

**A GUIDE
TO
WASTE MANAGEMENT
PLANS**

ZERO WASTE NEW ZEALAND TRUST

JULY 2000

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1.0 INTRODUCTION TO WASTE MANAGEMENT PLANS

Waste Management Plans (WMPs) are required by law in New Zealand. The Local Government Amendment Act (No. 4) 1996 gives the job of adopting a Waste Management Plan to each territorial authority (district or city council). The Act also spells out the matters which must be taken into account in the preparation of Plans and the process of community consultation which must be undertaken.

This Guide has been prepared to assist councils and community groups that are committed to achieving major waste reduction, with the preparation and effective use of Waste Management Plans as well as their review, in due course.

1.1 WASTE MANAGEMENT PLANS FOR COUNCILS

Each council must adopt a WMP and may amend it from time to time. However, there is more to a good WMP than meeting the council's legal obligations. They offer:

- The opportunity to develop a strategic approach to waste management planning
- A valuable day-to-day management tool
- A useful educational resource

1.2 WASTE MANAGEMENT PLANS FOR COMMUNITY GROUPS

The consultative process imposed by law on councils in the preparation of WMPs offers community groups or individuals an excellent opportunity to become involved in the future direction of their community. If you are enthusiastic about the concept of zero waste for your community this consultative process is the best opportunity to get the message across to local decision-makers.

- The steps involved in adopting a WMP are laid down in law
- The legislation directs the council to look at waste reduction, reuse and recycling before disposal
- The WMP process is more easily grasped than the law related to other environmental areas such as the planning process under the Resource Management Act.

Any individual or community group can make a submission during the consultation process. There is usually the opportunity to both make a written submission and then speak to it at a meeting of the council subcommittee considering the matter.

2.0 THE LAW AND WASTE MANAGEMENT PLANS

In New Zealand the Parliament in Wellington is sovereign. It sets and amends all the law which councils, companies and individuals must follow. For local government, the most important piece of law is the Local Government Act 1974 which sets out the things councils must do (usually involving the word, “*shall*”) and others which are optional (the critical word is “*may*”).

For WMPs the main piece of law is the Local Government Amendment Act (No. 4) 1996. This legislation is seven pages long and is to be read as if it was part of the Local Government Act 1974, also called the principal Act. That Act is nearly 400 pages long and very little has direct bearing on waste management. A copy of the legislation is available from Government Bookshops.

The main points in the Amendment Act (No. 4) are as follows:

- “Every territorial authority **shall** promote effective and efficient waste management within its district” (*Clause 538*)
- “Every territorial authority - **shall** adopt a waste management plan” (*Clause 539*)

The first of these points is not as simple as it might appear on the surface. In *Clause 538 (b)* an idea of “effective” waste management is apparent. The council should ensure that “*management of waste does not cause a nuisance or be injurious to health*”. In *Clause 538 (a)* the council is directed to “*have regard to environmental and economic costs and benefits for the district*”. The economic issues and the apparent requirement to weigh both environmental and economic factors are discussed in a later section.

The requirement to prepare a waste management plan is quite straightforward and the Act further spells out the matters that have to be considered and the way in which the community are to be involved. These matters are considered in the following sections.

A NOTE TO “BUSH LAWYERS”

It is very easy to become an “expert” in one or two aspects of the law but that is rarely the whole story. That is why we have lawyers, barristers, Queens Counsel and the Courts. They understand the interrelationship between one piece of law and the others. Even a piece of law as brief as this amendment has “fish hooks” in it. This emphasises the importance of the consultative process discussed in a later section. It is critical to maintain goodwill with all interested parties to avoid any recourse to legal solutions.

2.1 CONSULTATION FOR COUNCILS

Section 539 (3)(b) requires councils to follow the “*special consultative procedure*” which is outlined in Section 716A of the principal Act.

This involves giving specific notice of the council’s intention to consider the matter and then allowing the opportunity for public submissions for a specified period, usually between 1 and 3 months. The public must be given the opportunity to address the council committee considering the matter and the submissions and meetings are to be open to the public.

2.2 CONSULTATION FOR COMMUNITY GROUPS

The consultative process offers community groups the opportunity to make a significant input to the waste management planning process.

The law only requires that notice is given with the opportunity for submissions to be made and presented at a meeting. However, most councils are pleased to encourage more extensive consultation and involvement in the process. In order to make the most of these opportunities it is useful to couch submissions in terms of the legislation covered in later sections.

2.3 “EFFECTIVE AND EFFICIENT WASTE MANAGEMENT”

Section 538 of the Act clearly states that it is the “Duty of (each)territorial authority to encourage efficient waste management” and then goes into the more detailed requirements which have been mentioned in section 2.0. Councils are also directed that they have a duty to have regard for the environmental and economic costs and benefits for the district.

The critical element to comply with the directions in this legislation is for each council to be able satisfy itself and the community it represents that it has given serious consideration to a range of options and selected a strategy based on its view of the most efficient and effective of these.

Combining these two factors it would appear that the construction of grids or matrices would offer the simplest way to display the options and clarify these. A hypothetical example is noted below:

WASTE MANAGEMENT OPTION	ECONOMIC COSTS AND BENEFITS	ENVIRONMENTAL COSTS AND BENEFITS
1. Kerbside collections	Medium cost, low dollar returns	Low waste reduction factor, high public involvement factor
2. Recycling depots	Medium capital cost, low operating cost offset by dollar returns	High waste reduction factor, medium public involvement factor
etc.		

2.4 THE WASTE MANAGEMENT HIERARCHY OR THE “5 Rs”

Most of the waste management plans which have been developed by councils have emphasised internationally recognised waste management hierarchy or the “5 Rs”. In the New Zealand legislation these are actually: *“Reduction, Reuse, Recycling, Recovery, Treatment and Disposal”*. These methods of handling waste are included in Section 537 of the amendment Act in the Interpretation section. Councils are directed to consider these, in priority order, in the development of Waste Management Plans.

This is a sufficiently important part of the process of developing a WMP to warrant detailed scrutiny of each option. The first section under each heading is the definition from the Act, in italics, followed by commentary.

Reduction: *“means lessening waste generation”*. This has been interpreted to include waste minimisation education as well as waste audits and cleaner production promotion for commercial and industrial operators. Several councils have also used this heading to include lobbying government for mandatory standards for product durability and packaging.

Reduction is at the heart of the zero waste philosophy and involves the development of a new attitude to resources and waste. This involves an understanding of the materials and energy inputs and outputs within each community. This type of analysis invariably leads to decisions with profound impact on the waste stream as well as other community development benefits such as employment creation. By way of example, waste from a food processing operation could be used to replace imported animal feed providing financial benefits, local employment as well as waste reduction.

Reuse: *“means the further using of products in their existing form for their original purpose or a similar purpose”*. This includes establishing waste exchange registers; promotion of sale and exchange schemes; refurbishing operations; the second-hand market and opportunity shops as well as supporting reusable packaging systems.

It is worth noting that many industrial and commercial processes which are normally regarded outside the waste management activity are critical components in the reuse of materials. The commercial use of multi-use containers and pallets are examples of significant resource conservation measures which need to be maintained and encouraged.

Recycling: *“means the reprocessing of waste materials to produce new products”*. This aspect has received the most attention and is clearly the focus of most council and community attention in the new era of waste management planning. Obvious measures include kerbside collections of recyclables; drop-off points for recyclables and facilities for the recovery of construction and demolition waste.

These activities are familiar to councils but all parties need to recognise

that recycling is third in the hierarchy. Because of the nature of recycling activities they are likely to require ongoing funding, unlike some of the reduction measures, which can establish relationships which become self-sustaining.

Recycling collections and facilities are very popular with the community and it is important to use them as flagships for the broader waste reduction message.

Recovery: *“means extraction of materials or energy from waste for further use or processing; and includes, but is not limited to, making materials into compost”*. The recovery option is most usually associated with recovering greenwaste for composting. This offers the single greatest waste reduction strategy for most communities in New Zealand and has considerable other benefits in reducing the impact of greenhouse gas emissions; reducing the volume and biological impact of landfill leachate and offering considerable benefits to soils through the use of the products.

The recovery of energy from waste is referred to in this section and is examined here because it arises from time to time based on overseas experience, much of which is not relevant to New Zealand. The Zero Waste New Zealand Trust has examined a great deal of information related to the *incineration of waste* and developed a position statement which can be accessed by clicking on the heading.

Incineration of waste: Many countries in Europe, North America and Asia have used incineration of municipal waste as a disposal option for many years. Some of these operations recover energy by heating boilers for generating electricity or directly transfer the heat for industrial heating purposes. All waste incinerators must confront problems associated with their emissions but the energy recovery aspect is especially relevant in this context. New Zealand has extremely limited markets for large volumes of continuous low grade heat as provided by these operations. Where such demand is present, it can usually be met more economically and with fewer technical problems by using a known fuel such as waste sawdust. Similar issues arise with proposals to convert mixed waste to Refuse Derived Fuel (RDF) which have existed overseas.

Treatment: *“means, in relation to waste, subjecting the waste to any physical, biological, or chemical process to change the volume or character of that waste so that it may be disposed of with no or reduced significant adverse effect on the environment”*. This aspect of waste management has received relatively little attention and many of the options for “waste treatment” on the international stage are of a very large scale and not readily transferable to the New Zealand setting. Options in this category include incineration, pyrolysis and some high technology mechanical composting operations.

Some other treatment options have received attention in the past and may warrant more attention including: baling and pulverising or

shredding. These strategies would only be expected to viable in order to meet specific requirements for particular disposal options.

There are other low key treatment options which do warrant attention. Separate collection facilities for hazardous wastes with subsequent specialist treatment might fit into this category along with other dedicated operations targeting specific wastes. For example, in a locality with an existing incineration facility, possibly associated with a hospital, diverting additional suitable wastes to this facility could be regarded as a treatment option.

Disposal: *“means final deposit of waste on land set apart for the purpose”*. This relates to an appropriately consented landfill site. It needs to be recognised that many operating landfills in New Zealand do not have all of the necessary consents.

These factors need to be taken into account in the order of priority required in the legislation. Again this can be achieved in a simple tabular form and the example below expands on the table used in the previous section. In the column headed “‘5R’ RANK’ each option is examined and allocated to the most appropriate heading from the “5Rs”. The headings are numbered from 1 to 5, starting with 1=Reduction. This method of scoring follows the priority required in the legislation and avoids any criticism of subjectivity often made against ranking systems.

WASTE MANAGEMENT OPTION	“5 R” RANK	ECONOMIC COSTS AND BENEFITS	ENVIRONMENTAL COSTS AND BENEFITS
1. Kerbside collections	3 Recycling	Medium cost, low dollar returns	Low waste reduction factor, high public involvement factor
2. Recycling depots	3 Recycling	Medium capital cost, low operating cost offset by dollar returns	High waste reduction factor, medium public involvement factor
3. Annual household hazardous waste collections	1 Reduction	Low operating cost, nil dollar return	Very high reduction factor based on hazardous wastes recovered
4. Annual inorganic waste collection	5 Treatment & Disposal	Medium operating cost, nil dollar return	No waste reduction factor, some public health enhancement (reduction of vermin)
5. Commercial waste audit and cleaner production promotion	1 Reduction	Low operating cost, nil dollar return to council, significant dollar return to participants	Significant waste reduction factor
etc.			

Under the legislation it is vital that the council develop their strategy giving greatest

weight to the lowest scoring items. This can be guaranteed by reworking the table with an additional column for actual or proposed expenditure alongside each activity. Clearly, to meet the intent of the law there will be substantial funds allocated to the highest priority items.

Councils developing zero waste policies might wish to replicate a table of this type, possibly with an expenditure column, for each of the next five or ten years. The relative proportion of funds allocated to the reduction and disposal ends of the spectrum will be shifting profoundly through time as the result of earlier initiatives.

3.0 ECONOMIC ISSUES AND WASTE MANAGEMENT

The obligation to investigate both economic and environmental issues in the preparation of Waste Management Plans raises the important issue of economics in the context of waste management planning and waste reduction policies. Two factors need to be isolated.

The first is the transition from many, poorly managed tip sites to fewer disposal sites which must meet increasingly stringent environmental criteria. This change has happened throughout the world and has coincided with the second factor, being increased environmental awareness and the pressure to reduce waste volumes.

Both factors can have profound economic implications. The costs of improved facilities are obviously higher and are usually associated with new funding policies, usually some form of user-pays charging. The move to a user-pays regime is generally regarded as an important step in the development of modern waste management policies. However, if the individual charges get too high, and the council has not implemented an effective communications strategy, this can lead to increases in illegal dumping or backyard burning by a small section of the community. Obviously, this can be very difficult and costly to control and emphasises the need for ongoing communication and education.

Effective waste reduction policies will necessarily result in lower income from disposal fees. In many cases the waste reduction factor is not sufficient to lower any fixed costs, such as the amount of labour or equipment needed on the disposal site, so the unit cost must increase. These increased costs then raise the funding issues, discussed previously, in an apparently vicious cycle. These economic issues raise a number of points which are identified below.

- It is essential to openly raise economic issues in the development of Waste Management Plans to engender the highest possible level of public understanding of the background to the financial aspects of the planning process.
- The costs associated with higher environmental standards for the remaining landfills are unavoidable. The alternative of small, unregulated tip sites is no longer acceptable to the community or in law and, anyway, the costs associated with cleaning up unregulated sites will always be greater. Accordingly, any comparison of costs must not use a historical baseline, before the higher standards, if it is to be valid.
- The remaining landfills are extremely valuable community assets and it is critical

that only wastes for which there is no alternative means of handling are placed in them.

- A user pays funding regime is used to distribute the costs associated with waste more equitably. Some people, particularly the elderly, produce very little waste while some commercial concerns produce a lot. Only user charges apply the costs to those producing the waste.

4.0 HIGHLIGHTS OF A GOOD WASTE MANAGEMENT PLAN

Although Waste Management Plans are required by law, they do not have the same status as some of the other planning documents prepared by councils, such as District Plans, which follow through land planning matters with the council sitting in a quasi-judicial role. Accordingly, they can be prepared in a more user-friendly manner and in simple language.

There are many examples, from both New Zealand and overseas, where new waste reduction and recycling initiatives have been so popular with the community that they have led to a new higher level of public participation in decision-making on waste management and other important local matters.

A brief outline of the legislative requirements in the Local Government Act and any requirements of Regional Policy Statements under the Resource Management Act as well as the proposed consultative processes would be expected to give the setting for a draft WMP.

The Plan could then include a simple classification of the wastes being examined and the definitions being used, especially if there are any peculiarities in the district. For example, some councils choose to include the management of wastewater in a WMP, while others restrict their attention to solid waste and sewage sludge. The legislation is vague in defining the wastes under scrutiny and the important issue is consistency within the Plan itself.

A brief history of waste management in the district gives the local setting and, in most cases, will highlight the transition from many small uncontrolled tip sites to fewer modern facilities with the resulting rise in costs. In this section it is valuable to note government and community pressures to adopt waste reduction measures and any council policies related to zero waste targets.

The bulk of the document would then be expected to cover the options considered. These can be presented in the tabular form suggested in earlier sections or in individual sections of text. It should be noted that the most obvious forms of criticism, or possible legal challenge, to a WMP would arise where it could be demonstrated that the Plan did not canvas the options available and did not give them the weighting required in the legislation.

5.0 THE WASTE MANAGEMENT PLAN AND OTHER “PLANS”

Councils have legal obligations to produce a vast array of “plans”. These include: the District Plan prepared under the Resource Management Act; the Annual Plan; the Funding Plan and the Strategic Plan, each prepared under the Local Government Act. At the same time, individual councils will prepare other plans, possibly related to Economic Development or other initiatives of their own, and respond with submissions to plans prepared by regional councils or government agencies.

It is important to try and understand the interrelationship between these various documents. The Regional Policy statement prepared by the local regional council (or in some cases, the district council acting as a unitary council) sets the binding environmental policy directions for the region. These statements will have a section on waste management and most include a waste reduction objective. The district plan for the individual city or district will have more detailed policies for land use and other matters which will follow the same direction as the broader regional objectives.

A Waste Management Plan will need to be consistent with these documents, usually developing waste policies in more detail than the other two. In the event that a conflict between the documents arises, possibly because of changed policies, there are provisions to amend the document which is out of date.

The Annual Plan is an important part of the financial planning process for local government because this represents the plans for raising revenue and financial expenditure for the year ahead. The financial implications of any significant expenditure developed in the course of Waste Management Plan development will have to go through the Annual Plan process to be incorporated into the budget.

6.0 LIVING WITH A WASTE MANAGEMENT PLAN

A number of very important points follow the adoption of a Waste Management Plan. The following have been identified as critical elements for effective waste reduction:

- Align policies and write contracts to achieve the desired waste reduction targets. Zero waste councils should align these with their zero waste policy.
- Keep the community and local businesses involved in progress.
- Continually monitor and report on progress.
- Implement and build on council purchasing policies to favour recycled goods.