section 69 of the Act.
- l) The need for, and adequacy of, discharge monitoring systems, including:
 - ▶ Landfill leachate monitoring.
 - ▶ Landfill gas monitoring.
 - ▶ Proposed measurement of the quantity and types of waste.
- m) The extent to which the proposal would implement or hinder the use of the waste management hierarchy.
- n) Any adverse effect on values contained in areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- o) Any relevant industry codes of practice, the implementation of which would assist in the avoiding, remedying or mitigating of adverse effects on the environment.

Note For provisions relating to Hazardous Substances and Wastes refer to Chapter 4.

Principal Reason

This policy contains detailed criteria against which applications for discharges will be considered. It allows the specific components of a proposal to be considered in relation to the particular characteristics of the site. The criteria are considered to be those needed to address the issues in a way that is consistent with the Act, Regional Policy Statement, New Zealand Coastal Policy Statement and Council's other Regional Plans.

- 5. All collection and transportation of solid materials containing contaminants should be carried out in a manner which avoids, remedies or mitigates adverse environmental effects and minimise any potential for nuisance conditions.

Principal Reason

Collection and transportation of waste have the potential to be unsightly, and smelly, attract insects and animals. Transport of all solid materials can cause spillages and litter. These would affect amenity, be a possible cause of health problems and be a possible source of contamination of land and water.

- 6. In assessing applications for landfills the Council will be guided by the provisions of the National Landfill Guidelines (Ministry for the Environment 1992). It will recognise however that these Guidelines are conservative and precautionary in their approach. Strict adherence in all cases may not be necessary.

Principal Reason

The National Landfill Guidelines have been designed to improve the standard of landfill management throughout New Zealand. The Guidelines provide detailed

information on most aspects of landfill management. Adherence to these where appropriate will ensure that landfills meet environmentally acceptable standards of management.

7. The consent authority will require the rationalisation of landfill sites within the District.

Principal Reason

This will ensure efficient use of resources and avoid the proliferation of contaminated sites.

8. Adverse effects of waste ozone depleting substances on the atmosphere should be avoided or minimised by such actions as encouraging the use of alternatives, extraction of such substances prior to disposal, storage and appropriate disposal.

Principal Reason

The Ozone Layer Protection Act makes the discharge of ozone depleting substances an offence. This legislation gives effect to New Zealand's international obligations under the Montreal Protocol. Ozone depleting substances such as halons and CFC's are used in refrigeration systems, air conditioning units and fire fighting equipment.

Since many of these products eventually end up at landfills, it is desirable that efforts are made to reduce their use, recycle or reuse them, or as a last resort facilities are provided for the safe collection and storage of ozone depleting substances at landfill sites. As an example of this, systems are already in place within the district through refrigerator servicing agencies to degas refrigerators before final disposal.

3.4 Methods of Implementation

1. To provide solid waste collection and disposal facilities for those communities unable to perform these activities in a manner in which the environment is not adversely affected.

Principal Reason

Without community collection and disposal of solid wastes, people are forced to make their own arrangements such as burning, burying or dumping. In built-up areas a build up of waste in back yards or illegal dumping is likely to occur, leading to odour, water pollution or vermin attraction, and unsightliness.

2. Council will ensure that provision is made for the safe and effective collection and storage of ozone depleting substances.

Principal Reason

The Ozone Layer Protection Act makes the discharge of ozone depleting substances an offence. This legislation gives effect to New Zealand's international obligations under the Montreal Protocol. Ozone depleting substances such as halons and CFC's are used in refrigeration systems, air conditioning units and fire fighting equipment.

Since many of these products eventually end up at landfills, it is desirable that facilities are provided for the safe collection and storage of ozone depleting substances at landfill sites. Provision of such facilities could include ensuring that regular collections by approved collectors are undertaken, which would obviate the need for capital expenditure on suitable extraction equipment and storage

3. The Council will develop and implement a programme aimed at educating farmers and residents about the environmental effects of farm and backyard refuse dumping.

Principal Reason

These activities have been traditionally carried out by people who are often largely unaware of the adverse effects of what they are doing.

4. The Council will contribute to the avoidance of adverse effects from landfills through co-ordinating the application process for the various resource consents required for landfills and develop an integrated approach to consent conditions and Landfill Management Plan requirements.

Principal Reason

A consistent and District-wide approach to resource consents is desirable. Council is in the best position to co-ordinate this.

5. The Council will require resource consents for existing and former landfills which are discharging contaminants to the environment. It will manage any adverse effects that are occurring from such sites.

Principal Reason

This is necessary for Council to meet its obligations under the Act and to avoid remedy or mitigate as far as possible the effects of past activities.

6. To reduce the potential adverse effect of landfill gases through appropriate design, management and operation of waste handling sites and, where appropriate, the installation of gas capturing systems.

Principal Reason

Landfill gases can contribute to the greenhouse effect. They can also cause explosions, odour and affect plant growth. Gas emissions from landfills are estimated to contribute around 4 per cent of New Zealand's contribution to the Greenhouse Effect (Von Dadelszen and Plume, 1991).

They can also be explosive. It is recognised that many landfills in the District may be too small for landfill gas extraction to be a cost effective option.

However, technology for landfill gas extraction is likely to become more refined. Landfill gas extraction reduces adverse environmental effects and may be an efficient and effective use of the Districts renewable resources, and hence is encouraged, where feasible.

7. All people employed in the handling of waste and operation of landfills should receive training which recognises and incorporates the complexity and sophistication of modern waste disposal techniques.

Principal Reason

The potential for adverse effects from waste management is so great and the available techniques are so complex that training of people involved is essential.

8. The Council will manage activities causing discharges of sediment through a combined *Refer* District and Regional Plan for land use.

Principal Reason

Activities that can discharge sediment can also have a number of other adverse effects. District and Regional Plans have long been dealing with issues such as amenity, natural hazards, natural character, habitat and ecosystems. For continuity and to avoid duplication the Council will continue to deal with these effects in its combined Regional and District Plan.

3.5 Rules for Solid Discharges

Permitted Activities

Rule 3.5.1 Inert substances

The deposition of any material into or onto land that is:

- ▶ Solid.
- ▶ Not a hazardous substance.
- ▶ Biologically and chemically inert for the duration of the time that the material is to be in contact with the land into or onto which they are discharged, and shall be a **permitted activity**, provided the following conditions are met:
 - (a) No objectionable or offensive odour or dust shall be discernible beyond the boundary of the property as a result of the discharge.
 - (b) The material shall be located and contained to ensure that it is not able to enter any water body or the coastal marine area.
 - (c) The material does not cause any diversion of overland flows of stormwater or floodwater on to other property.
 - (d) The material does not provide an attraction or accommodation for vermin.
 - (e) The material is not deposited in any area of significant indigenous vegetation or significant indigenous habitat, or any heritage site (see chapter 3 of the Combined Regional Land and District Plan).

Note: With regard to diversion of water see also Section 14 of the Act and with regard to coastal or flood hazard areas see the District Plan.

Principal Reason

This rule allows for raising the level of land with harmless and inert materials which are technically contaminants within the meaning of the Resource Management Act 1991.

Rule 3.5.2 Solid Waste at Farms

The discharge of any contaminants into or onto land in connection with solid waste disposal at farms, or farm composting operations shall be a **permitted activity**, provided the following conditions are met:-

- (a) For composting, the discharge shall consist only of green wastes produced on the property and shall contain no hazardous substances.
- (b) For solid waste disposal, the discharge shall consist only of household or farm wastes generated on that property and shall contain no hazardous substances.
- (c) The discharge shall occur no less than 50 metres from any river, surface water body, wetland, drain or channel, from any bore used for drinking water supply, or from the coastal marine area.
- (d) The base of the fill area shall be no less than 1 metre above the highest level of the water table.
- (e) No offensive odour shall be discernible beyond the boundary of the property as a result of the discharge.
- (f) There shall be no windblown litter from the site.
- (g) No more than six months after the closure of the discharge site, the site shall be rehabilitated to a condition which is compatible with surrounding land uses, and does not constitute a greater hazard than the surrounding land with respect to landslip and subsidence.
- (h) There shall be no diversion of overland flows of floodwater or stormwater.
- (i) The discharge shall not result in the application of more than 200 kg/ha of nitrogen per annum to the land.

Principal Reason

This rule allows for small-scale rural disposal sites with minimal environmental impact to take place without the need for resource consents to be obtained.

Note: Domestic composting operations are not affected by section 15 of the RMA.

Rule 3.5.3 Fertiliser Applications

Application of fertiliser to land according to manufacturer's recommendations, or in accordance with the Fertiliser Code of Practice (New Zealand Fertiliser Manufacturers Research Association, 1998) shall be a **permitted activity**.

Principal Reason

Although there is a theoretical potential for fertiliser application to cause adverse effects especially to water quality, when correctly applied this has not been shown to be a serious issue in the Gisborne District.

Note: The Regional Air Quality Plan also contains provisions relating to the use of agricultural chemicals. (2) The use of agrichemicals is a permitted activity under Rule 13.

Rule 3.5.4 Stockpiles

Storage of bulk materials (other than hazardous substances) in stockpiles on land shall be a **permitted activity**, provided the following conditions are met:

- (a) There is no discharge of contaminants into or onto land from the stockpile caused by leaching, run-off, wind or any other process; and
- (b) There is no discharge of contaminants into or onto water from the stockpile.
- (c) There are no discharges of offensive or objectionable particulate matter, liquids, mists or odour at or beyond the boundary of the site.

Note: For discharges to air from stockpiles, see the Regional Air Quality Plan.

Principal Reason

This rule allows for bulk storage of materials on land to take place without the need for resource consents where there is minimal environmental impact. This may require stockpiles to be lined, covered or bunded, or leachate control systems to be provided. This may require stockpiles to be lined, covered or bunded, or leachate control systems to be provided.

Rule 3.5.5 Bark and Agricultural Manures

Discharge of bark or solid animal manures including poultry manure to land shall be a **permitted activity**, provided the following conditions are met:

- (a) The discharge shall not result in any offensive or objectionable, particulate, liquids, mists or odour at or beyond the boundary of the site.
- (b) The discharge shall not result in the application of more than 200 kg/ha of nitrogen per annum to the land.
- (c) The discharge shall occur no less than 50 metres from any river, wetland, surface water body, drain or channel, from any bore used for drinking water supply, or from the coastal marine area.
- (d) The base of the disposal area shall be no less than 1 metre above the highest level of the water table.

Principal Reason

This rule allows for mulching or fertilising with organic materials on land to take place without the need for resource consents where there is minimal environmental impact.

Discretionary Activities

Rule 3.5.6 Other Solid Discharges

Except as provided for in the rules of this plan the discharge of any waste materials or contaminants onto land and the discharge of any solid material containing contaminants into or onto land; or into water shall be a **discretionary activity**.

Principal Reason

This rule allows for detailed consideration of all proposals for significant discharges of wastes or contaminants. It will ensure that only those whose adverse effects can be avoided remedied or mitigated can proceed. The detailed criteria against which these are to be assessed are set out in the Policies stated above.

General Rules for Landfills and Waste Handling Sites

Landfills are a **discretionary activity** under Rule 3.5.6 of this plan. Rules 3.5.7 and 3.5.8 shall apply to landfills and waste handling sites where appropriate. Failure to comply with these rules will mean the landfill or waste handling site is non-complying.

Rule 3.5.7 Landfills

All operating and all new landfills in the District will be managed in accordance with site specific Management Plans to be approved by the Council that shall specify the matters incorporated in Appendix 3 Schedule B of this Plan. Applications for resource consents shall include proposed management plans for the site. Operators of sites in existence at the time this Plan becomes operative shall submit proposed management plans for approval by Council within 6 months.

Principal Reason

The National Landfill Guidelines (Ministry for the Environment, 1992) recommend management plans be established for all landfills. Such plans are seen to be an efficient and effective mechanism for dealing with the range of landfill management issues likely to be experienced throughout the District.

Rule 3.5.8 Landfill Monitoring and Management Plans

All holders of resource consents for landfills will annually furnish to Council:

- ▶ A return of the quantity of waste accepted for disposal at the site. Where there has been a 10% or greater increase in the total volume of waste disposed of in the preceding year and in any case every five years, a survey identifying the types and quantity of waste accepted for disposal shall be undertaken. The survey shall be carried out in a manner not inconsistent with the Waste Management Protocol and included in the annual return for the following year.
- ▶ An updated Landfill Management Plan which addresses the matters listed in Appendix 3 Schedule B of this plan.
- ▶ An audit report addressing the matters listed in Appendix 3 : Schedule C of this Plan.

Principal Reason

This rule enables the Council to monitor the quantity and nature of wastes disposed of at specific landfills. This data will enable the sites to be properly managed. It also ensures that information is available to enable the long-term management of landfill sites. It will ensure that operators of landfills regularly monitor their operations to ensure they meet their obligations. It will ensure that land filling techniques incorporate the most up-to-date knowledge. Analysis of historical data has shown that a 10% increase in the quantity of waste is a 'significant' increase.

Prohibited Activity

Rule 3.5.9 Ozone Depleting Substances

The discharge of ozone depleting substances or waste containing such substances to land or water shall be a **prohibited activity**. No consent will be granted for any such discharge. Any person collecting or disposing of waste containing ozone depleting substances shall ensure the safe and effective collection and storage of the ozone depleting substances prior to disposal of the associated waste.

Principal Reason

Ozone depleting substances, if released to the atmosphere, add to the depletion of the ozone layer. This creates health hazards. Ozone depleting substances must neither be released directly nor left in waste in a form in which they may be indirectly released as wastes decay. An example of this is the degassing of refrigerators before final disposal.