



Submission
on

**Christchurch City Council
Draft Waste Management Plan 2005
Towards Zero Waste**

from
Sustainable Otago Christchurch

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Executive Summary

1. Sustainable Otago Christchurch [SOC] congratulates the Christchurch City Council for the development of a draft Waste Management Plan.
2. Sustainable Otago Christchurch developed this submission through collaboration with members who have hands-on involvement in the processes covered by the plan. This was refined by further distribution and comment of the draft from SOC members to produce this final submission.
3. The **aims of Sustainable Otago Christchurch** are:

Recognising Te Tiriti O Waitangi/The Treaty of Waitangi, to actively contribute within Otago/Christchurch to opportunities and means for achievement of long-term sustainability. In doing so, to seek to ensure that all people have their basic needs satisfied, so that they can live in dignity, in healthy communities, while having the minimum adverse impact on natural systems, now and in the future.

SOC's appreciation of the meaning and process of Strong Sustainability is outlined in Appendix 1.

4. Sustainable Otago Christchurch is committed to ensuring **social, cultural, environmental and economic aspects** of future urban activity and ongoing development in the Greater Christchurch area are all addressed in a sustainable way.
5. This submission therefore strongly supports the principle of redesign and reduction of waste at source as a primary consideration
6. This includes support for expansion of activities like "Target Zero"
7. We believe that there needs to be more concentration on non-domestic waste which is a majority of the waste stream
8. The reduction where possible and the collection and treatment of organic waste (both domestic and non-domestic) is of paramount importance to reducing waste-to-landfill
9. There needs to be a positive programme of preparation for this activity. Planning to collect domestic organics with no preparation for their treatment could be counterproductive.



10. The examination of methods of organic waste treatment should include biogas production
11. The plan should include a major component of information collection and dissemination.
12. This should include not simply a “public education” programme but also a programme aim at establishing attitudes of “responsible consumerism” among both commercial and domestic sectors
13. The consultation document covers only a limited set of options
14. Of the options offered, option 3 with 240 litre wheelie bins is the least deficient although collecting organics without having a means of treatment seems to be counter-productive.
15. We believe that organics collection is the key to a major reduction in waste to landfill. However, taking into account the number of options which do not appear to have been considered in detail and the fact that specific processes do not appear to have been adequately researched, we suggest that it is premature to decide on a specific plan for domestic kerb-side waste collection.
16. Sustainable Otago Christchurch believes that through its membership it has access to valuable expertise. Sustainable Otago Christchurch is willing to collaborate with Christchurch City Council where possible in further development of the Waste Management Plan.

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Commentary on the Draft Waste Management Plan

General Issues

The main document covers many matters of importance but tends to focus on processes rather than outcomes

Although one of the stated principles para 3.2.1 is “Integrated Waste Management” we are of the view that the plan in fact does not take a holistic approach. The problem is treated largely in terms of separation with less concern for their integration than is desirable. Although the theoretical steps of Redesign, Reduction at Source, Reuse, Recycling, Recovery of Resources and Residual Management are stated the plan that follows is based mainly on a reactive approach. This approach appears to assume that waste WILL increase and we are faced with the job of sorting and diverting as much as possible of the increase away from landfill. While this is an important aspect of waste management the equally (or more) important aspects of redesign and reduction are not given the attention they deserve.

In particular we suggest that more focus on the upper part of the hierarchy of “Rs” would in the long run be more economic AND result in a greater reduction of waste to landfill

The plan is strong on GOALS. Too little attention is given to IMPLEMENTATION

Section 3.3 lists priorities yet the summary document and the feedback form are centred around options for separation and collection of domestic kerbside rubbish which, while important to householders constitutes only about 12% of the total. Too little priority of discussion is given the reduction of commercial and Business waste

In this respect we are disappointed to note the virtual demise of the Council’s Target Zero project. This programme is (was?) critical to working with industry and business to help redesign their systems, packaging and products so as to reduce the production of waste.

There is no concern for the potential consequences of future energy costs and shortages

There is no integration with other waste streams such as bio-solids

Targets for Waste Minimisation

Target 4 (kerbside waste) includes the individual materials treated in the other targets and is thus inconsistent with the rest of the presentation

The values of targets chosen in the graphs (Items 1-7 of the summary section 3.5 of the main draft) appear to be arbitrary-at least no particular justification is given for the various choices



The graphs given in section 3.5 of the main report (Items 1-7 of the summary) indicate that there is a very serious shortfall in our performance in dealing with almost all types of waste streams.

While the green kitchen waste, paper and cardboard and overall waste stream graphs show that actual performance has been on or better than projection to date even these are now trending positively away from the projections.

The only graph which trends downwards and towards the projection is that for kerbside waste. This is the only area where there could be said to be some cause for optimism yet it is the one that the summary pays most attention to and the public feedback form is exclusively concerned with

While we do not suggest that kerbside waste is unimportant, we do see this as representing an imbalance of concern

There is only brief mention of the growing amounts of “electronic waste” and no indication of any plan to deal with this other than to “monitor” it and encourage the use of recycling services.

Target Zero

This programme is mentioned (e.g. p52) but we understand that its support has been reduced to the point where its effectiveness has been drastically impaired. If top of the “Hierarchy of Rs” results are to be achieved, as they must, then Support for programmes like Target Zero must be increased

Composting

The separation at source of organic material is key to the next major step in reducing waste to landfill. This needs to be achieved at the commercial and domestic levels

We note that organic material in landfill generates discharges of methane (and other gases) and leachate. Although modern landfill sites such as Kate Valley are configured to reduce the leakage of leachate and to recover methane and burn it to reduce greenhouse consequences (sometimes generating power on the way). We suggest that the elimination of the majority of organics from the waste stream to landfill is an essential step in any environmentally sound waste handling system.



We are aware of trials that have been carried out on

- i) “decentralised composting” which includes the promotion of home composting, existing greenwaste collection and community garden composting and
- ii) “organics recycling” which involved weekly kerbside collection of kitchen waste in hygienic 40 litre containers with biodegradable liners

It was intended that these trials, involving several thousand households would help to determine the most sustainable and socially acceptable approaches to reducing household organic waste in Christchurch

The results of these trials do not appear to have been made available to inform this draft Waste management Plan.

We are concerned that the commitments of the Management plan of 2004 do not appear to have been implemented. In particular, no progress or funding appears to have been made towards the implementation of collection and “in vessel” composting of commercial organics.

Composting will to produce large quantities of material for which uses will need to be found

Anaerobic fermentation of organics can both reduce the mass of final solid material and provide a supply of combustible gas (methane). With the inevitable rise in future cost of all energy sources this will almost certainly become a valuable product. There are numerous potential uses for such a fuel whose economics now and future should be considered before large-scale organics treatment begins. We are of the opinion that serious consideration should be given to multi-stage processing of organics to provide fuel with subsequent (aerobic) treatment to further reduce the total mass of final material.

Consultation

The consultation period is inadequate for fully researched comment particularly by voluntary organisations with restricted resources.

The consultation document (summary) and feed back form focuses only on domestic waste and over-simplifies the information.

Question set 1 is composed of what are essentially “motherhood” leading questions.

Question set 2 is confusing to the point of uselessness. With reference to the graphs, it is unclear whether “too high” refers to the percentage reduction or to the mass/person of waste to landfill. These are in opposite directions with the result that answers will be impossible to analyse meaningfully.



Options

In all options offered, the use of wheelie bins for recyclables precludes on-truck sorting

There are both advantages and disadvantages to open bins for recyclables. Bins with lids could reduce contamination and make it easier for collectors to reject wrong material. Present experience with on-truck sorting has been disappointing. The job is very harsh on operators. The labour turnover is great and the present operating company has backed away from performing the task effectively. The alternatives appear to be either sorting at household and multiple collections or co-mingling at household and sorting at transfer station. While delivery of co-mingled recyclables to the transfer stations (“eco centers”) may impose additional costs over having material sorted before loading or during delivery, it is not clear that this is necessarily so.

Option 1 is essentially a variation of the status quo. It does not address the vital matter of diverting organics from landfill

From the technical point of view Option 2 simply substitutes a wheelie bin for the bag of option 1) and invites the householder to see more of their waste as “rubbish”

NEITHER OF THESE OPTIONS ADDRESSES THE HANDLING OF ORGANICS AND IT IS SURPRISING AND DISAPPOINTING THAT THEY APPEAR IN A PLAN LABELLED “TOWARDS ZERO WASTE”

Option 3 does address the need for separation of organics at source. However, its consequences do not appear to have been considered in full.

There is no indication of what will happen to the organics one collected.

Has the potential for contamination been examined?

Has the method of processing been decided? (refer to our comments about organic processing and the production of biogas above)

Has the quality of the compost to be produced been evaluated?

Have the quantities of compost been estimated and the likely sources of sale been analysed

Has the scale of operation been considered and have alternative scales been examined taking into account fuels costs and operating costs of centralised versus decentralised plant?



What is the relation between disposal of compost and that of bio-solids from other council treatments? It is believed that because of heavy metal content bio-solids pose a different problem from domestic and commercial waste composts and that the two should be handled separately.

The Feedback Form

The feedback form is deficient in several respects:

- The document concentrates almost exclusively on domestic collection.
- The questions in group 1 are not helpful to the purpose of the plan
- The questions in group 2 are ambiguous

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SOC Appendix 1

Sustainability Context

A description of sustainability SOC uses is:

1) **Living within resource limits** - avoid 'hitting the wall' when demand outstrips supply, (e.g. of fresh water, fuels) or of an ecosystem's ability to process our wastes (toxic accumulation in estuary, groundwater, air, etc). The long term target would be zero waste production and also restoration of ecosystems. Carbon emissions would be reduced to about 40% of present level.

This would reduce our ecological footprint - require use of less land space, water, local and distant natural resources. This includes but is much more than 'eco-efficiency', as it is about the total impact of the city not just smaller 'per person' impacts. To help achieve this the Precautionary Principle may usefully apply, as some natural system impacts may be irreversible once thresholds are passed, such as species extinctions, salt-water intrusion to groundwater, or soil erosion. Another aspect is full-cost environmental accounting or other ways to include 'public externalities' in new projects and policy-making.

2) **Maintain valued quality of life**, for future generations (as well as the means of survival), i.e. inter-generational equity. An equitable society has cohesion, builds 'social capital', has capacity to cope when under stress (e.g. if disaster such as flood, earthquake or epidemic hits) and values wisdom as well as being smart.

3) **Achieve economic viability** within the context of an acceptable society, which itself exists within ecological constraints (= strong sustainability, not a trade-off process between the three, which has typically been environmental or social losses, for economic gains, going mostly to the proponents of development. If you draw a diagram of 'strong sustainability' it is three concentric circles like a target, not three slightly-overlapping circles like ears on a face.)

Australian Professor Ian Lowe seeks a 'Humane, Eco-centric Approach, on a Long Time Horizon, Informed, Efficient and Resourced for a managed transition (the useful acronym = HEALTHIER).

Weak sustainability (the basis of most current environmental policy in NZ) works on the assumption that science and technology will resolve any problems that we create and enable us to overcome resource shortages and provide ecological services. From this viewpoint, the Economy is the primary sector of interest, and other sectors (Society, Environment) are dependent upon it.



A strong sustainability model, on the other hand, is based on physics and sustainability science and makes it clear that there are real and unavoidable limits to the substitutability of resources that cannot be overcome. A strong sustainability model does not rely on science and technology alone to resolve unsustainable practices. It accepts that there are limits to resources and wants to furnish the future with a richer inheritance rather than the need to clean up after us.

From a strong sustainability perspective, the economy is a subset of society, and that in turn is totally dependent upon its surrounding environment. Technological fixes such as pollution control and eco-efficiency sometimes remedy conditions in the short term and give the impression that the constraints are being overcome. However they do not address the fact that we are seriously depleting the resources needed for life on earth.

Transition to a sustainable Greater Christchurch will take determined visioning, planning and laborious changes in attitude and behaviour. Most of all, however, it would mean a change away from the current dominant world view (short-term, linear, consumerist, utilitarian) and set of ethical principles we now use in planning. Critically, it requires systems thinking on complex problems. Such a change is critical, towards a state where sustainability, not population growth, economic growth or infrastructure development, is the key driver. Sustainability needs to be the goal, regardless of current or future population growth.

Different measurements (such as Genuine Progress Indicators) will need to be applied in tracking the success of development than just simply looking at GDP or economic growth. The challenge is to create an ecologically viable and sustainable society existing within increasingly severe economical constraints.

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