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CASE STUDY

The Canterbury Regional Landfill Kate Valley



Presenter

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Presented By



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The Canterbury Regional Landfill

Kate Valley

Executive Summary

In the early 1990's, several local authorities in Canterbury had commenced investigations to find landfill sites to meet their residents' needs. They knew that their existing rubbish dumps would soon be required to be closed because they could not meet the standards which would be required under the Resource Management Act. They needed to look for sites suitable for new environmentally secure and well-engineered modern landfills, of a standard capable of obtaining the resource consents required.

In a region where only one modern landfill would be economic, it was necessary to put a structure in place in which all territorial authorities could participate in a modern new landfill (or alternative method of waste disposal), and in which the interests of Christchurch City with 75% of the waste could be balanced with those of several smaller rural councils, and where the objectives of waste diversion for recovery, and of waste minimisation generally could be protected and enhanced. These objectives were tackled through a joint committee of all of those councils.

It was also considered necessary to bring in the private sector, whose expertise, willingness to share capital costs and risks, and whose 'secured' potential landfill sites would be a desirable, if not necessary, to a leading part in the establishment and operation of a successful business and a high quality facility. The Transwaste Canterbury Limited joint venture company was found to be a very successful model.

Problem/Issue

**AN ENVIRONMENTAL AND ECONOMIC PROBLEM FOR WASTE DISPOSAL
IN CANTERBURY**

Background

By 1995, most of the Canterbury City and District Councils had begun work on their Waste Management Plans; and it soon became clear that the final cost per tonne for disposal to appropriate high standards, would be significantly higher than might have been expected, and between three and four times higher than the then existing costs. The prospect of large cost increases for "go-it-alone" waste disposal systems to meet best practice environmental standards prompted the Waimakariri District Council to convene a meeting in late 1995 of all rural

Canterbury Councils (also attended by Christchurch City Council and Canterbury Regional Council in observer roles), to investigate the potential for a regional approach to this problem. It was thought that economies of scale could make a regional landfill much more cost effective than a number of smaller local landfills.

Initially the officers of the Waimakariri District Council had attempted to establish a new landfill in that District, but soon found that the “go-it-alone” approach was not feasible. Other councils in Canterbury had similar concerns, and Christchurch City Council officers had begun a preliminary evaluation of the possibility of expanding and re-consenting the existing Burwood Landfill, as well as the possibility of alternative sites outside Christchurch. At the same time Waste Management Limited had begun to apply pressure for the Burwood facility to be closed, because of the difficulties of re-engineering it to meet the new standards being demonstrated elsewhere, and which would be required by the Resource Management Act.

The officers of these councils brought these matters to the attention of their respective council standing committees, which discussed and endorsed an investigation into a joint approach by most of the Canterbury territorial authorities. The initial discussions were attended by both senior officers, and committee chairs or their nominees, of all interested councils.

A regional approach was seen by all nine Canterbury rural Councils to have huge merit, and the concept was embraced enthusiastically. The Christchurch City Council, acknowledging a responsibility to take a leading part in assisting the whole region to solve the problem, subsequently accepted an invitation from the rural Councils to participate in examining the concept, and as a result all of the ten Canterbury territorial local authorities formed the Canterbury Waste Joint Standing Committee (CWJSC) in September 1996. The task given it was to investigate the potential for a regional solution for the approximately 300,000 tonnes of solid waste then required to be disposed of in Canterbury annually, and to report back to the Councils with recommendations.

Collection

Solid waste collection systems (collection, transfer stations, and landfills) were traditionally operated by Councils, with rates-funded bag collections at the kerbside. But increasingly, private waste companies had also become involved, offering services to businesses and householders to pick up and dispose of their waste.

Transfer Stations

In 1999, five local authorities in Canterbury used transfer stations as an intermediate step between the collection system and their landfills. The transfer stations provided further opportunities to remove recyclables and reusable material from the waste stream. They also gave more control over waste handling, both at the station and at the landfill, and substantial overall cost savings to the community accrued from transport efficiencies. Fewer, larger vehicles are used to transport compacted waste from local transfer stations to

landfill, compared with having many individual commercial and private vehicles going directly to the landfill (the further a landfill is from the transfer stations, the greater the benefit, in both cost and transport-related environmental terms). By the time the Kate Valley Landfill was commissioned in 2005, all of the participating Councils, and the landfill operator, Canterbury Waste Services Ltd (CWS) had established new or refurbished transfer stations to service the landfill.

Landfills

When the regional landfill project commenced in 1995, the Ministry for the Environment landfill census showed that there were 52 old landfills in Canterbury. Only a few had consent to operate beyond 2002, and only two beyond 2004. Most were essentially holes in the ground which Councils had found convenient for storing solid waste. Many were in gravel pits above groundwater aquifers, or in riverbeds. None had the environmental protections inherent in modern, engineered landfills. These environmentally risky dumps needed to be, and have now been, closed.

The two major existing landfills, Burwood Landfill in Christchurch and Redruth Landfill in Timaru, were examples of (then) NZ good practice, but were considered well short of current international landfill environmental standards. Christchurch City Council's Burwood landfill, which accepted waste from five local authority areas, had consent to operate only until May 2002. The City Council later obtained resource consents to cover the period between June 2002 and the availability of a new regional landfill.

Waste Quantities

When the regional waste disposal project began in 1995, there was approximately 300,000 tonnes of solid waste for disposal being generated each year, after recycling and other waste reduction activities, in the area covered by all ten territorial local authorities involved in the CWJSC.

Approximately 277,700 tonnes came from within the area of the six Canterbury Councils which subsequently became involved in the regional waste joint venture. Around 75% of this came from within Christchurch City. This had reduced to approximately 263,000 tonnes of waste for disposal in 2000, despite an approximate 18,000 additional people living in the area administered by the six Councils, as a result of the introduction of kerbside recycling and composting of greenwaste. In Christchurch City, around 16% of the total waste stream was already being diverted from disposal at the Burwood landfill by Council-provided recycling, composting and other waste minimisation schemes.

The private sector was also heavily involved in the collection, recycling and diversion of waste. Within Christchurch City, waste industry sources involved in the transport of waste from producers to recyclers indicated that a minimum of 100,000 tonnes of waste was being diverted from disposal in 1999 within the private sector.

In some of the rural areas, diversion from landfill had reached a similar or higher level, due to successful local waste reduction programmes, often operated by volunteers with Council support.

Overall Canterbury was achieving 38% diversion from disposal, a result which then compared well with some of the best in the world, but the tonnage of waste requiring disposal then began to trend upward, and this trend continued in Canterbury until 2006 when a small reduction was recorded for the first time since the Canterbury Landfill project began. The tonnage disposed of at Kate Valley at year end 2006 was almost 300,000 tonnes.

Project/Response

THE SOLUTION – A CANTERBURY REGIONAL LANDFILL

Regional Waste Concept

The six Councils which elected to become involved envisaged that, instead of each local authority working within its own boundaries to manage its own waste disposal, all could join together to develop one modern, high standard waste disposal facility to accommodate most of Canterbury's solid waste.

The Councils considered that this approach would have the major advantage of the substantial economies of scale available with a larger facility. The significant financial burden of the capital and operating costs of a modern high standard facility could be made more manageable for each Council, and could enable world best practice to be achieved at an affordable price for the regional community.

The Councils understood that they needed to eliminate the old-style unsafe rubbish dumps throughout the region and that this would have a substantial long-term environmental benefit. They considered that focusing their efforts regionally on one properly designed and operated facility would produce better environmental outcomes than several Councils struggling to meet new high environmental standards with smaller facilities and limited resources.

They also saw that working together at a regional level could open up the way for improvements in management of the total waste stream. At the time, all Canterbury Councils had different waste strategies and applied differing approaches to funding waste minimisation; and there was a general lack of any coordination of waste minimisation efforts. The Councils foresaw that taking a regional focus would encourage streamlining and coordination of the various recycling and reuse initiatives underway in different Canterbury communities, and would encourage cooperation and sharing of knowledge and resources between them, in a way that had not happened before.

Right from the beginning, a major part of the thinking of the Canterbury Councils, was that a regional approach should apply to the entire waste management

process, not just to the disposal of residual waste after recycling and other waste minimisation efforts.

While the initial focus had to be on waste disposal, because of the critical time constraints due to the imminent closure of existing landfills and dumps, a later look at the benefits of joint action in waste minimisation was planned by the joint Councils. Unfortunately, while some good work has been done, the other waste management initiatives of the joint Councils have not progressed as well as the landfill project consistently across the whole region.

The reason for this appears to be that, having secured a 'best practice' landfill, the pressure for better waste diversion facilities has been reduced. While officers of most of the Canterbury councils have continued to plan to achieve better recycling / recovery, many of the politicians have shown some resistance to committing rate- payer funds to better waste diversion facilities. But Christchurch has leased its waste transfer stations to Meta NZ Limited whose objective is to optimise diversion at those facilities. Timaru has established a materials recovery facility for some of the waste stream; and other councils have also taken worthwhile initiatives. Yet the establishment of modern and comprehensive recyclables collections and materials recovery facilities are generally lagging about five years behind the landfill project. A regional approach to the establishment of such facilities is not being considered beyond the sharing of information. However the scope for a regional approach exists, and the probable establishment of a modern Materials Recovery Facility (MRF) in Christchurch within the next two years is likely to generate interest from nearby districts to collect and commit their recyclables to it.

Canterbury Waste Joint Standing Committee (CWJSC) and its Investigations

To progress the investigation of the merits of a regional solution to solid waste disposal, the original ten Canterbury territorial local authorities set up the Canterbury Waste Joint Standing Committee (now the Canterbury Landfill Committee). This committee is a full standing committee of each participating Council, with an agreed terms of reference to establish and implement solid and hazardous waste strategies that have the minimum practicable adverse environmental effects.

CWJSC members are elected councillors. The Councils are bound by contract to ensure continuation of the Committee through the three yearly election cycle.

Each District Council has one elected representative, with the Christchurch City Council having three. While all representatives have full attendance and speaking rights, voting is split 50/50 between the rural District Councils combined, and the City Council, with one representative chosen by each grouping of three rural Districts for voting purposes. Maintaining a balance between the City and rural Districts was seen as a key to successful progress.

The City has the right to appoint the chairman, who has a limited casting vote, recognizing that the City supplies about 75% of the waste stream and a similar proportion of the joint Councils' capital contribution. This formula was recommended to the participating councils following discussions by the members of the Committee. The City would have been unlikely to agree to anything less, but the rural councils needed to have a real influence on the fundamental decisions to be made, especially since the new landfill would have to be located within the territory of one of them. The balance, between the two groups (rural and city), structured as described, has proved to be a successful model, and this concept has also come through into the final structure chosen to implement the regional landfill project.

A staff group made up of appropriate technical and management staff from the participating Councils advises the Landfill Committee, and implements its decisions. Technical and financial consultants were engaged for assistance throughout the Standing Committee's investigations for the regional landfill project.

As part of those investigations, the Landfill Committee identified a number of objectives that a regional solid waste facility would need to achieve to satisfy the region's expectations. The Committee determined that these objectives incorporated the "bottom line" of what is important to Canterbury communities, and would have to be incorporated in the project.

These objectives were:

1. Environmental Risk Minimisation
The desire to avoid future pollution problems for future generation.
2. Waste Minimisation
Balancing the inherent conflict between generating a fair financial return with the strong community desire to minimise waste going to final disposal.
3. Cost Effectiveness
The solution must be the most cost effective solution, not only because of the desire to have an affordable system, but also because the open competitive commercial environment in New Zealand demands it.
4. Stable Prices
Evening out of peaks and hollows of normal commercial operation to maintain reliable steady pricing, to allow people to plan for their disposal costs.
5. Continuity of Service
Reliability in all events, including commercial failure, weather, etc.
6. Equity of Access
No possibility of a commercial partner shutting out competitors from the facility or using discriminatory pricing.

7. High Quality Services and Facilities

Commensurate with the importance to the community of a single major solid waste disposal facility.

Shortly after its formation, the Committee embarked upon a detailed investigation of the different options available for a regional solid waste disposal in Canterbury. While the initial focus of the rural Councils had been on landfill, the Committee decided to review all waste disposal options. A range of different options for waste disposal was evaluated:

- Landfill
- Incineration
- Waste reduction, re-use, recycling
- Composting
- Bio-digestion
- Neutralysis

It was concluded by the Committee that a modern landfill would be the only acceptable and affordable option for Canterbury which could meet the objectives, and would also be compatible with waste reduction, re-use, recycling and recovery of energy initiatives.

The Committee developed criteria for the selection of potential landfill sites. These criteria were based on the Centre for Advanced Engineering Landfill Guidelines and the US Environmental Protection Agency's Subtitle D landfill regulations.

During February and March of 1997, extensive Canterbury-wide consultation was undertaken on how to handle the region's waste. By way of a series of Canterbury-wide advertisements, distribution of an information booklet, eleven public meetings across the region, and three additional meetings for special interest groups, the public were asked to comment on four main issues:

- Should the Canterbury Councils continue to work together to find a regional solution for solid waste disposal?
- Were the objectives that the Committee had identified, a true reflection of what Canterbury communities would want to see in any regional solid waste disposal option?
- How did the regional community feel about the prospect of the Canterbury Councils working in partnership with the private sector to deliver a regional solution?
- Are the landfill selection criteria appropriate for later selection of potential landfill sites?

Public submissions received during the consultation process were very positive about the Councils working together, supported the objectives, and confirmed the appropriateness of the landfill criteria. The public consultation endorsed a regional approach to building and operating one environmentally secure landfill to take the region's residual waste. It also supported the continued involvement of the local authorities with waste reduction, re-use and recycling strategies so as to reduce the volume of waste that finally needs disposal. However, there was recognition that, despite the significant impact that waste minimisation was already having in Canterbury, a substantial quantity of residual waste would need disposal for the foreseeable future.

A small number of submitters had concerns about the private sector involvement, but most participants in the consultation accepted the rationale for a partnership approach.

In September 1998, six of the original ten territorial local authorities formally resolved to join a joint venture: Ashburton District, Selwyn District, Banks Peninsula District (now amalgamated into Christchurch City), Waimakariri District, Hurunui District, and Christchurch City. Timaru City Council decided not to join the joint venture since it has a landfill at Redruth with long term consents, which it decided to upgrade instead. Its nearby councils of Waitaki and MacKenzie opted to co-operate with that option too. .

THE JOINT VENTURE BETWEEN LOCAL AUTHORITIES AND PRIVATE WASTE COMPANIES

Private Sector Involvement in Waste Disposal

Shortly after the Committee began investigating the potential for a regional approach to waste disposal, it became apparent to the Councils involved, that private waste companies were intending to enter the landfill market in Canterbury. Two firms had publicly stated that they had "secured" potential landfill sites in Canterbury. It was since later discovered that a third private firm had also secured a landfill site.

While the concept of private landfills was new in Canterbury, in Auckland the private sector has been heavily involved in the waste disposal business for many years, and all landfills in Auckland are either privately owned or run as a joint venture between a local authority and one or more waste companies.

Organisational and Ownership Arrangements

As part of its overall investigations into a regional waste solution, the Committee carried out a feasibility study to identify the types of organisational arrangements that could be used to develop and manage a regional landfill. These broke down into three models, as follows:

- **Council ownership**
Councils form a consortium and develop a facility.
- **Private sector delivery**
Councils stand aside and let the market provide whatever facilities the private firms deem appropriate.
- **Private sector/Public sector partnership**
Some form of joint venture or other partnership arrangement between the Canterbury local authorities and one or more private waste companies.

The Council ownership model would probably have been the preferred option even just a few years before, when the private sector had no involvement in waste disposal in Canterbury, but with the clear intention of the private waste disposal companies to enter the Canterbury waste disposal scene, the private sector delivery option was also considered as a possibility for Canterbury. The Councils were conscious however, that, with this model, they would have no influence on the disposal process, with a correspondingly reduced chance of realising the Councils' and community's objectives. Objectives such as continuity of service, environmental risk minimisation, stable prices, and equity of access, were considered by the Councils to be difficult to ensure without public sector involvement. In particular, the Councils considered that under this option they would not be able to successfully avoid or balance the potential conflicts between the wish to maximise waste flow for financial return and the strong community desire to minimise waste going to final disposal in a landfill.

The private sector / public sector partnership option also had the advantages of bringing in the expertise and experience of the waste companies, and potential access to their financial resources as well as access to the landfill sites which they had "secured". It was also seen as providing the best chance of making the realisation of the Councils' and community's objectives achievable. Such a partnership was seen to work best with a 50/50 arrangement in that no decision could be made without the agreement of both the 'commercial partners' and the participating Councils on the board of the joint venture company.

The 1997 public consultation on regional solid waste disposal included consideration of how the regional community felt about the prospect of the Canterbury Councils working in partnership with the private sector to deliver a regional solution. As was outlined above, whilst some submitters had concerns about the private sector involvement, most participants in the consultation meetings and submissions accepted the rationale for a partnership approach.

Development of the Public / Private Joint Venture

In late 1996, waste companies were invited through national advertisements to register their interest in putting forward proposals to the Committee to provide a

regional waste disposal solution which would meet the Councils' and community's objectives. Seven companies registered their interest, five for disposal by landfill, one for disposal by incineration (energy from waste), and one for the transportation component only. This demonstrated significant private sector interest in the partnership concept, and led to the Committee seeking public feedback on the idea.

Feedback from public consultation undertaken in early 1997 was incorporated into a Request For Proposals (RFP) document, which was sent out in April 1997 to six of the seven companies, which had registered interest. Only the registrant interested in the transport component was not invited to submit further as their interest was not relevant to the disposal partnership being investigated. The RFP set out what the Committee had hoped to achieve in a regional solution. It invited the private companies to put forward full proposals for a partnership which would meet both the Councils' and community's objectives, and commercial and business imperatives. The process was carried out by the staff support group comprised of officers from all of the participating councils.

All proposers made detailed half-day presentations to the Committee, and substantial independent advice on the proposals was obtained.

Following evaluation by the Committee, the two of the best proposing companies, Waste Management NZ Ltd and Envirowaste Services Ltd, were assessed as having similar strength, but with some differences in their respective approaches. The Committee wished to have the best of both of these proposers. Therefore both of them were invited to submit second stage proposals and further presentations. After more research and advice, the CWJSC decided that the best way to attain its objectives would be to have both firms involved in the joint venture partnership. This led to an invitation to both firms to participate in a joint venture with the Councils. The two companies subsequently agreed between themselves to set up a new joint venture company (Canterbury Waste Services Limited - CWS) to participate in the joint venture with the Councils.

Following the agreement of the two private companies to work together, and formal endorsement of the joint venture proposal by all of the participating Canterbury Councils, the CWJSC began an extensive period of negotiations with the two companies to finalise the nature of the joint venture. All of the principles and agreements for the entire venture were then incorporated into a Memorandum of Understanding (MOU). Negotiation of the MOU took from January to August 1998. A great deal of effort was put into the development of the MOU to ensure that everything was understood and agreed.

The most difficult issues were those relating to the control of the joint venture company, how it would fix gate charges and establish a fair rate of return, and how the commercial partner would operate, especially how its "proper return" would be established. Other areas which presented some difficulty were issues

relating to the need for the councils to ensure that only residual waste would go to the landfill, and the need for co-operation with the councils' waste minimisation plans. These issues were resolved by a long and detailed process of negotiation by representatives of the Committee and supporting officers, as well as legal advisers.

The negotiated MOU and related company documentation was taken back to all of the Canterbury Councils in August 1998 for them to make their final decision on whether to participate in the joint venture. A "roadshow" presentation reiterating the entire process and covering the specific details of the proposed agreement was given to each Council.

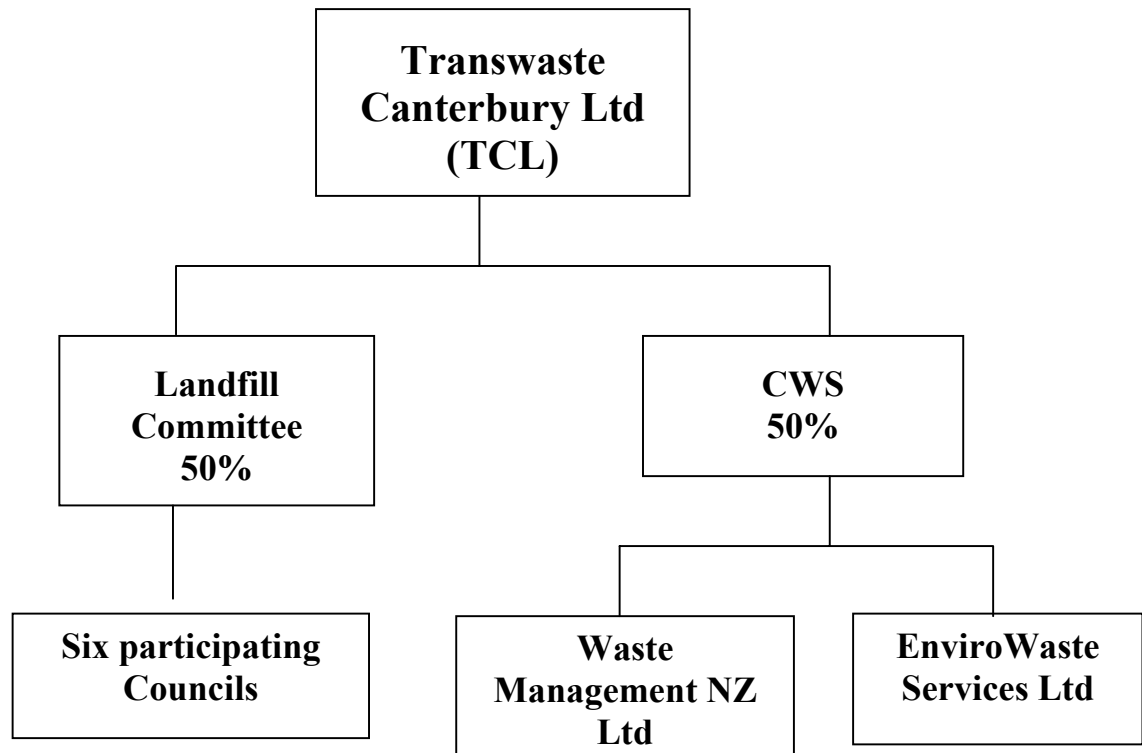
Joint Venture Structure and Agreements

The MOU provided for a new joint venture company, Transwaste Canterbury Ltd (TCL). Half of the shares in the company are owned by the six participating local authorities, and half by CWS.

Individual Council shareholdings are in proportion to their population as a surrogate for waste volumes, which could not at the time, be accurately measured in all participating Council districts. The Council shareholdings are held in each Council's own right, but coordination of the Council shareholders as a group is achieved through the Committee. Each Council has irrevocably delegated its shareholder functions to the Committee. This is an essential requirement to ensure that all Councils have a single voice in the joint venture with the commercial partners in TCL.

The joint venture company has eight directors, four from each shareholding group. The Chair of the Board is a Landfill Committee appointee for the period until the landfill is operational, and also for the first two-year rotation after land filling commences. The Chair has no casting vote, ensuring that agreement must be reached on all matters. This was essential to the success of the joint venture. A casting vote would have unbalanced the equality of voting on the board and would have had a negative effect on healthy board dynamics. It is too easy for a matter to be resolved by simple weight of numbers if either the commercial partner or the council partner had a majority, potentially resulting in one partner becoming disaffected. Equality ensures that neither partner can dominate, and requires the development of consensus. An example was the process to establish the fair rate of return for Transwaste. Expert advice taken by both partners did not agree. A third expert also failed to settle the matter completely. In the end the board of the company 'locked' itself away for a whole Saturday session devoted to the issues surrounding the matter, and finally reached consensus. The point is that neither party can afford to fail to reach a reasonable decision on important matters. Obviously experienced and capable board members is of vital importance.

Figure 2 shows the joint venture structure.



The joint venture constitution includes important provisions to ensure that the respective interests of the different parties are protected, but TCL is managed commercially, with its prime objective being to operate as a successful business. It was seen by the parties to be important that the TCL Board focuses on providing the most efficient landfill for Canterbury's residual waste, with waste minimisation initiatives being managed by the Councils through the Landfill Committee. A commercial approach was believed to be the best way of ensuring this. As the Company has a 50 percent local authority ownership, it is also required by the Local Government Act to operate commercially.

TCL now operates as a landfill and waste haulage company, but it also has a longer-term objective of being able to offer other waste facilities and solutions in the region, and an obligation to both co-operate with Councils waste minimisation initiatives as well as an ongoing obligation to investigate alternatives to landfill which are at least equally viable commercially, and equally or more effective in terms of environmental security, as the Kate Valley Landfill. All joint venture shareholders must commit their controlled volumes of waste to the Kate Valley facility.

The Mission Statement of the company covers its various commitments, as follows:

- To the shareholders to operate as a successful business with sufficient earnings to support the company's growth, whilst also returning an adequate risk adjusted return on investment (a "fair rate of return" as defined in the MOU).
- To the environment and its Resource Management Act responsibilities.
- To service and customer needs.
- To health and safety.
- To business ethics policies.
- To the people of the region and Tangata Whenua.

Participant's Roles

TCL has selected, consented, built and now owns the Kate Valley Landfill. It is responsible for the collection and transport of residual waste from all transfer stations that supply waste directly to the landfill. TCL sets the gate charges at the landfill, having regard to the principles set out in the MOU and subsidiary agreements. This incorporates a process to ensure that TCL earns a "fair rate of return" (as defined in the MOU), and that CWS, as TCL's contractor to build and operate the landfill on TCL's behalf, earns a "proper return" (as also defined in the MOU). TCL guarantees adequate disposal capacity for the participating local authorities for a minimum period of twenty years (the term of the joint venture).

Each participating Council, as transfer station owners (and any other suppliers of waste to the landfill), must ensure the waste going to landfill meets TCL's waste acceptance criteria, and that waste is loaded in an appropriate way to meet safety and efficiency requirements.

Outside those obligations, the Councils are free to manage their waste stream up to the point of the residual waste going to landfill, as they wish. Councils and other transfer station operators retain control of pricing at their transfer stations, and can undertake any waste minimisation activities. These arrangements, together with the RMA consent conditions, ensure that the Kate Valley Landfill is operated as a default facility to dispose of residual waste, which Councils and others involved have been unable to divert for reuse, recycling or recovery of energy.

A Landfill management and Operations Contract was entered into by TCL with CWS under which CWS managed the design and development of the landfill, including the consenting process, and under which CWS now manages the landfill operation and the transportation system from transfer stations to the landfill.

The Landfill Committee directly appoints four nominee directors to represent the Council shareholders on the TCL Board.

Since the formation of the board, Waste Management has been sold to Transpacific Industries (TPI), and Envirowaste Services has been sold to Ironbridge, which has entered into an agreement, which would result in its CWS interest in Transwaste being sold to TPI. While these changes do not directly affect the Transwaste joint venture, they demonstrate at least a potential risk for Councils entering into such ventures, being that:

- The nature of the joint venture can be changed in a way which could result in culture change which may, or may not, be undesirable with reference to both the dynamics of the joint venture board, given the degree of dominance which the industry partner (CWS) has in the overall scheme, and
- The possibility of one party achieving such regional dominance through such a significant degree of vertical integration (collection, transfer, transportation and disposal of waste) that aspects of monopoly behaviour have the opportunity to emerge.

As a way of reducing these risks, attention might be given to the rights of pre-emption relating to the sale of the interest of any participant in the commercial partner's shareholding entity in Transwaste, perhaps by seeking to limit the parties to whom the shares in that entity may be sold. The consent of the council partner could be required, and might be properly with-held if undesirable vertical integration might be likely to result. Obviously the commercial partner would strongly resist any such limitation, and it might be a deal breaking issue for them.

Results and Conclusions

Success of Joint Venture set up

The Canterbury Landfill Project has demonstrated:

- A successful joint approach by (originally) six (now five) territorial Councils to establish and operate a major facility for waste disposal for a large part of the Canterbury region, in ways which optimise the achievement of Council and community objectives.
- A successful public – private joint venture which achieves fundamental commercial objectives without compromising Council and community requirements, including fair pricing in a regional monopoly environment.
- A robust process in the establishment of the Kate Valley Landfill which preserves options for increased diversion from landfill, and for an alternative method of waste disposal should one become available which at least equals the Kate Valley facility in both economic and environmental protection terms.

- The establishment of a high quality long term waste disposal facility which meets Council and community expectations and world best practice standards of service and environmental security.
- That the comprehensive arrangements made through the MOU and subsidiary instruments, including rights of pre-emption, cannot in the end prevent the possibility of aspects of monopoly behaviour and of excessive influence at the joint venture board table, emerging as a result of changes in the ownership structure of the commercial partner.
- The Kate Valley Landfill is only in its second year of operation. At the end of its first year waste tonnages had increased to nearly 300,000 tonnes. Since then it is evident that this level has slightly reduced or reached a plateau. These tonnages were significantly higher than initially expected. The facility has coped easily with the increase, and it is also now clear that compaction rates and other efficiencies relating to future landfill development will ensure that it will have the capacity to continue well beyond its currently consented life.
- It is also evident that the financial performance of the company is satisfactory, and that it will earn its required rate of return and provide the desired dividend levels to its shareholders within a reasonable period following commencement. The first year's published financial statement is not representative of a 'normal' year of operation due to start-up effects, and the second year of operation has not yet been completed.
- The necessary increase in gate charges has been absorbed by the community without any significant protest or effect, other than to incentivise the moves being made by others to improve waste diversion to recycling or recovery.
- There have been no significant consent compliance issues, environmental incidents or operational problems. An ambiguity in the interpretation of some consent conditions relating to truck movements to/from the landfill was successfully resolved by reference to the consent authority.

Prospects/the Future

The Kate Valley Landfill and Transwaste can look forward to a probable steady reduction in waste volumes. While increased volumes are likely to be diverted to recycling or recovery, there will still be significant volumes requiring disposal at this facility for the long term. As volumes decrease the development of the landfill can be adjusted accordingly.

Statistics:

10 years from conception to commissioning

20 years joint venture – public / private

\$36M capital investment to open

Share capital \$20M, of which \$16M called

Gate Charge \$64.77 per tonne (2006-07) \$72.06 per tonne (2007-08) incl GST.

Transport charge per trip from Christchurch: range is \$503.42 to \$542.56 (2006-07) \$540.17 to \$582.16 (2007-08)

First year acceptance nearly 300,000 tonnes

Operated on fully commercial basis with agreed return on investment

Future opportunities exist in the development of landfill gas for generation of energy and for the evaporation of leachate (thus avoiding expensive transport to the Christchurch wastewater treatment plant).

The implementation of the company's real estate strategy will also offer a substantial financial upside, as surplus land is sold, while preserving options for a 'Kate Valley II' landfill if ever another one should be needed in the very long term, and while preserving ample buffer zones and screening areas as well as a very large conservation area and project with very significant public recreation values and tourist potential.

Adaptability/Transferability

The joint venture structure offers the parties options for the future. The councils' interests are both commercial and strategic, and this seems unlikely to change. They may at some future time seek to purchase the commercial partner's interest while maintaining the landfill operation and transport system by contract. If so the governance structure through the Committee and the Transwaste Board will continue to be effective. Alternatively there should be a ready market should the councils for any reason decide to sell their interest and let the private sector continue the landfill without any council involvement.

Should the current ownership structure and contract system continue in the long term, as seems likely, then there is no reason why it should not continue to operate successfully for the mutual benefit of both shareholder groups. It will stand the test of time, and as such will be a testament to the robust concept for the ownership, governance and management of the facility, the decisions made to optimise operational and transport efficiencies, and the adoption of the highest achievable environmental and operational standards.

Nevertheless, as every such facility will have its own unique set of issues, the lesson for anyone setting out to establish a regional facility of this kind will be well advised to place particular attention to the foundation arrangements such as those addressed in the Transwaste MOU, since once resolved they are not easy to amend. The experience of others is available, and the wheel need not be re-invented.

Contacts for Further Information

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