

Contents

Solid Waste

OBJECTIVES AND VISIONS	2
OVERVIEW	2
WHAT IS WASTE?	3
KEY ISSUES	4
PRESSURES	4
STATE	4
Area of land designated for landfills	
Total quantity of waste disposed to the landfills	
Composition of waste disposed at landfills	
Quantity of waste recycled	
Number of households which received waste collection and kerbside recycling	
Landfill leachate	
RESPONSE	6
WHAT YOU CAN DO TO HELP	7
CASE STUDY	8
Solid Waste Management Strategy	

OBJECTIVES AND VISIONS

To ensure the appropriate storage, disposal and reduction of solid and hazardous wastes through the avoidance, remediation or mitigation of adverse effects on the environment

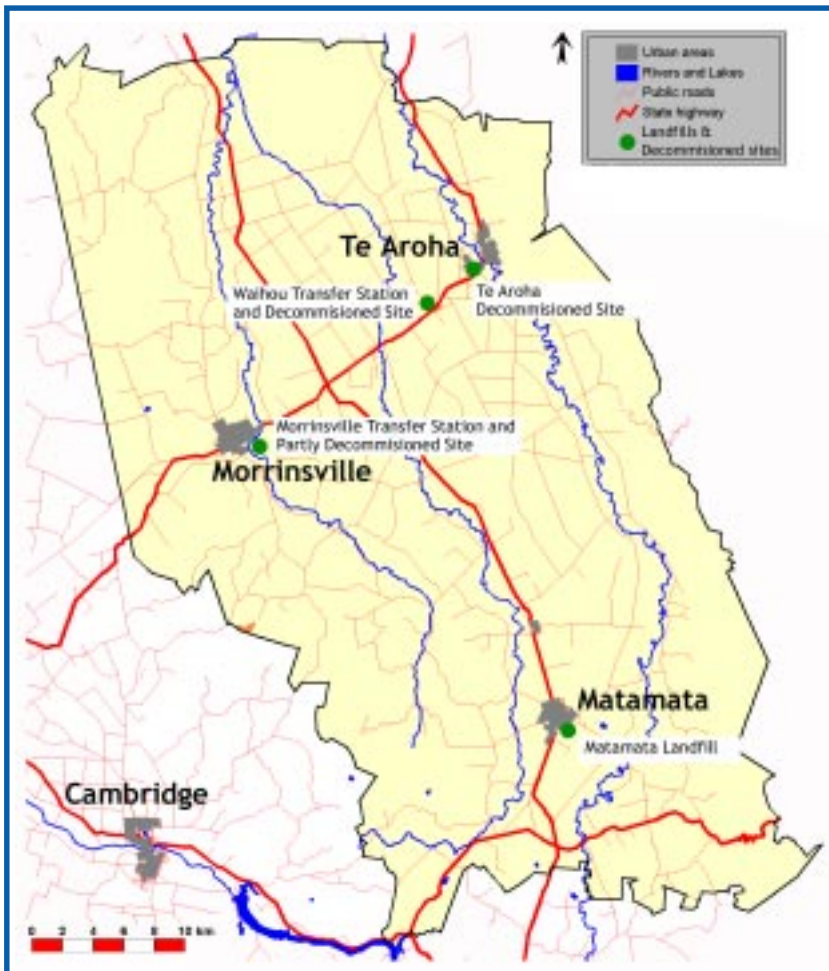


Solid Waste

OVERVIEW

SOLID WASTE

It is difficult to summarise management of solid waste with no trend data. However, Council is monitoring leachate from the landfills, and has implemented a programme for promoting recycling and has good data of waste tonnages since 1993. Council shreds and utilises greenwaste as part of its management of the landfill site at Matamata, and encourages residents of the District to do likewise.



Landfills and transfer stations in the Matamata-Piako District

Morrinsville adjacent to the closed landfill. Council contracts out the management and operation of these sites. The Morrinsville landfill is being decommissioned at present and is expected to close in the year 2000. Upon closure of the landfill, all solid waste will be disposed of to an out of district landfill. Council has prepared landfill management plans and obtained resource consents for the Matamata and Morrinsville landfills, which help to ensure that use of the landfills avoids, remedies or mitigates potential adverse effects on the environment.

Waste is generated when people discard things that they do not have a use for, or perceive to have little or no value. Council is responsible for promoting effective and efficient waste management and waste reduction practices. The generation of waste often highlights inefficiencies in a waste management system, whether it be domestic or commercial waste. Waste reduction is the first step in the 'waste hierarchy' which is shown below. As waste flows through the hierarchy, the quantity for disposal is significantly less than that created initially.



Waste Management Hierarchy

The Matamata-Piako District Council has a landfill at Matamata and two refuse transfer stations, one at Waihou, and the other in

What is waste?

“Materials and energy which have no further use and are released to the environment as a means of disposal”

(Ministry for the Environment (MfE), 1998)

Pressures

Waste is generated by many human activities that are part of everyday living. The environmental effects of waste vary with the toxicity and quantity produced and includes the contamination of soil, rivers and groundwater. Waste can exist in a solid, gaseous or liquid form. This chapter deals only with solid waste.

Uncontrolled disposal of waste can have a significant adverse effect on the natural environment, including surface and groundwater, soil and air. Small rubbish dumps, such as farm dumps are difficult to identify and control. Council has made this form of dumping illegal given the significant adverse

KEY ISSUES

- Waste minimisation
- Effective control of private solid waste disposal
- Effect of solid waste storage and disposal on the environment

environmental effects that can occur.

The majority of waste in the District is disposed of via landfills. The effects of landfills include odour, pests, reduced amenity values and groundwater and surface-water contamination from leachate. Eventually, landfills reach capacity and establishing a new landfill is a complex, costly and time-consuming process.

The Matamata-Piako District has a number of large industries, including dairy processing, chemical manufacturing, fertiliser manufacturing and meat processing. All these industries influence the quantity and type of waste generated in the district.

State

Area of land designated for landfills

Council has designated three areas in the District for waste disposal, occupying the following areas :

Areas designated for waste disposal	
Landfill	Area (ha)
Morrinsville	3.99
Matamata	13.3
Waihou	12.8
Total	30.09

The Waihou landfill closed in 1995. Waste from the Waihou transfer station is disposed of at the Matamata landfill.

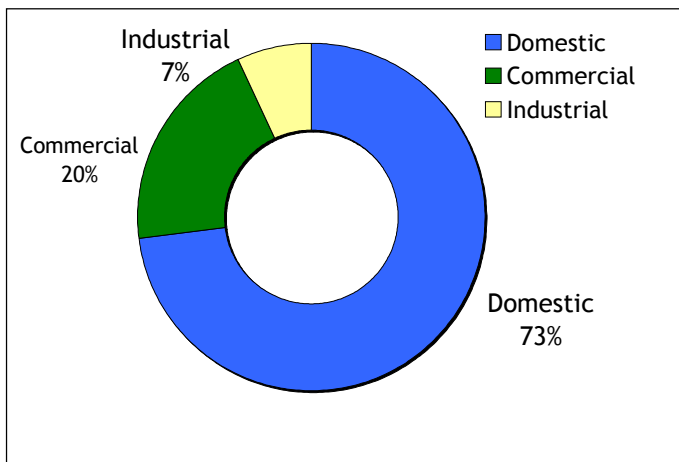
Total quantity of waste disposed to the landfills

The Matamata-Piako waste stream can be separated into three broad categories;

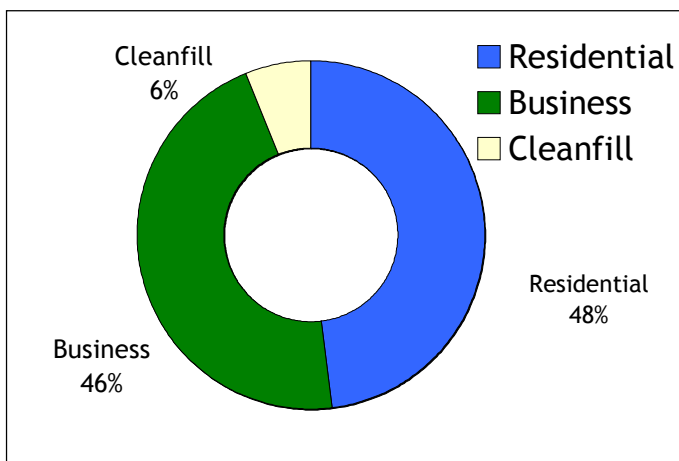
- General - material requiring landfilling
- Greenwaste - organic plant material suitable for composting
- Construction and Soil - material suitable for use as landfill cover and/or disposal to a cleanfill site.

Matamata-Piako Waste Stream (1995)	
Landfill/transfer station	Amount (tonnes)
Waihou	4,500
Morrinsville	9,400
Matamata	9,600
	23,500 TOTAL

The Matamata-Piako District disposed of a total of 23,500 tonnes of waste including green waste and cleanfill in 1995 "engineered" landfills. Using the 1996 census data, this equates to 790kg of waste per person for 1996. If green waste and cleanfill are excluded, the waste produced per person reduces to 340kg per person. The Environment Waikato State of the Environment Report estimates that based upon a survey of seven Councils within the Region, each person within the Waikato Region generates 598kg¹ of waste per year, significantly more than the Matamata-Piako District average of 340kg.



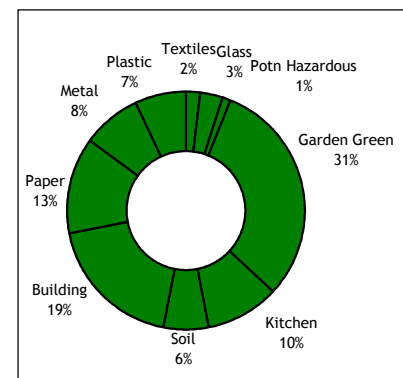
Source of waste at Matamata Landfill 1993



Source of waste at Morrinsville Landfill 1996

Composition of waste disposed at landfills

Matamata-Piako District Council commissioned Waste Analysis Protocol (WAP) reports in December 1995 and April 1996, for the Morrinsville landfill and the Waihou transfer station. WAP reports provide information on the amount of waste being disposed of to landfill, and the composition of this waste. A comparison of results from WAP studies over time provide an indication of changes in waste disposal practices within the District and to identify whether recycling initiatives are working.



Composition of waste disposed at Morrinsville Landfill 1996

Breakdown of annual refuse quantities (1995)			
	General (tonnes)	Greenwaste (tonnes)	Construction/Soil (tonnes)
Waihou	1800*	1500	1200
Morrinsville	4800	2700	2000
Matamata	3200	3300	3000
Total	9800	7500	6200

* transported to Morrinsville landfill for disposal

Quantity of waste recycled

Approximately 30% of the District's residents participate in recycling schemes. Council operates recycling centres at the District's landfills and transfer stations, and also collects recyclable materials as part of kerbside rubbish collection. Council collects metal, glass, plastic containers labelled 1 and 2, and newspaper as part of the kerbside collection programme. Council also collects scrap metal, whiteware, automotive batteries and used engine oil at the recycling centres. Businesses can put out paper and cardboard for collection as part of the commercial refuse collection. Hazardous waste storage facilities are situated at Waihou and Morrinsville whereby hazardous material can be disposed of by arrangement.

The WAP survey results for the Morrinsville landfill and Waihou Transfer Station show that 32% of the waste disposed of to the landfill is potentially recyclable. Please refer to figure "Composition of waste disposed at Morrinsville Landfill 1996" on page 34.

Council also composts greenwaste with an estimated 7500 tonnes of waste accepted at the landfills and transfer stations in 1995. Greenwaste

is stockpiled and used later as landfill cover.

Number of households which received waste collection and kerbside recycling

Council provides refuse collection services to approximately 7500 (71%) households in the Matamata-Piako District. This includes domestic rubbish collection and kerbside collection of recyclable materials.



Landfill leachate

The Matamata-Piako District Council monitors the amount and quality of leachate from the District's landfill to adjacent surface water bodies, up stream and down stream of the landfill location. The Council also monitors bores located at 3-4 sampling sites in the vicinity of the landfills. The monitoring costs the Council approximately \$9,000 per annum. Council's spending has increased over the past few years, indicating that monitoring of water quality is increasingly important to the Matamata-Piako community.

Response

The Council has introduced waste minimisation and recycling strategies at Council landfills and transfer stations and residents receive information about waste reduction through advertising in the local newspaper. Council has prepared a Solid Waste Management Strategy for the District along with landfill management plans for the Morrinsville and Matamata landfills which include details of landfill monitoring programmes. Council has recently installed two weigh bridges and a weighing device at its sites to accurately monitor and record waste tonnages. A freephone number is also available for any enquiries regarding recycling, refuse collection and disposal of solid waste.

Environment Waikato, through its environmental education programme, encourages waste reduction and recycling. Landfills within the region must comply with certain standards to protect and enhance the environment and resource consents are required to ensure minimum standards are met and maintained.

In addition, Environment Waikato launched a region-wide programme called "Target Zero Waste" in August 1998. This programme is a

business training programme encouraging the development of partnerships between businesses to implement cleaner production techniques at no cost.

¹ It is implied only that this figure does not include green waste or cleanfill.



Home composting

What you can do to Help

- Compost green waste at home for use in the garden.
- Recycle glass, metal, paper and plastic. Take used oil to collection centres.
- Reduce the amount of packaging. Buy products with less packing, or buy in bulk.
- Ensure that private solid waste disposal is undertaken in an appropriate manner.
- Join a "Target Zero Waste" programme

CASE STUDY

Solid

Waste Management Strategy

In 1990 Council initiated a forward planning programme for the management of solid waste. Landfills within the district were approaching their 'use-by' dates and alternative waste management options needed to be identified.

LONG TERM MANAGEMENT STRATEGY

A long-term management strategy has been developed, which includes the disposal of solid waste to an out of District landfill and the construction of transfer stations, waste minimisation and kerbside recycling.

RECYCLING

Kerbside recycling is carried out on a one-product-per-week basis for glass, plastic, paper and cans, the most economically viable system for a district with three main centres and a small population of 29,500.

WASTE MINIMISATION

Waste minimisation was significantly helped when green waste was removed from the waste stream reducing the annual waste volume by 7,500 tonnes. Recycling and waste minimisation has resulted in the district's landfill waste being just 340kg per person per year as opposed to the regional average of 598kg.



CASE STUDY

TRANSFER STATIONS

Council operates transfer stations at Waihou and Morrinsville. Currently Council, in co-operation with Hauraki District Council, operate a contracted mobile shredder for green waste disposal. In the future there may be a need to establish a more comprehensive joint initiative between the Councils or for Matamata-Piako District Council to set up its own composting operation.

KERBSIDE RECYCLING

Kerbside recycling is likely to change to all recyclables being collected each week as the community has expressed this in preference to having to store three of the four categories of recyclables for a month between collections. Council is to continue with kerbside recycling despite see-sawing prices for plastic and glass, and the financial incentives paid to the contractor. The Council intends to boost community participation in recycling through a comprehensive educational programme. In this way Council will be well placed to ensure less solid waste is being disposed of at landfills.



Waihou Transfer Station