

4. REGIONAL WASTE MINIMISATION

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The purpose of this report is to provide feedback on current programmes and to map out options for possible future action.

UPDATE

Two projects have been approved by the Subcommittee, the regional organics project to commence in February 2003 and the regional construction and demolition project to commence mid-year 2003.

1. Regional Organics

Landcare Research at Lincoln was commissioned for this investigation and the full report will be available at the end of October 2003. The project is currently being written up and finalised, and cost estimates will be included in the report.

2. Construction and Demolition Materials

Since the December 2002 discussion of a regional study on construction and demolition materials a new two year long national construction and demolition reduction project has been approved by the Sustainable Management Fund of the Ministry for the Environment - to commence in the second half of this year. The programme aims to provide clear guidelines, tools and education resources to assist local and regional authorities, businesses and the community to implement the New Zealand Waste Strategy's targets relating to construction and demolition materials.

The project brief identifies three regions to be investigated, one being Canterbury. It is considered prudent to discuss the objectives of the Subcommittee's proposed project with the Sustainable Management Fund project leader (to be appointed in September) to determine options and synergies. Two independent separate projects on the same issue in Canterbury may not be the best use of resources. Once the commonalities and possible differences between the two projects have been determined an amended proposal will be submitted to the Subcommittee for consideration.

RECYCLING FOR 2003/04 AND BEYOND: THE RMF AND GLASS AND PLASTICS IN CANTERBURY

Over the past five years the volume and range of kerbside material collected (by Onyx and at the transfer stations) in Christchurch City and Waimakariri District has grown by over 60%. This currently consists of:

- Steel and aluminium cans
- Plastic containers (HDPE & PET)
- Paper and cardboard (mainly old newspaper)
- Container glass

Material from Selwyn District is soon to be delivered to the Recovered Materials Foundation (RMF). This will further increase volumes by 5-8%. With additional volumes from other territorial local authorities greater efficiencies can be achieved, and opportunities to explore more capital intensive processing options can be investigated.

Future developments will focus on two key areas, glass and plastic. With the objectives being:

1. To increase the range of materials accepted (eg. additional plastic and glass types).
2. To improve the value of the post-processed material.

The projects to be undertaken by the RMF over the next 12 months to achieve these objectives are:

GLASS

1. Whole Bottles

Over the last six months an assessment of the bottle reuse market has highlighted that a large customer base still exists particularly for wine, spirit and juice bottles. The RMF now owns the only operational bottle washing plant in New Zealand. In order to maximise the productivity of this plant the maximum volume (and quality) of bottles must be recovered from the waste stream. To achieve this the RMF is introducing better receipt and sorting systems and more efficient initial cleaning and grading processes. The expected outcomes are:

- A 100% increase in processed volumes (estimate maximum 625,000 bottles p.a.).
- A 50% increase in range of bottles accepted.
- Five fulltime positions created.

2. Glass Drying and Washing

In the early stages of glass processing a stockpile of coarsely crushed glass was produced (approximately 3,300 tonnes). This stockpile will be consumed in the next six months and the RMF will have to process glass direct from kerbside to maintain current product lines (sandblasting, filtration media) and generate new products (glass tiles, surface coatings). In order to crush and screen glass it must have a low moisture content. The RMF therefore needs to establish a drying process to augment the glass crushing plant. Furthermore some of the high value added products require stringent quality control (eg. low sugar content, paper contamination). This will require an ability to wash some of the glass feedstock. Drying glass is the priority project (stage one) followed by washing (stage two).

In addition the RMF currently sends large volumes of glass to ACI (Auckland). Recently significant amounts of this glass have been rejected (largely through external factors) at a heavy cost to the RMF. Further processing by the RMF will reduce the dependence on other agencies and retain the material locally. The expected outcomes of washing and drying glass are:

- Reduction in operational processing costs (by processing internally).
- Opening of potential new markets.
- Reducing reliance on external factors.
- Retaining material locally.
- Job creation (estimate 4 sorting staff, 4-6 new processing staff).
- Increased ability to accept wider range of glass.

PLASTICS

1. Plastic Chipping and Washing

The plastic processing plant at the Parkhouse Road site is now operating two shifts/day and producing a very high quality sorted and baled product (types: HPDE, PET). With the addition of a chipping (stage one) and washing (stage two) operation some of this product will increase in value by over 100%. Furthermore other plastic grades become worthwhile to process. This operation would also provide opportunities for investigating mixed plastic processing, thereby further increasing the range of plastic that could be recovered. The anticipated outcomes are:

- Potentially double the revenue (and return to participating Councils) from plastic sales.
- Job creation (estimate 2 fulltime processing staff).
- Increased ability to accept wider range of plastic (particularly types 3 and 5).
- A 65% (estimate only) reduction in waste from plastic sorting.

2. Plastic Film Recovery

A new technology (developed by a New Zealand company) has been identified that can produce high quality products from post-consumer plastic film, including silage wrap. The manufactured product has the potential to replace treated timber (footpath kerbing, posts etc.) as well as variety of other wood and plastic products. The process requires a combination of film material comprised mainly of:

- Plastic shopping bags.
- Commercial shrink-wrap.
- Farm (silage) wrap.

The RMF is intending to partner with this company with the intention of extracting this material from the kerbside collection and commercial/industrial waste streams in the city and potentially from the region. The expected outcomes would be:

- The ability to collect shopping bag waste through kerbside collection.
- The ability to recover large volumes of commercial/industrial film.
- Additional sorting facilities with increased staff levels.
- Potential for consuming 20-40 tonnes/month of plastic film.

WASTE MINIMISATION

The focus on all of the above projects is essentially on recycling. Long term effective waste minimisation, will also require resources to be put into strategic projects with much longer time frames and perhaps less obvious tangible outcomes. In this category are the “advocacy and lobbying” type of project, samples of which are shown below and which have been taken from Christchurch City Councils draft SHWMP part 2. It is suggested that a regional position could be developed for some of these, with subsequent advocacy being carried out on behalf of the region, which would carry more weight.

- Lobby target industry sectors and government agencies to establish mechanisms that will facilitate the diversion of organic matter from landfill (eg. requirements for the separation of food scraps within the licensing controls placed on the hospitality sector).
- Lobby government, and where appropriate, industry, for the implementation of nationwide initiatives that will assist in waste minimisation, including:
 - Selected producer responsibility laws.
 - Container deposit or take back schemes.
 - Packaging reduction legislation.
 - The use of recyclable packaging, or biodegradable alternatives.
 - Minimum recycled content regulations.

CONSIDERATION OF OPTIONS

As mentioned above the regional construction and demolition materials project is on hold to determine synergies with the Sustainable Management Fund project, and the regional organics project is due for completion at the end of October 2003 after which the full report will be tabled to determine future options.

Regarding glass and plastics, it seems clear that increased volume from across the region would enhance these proposed RMF initiatives, and support in principle from the Subcommittee for these programmes is recommended.

In addition it is recommended that resources be allocated to a selection of the “advocacy and lobbying” type of projects noted above.

Possible options for the Canterbury Waste Subcommittee to consider supporting are:

- Review existing waste data from all districts to determine the likely volumes of recyclables (including potential recyclables) and their current disposal paths. Where this information does not exist selective audits may be necessary to determine what is currently in the Canterbury waste stream.
- A detailed analysis needs to be done to look at transport costs (and related issues) for moving recovered material around the Canterbury region.
- A detailed analysis of the pros and cons of some (or all) of the advocacy type projects needs to be carried out, and the results debated. A long term programme of action could subsequently be developed to move forward on those projects that are seen to be best supported regionally

Richard Lloyd of the Recovered Materials Foundation will attend the meeting to further discuss these issues.

SUMMARY

Reports on regional construction and demolition materials and regional organics have been commissioned and future action will be determined once these have been tabled. This report contains proposals by the Recovered Materials Foundation for glass and plastics which will be further developed.

Staff

Recommendation: That the information be received.

Chairman's

Recommendation: That the above options be costed and reported back to the next meeting of the Subcommittee.