

### 3. REVIEW OF WASTE MINIMISATION AND DISPOSAL

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The purpose of this report is to seek the Committee's recommendations on the review of the waste minimisation and disposal significant activity.

#### BACKGROUND AND PROCESS

The review of waste minimisation and disposal is one of a rolling programme of significant activity reviews being carried out over the next 2-3 years. The reviews are being carried under the auspices of the Budget Scrutiny and Audit Special Committee.

#### Review Objectives

The review reports to the following objectives:

- To identify the major cost (operational and capital) and revenue drivers for the previous six years and the next five financial years (operating) (including a comparison against actual and forecast CPLs) for this period and 10 years (capital) and based on these to evaluate options to reduce costs and/or increase revenues*
- To review all current contractual arrangements relating to waste minimisation, management, collection and disposal to ensure that:*
  - Council approved levels of service are being achieved;*
  - Options for service delivery are considered; and*
  - Contracts are efficient and effective.*
- To review management and governance structures to ensure that:*
  - there is no duplication in roles and responsibilities, and therefore additional costs; and*
  - they support the achievement of Council agreed waste minimisation goals and targets.*
- To review Council owned waste minimisation and disposal infrastructure to ensure that Council investment is best utilised to achieve Council agreed goals and objectives.*
- To review options for alternative levels of service.*
- To review each output to determine which are statutory and/or discretionary activities and to ensure that the most appropriate method of service delivery is in place in light of potential and actual duplications and the roles of other service providers.*

#### Timing and Focus of Review

The review commenced in February 2002 with the last seminar on review findings being presented in September 2002.

During the period of the review there has been a constant flow of 'business as usual' issues to be faced in solid waste. Some of these supersede the work being done in the review and in some cases issues identified in the review have been already actioned.

The review has focused in some detail on virtually all aspects of the solid waste business.

#### Review Process

The stages of the review completed to date are:

- Review Team work with the Solid Waste Team to identify issues etc.
- Review Team draft presentations (2) to Budget Scrutiny and Audit Special Committee.

- Draft presentation to joint seminars (2) of Budget Scrutiny and Audit Special Committee and Sustainable Transport and Utilities Standing Committee.

The next stages are:

- Review Team reports to Budget Scrutiny and Audit Special Committee.
- Report forwarded on to Sustainable Transport and Utilities Standing Committee with Budget Scrutiny and Audit Special Committee recommendation.
- Report forwarded to the Council for approval with Sustainable Transport and Utilities Standing Committee recommendation and Budget Scrutiny and Audit Special Committee recommendation.

## FINANCIAL ANALYSIS

A key part of the review process was to analyse the financial performance of the whole significant activity of waste minimisation and disposal. This process was complicated by the mixing of revenues and costs between outputs, the following analysis is based on significant re-allocation of costs and revenues to produce meaningful financial information. A common basis of 'cost per tonne' has been used where ever possible to provide easy comparisons between cost centres.

The graphical information prepared is substantial and has previously been made available to the Committee. The summarised financial analysis, showing a comparison between the current financial year and the first year of operations for Kate Valley (2004/05) and also showing the cost per tonne figures in parenthesis, is:

ACTIVITY	2002/03 BUDGET	2004/05 LTOP	COST PER TONNE TREND
<b>Costs</b>			
Information, Advice and Planning	\$581,000	\$501,000	
Commercial Waste Reduction	\$512,000	\$512,000	
Resource Reuse Centres	\$159,000	\$159,000	
Kerbside Recycling Collection	\$2,786,000 (\$159/tonne)	\$3,136,000 (\$153/tonne)	Down
Recycled Materials Foundation (RMF)	\$1,383,000 (\$79/tonne)	\$783,000 (\$36/tonne)	Down
Onyx and Metallic Collection	\$3,422,000 (\$98/tonne)	\$3,422,000 (\$104/tonne)	Up
Compost Operations	\$321,000 (\$9/tonne)	\$296,000 (\$8/tonne)	Down
Landfill Aftercare	\$177,000	\$177,000	
Hazardous Waste Operations	\$170,000	\$230,000	
Refuse Station Operations (incl Transport)	\$4,081,000 (\$21/tonne)	\$6,110,000 (\$35/tonne)	Up
Burwood Landfill Operations	\$1,990,000 (\$8.30/tonne)	\$1,808,000	
Kate Valley Landfill Operations		\$8,747,000 (\$44.80/tonne)	Up
Total Tonnages	245,100 tonnes	233,000 tonnes	
<b>TOTAL COSTS</b>	\$15,582,000 (\$63.57/tonne)	\$25,831,000 (\$110.86/tonne)	
<b>Revenues</b>			
Sale of Black Bags	(\$665,000)	(\$5,501,000)	
Waste Operators Licensing		(\$1,000,000)	
Refuse Revenue	(\$13,239,000)	(\$13,641,000)	
<b>TOTAL REVENUE</b>	(\$13,904,000)	(\$20,142,000)	
<b>NET COST</b>	<b>\$1,678,000</b>	<b>\$5,690,000</b>	

This financial summary highlights the quandary for the Council – dramatically increasing costs (particularly with the new landfill) and reducing tonnages going to landfill. This combination leads to the substantial increase in average cost per tonne from about \$64 to about \$111 over the two year period 2002/03 to 2004/05. The reductions in tonnages to landfill is the primary goal the Council is seeking and unfortunately, due to the largely fixed cost nature of the infrastructure required to collect, handle and dispose of waste, the more successful the Council is the worse the cost per tonne is likely to be.

The summary above also highlights that overall this area is predominately user pays though this picture is skewed somewhat by the current (2002/03) user pays charging regime in place at the transfer stations. At the moment the (commercial) user charges are greater than the actual cost of the activity largely due to the introduction of the 'Kate Valley Equilisation Charge', this is a three step increase in user charges to soften the impact of the large increase in cost associated with the new landfill. From 2004/05 the overall net cost to the Council increases as the commercial user charge more closely aligns with the actual cost of disposal. This overall net cost closely aligns with the net cost of waste minimisation activities.

The costs for solid waste can be split between those relating to waste minimisation and those relating to waste collection and disposal as follows, noting that waste collection and disposal includes all of the additional activities that are not directly waste minimisation:

Activity	Total Cost	Tonnages	Cost per Tonne
Waste Minimisation 2002/03	\$4,679,000	53,000	\$88.25
Waste Collection and Disposal 2002/03	\$10,903,000	192,100	\$56.76
Waste Minimisation 2004/05	\$4,355,000	58,100	\$74.96
Waste Collection and Disposal 2004/05	\$21,476,000	174,900	\$122.79

This analysis highlights the opportunity the new landfill will create. In the current financial year disposing of waste is a more financially viable option than waste minimisation. However with the opening of the new landfill in 2004/05, and all the additional costs that are associated with this, waste minimisation becomes a significantly more attractive option.

It is to be noted that no allowance has been made in this analysis for the creation of a Waste Minimisation Fund as agreed in principle by the Council. This issue is being discussed through the Standing Committee and Council process at the moment, if the Waste Minimisation Fund is confirmed this will have a significant impact on the figures quoted in the report.

#### **COMMERCIAL WASTE REDUCTION/TARGET ZERO**

In terms of waste minimisation activity the Council has focused primarily on household generated waste rather than commercial waste. This focus partly reflects the fact that the Council has control over the household waste stream from the front gate to the landfill.

The efforts focused on the commercial waste stream, which is by far the larger waste stream of the two, are organised through the Target Zero programme and through the Recovered Materials Foundation. The latter runs a waste exchange programme and also targets specific waste streams such as paper for recycling and on-selling.

The Target Zero programme has an overall goal of aiding development of "*Innovative, profitable and accountable businesses that integrate sustainable economic, social and environmental values in their thinking, decision-making and behaviour in Christchurch City*". This programme has long-term objectives for shifting the way Christchurch businesses think about resource use and has embarked on a number of initiatives focused on raising general awareness as well as implementing successful waste audits of specific businesses.

Through the process of the review it has been agreed that the budget for commercial waste reduction will be reduced by \$100,000 in each of 2003/04 and 2004/05. This will provide a new level of ongoing Council funding for this activity of \$312,000 per annum from 2004/05. This reduction has been agreed on the basis of the reduced funding being recouped from alternative sources such as government grants.

The other issue that has been addressed through the review has been where best to situate the Target Zero Team to maximise the achievement of Council agreed goals. The Target Zero Team has identified an opportunity to partner and co-locate with other organisations who promote sustainable business development. Potentially the core partners in a 'Sustainable Business Centre' are Landcare Research, The Natural Step, the Energy Efficiency and Conservation Authority (EECA) and the Recovered Materials Foundation (RMF). This is an exciting development, aligned with the principles of collaboration in the new Local Government Bill, which could produce significant benefits for Christchurch in terms of co-ordinated research, development and investment in sustainable business. A number of issues still need to be resolved and the team has initiated a process to do this.

#### **RECOVERED MATERIALS FOUNDATION (RMF)**

The RMF is a not-for-profit (charitable) trust originally set up by the Christchurch City Council. The draft 2002/03 budget, relating to council funded activities, for the RMF was as follows:

<b>Activity</b>	<b>Cost/(Revenue)</b>
Materials Processing (net)	(\$4,310)
Development & Technology	\$725,000
Waste Exchange	\$150,000
SuperShed	\$160,000
Kerbside Promotion	\$40,000
Redesigning Resources (every 2 <sup>nd</sup> year)	(\$25,000)
TOTAL	\$1,070,690
CCC Budgeted Payment	(\$1,070,000)

Note – the CCC payment excludes the Business Development Fund levy.

Looking at each of these activities individually:

Materials Processing – this is the core activity of the RMF and includes the costs for sorting, processing and distributing to market the various waste streams handled (ie paper, bottles, glass and plastic). Total turnover is anticipated to be around \$2.385m based on current and anticipated prices for materials.

RMF has now developed a level of capability and maturity in the materials processing and marketing area. This expertise should be reflected in the new contracts being prepared between the Council and RMF for these services.

During the review process RMF have agreed to provide the Council with a revenue stream from materials processing of between 10% and 15% of the gross revenue. For the current financial year this will mean a revenue of about \$238,500, subsequent years will be negotiated on a yearly basis.

Development and Technology – this is the second primary activity of RMF and involves RMF in assessing and then assisting in development for sustainable business projects related to waste streams. Through the review process it has been agreed that the funding for this activity should be split. The Council will continue to provide base funding of \$200,000 per year for RMF to provide the point of contact and initial feasibility work on development and technology projects. Any further funding will be bid for by RMF on a project-by-project basis. Bids will be in the form of business plans and may be for grants, loans or equity shares and will generally relate to the capital cost of the project (rather than the ongoing operational cost). It is anticipated that these bids will be received and reviewed as part of the Council's Annual Plan process and will compete for funding against other waste minimisation project bids from City Water and Waste and Target Zero.

Waste Exchange – this activity involves the identification of business waste streams that could be exchanged and used as an input for another business or could be added to the materials processed by RMF. It has been noted through the review that this activity has many similarities with the Target Zero programme and part of the drive for the partnering concept supported for Target Zero is to ensure that proper and effective co-ordination occurs between these activities. It has been agreed with RMF that the appropriate level of ongoing funding is \$100,000 per year.

SuperShed (including the three Resource Reuse Centres) – this facility is operated by the RMF at the Bromley Treatment Plant site and involves the re-sale of items dropped off at the various transfer stations and resource re-use centres. The RMF also operates the Resource Reuse Centres which are the drop off point for goods and the point where RMF sorts the items to go to the SuperShed. It has been agreed that this total operation will operate at no cost to the Council with the RMF meeting the property lease costs of its sites and any dumping charges for items that it has not been able to on-sell from the SuperShed (this does not include the dumping costs for items that RMF do not take to the SuperShed from the Resource Reuse Centres). These last two items (leases and dumping) have an estimated budget of around \$20,000 per annum.

Kerbside Promotion – the Council funds RMF’s involvement in the Kerbside Promotion Team. This team is currently led by Mark Prain and involves the Council, RMF and Onyx (as far as Christchurch is concerned) in developing promotions, education and marketing to increase the use, and maintain the quality, of kerbside recycling. Set out later in this report is a proposal for altering the way this area operates, in effect this will keep the funding that currently flows to RMF with the Council while retaining the key coordination role that RMF has.

Redesigning Resources – this is an ongoing programme of work similar in nature to the sustainable business focus of the Target Zero programme. Once every two years a major conference is held which brings together the advocates for redesigning resources. It is proposed through this review that the responsibility and funding for the Council’s involvement in Redesigning Resources should be placed with the Council’s Sustainable Christchurch Team, led by Eric Park, with conference organisation being outsourced as required. It is anticipated that the RMF will continue to be strongly involved with Redesigning Resources from their own business perspective.

Provision for Reserves – The RMF holds a number of reserves to provide protection against business risk and to provide capital for development. The Materials Equalisation Reserve is held to a maximum of \$750,000 and provides cover against fluctuations in commodity prices for materials. It is intended by RMF that when this fund has reached its maximum, which should be during the current financial year, the surplus funds will be used as the first call on research and development projects. The capital reserve funds have been depleted over the last two years as RMF have invested substantially in new processing and handling equipment for materials processing. It has been agreed that Council funding should not be used as provision for reserves but that this should come from the various activities themselves, mostly materials processing and the SuperShed which both produce revenue streams.

Business Development Fund (BDF) – the RMF are the administrators of this trust fund which is funded by a \$2 per tonne levy on waste to the landfill. The fund was created to provide businesses with an opportunity to access funds to develop waste minimisation opportunities. The RMF Board approves any grants having received advice from an industry group that deliberates on proposals, though none have been made to date. The trust fund currently sits at \$1.1m.

Based on the above the revised base funding for RMF is as follows:

<b>Activity</b>	<b>Council Cost/(Revenue)</b>
Materials Processing (net)	(\$238,500)
Development & Technology	\$200,000
Waste Exchange	\$100,000
SuperShed	(\$20,000)
Kerbside Promotion	\$0 (transferred)
Redesigning Resources	\$0 (transferred)
Provision for Reserves	\$0
TOTAL	\$41,500
CCC Budgeted Payment	(\$1,070,000)

While this is a very substantial reduction in base funding for RMF it should be noted that these figures do not include the development and technology project bids which, based on previous funding levels, can be anticipated to reach approximately \$500,000 per year at least.

The Review Team also supports the Council viewing RMF as a 'normal' contract service provider. While the Council to date has been heavily involved in ensuring that RMF is successful it is now appropriate to ensure that proper contracts are in place and that the Council has clarity about the outcomes and outputs it wants to achieve in contractual partnership with RMF.

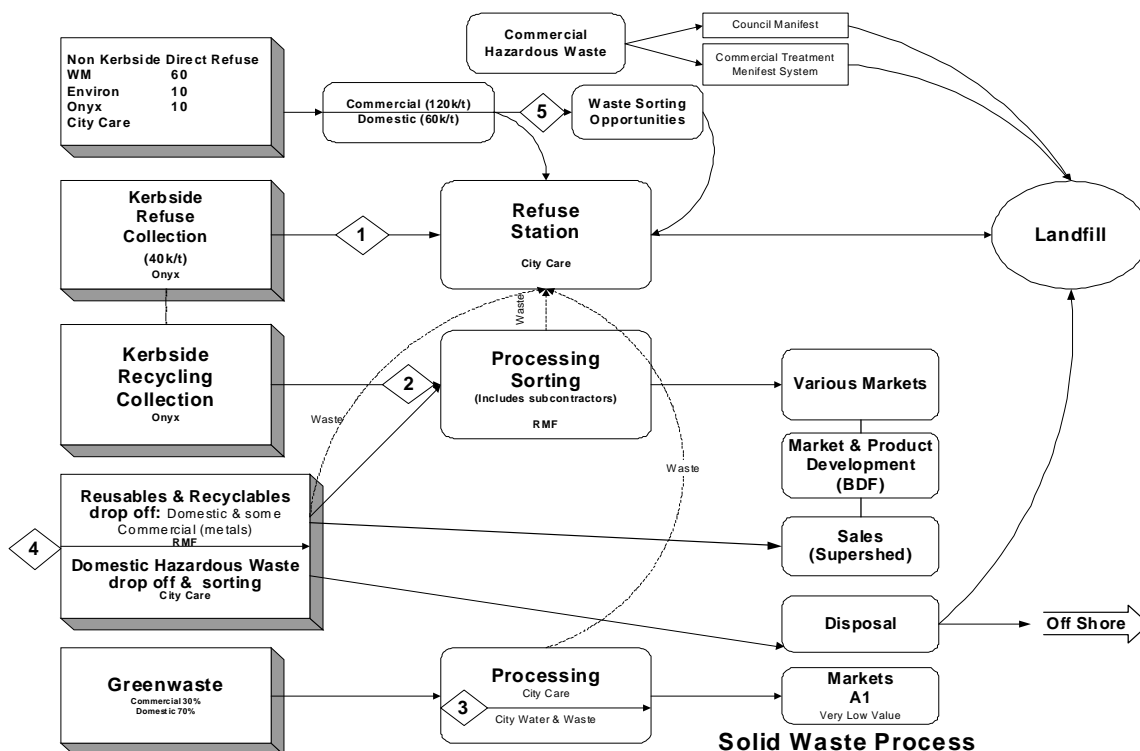
The Council budget for RMF has a decrease of \$300,000 per year for three years from the current year. This means that the level of savings indicated in the above table reduces by this amount each year and with the allowance for development and technology spending of \$500,000 per year the budgeted level of spending by the Council will actually increase from 2004/05 as follows. (Note: The base funding will alter from year to year with the gross revenue value of materials processed and the level of spending on Development and Technology will alter dependent on the projects submitted.)

Year	Council Funding	Revised base funding plus D&T funding	Difference
2002/03	\$1,070,000	\$541,500	\$528,500
2003/04	\$752,000	\$541,500	\$228,500
2004/05	\$452,000	\$541,500	(\$99,500)
2005/06	\$152,000	\$541,500	(\$399,500)

The Review Team would also like to pass on its thanks to the management team of RMF and in particular to the new Chief Executive Officer, Richard Lloyd, who has been willing to challenge current practices and processes.

### CONTRACTING

Part of the review process has been an assessment of current contracting practices and contractual relationships and evaluation of the supply chain. The following diagram describes the various waste and recycling collection, processing and disposal processes for household and commercial waste streams:



This diagram highlights that there are a number of different service providers operating in each process and that the 'hand-over' points in each process can be potential areas of reduced efficiency and achievement of waste minimisation goals.

The contract suppliers currently involved in providing services to the Council in this area are:

- **RMF:** management of kerbside recyclable materials
- **RMF:** management of recycling centres at refuse stations
- **RMF:** management of business development fund
- **RMF:** research and development for reuse and recycling
- **Kerbside Promo:** promotion and education for recycling
- **Chequer Packaging:** manufacture of refuse bags
- **Onyx:** kerbside collection of refuse and recyclables
- **City Care:** management of refuse stations
- **A1 Contractors:** On-selling of compost product
- **KB Quarries:** supply of machinery/labour at Burwood Landfill
- **Boffa Miskell:** planning/supervision of landscaping at Burwood Landfill
- **Transwaste:** operation of future landfill

Waste Management Limited and Envirowaste can be added to this list as the major collectors of commercial waste (which comes to the transfer stations) in the city.

The total spent by the Council for these services is around \$22m per annum.

Any review of contract practices and relationships would seek to achieve the following goals:

- **Maintain** and **enhance** waste collection (domestic and commercial)
- **Reduce** refuse to landfill
- **Increase** recyclables
- **Increase** green waste to compost
- **Improve** transfer station productivity
- **Optimise** landfill space management
- **Enhance** innovation
- **Foster** joint ventures
  - **Reduce** operational and capital costs AND
  - Grow** achievement of waste minimisation targets

To achieve this it is proposed to facilitate a contract review process involving all of the current service providers and the two other main waste collectors to determine a mutually beneficial outcome in terms of reduced cost and improved waste minimisation outcomes. The Review Team believes that if this can be done successfully then savings of +\$500,000 per year are achievable with greatly increased levels of waste minimisation activity.

## **MARKETING, EDUCATION AND PROMOTION**

Currently there are a number of areas in the Waste Minimisation and Disposal activity that undertake marketing, education and promotions, in summary these are:

- Recovered Materials Foundation
- Target Zero
- Kerbside recycling
- Composting/Greenwaste
- Refuse Operations
- General planning

Collectively the spend is about \$400,000 per annum, if Target Zero is excluded (on the basis that their budget has already been cut by \$200,000) then the total is \$313,500.

Each of these areas operates in relative isolation from each other and while they each individually achieve their targets the Review Team was not clear that this necessarily represented the best overall outcome in terms of solid waste goals.

Kerbside recycling marketing, education and promotion is run by a committee made up of representatives of the Council, RMF and Onyx (for the Council area) which has the following objectives:

1. Develop and provide a communication, promotions and education programme for the general public in the committee's service area so as to maximise reduction of waste through kerbside recycling.
2. Plan and provide recycling promotion in partnership with identified groups eg specific geographical areas, education providers, business and governing bodies.

In essence this activity is focused on both motivating the public to participate, and in educating the public about how to present their recyclables at the kerbside. As far as the target audience is concerned it is therefore about their interaction with the collector (Onyx ) and the Council.

The Review Team supports the continuation of the committee who have a specific focus on kerbside recycling, with the Council retaining the funding and managing the process for implementation of marketing, education and promotion projects. Implementation is to be managed by a small team of people with professional skills in these areas.

The Review Team supports the inclusion in the next version of the Solid and Hazardous Waste Management Plan (due to be updated shortly) of explicit goals and priorities for marketing, education and promotion spending. The Review Team also supports the creation of a marketing and promotion steering team to set overall priorities for projects and to monitor achievement of the Waste Management Plan goals. The Review Team believes that the current funding of \$313,500 can be spent much more effectively than at present and supports the retention of this level of funding with the introduction of appropriate key performance indicators that describe improved spending effectiveness.

## CONCLUSIONS

The review of the waste minimisation and disposal significant activity has identified a number of opportunities for savings and a number of potential changes and initiatives. In summary these are:

Target Zero	Budget reduction of \$200,000 Partnering opportunity
RMF	Budget reduction of \$776,500 (allowing \$500,000 per year for development and technology projects) New bidding process for development and technology projects Changes to kerbside promotion funding responsibility Changes to budget responsibility for Redesigning Resources
Contracting	Review of current contract practices – estimated saving of +\$500,000 per year with improved waste minimisation outcomes
Marketing, education and promotion	Changes to Waste Management Plan and the need for a steering team identified Changes to implementation of marketing, education and promotion projects Focus on increasing the effectiveness of spending
Total budget reductions	\$1,476,500 (dependent on outcome of contract review and the level of spending on research and development projects)

Not included in potential savings is the proposed shift to 'waster pays' for kerbside rubbish collection. This is estimated to reduce Council expenditure by \$4,566,000 per year.

## Staff

- Recommendation:**
1. That the budget for the Target Zero programme be reduced by \$100,000 per year, from 2003/04, for two years.
  2. That Target Zero be supported in their initiative to build a working partnership with the Recovered Materials Foundation, Energy Efficiency and Conservation Authority, Natural Step and Landcare Research.
  3. That the revised base funding of \$41,500 (2002/03) for RMF be confirmed, noting that this amount will change year to year dependent on the value of gross revenue from materials processing.



4. That the revised process for receiving project funding bids through the Annual Plan process for waste minimisation related initiatives be confirmed with, initially, the Recovered Materials Foundation, Target Zero and the City Water and Waste Unit able to put forward business cases for projects.
5. That the City Water and Waste Unit retain the funding for kerbside promotion work in support of the Kerbside Promotion Committee and to assume the committee co-ordination role.
6. That budget responsibility for the Redesigning Resources initiative shift to the Christchurch City Council Sustainable Business Team with this team, Target Zero and RMF responsible for co-ordinating and implementing the programme.
7. That the review of current contracting practices be supported with a goal of reducing cost (a target of \$500,000 saving) and improving waste minimisation outcomes.
8. That the City Water and Waste Unit put in place a steering team for marketing, education and promotion work related to the achievement of Waste Management Plan goals with this steering team to put in place appropriate key performance indicators that ensure greater effectiveness of spending in this area.
9. That the City Water and Waste Unit put in place a small professionally-skilled implementation team for all marketing, education and promotion projects and initiatives.

**Chairperson's  
Recommendation:**

Not seen by Chairperson.