

6. IN-VESSEL COMPOST PLANT

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The purpose of this report is to provide the Council with an update on the In-vessel Compost Plant project.

BACKGROUND

For the last five years, the City Water & Waste Unit has been investigating the possibility of setting up an in-vessel compost plant. Originally the driver for this was to shift the existing open-air green waste windrowing compost operation undercover so as to avoid associated dust and odour problems. Subsequently the Council has ceased screening compost on site and this has obviated the need to move the composting process inside. The focus of the need to provide an in-vessel plant has now shifted from green waste composting to the need to set up such a plant to compost putrescibles (mainly food wastes) and so divert them out of the landfill, where they produce the bulk of the unwanted leachate. Putrescibles will come from industrial sources initially and (this is our vision) later from a domestic kerbside collection.

SEARCH FOR SUITABLE TECHNOLOGY

The City Water & Waste Unit has undertaken a substantial search for suitable technology over the past five years including:

- Lengthy negotiations with the Hazaka Company of Japan.
- A desktop web and literature search.
- A request for proposals from industry resulting in around 70 proposals received.
- Subcommittee evaluation of a short list of six proposals, extensive evaluation of a final list of three of these, and a final decision to not accept any tender at this stage.
- Currently negotiating with Global Renewables Ltd of Australia.

The outcome to date of this work has been:

- (a) A decision to purchase a HotRot Composter to process rag and grit (and other trial materials) at the CWTP – note this was a beneficial spin-off result from the request for proposal procedure.
- (b) The realisation that the cheapest method of processing green waste into compost is by open-air windrowing (as opposed to in-vessel processing).
- (c) The realisation that the next steps in removing organics from the waste stream should be:
 - Streaming putrescibles away from the landfill and composting them in-vessel.
 - Further pricing incentives to encourage organics separation, for example, recycling of more green waste by pricing disincentives against the acceptance of mixed refuse and green waste loads at the refuse stations, (ie a high fee for such loads). This will encourage commercial and domestic sorting of green waste by streaming it into the compost system via a fee discounting incentive – note to some extent this is happening already and the strategy will become progressively more effective as refuse fees rise further in the run-up to the closure of Burwood Landfill and the opening of Kate Valley.
- (d) That the best approach to the selection of an in-vessel organics processing (ie composting) technology, is now to negotiate with a supplier of linked processes who has the capability to process the entire incoming waste stream. In this way we can select the part of their technology that best suits our Christchurch situation at the present time and still retain the ability to add on various other processing modules later.
- (e) The capital budget (see below) for the project has been delayed one year to allow more time for appropriate technology selection.

PROCESS FROM HERE AND GLOBAL RENEWABLES LIMITED

Taking all of the above into consideration and in particular that the Council has already widely sought proposals from the market place, it is now considered entirely appropriate to negotiate with a 'best dressed' company who can supply linked technology.

The preferred supplier with whom negotiations are currently progressing is Global Renewables Limited (GRL), refer attachment for background on this Company.

Global Renewables Limited has twice presented to the Waste Initiatives Subcommittee who have been impressed with:

- Their professional approach.
- Their ability to link up various technologies to provide a comprehensive solid waste process.
- In particular their organics processing technology.

It is relevant to note here that the technologies that GRL utilise all have a well proven track record. In addition they have recently been contracted to build a \$75m waste processing plant in Blacktown near Sydney, handling 160,000 tonnes/per annum – very comparative with the Christchurch situation, except we are only looking at the putrescibles fraction of our waste stream at this stage.

BUDGET

The capital budget for the in-vessel compost plant is as follows:

	All in \$m					
	2001/02	2002/03	2003/04	2004/05	2005/06	Total
On City Water & Waste 2001/02 budget	0.100	2.600	2.600	0.500		5.800
On City Water & Waste 2002/03 draft budget	0.100	0.150	2.893	2.893	0.500	6.536

SUMMARY

The Waste Initiatives Subcommittee has considered a large number of proposals for an in-vessel compost plant. Rather than accept any proposal at this stage it has resolved to take another 12 months to investigate further technology. Investigations are proceeding with an Australian company, (Global Renewables Limited).

RESOLUTIONS OF WASTE INITIATIVES SUBCOMMITTEE

Taking all of the above matters into consideration and in particular the extensive investigations to date, the Waste Initiatives Subcommittee has recommended:

1. To not advertise for widespread proposals again.
2. To investigate technology suppliers on a targeted 'best dressed' approach (and especially those that can supply linked processes that have the capability to process the entire waste stream and hence allow us to 'add on' later).
3. In particular to investigate Global Renewables Limited technology to ascertain whether it (and in particular the organics processing module) is suitable for Christchurch and at what cost etc.

Staff

Recommendation: As above

Chairman's

- Recommendation:**
- (1) That the approach be to adopt a mix of technology best suited for the Council's needs and which can be integrated for the best overall solution towards the removal of putrescibles for the waste stream as discussed in the report.
 - (2) That staff further investigate Global Renewables Ltd Technology to ascertain whether it (and in particular the organics processing module) is suitable for Christchurch and at what cost etc.