CANTERBURY WASTE JOINT COMMITTEE AGENDA

FRIDAY 10 AUGUST 2012

AT 11AM

IN COMMITTEE ROOM 1, CIVIC OFFICES 53 HEREFORD STREET

Committee: Councillor Sally Buck (Christchurch City Council)
Mayor Claire Barlow (Mackenzie District Council)
Councillor Robbie Brine (Waimakariri District Council)
Councillor Stu Burrows (Kaikoura District Council)
Councillor Dick Davison (Hurunui District Council)
Councillor Matt Henderson (Waimate District Council)
Councillor Aaron Keown (Christchurch City Council)
Councillor Glenn Livingstone (Christchurch City Council)
Councillor Pat Mulvey (Timaru District Council)
Councillor Darryl Nelson (Ashburton District Council)
Councillor Lindsay Philps (Selwyn District Council)

General Manager	**Principal Adviser**	**Committee Adviser**
Jane Parfitt	Mark Christison	Janet Anderson
Telephone: 941-7305	Telephone: 941-5734	Telephone: 941-8179

INDEX

CANTERBURY WASTE JOINT COMMITTEE 10. 8. 2012

1. APOLOGIES

An apology has been received from Councillor Dick Davison.

2. CONFIRMATION OF MINUTES – MEETING OF 12 AUGUST 2011

Attached.

CHRISTCHURCH CITY COUNCIL

MINUTES OF A MEETING OF THE CANTERBURY WASTE JOINT COMMITTEE

Held at the Canterbury Club Worcester Street Christchurch on Friday 12 August 2011 at 11.40am.

PRESENT:	Councillor Sally Buck (Chairperson)(Christchurch City Council) Mayor Clare Barlow (Mackenzie District Council) Councillor Stu Burrows (Kaikoura District Council) Councillor Dick Davison (Hurunui District Council) Councillor Glenn Livingstone (Christchurch City Council) Councillor Darryl Nelson (Ashburton District Council) Councillor Lindsay Philps (Selwyn District Council)
IN ATTENDANCE:	Jane Parfitt (Christchurch City Council) Don Chittock (Ecan) Chris Keeling (Ecan) Davina McNicoll (Ecan) Gerard Cleary (Waimakariri District Council) Carl McKay (Mackenzie District Council) Ruth Clarke (Timaru District Council) Zefanja Potgieter (Christchurch City Council) Kevin Crutchley (Christchurch City Council) Chris Hopman (Selwyn District Council) Jim Palmer (Waimakariri District Council) Kitty Waghorn (Waimakariri District Council) Sally Cracknell (Hurunui District Council) Gavin Sole (Selwyn District Council) Peter McCormick (Screen Vistas) Janet Anderson (Christchurch City Council – Minutes secretary)
APOLOGIES:	Apologies were received from Councillors Aaron Keown and Pat Mulvey.

1. MINUTES OF MEETING 29 APRIL 2011

It was **resolved** on the motion of Councillor Glenn Livingstone, seconded by Councillor Dick Davison that the minutes of the meeting held on 29 April 2011, as circulated, be confirmed as a true and correct record of the meeting.

2. REPORT BACK ON 2010/11 PROJECTS

Compost product development
This project is now in its fifth year. The $30,000 per annum is part of a larger budget contributed to by Transpacific Industries, Ecan and MAF. Five year trials of a variety of land uses had been carried out with five different soil types. Farmers are particularly interested in the benefits of compost with increased cost of fertilisers.

Business resource efficiency
Staff are keen for this project to continue. Progress in Christchurch, Selwyn and Waimakariri had been disrupted by the earthquake, but Timaru had done well in recruiting new businesses. An opportunity was seen for Christchurch to set up a waste exchange, for example working alongside any large construction project. The committee suggested that staff could work with damaged schools.

E-Scrap recycling
Ashburton have delivered 30 pallet loads for recycling. The plant extracts 99% of material for recycling and sorts all metals. Council members were encouraged to take a tour of the facility in Halswell Junction Road. Ashburton charges $6 per item for delivery to the plant.

E-Book
Staff advised that after three proofs a final version was expected within a few days. It is a legislative requirement that Councils host their own information and this is currently being worked through.

It was **resolved** on the motion of Councillor Darryl Nelson seconded by Councillor Dick Davison to receive the information.

3. PROPOSED REGIONAL WASTE MINIMISATION PROJECTS 2011/12)

As previously noted the Compost product development project is in the last year out of a five years project. The Regions shared information regarding waste minimisation projects: Ashburton is working with supermarkets and the hospitality sector and looking at a range of options for dealing with organic waste, including trialling a rotary machine. The Council has budgeted $200,000 for a greenwaste project at Rakaia. The McKenzie district advised that a large scale worm farm in Cromwell operated at no cost to the Council and they are currently looking at options for collection of organic waste. Selwyn advised that it was investigating remote rural transfer stations because Rolleston is not very central to the District. Kaikoura deals with this by sending a truck out to each household. Timaru advised that the figures for E-book and E-Scrap recycling had become transposed in the report.

It was **resolved** on the motion of Councillor Darryl Nelson seconded by Councillor Linday Philps that the projects identified in the staff report for funding in the 2011/12 year be approved subject to amendment to the E-scrap recycling ($30,000) and E-book ($4,450).

4. CANTERBURY HAZARDOUS WASTE MANAGEMENT STRATEGY (CHWMS) REVIEW

Don Chittock reported that the aim of the strategy is to reduce the volume of hazardous waste to landfill and resulting harm to the environment. A number of product stewardship schemes are envisaged, that is funding disposal at the point of sale. The MTA and majority of tyre companies have now signed up to the scheme and future schemes envisaged involve paint and treated timber.

It was resolved on the motion of Councillor Dick Davison seconded by Councillor Glenn Livingstone that the information be received.

5. STOCKPILING OF WASTE AND ILLEGAL DUMPING

Timaru advised that a joint response between the Council, Child, Youth and Family, and Ecan had been agreed. Where the Council's investigation is unable to find the offender then Young Offenders are sent out under supervision to clean up as community service. Kaikoura is developing a public awareness programme and is considering setting up a similar programme, although supervision of the young offenders is an issue in their district. Ecan staff reported that five cases were currently under investigation mainly involving demolition waste dumped in Waimakariri, Hurunui and Selwyn. There had been an increased trend in roadside dumping in Kaikoura.

It was resolved on the motion of Councillor Sally Buck, seconded by Councillor Dick Davison that Ecan staff work with the staff of the District Councils to investigate the feasibility of setting up illegal dumping clean-up programmes and report back to the next meeting of this Committee.

The chairperson advised that the next meeting of the Canterbury Regional Landfill Joint Committee would be held at Kate Valley Landfill on 28 October 2011 and invited the members of this Committee who are not members of CRLJC to join them for a tour of the site in the morning prior to the CRLJC meeting.

The meeting concluded at 12.40pm.

3. CORRESPONDENCE – TREATED TIMBER WASTE MINIMISATION PROJECT

Attached.

12 June 2012

Environment Canterbury
PO Box 345
CHRISTCHURCH
8140

Attention Chris Keeling

Dear Sir

Re: Treated Timber Waste Minimisation project

The Canterbury Waste Joint Committee has been working to advance regional waste minimisation initiatives for more than a decade, and has representatives from the following territorial authorities:

Ashburton District Council
Christchurch City Council
Kaikoura District Council
Mackenzie District Council
Timaru District Council
Selwyn District Council
Waimakariri District Council
Waimate District Council

The problem of what to do with treated timber waste has been discussed at various times in the past and the Committee is expected to offer its full support to the proposed Treated Timber Waste Minimisation project application at its next meeting, to be held in August 2012. The Committee will then also consider a report from staff regarding the issue of possible financial support for the project.

Yours sincerely

Councillor Sally Buck
Chair: Canterbury Waste Joint Committee

4. STOCKPILING OF WASTE AND ILLEGAL DUMPING

Verbal update from Carl Diamond and Brett Aldridge – Environment Canterbury (ECan).

5. PROJECTS REPORT BACK FOR 2011/2012

General Manager responsible:	General Manager City Environment Group, DDI 941-8608
Officer responsible:	Unit Manager, City Water and Waste
Author:	Zefanja Potgieter, Senior Resource Planner

PURPOSE OF REPORT

1. To report back on regional waste minimisation projects for 2011/2012.

BACKGROUND

2. The following projects were approved by the committee for the 2011/2012 financial year.

Project	Service Provider	Original approval	Actual expenditure
Compost product development	Crop and Food Research	$30,000	$30,000
Canterbury Business Resource Efficiency projects	Target Sustainability	$35,100	$33,190
Free Materials website	Target Sustainability	$4,000	$0
E-Scrap recycling	Timaru District Council	$19,915	$11,816
E-Book	Timaru District Council	*$5,000*	$10,185
Commercial organics collection – feasibility study	Biobiz Ltd for Ashburton District Council	*$6,400*	$7,360
Rural transfer stations	Selwyn District Council	No funding requested	$0
TOTAL		**$100,415**	**$92,551**

3. Only actual expenditure is shared by all member Councils as set out in the Constituting Agreement, and unspent budget is not carried forward.

REPORT BACK ON INDIVIDUAL PROJECTS

4. Staff and / or consultants will present each of the projects listed below, and respond to questions.

Compost Product Development

5. See **Attachment 1** for a summary of this five year project which has now come to an end. A representative from Crop and Food will attend the meeting and provide further information. The conclusions of the attached report are:

   (a) Our research indicates that mature compost applied at rates of at least 25 tonnes per hectare can enhance crop production for at least two years following a single application of compost.

   (b) It also suggests that where compost is applied, inorganic fertiliser can be applied at lower rates, without compromising yields.

   (c) Applying compost can have both an immediate and long-term positive impact on soil properties, if applied in sufficient amounts.

5 Cont'd

(d) For farmers to adopt the use of this compost they need to be convinced of three things:

(i) That it will be financially viable for them.

(ii) That it will benefit their situation.

(iii) That it will not provide any environmental issues for them.

(e) Our research is showing that these three things can be met, at least in some situations.

(f) Farmers may also be keen to use compost for "feel good" environmental reasons.

(g) Best Management Guidelines will be produced later this year.

Canterbury Business Resource Efficiency Projects

6. The Christchurch City Council is working with Progressive Enterprises on a Target Sustainability Supermarket Project with eleven Countdown Christchurch stores. This project has been extended to the wider Canterbury region to an additional seven Countdown supermarkets. Four new Canterbury Countdown supermarkets were recruited as business members in the 2011/2012 financial year.

7. Other new business members recruited include the Heritage Hanmer Springs Hotel and Hanmer Springs Thermal Pool and Spa.

Business Member	**Consultancy Completed to Date**
Countdown Rangiora	Waste audit, energy assessment, water audit
Countdown Rangiora East *(New member)*	Energy assessment, water audit
Countdown Kaiapoi	Waste audit, energy assessment, water audit
Coundown Timaru Church Street	Waste audit, water audit
Countdown Timaru *(New member)*	Just joined
Countdown Rolleston *(New member)*	Waste audit, energy assessment, water audit
Countdown Ashburton *(New member)*	Waste audit, energy assessment, water audit
Continental Catering Rangiora	Waste audit, energy assessment, water audit
Heritage Hanmer Springs *(New member)*	Waste audit, energy assessment
Hanmer Springs Thermal Pool and Spa *(New member)*	Waste audit, energy assessment

Project	Target Sustainability Timaru-lead Project
Time Frame	July 2011 – March 2012
Supervisor	Ruth Clarke, Timaru District Council
Region	1 Timaru business (New World supermarket) 1 Waimate business (New World supermarket) 1 MacKenzie business (Hermitage Hotel)
Deliverables	All audits for waste, water and energy have been completed for each of the 4 businesses.
Ongoing	These businesses now need to implement their actions and work towards gathering data for a case study in the 2012/2013 year.

5 Cont'd

Free Materials

8. This project has had to stand over to the 2012/2013 financial year.

9. Free Materials (ww.freematerials.co.nz) is an automated system enabling registered suppliers and collectors to supply and collect re-usable materials.

   (a) The service is available to businesses, education providers, charities, community groups and local or national government organisations. It is not available for individuals.

   (b) All materials must be supplied free. Collectors may not on-sell material collected.

   (c) Collectors contact the supplier expressing an interest in collecting amounts of material. Suppliers choose from up to three potential collectors. Suppliers can re-list their materials.

   (d) Suppliers are required to record each collection on the website.

   (e) The following materials are prohibited from this service: hazardous materials, carpet, liquids, compost / manure, non-operational electronic equipment.

10. $4,000 is a contribution towards website administration from the following seven districts to use the Free Materials service for 10 months through to 30 June 2013: Kaikoura District Council, Hurunui District Council, Waimakariri District Council, Selwyn District Council, Ashburton District Council, Timaru District Council and McKenzie District Council.

E-Scrap Recycling

Project	**E-SCRAP RECYCLING**
	Generally, councils required less infrastructure than was estimated and Christchurch did not require support from this programme, resulting in less expenditure.
Project Intent	The intent of the two-year project was to set up an e-scrap recycling programme by running a pilot programme in Year 1 and then rolling-out across Canterbury in Year 2.
Year 1 Project Outline	The recycling process was investigated and a liaison with E-Scrap Recycling Ltd for processing was put in place. A total branding and media package was designed and a pilot project was successfully launched in the Timaru District.
Time Frame	2011/2012 was the second year of a two-year project.
Region	Canterbury-wide.
Supervisor	Ruth Clarke, Timaru District Council.
Year 2 Project Outline	To roll-out the programme in all Canterbury councils.

5 Cont'd

Project	**E-SCRAP RECYCLING**
Deliverables	Provision of infrastructure for collection systems such as tables and signage. **Completed.** Dissemination and editing of generic media- a CD was sent to each council with the branding designs and templates for letters, media releases, radio ad scripts, posters and signage. **Completed.**
E-scrap Recycling Ltd	A site visit was conducted on 15/06/2012. Large volumes of material are stockpiled on site, but processing capacity has improved and more material is now being processed each day than is received. Processing is done on-site. E-Scrap Recycling is committing significant money to a large building and machinery which will improve their processing capacity from the end of 2012.
Kaikoura District	E-scrap facility available at Kaikoura Resource Recovery Centre. Tonnes received 30/06/2011 - 1/06/2012 = 9 tonnes.
Hurunui District	E-scrap facilities available at all 5 transfer stations from October - November 2011. Tonnes received 01/10/2011 - 1/06/2012 = 11 tonnes.
Waimakariri District	E-scrap facility available at Waimakariri Resource Recovery Park from September 2011. Tonnes received 13/09/11 - 12/06/2012 = 65 tonnes.
Christchurch	Christchurch's transfer stations have not used the E-Scrap process due to existing relationships with other processors, and concerns over capacity at Metalcorp which is the service provider. This will be reviewed on an ongoing basis.
Selwyn District	E-scrap facility operating at The Pines, Rolleston. No data available yet.
Ashburton District	Tonnes received 1/05/2012 – 30/06/2012 = 6.64 tonnes.
Timaru District	E-scrap facilities available at all 4 transfer stations. Tonnes received 1/06/2011 - 1/06/2012 = 55 tonnes.
Mackenzie District	E-scrap facilities available at all 3 transfer stations.
Waimate District	Table and signage in place. Implementation to be negotiated with RRP contractor.
Further Funding	Waimakariri would like to supplement their infrastructure with crates. Although, there was enough in the budget to allow for this, the final tally of invoices did not leave enough time to organise in the 2011/2012 financial year. More details in the 2012/2013 project outlines.

5 Cont'd

E-Book

Project	**E-BOOK** (www.eread.co.nz/oneplanet/)
	Costs were higher than anticipated due to formatting of the e-book and incorporating editing changes.
Time Frame	June 2011 to July 2012.
Supervisor	Ruth Clarke and Briony Woodnorth, Timaru District Council.
Region	Canterbury Waste Joint Committee region wide.
Project Intent	To create a resource all councils could access, which would contain a range of waste minimisation material in an easy-to-read format. To link back to the Council's main pages from the e-book.
Deliverables	Format pages for a more interesting look-add graphics, images and change font colour and sizes. **Completed**. Add more information, particularly educational resources. **Partially completed.** To add links for other Councils in Canterbury. **Completed.** E-book Hosting. **Completed.**
Content	A large range of generic information including videos presented in an attractive on-line format. Each Council provided links relevant to each district (kerbside collection, transfer stations, fees and charges, other local information). A large number of websites are linked in the E-book.
Benefits	This project facilitated several councils upgrading their Solid Waste information.
Further Funding	Further funding will enable ongoing development of the E-book and development of a strategy to make the project self-funding. More details in the 2012/2013 project outlines.

Commercial Organics Waste Collection – Feasibility Study

11. Brian Gallagher of Biobiz Ltd was engaged by Ashburton District Council to conduct a feasibility study for the collection and processing of organic waste from commercial premises in the district with a view that relevant aspects may be applicable on a regional basis. A summary of the outcomes is detailed as follows. The full report is available but not included in this report, and copies will be made available at the meeting.

Summary

(a) 119 commercial premises were identified as generating organic waste and in particular food waste in the Ashburton District excluding the larger primary processing factories. 43 premises were visited to help determine current food waste management methods and it was found that 67 per cent of these had their food waste collected by a "pig farmer".

(b) 119 commercial premises were identified as generating organic waste and in particular food waste in the Ashburton District excluding the larger primary processing factories. 43 premises were visited to help determine current food waste management methods and it was found that 67 per cent of these had their food waste collected by a "pig farmer".

5 Cont'd

(c) It is estimated that approximately 600 - 900 tonnes of food waste could be generated by the 119 commercial premises per annum. Possibly 83 per cent of this quantity (500-700 tonnes based on the 43 premises visited) is fed to pigs leaving 100 - 150 tonnes disposed to landfill from possibly 32 premises out of the 119 not participating in the pig food collection.

(d) There are regulations that require food waste containing meat to be cooked prior to feeding to pigs and the Ministry of Agriculture and Fisheries (MAF) monitors these regulations.

(e) Organic waste from the larger primary processing factories in the District is managed on-site or taken off site for processing. The Ashburton abattoir processes organic waste with a vermiculture operation and is the only facility that may be able to accept food waste for processing.

(f) The preferred technologies for food waste processing would either be vermiculture and in-vessel composting.

Barriers

(g) Some of the barriers identified for a commercial food waste collection were identified as follows:

(i) There is no legislative requirement or local by-law requiring food waste to be separated and collected separately from general refuse. It is easy to throw the food waste in with general refuse.

(ii) A Council service should be flexible to enable various emptying frequencies and quantities to meet customer's requirements for commercial premises.

(iii) The cost of a private commercial food collection service will cost more compared to a Council residential collection service.

(iv) There is currently a free collection service of food waste by "pig farmers". The survey of 43 premises visited showed that this service was used by approximately 67 per cent of commercial premises, possibly accounting for 83 per cent of the food waste quantities from the premises visited.

Recommendations by Biobiz Ltd

(h) The report identified the following regional recommendations:

(i) Write to MAF to encourage them to contact Council staff to facilitate the promotion of the proper disposal and treatment of food waste as a food source for the pig industry.

(ii) That the Councils consider the collection of food waste from commercial premises if they are considering a food waste collection service.

(iii) That the Councils consider enhanced levels of service for food waste collection from commercial premises, (e.g. several containers or more frequent emptying).

(iv) That 40 litre containers may be used for manual lifting of food waste, with containers greater than 40 litres being mechanically lifted. *(Staff note: OSH guideline is 15 kg).*

(v) That a 140 litre wheelie bin is the maximum size for food waste only, with up to a 240 litre wheelie bin being the standard maximum size for a food and garden waste collection.

5 Cont'd

(vi) That a register of composting facilities and acceptance criteria and cost to accept food waste for composting be established by the relevant Councils in Canterbury.

STAFF RECOMMENDATION

(a) That the information be received.

(b) That each Council adopt and implement the regional recommendations identified in the Biobiz Ltd report as they see fit.

Compost project summary

Use of kerbside organics compost in the agricultural sector

Introduction

- Compost is a good source of both organic matter and nutrients.
- Provides both readily available and on-going supply of nutrients as it decomposes.
- Can help suppress weeds when broadcast on soil surface.
- Canterbury soils have the potential to respond well to compost as they have relatively low organic matter contents and chemical fertility.
- However, historically there has been no large supply of compost available in NZ.
- This changed with the opening of this Christchurch composting plant, but there was still a lack of knowledge of the benefits of compost to NZ soils and crops, and how farmers should be utilising it to take advantage of those benefits.
- Plant & Food Research was commissioned in 2007 to help provide some of those answers.
- PFR have carried out 5 field trials on a variety of soils and crops over past 5 years, using compost from Timaru (Transpacific Industries) and Christchurch (Living Earth).
- Crops have included pasture, forage brassicas, intensive vegetables and arable crops.
- Large number of crop and soil measurements carried out.
- The trials looked at varying rates of compost and fertiliser, and timing of application.

Christchurch compost

- Christchurch compost is a well matured high quality product with high nutrient content.
- Being screened and at a consistent moisture content it is easy to spread uniformly.
- Ideally suited for use in the agricultural sector.

Crop production

- In most trials crop yield increased where compost was applied due mostly to high levels of both mineral and total nitrogen in the compost.

- Some examples of crop yield response:

Example 1: The dry matter yield from the various crops grown between 2007 and 2012 following a one-off application of compost in 2007. Most crops had higher yields with higher rates of compost, with the increases generally diminishing over time. Further increases were obtained with small top-ups of compost from 2010.

Crop	No compost	25 t/ha compost	50 t/ha compost	100 t/ha compost
2007-08 Kale	7.81	9.35	11.71	12.53
2008-09 Kale	9.61	10.23	11.07	12.80
2009-10 Barley	10.34	8.99	10.96	10.54
2010 Oats	3.21	3.40	3.30	3.37
2010-11 Rape	4.48	4.29	4.47	4.53
2011 Rape regrowth	1.20	1.31	1.37	1.29
2011-12 Grass	0.72	0.75	0.83	0.89
Cumulative yield	37.4	38.3	43.7	46.0
With compost top-ups*	39.0	38.3	44.4	48.3

* compost top-ups of 12.5 t/ha each were applied prior to the rape and grass being established.

Example 2: When seed peas were grown as the 4th arable crop following a one-off application of compost 3 years earlier the yield (t/ha) increased with rate of compost when applied in addition to recommended rate of fertiliser.

No compost	25 t/ha compost	50 t/ha compost
5.7	5.8	6.3

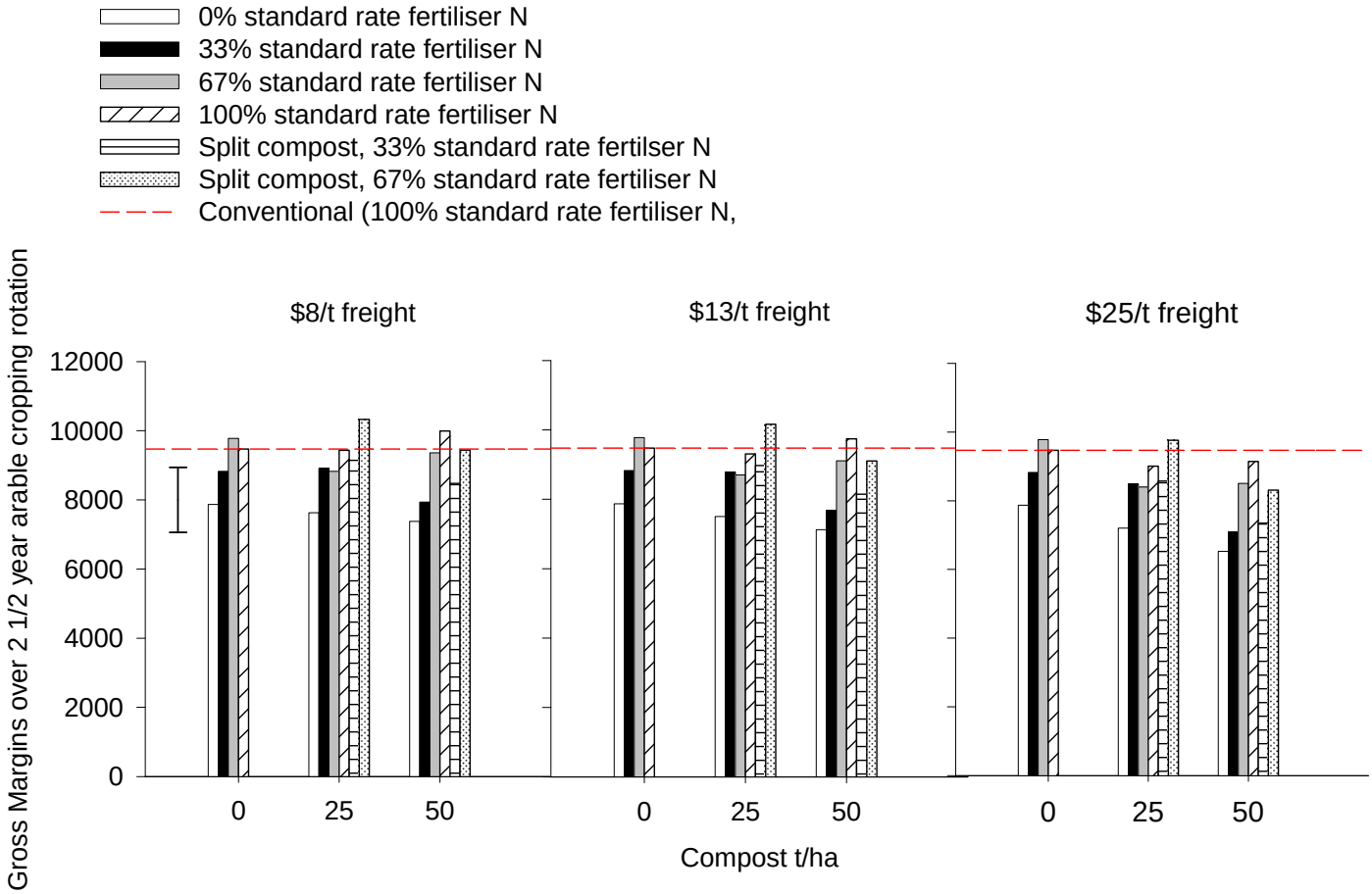
Example 3: Following a one-off application of compost in October 2007, the grass dry matter (kg/ha) from the initial two samplings in 2008 was considerably greater where compost had been applied. Grass yield continued to be greater in the compost plots in all 11 samplings, although these increases had diminished to around 15% 3 years after the compost was applied.

	No compost	50 t/ha
Cut one (February 2008)	1271	2571
Cut two (March 2008)	456	1928

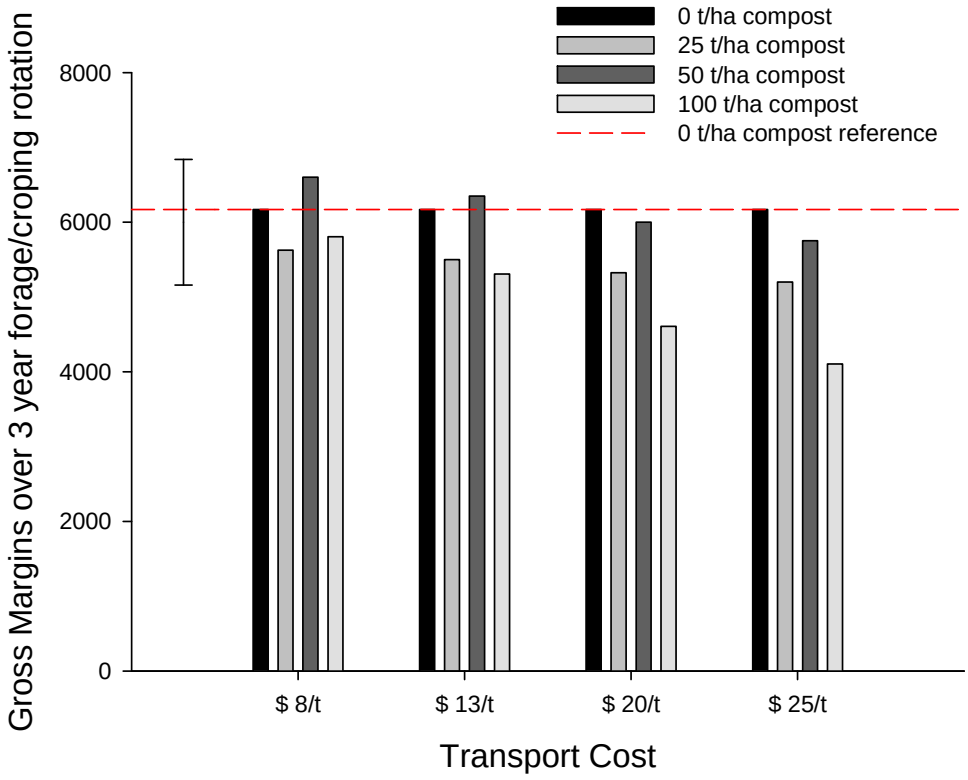
Gross margins from the arable trial

Three gross margin scenarios have been calculated based on compost being brought at $12/t and being applied at $6.50/ha. The first scenario has a low freight cost of $8/t which represents a situation where the farm is close to the Christchurch plant. The third scenario has an expensive freight cost of $25/t and represents a situation where the farm is a lot further away (i.e. Methven). The middle scenario represents an in-between distance. These three scenarios do not take into account that a farmer may be able to pay lower freight rates for longer distances if they can arrange back filling.

It can be seen from the below graph that when compared to the conventional approach of applying no compost and 100% recommended rate of N fertiliser, the best gross margin compost/fertiliser combinations over a period of two and a half years (over which time four arable crops were grown) was 25/t of compost applied in three split application (around 8t/ha per time) combined with 67% of the standard rate of N fertiliser. The second best scenario was a one of compost application of 50 t/ha with the full rate of recommended N applied. The third best gross margin scenario was no compost and 67% of the standard rate of fertiliser N. This held for the first two freight scenarios, but if the freight costs are up around $25/t then the 50 t/ha one off application rate combined with % 67 standard rate of N fertiliser was no longer is as financially viable as using no compost at all. However the 25 split with %67 standard N was still economically viable.

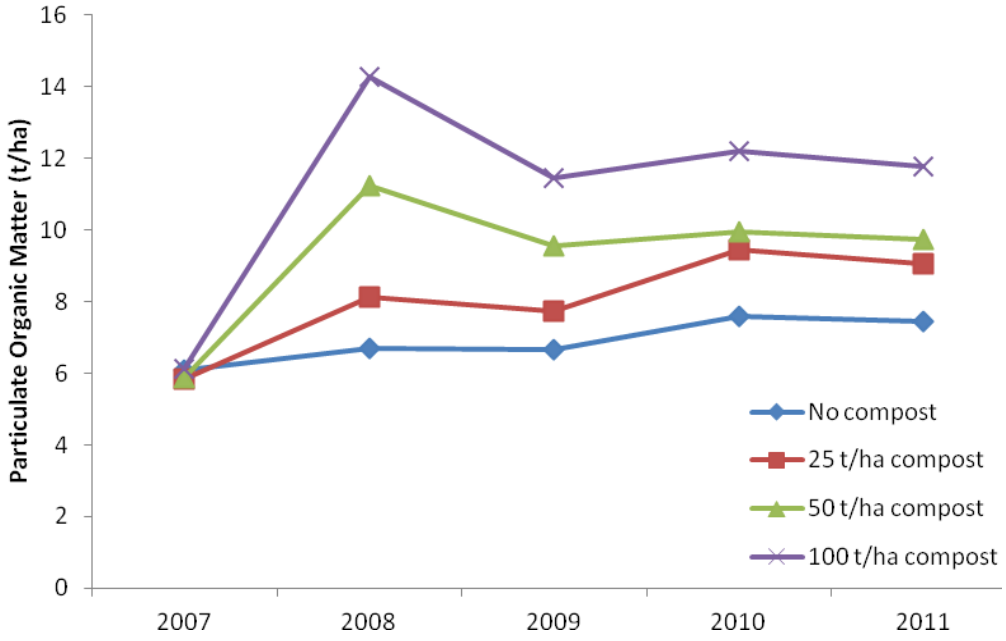


Gross margins at the forage trial included a fourth scenario of $20/t freight. In the below graph is can be seen that when compared to applying no compost at all (the dashed line), as long as the freight costs were less than $17/t, gross margins were highest when a one off application of 50 t/ha of compost was applied.



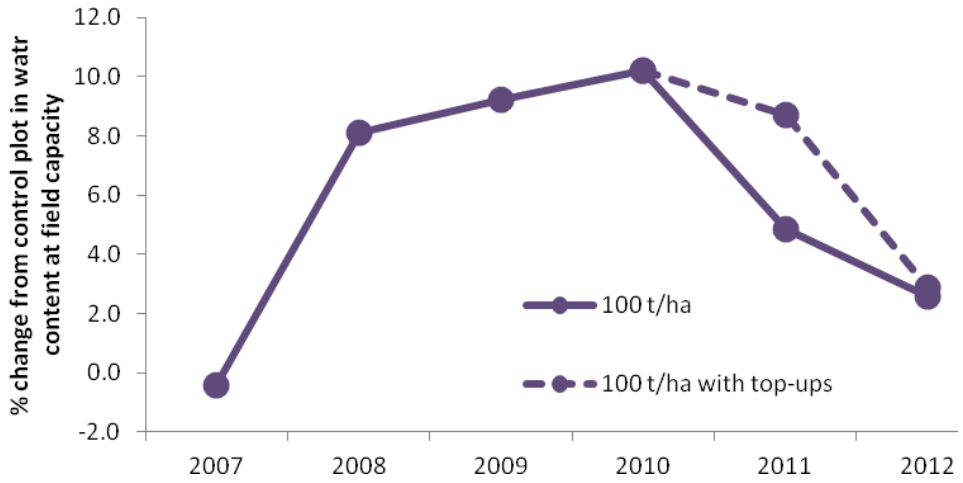
Soil organic matter

- Due to compost being made up of around 30% total C, organic matter levels in the soil increased with rate of applied compost across most of our trials. The graph below from our South Canterbury forage cropping trial shows soil organic matter levels were still measurably higher in 2011 after one-off applications of compost were made 4 years earlier.



Soil's capacity to hold plant available water

- Increases in organic matter can potentially increase the amount of water a soil can hold.
- We measured a significant increase where 100 t/ha compost was applied.
- This increase diminished after 3 years, even following 12.5 t/ha compost top-ups.
- Only small changes (<2% difference) were measured at lower rates of compost.
- Appears that to increase a soils ability to hold water, considerable amounts of organic matter are required. Repeated applications of moderate rates of compost may achieve this.



Soil structure

- Soil organic matter is strongly correlated with soil physical properties.
- Our trials indicate that despite organic matter levels increasing with compost, there have been no measurable changes in soil structure.
- It is likely that sustained applications of compost are required before improvements in physical properties such as aggregate stability can be measured.

Environmental

- With high levels of N there has been an interest in the potential for nitrate leaching losses from compost, especially when used at high rates.
- We measured nitrate leaching under an arable crop rotation during a wet winter on a free draining soil and there was no increase in the amount of nitrate leached where compost was applied compared to where no compost was applied.
- We have also measured the levels of trace elements (incl. Boron, Iron, Manganese, Zinc, Copper, Cobalt and Molybdenum) under both 14 and 28 t/ha compost rates and measured no significant increases in the soil.

Conclusions

- Our research indicates that mature compost applied at rates of at least 25 t/ha can enhance crop production for at least 2 years following a single application of compost.
- It also suggests that where compost is applied, inorganic fertiliser can be applied at lower rates, without compromising yields.
- Applying compost can have both an immediate and long-term positive impact on soil properties, if applied in sufficient amounts.
- For farmers to adopt the use of this compost they need to be convinced of three things:
  1. That it will be financially viable for them
  2. That it will benefit their situation
  3. That it will not provide any environmental issues for them
- Our research is showing that these three things can be met, at least in some situations.
- Farmers may also be keen to use compost for "feel good" environmental reasons.
- Best Management Guidelines will be produced later this year.

6. PROPOSED REGIONAL WASTE MINIMISATION PROJECTS 2012/13

General Manager responsible:	General Manager, City Environment, DDI 941-7305
Officer responsible:	Water and Waste Manager
Author:	Zefanja Potgieter, Senior Resource Planner

PURPOSE OF REPORT

1. To propose regional waste minimisation projects for 2012/13.

SUMMARY

2. The following projects are proposed for consideration by the Committee, amounting to $93,200 out of a budget of $110,000.

Project	Service Provider	Budget $
Business resource efficiency projects**	Target Sustainability	26,000
Free Materials Service**	Target Sustainability	4,000
E-Scrap recycling	Timaru District Council/Metalcorp	2,700
E-Book	Timaru District Council	5,500
Treated Timber investigation	ECan, CCC, BRANZ, Scion and Fraser Scott (Project Manager)	15,000
Farm waste project*	ECan	40,000*
TOTAL		93,200

* *This project to be presented in full at the next meeting of this committee*
** *These projects will be seeking continuing annual funding.*

3. **Business Resource Efficiency: Target Sustainability Services**

The funding requested for this year is to complete the consultancy and case studies with the current Canterbury business members for 2012/2013. Funding of regional business resource efficiency projects will be an annual funding proposal.

The Christchurch City Council Target Sustainability services provide free resource efficiency consultancy to Christchurch businesses to assist them to reduce waste and to be energy and water efficient. Waste audits, energy assessments and water audits are conducted at the business member site. The business member receives resource efficiency recommendations and an action plan. At the end of the project, which normally takes approximately 18 months from when the business member starts the project, a business member case study is produced detailing what resource efficiency initiatives were implemented. Information about Target Sustainability and case studies can be viewed at www.targetsustainability.co.nz. The Target Sustainability Services have been expanded into the Waimakariri, Selwyn, Timaru and McKenzie Districts through funding from the Canterbury Waste Joint Committee (CWJC). Funding for this financial year is to complete the work with current business members and to recruit and work with new business members in the Ashburton District.

4. **Free Materials: A Web-Based Waste Exchange**

The funding request of $4,000 is the remaining cost from a two year programme for contributions from the following seven districts to use the Free Materials service for 10 months through to 30 June 2012: Kaikoura District Council, Hurunui District Council, Waimakariri District Council, Selwyn District Council, Ashburton District Council, Timaru District Council, McKenzie District Council. There will be a small annual expense for this project for future years.

6 Cont'd

Free Materials *www.freematerials.co.nz* is an automated system enabling registered suppliers and collectors to supply and collect re-usable materials.

(a) The service is available to businesses, education providers, charities, community groups and local or national government organisations. It is not available for individuals.

(b) All materials must be supplied free. Collectors may not on-sell material collected.

(c) Collectors contact the supplier expressing an interest in collecting amounts of material. Suppliers choose from up to three potential collectors. Suppliers can re-list their materials.

(d) Suppliers are required to record each collection on the website.

(e) The following materials are prohibited from this service: hazardous materials, carpet, liquids, compost / manure, non-operational electronic equipment.

5. **Treated Timber Project**

Project Name	**Treated Timber Project**
Time Frame	A one year project. Start date to be confirmed dependant on approval for Waste Minimisation Funding. This project forms the first phase of a wider project to address New Zealand's current use of treated timber and how it is disposed of. Further work will include investigating alternatives to treated timber and the feasibility of a product stewardship scheme.
Project District/Region:	Christchurch/Canterbury
Supervisor and Partners	Chris Keeling, Environment Canterbury. Project team completed by CCC, BRANZ, Scion and Fraser Scott (Project Manager).
Outline	Waste treated timber has always been a problem waste due to the treatment chemicals contained within the matrix of the timber. It is contaminants such as copper, chromium and arsenic, among others, which make treated timber a hazardous waste and mean that it cannot be disposed of in the same ways as untreated timber. Due to the nature of treated timber, not many disposal options are currently available; the only current option for disposal in Canterbury is landfilling at Kate Valley, which not only fails to offer any reuse, recovery or recycling options, but also takes up valuable landfill air space. Following the Canterbury earthquake, there are (and will be) significant quantities of treated timber from demolition and rebuild activities that require disposal. On top of this are normal 'business as usual' volumes from non-earthquake-related activities. With this in mind, this project aims to investigate potential disposal options for treated timber to address the current situation and also offer medium to long-term options moving beyond earthquake recovery. The project will particularly focus on economic feasibility and finding options that will be financially sustainable once up and running. Specific aims are to:

6 Cont'd

Project Name	**Treated Timber Project**
	• Increase the collection and reuse/recycling of waste treated timber in Christchurch from essentially nil to 5,000 tonnes annually (representing 20% of annual treated timber waste), and hence divert this waste from landfill. • Minimise the impact of treated timber waste as a direct consequence of Christchurch earthquake remediation work by collecting and reusing/recycling 49,500 tonnes of demolition waste (representing 20% of projected treated timber waste) and by collecting and reusing/recycling 4,950 tonnes of treated timber waste from the new construction projects (representing 20% of the projected treated timber waste) over the next three to five years. • Identify an appropriate, effective and low-cost tool for identifying treated timber on site. • Increase collaboration between industry, local authorities, construction interest groups and the wider community to improve waste minimisation management of treated timber over its lifecycle. In order to get the project proposal lodged with MFE in time, Councillor Sally Buck on behalf of the CWJC and Mark Christison on behalf of the Council, have in June 2012 provided in principle letters of support for this proposed project, one of national significance for a problem waste. The project is of particular interest to the Waimakariri, Selwyn and Christchurch Councils as the rebuild process gathers momentum.
Deliverables	**Milestone 1 - Industry Overview** Report detailing a situation analysis and map of the current industry and potential applications for treated timber waste. **Milestone 2 - International Industry Trends** Report providing an overview of key international trends and technological developments in the industry internationally and how the selective application of these might improve the industry in New Zealand. **Milestone 3 - Potential Scenarios** Report detailing potential new waste treated timber collection and recycling systems, and the risks, financial implications and potential benefits of each scenario. **Milestone 4 - Timber Identification Tool Development** Report providing an overview of international research relating to waste treated timber identification on-site and, if feasible, a specification and rationale for a tool for use in New Zealand. **Milestone 5 - Stakeholder Collaboration** Detailed business cases for scenarios, including pilot trial plans. **Milestone 6 - Scenario Pilot Trials** Final report detailing pilot processes and outcomes, and scenario details and implementation plan.

6 Cont'd

Project Name	**Treated Timber Project**	
Cost	**Total project cost**	**$190,900**
	ECan contribution	$15,000
	BRANZ contribution	$15,000
	CWJC funding required	$15,000
	Waste Minimisation Fund contribution	$145,900

6. **Farm Waste Management Project**

A full project proposal is being developed and will be submitted to the next meeting of the Committee. The following is some background.

During 2011/2012, Environment Canterbury liaised with the rurally-focussed Plasback and Agrecovery product stewardship schemes to catch up on progress regionally and nationally. General feedback from these schemes suggests that, while the schemes are going well, rural engagement could improve, particularly in Canterbury, and there may be more general farm waste management issues that need to be addressed. Further discussions with Canterbury TAs at staff level have also uncovered concerns about rural burning and burying of wastes and it seems that on-farm waste management is somewhat of a mystery on a local and national level.

As a result of this, Environment Canterbury is now in the process of building a picture of how waste is managed on farms, including identifying waste types and current disposal methods. The overall aim of this work is identify a valuable insight into on-farm waste management, identify why issues may be occurring and put initiatives in place to make improvements, if required. A key point to this work is that we do not want to use regulatory approaches, rather look for other methods to fill in gaps between already established schemes like Plasback and Agrecovery. It is expected that this will be a long term project (>2 years) from investigating and understanding the issue through to building programmes and initiatives to facilitate change.

To help continue this project in the first year, funding will be required to design methodologies for waste data gathering and consultation with the farming community and associated industries. At this stage, we are still waiting for scoping work to be completed, but it is likely that a contribution of $40,000 from the Canterbury Waste Joint Committee will be sought in September 2012.

7. **E-Scrap Project**

Project	E-SCRAP RECYCLING – last year as a funded project
Total Cost	$2,700
Time Frame	By December 2012
Region	Waimakariri District Council
Supervisor	Ruth Clarke, Timaru District Council
Outline	Additional crates for escrap collection for Waimakariri.
Benefits	Waimakariri Quantities at Oxford transfer station could be quite low once the 'first flush' of disposal has been dealt with. It is difficult to obtain pallets as the site is so far from main centre, and we are also keen to keep operational costs at a minimum here. A reusable crate would suit our purposes more than the pallet and wrap solution in use at Southbrook resource recovery park as there is no pallet handler or forklift at Oxford. Three crates would allow one crate to be in use, one 'in transit' and a third loaded ready for pickup.

6 Cont'd

Deliverables	Three x crates for Waimakariri District Council.
Costs Breakdown	$900 per crate x three crates = $2,700

8. **E- Book Project**

Project	E-BOOK – last year as a funded project
Total Cost	$5,500
Time Frame	1 July 2012 to June 2013
Supervisor	Ruth Clarke, Timaru District Council
Region	CWJC region wide
Outline	To add more information to e-book in the form of videos and extra information. To promote the e-book to other councils in New Zealand with the intention of them linking on. To develop a strategy for the e-book funding to be self-supporting for ongoing hosting, editing and additional information and possible sponsorship of information. To develop a strategy for monitoring the effectiveness of the website through how many hits it receives. Promote the e-book through existing networks.
Benefits	Keep the e-book up-to-date. Promote waste minimisation through on-line information.
Deliverables	Extra information in e-book. Link in more councils. Develop funding strategy. Develop advertising and results analysis strategy.
Costs Breakdown	Add video ($200 per video) x 3 = $600.00 Design and link a page. ($200.00 per page)x 10= $2,000.00 Link upgrade x 3 (maintenance) $50 $150.00 Costs to link Canterbury councils to new design page for regions in New Zealand $2,500 Data analysis strategy $250.00

SUMMARY

The farm waste management project is under development and will be presented in full at the next meeting of the committee. The Committee's *Constituting Agreement* was amended in February 2011 to allow for a meeting to take place by telephone or video attendance. Should consideration of the farm waste management project be the only agenda item for the next Committee meeting (possibly in September 2012), the option exists to use the new meeting provision for the first time.

STAFF RECOMMENDATION

(a) That the Committee approve funding of $26,000 to the Business resource efficiency projects noting that further funding will be applied for on an annual basis.

(b) That the Committee approve funding of $4,000 to the Free Materials Service project noting that further funding will be applied for on an annual basis.

(c) That the Committee approve funding of $2,700 to the E-Scrap recycling project, noting that no further funding will be sought for this project.

6 Cont'd

(d) That the Committee approve funding of $5,500 to the E-Book project, noting that no further funding will be sought for this project.

(e) That the application for funding of $15,000 to the Treated Timber investigation be approved.

(f) That approval of funding for the Farm Waste project be deferred to the next meeting of this Committee, when a full presentation in support of the application will be made.

7. HAZARDOUS WASTE INFORMATION UPDATE

General Manager responsible:	General Manager DDI 941-8608
Officer responsible:	Water and Waste
Author:	Chris Keeling (Ecan)

PURPOSE OF REPORT

1. To update the Committee on hazardous waste related projects managed by Environment Canterbury (ECan).

Residential Red Zone Household Hazardous Waste Programme

2. The project aims to remove all household hazardous waste from residential red-zoned properties prior to them being demolished to prevent discharge to the environment, reduce risks to site workers and public and mitigate legacy contaminated land issues for future Cantabrians.

   The project is ECan led but involves working in partnership with Christchurch City Council (CCC) and Waimakariri District Council (WDC) to use existing district Council infrastructure and provide project governance. We are also working closely with Canterbury Earthquake Recovery Authority (CERA) and insurance company contractors to coordinate the service operationally.

   $509,000 of funding has been provided by the Waste Minimisation Fund to support this project.

   We have estimated that approximately 100 tonnes of hazardous waste needs to be removed from red-zoned properties. Between ECan, CCC and WDC contracts are in place to either receive hazardous waste at transfer stations or inspect and remove hazardous waste directly from red-zoned properties prior to demolition.

   In total, 26.89 tonnes was received up to the end of May 2012 through transfer station/EcoDrop receipts and hazardous waste collected directly from red zone properties.

Canterbury 2012 Agrichemical Collection

3. 2.42 tonnes of unwanted agrichems collected in March 2012 through Agrecovery. This is an increase from the previous year when two tonnes were collected. ECan funded the collection and disposal of legacy chemicals. Increased promotion for this event by Territorial Authorities and ECan seemed to help with volumes.

4. We will be updating the Canterbury Hazardous Waste Management Strategy this year. This framework will be reviewed and updated to reflect the rationalisation of waste work areas at ECan and the new waste issues arising from the earthquake. The new strategy will be in place by July 2013.

Regional Hazardous Waste Collection

5. Continuing with regional hazardous waste disposal contract work. The aim of this project is to implement a unified approach to collection and disposal of hazardous waste to get better scales of economy and lower costs for all Canterbury Territorial Authorities. This project has not progressed for some months due to earthquake recovery work but will be picked up next financial year. We hope to have something in place by July 2013. Some Otago Territorial Authorities have also shown interest in this, which may lend support to a south island-wide collection in the future.

Treated Timber Project

6. See report on proposed projects for 2012/13.

7 Cont'd

Farm Waste Management Project

7. See report on proposed projects for 2012/13.

STAFF RECOMMENDATION

It is recommended that the information be received.