Waste Assessment for Waste Management and Minimisation Plan Review

Prepared for Hauraki District Council, Thames-Coromandel District Council and Matamata-Piako District Council

December 2011
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<th>Definition</th>
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<td>Waste Management and Minimisation Plan</td>
</tr>
<tr>
<td>WMA</td>
<td>Waste Minimisation Act (2008)</td>
</tr>
<tr>
<td>(NZ) ETS</td>
<td>New Zealand Emissions Trading Scheme</td>
</tr>
<tr>
<td>DEF</td>
<td>Default Emission Factor (in reference to the NZ Emissions Trading Scheme)</td>
</tr>
<tr>
<td>DFO</td>
<td>Disposal Facility Operator</td>
</tr>
<tr>
<td>UEF</td>
<td>Unique Emission Factor (in reference to the NZ Emissions Trading Scheme)</td>
</tr>
<tr>
<td>DOC</td>
<td>Degradable Organic Carbon (in reference to the NZ Emissions Trading Scheme)</td>
</tr>
<tr>
<td>NZU</td>
<td>New Zealand Unit - a unit of carbon that can be traded through the ETS (in reference to the NZ Emissions Trading Scheme)</td>
</tr>
<tr>
<td>HDC</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>MPDC</td>
<td>Matamata District Council</td>
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<td>TCDC</td>
<td>Thames-Coromandel District Council</td>
</tr>
<tr>
<td>CRN</td>
<td>Community Recycling Network</td>
</tr>
<tr>
<td>WMF</td>
<td>Waste Minimisation Fund</td>
</tr>
<tr>
<td>RCN</td>
<td>E-Waste recovery company</td>
</tr>
<tr>
<td>Agrecovery</td>
<td>National product stewardship scheme for the recovery of agricultural chemical containers and silage wrap</td>
</tr>
<tr>
<td>NZWS</td>
<td>New Zealand Waste Strategy</td>
</tr>
<tr>
<td>Molok</td>
<td>Large public area bins for refuse and recycling. The majority of their volume is underground reducing visual impact, easing space constraints and reducing service intervals</td>
</tr>
<tr>
<td>SMART</td>
<td>Save Money And Reduce Trash</td>
</tr>
<tr>
<td>RTS</td>
<td>Refuse Transfer Station</td>
</tr>
<tr>
<td>CFC</td>
<td>Chlorofluorocarbon</td>
</tr>
<tr>
<td>TA</td>
<td>Territorial Authority</td>
</tr>
<tr>
<td>HASNO</td>
<td>Hazardous Substances and New Organisms (Act 1996)</td>
</tr>
<tr>
<td>RMA</td>
<td>Resource Management Act (1991)</td>
</tr>
<tr>
<td>E-waste</td>
<td>Electronic and electrical waste</td>
</tr>
</tbody>
</table>
1.0 Introduction
This section provides a brief background of the key characteristics of each of the districts covered in this Joint Waste Assessment.

1.1 Purpose of this Joint Waste Assessment
This Joint Waste Assessment is intended to provide an initial step to the development of a Joint Waste Management and Minimisation Plan, and should provide the information necessary to identify the key issues and priority actions that will be included in a draft WMMP.

Section 51 of the WMA outlines the requirements of a Waste Assessment, which must include:

1. a description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority’s district
2. a forecast of future demands
3. a statement of options
4. a statement of the territorial authority’s intended role in meeting demands
5. a statement of the territorial authority’s proposals for meeting the forecast demands
6. a statement about the extent to which the proposals will protect public health, and promote effective and efficient waste management and minimisation

1.2 Joint Working
As adjoining districts in the Waikato region (shown in Figure 1-1), Thames-Coromandel District Council (TCDC), Hauraki District Council (HDC) and Matamata-Piako District Council (MPDC) (the Councils/the Districts) have grouped together in order to prepare a joint Waste Assessment. As the available waste management services vary between the districts, this document presents the current situation in each district separately. The document also highlights similarities in services between the districts and assesses the potential for future joint-working.
The Councils have been considering a joint working approach for several years, and commissioned Morrison Low to undertake a feasibility assessment for a shared waste contract in 2009. The ‘Statement of Options’, towards the end of this Waste Assessment outlines potential options for joint-working which could be adopted going forward.

Although currently each District has separate arrangements for their waste management, they are all contracting the same operator - Smart Environmental Ltd - for waste and recyclables collections – therefore to some extent there is a level of joint-working by default being undertaken already, albeit informal and controlled only by the contractor themselves. When the contracts are retendered, however, there is no guarantee that the same contractor will retain all three contracts and that this informal ‘joint working’ will be able to continue.
1.3 Background
The Waste Minimisation Act 2008 (WMA) requires a formal review of the Districts’ existing Waste Management Plans be completed prior to 1 July 2012. Section 50 of the WMA requires all Territorial Authorities to prepare a ‘Waste Assessment’ prior to adopting a new Waste Management and Minimisation Plan (WMMP).

The Councils have decided that this joint Waste Assessment will be the first step in reviewing their existing Waste Management Plans.

The Councils have drafted a memorandum of understanding to undertake a joint procurement of waste and recycling services in 2013, when their current contracts terminate. As part of this move towards joint waste management, this joint Waste Assessment may subsequently lead to the production of a joint Waste Management and Minimisation Plan (WMMP), depending upon the Options identified in the Assessment (see Section 7.0).

1.4 Thames-Coromandel District
The Thames-Coromandel District is located in the North-east of the Waikato region, largely on a narrow peninsula, through the middle of which runs a dividing mountain range. With the population spread through the coastal margins of this rugged region, the geography presents particular challenges to waste management.

The District borders the Hauraki District to the south. With a land area of 258,000 hectares, the area is well-known for spectacular beaches, native bush and large parks and reserves and over half of the land within the District is either Department of Conservation or Crown land.

The usually resident population of 25,941 (from 2006 census), growing at 0.3% per year, is characterised with a relatively high proportion of older people (compared to the NZ national average), suggesting it has become a popular area for retiring to. The most prevalent ethnicities in the region are European, then Maori.

During the Christmas and New Year Period the population can multiply by up to 26 times in particularly popular areas such as Matarangi, but on average the population increases by about five times.

As an attractive holiday destination just over half of the 26,186 housing stock units are occasional or secondary residences (i.e. holiday homes and baches). Between 1998 and 2008 the number of dwellings has increased at 2% per annum, more than six times greater than the growth rate of the resident population. However, the majority of this rapid growth was predominantly due to the increase in the number of unoccupied dwellings, as shown in Figure 1-2.

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2 BERL Economics (2009)
The largest settlements in the District are Cooks Beach, Coromandel, Matarangi, Pauanui, Tairua, Thames, Whangamata and Whitianga. The most recent census data (2006) showed that Thames has the largest usual resident population of 7,542 people, followed by Whitianga with 3,768 people and Whangamata with 3,567 people.

As well as these main settlements there are a large number of small-dispersed communities making for an overall low population density across the region. This is significant when considering infrastructure.

Economically, there is predominantly reliance on the service sector (in 2006 this sector accounted for 34% of employment), then distributive sector (accounting for a further 28%), the secondary sector 22% and finally the primary sector (10%). These employment figures are indicative of the Districts economic reliance on the tourism sector.

1.4.1 District Strategies and Plans
The following strategies and plans in-place in TCDC have provided useful context and background:

- Solid Waste Asset Management Plan for the Thames-Coromandel District Council (April 2006)
1.5 Hauraki District

The Hauraki District adjoins the Thames-Coromandel District to the north and the Matamata-Piako District to the south, Waikato District to the west, and Western Bay of Plenty District to the east. It is characterised by geographical diversity with both an abundance of flat fertile soils and the rugged Karangahake and Kaimai/Coromandel ranges.

It is the smallest of the three Districts covering a total of 1,144 km² with a population of 17,690 usual residents (2006 census data) and 10,153 households. The areas of Kaiaua/Miranda were annexed into Hauraki District on 1 November 2010, which resulted in a slight increase in population and household numbers. There are a higher proportion of residents between 45-64 and 65+ compared to the rest of New Zealand. The majority of residents are European, and the Hauraki District has a higher proportion of residents in either the European or Maori ethnic groups, compared to the rest of the country.

The main townships are Paeroa, Waihi and Ngatea with populations of 4,000, 4,500 and 1,150 respectively.

While Hauraki does not have the same level of peak season visitor influx as Thames-Coromandel there are high visitor numbers in some areas, in particular Whiritoa.

The Hauraki District supports a range of economic activities, including: a strong agricultural sector, which is predominantly dairy farming, beef and sheep and gold and silver mining. The District’s mines account for 46% of the country’s gold production and nearly 100% of silver production. Tourism is becoming an increasingly important aspect of the economy in partnership with the Coromandel Regional Tourism Organisation.

1.5.1 District Strategies and Plans

The following strategies and plans in-place in HDC have provided useful context and background:

- Hauraki District Council Solid Waste Asset Management Plan (September 2009)
- Hauraki District Council Annual Plan 2010/11
- Waste Management Plan 2002

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4 Figures supplied by HDC
1.6 Matamata-Piako District

The Matamata-Piako District covers approximately 182,150 hectares of mostly flat land and is situated in the eastern part of the Waikato region bordering Hauraki, Waikato, South Waikato, Waipa, and Western Bay of Plenty Districts.

The total population of the district is 31,512 people (as of 2008) occupy 14,180 households. The three main settlements in the district are Matamata (6,430 people), Morrinsville (6,770 people) and Te Aroha (3,850) (all 2006 figures). As a region, compared to the national average, there is a greater proportion of New Zealand European and an average level of Maori.

The economic drivers for the district (ranked in order) include dairy farming, dairy manufacturing, wholesale and retail, meat processing and poultry processing. Other large industries include chemical and fertiliser manufacturing. These industries greatly influence the quantity and type of waste generated in the Matamata-Piako District.

1.6.1 District Strategies and Plans
The following strategies and plans in-place in MPDC have provided useful context and background:

- Matamata-Piako District Council Solid Waste Asset Management Plan (June 2010).

1.7 Summary: The Three Districts

Sections 1.3 to 1.6 have presented the characteristics of each District individually. As a joint approach is being taken in this assessment it is also important to consider similarities and differences across the Districts, and any potential issues which may arise as a result.

From a waste management perspective there are several key issues which are faced by the Districts. These issues will be considered at the Options stage of the Waste Assessment (Section 7.0):

- **Population fluxes**: these are as a result of temporary residents and tourism during the summer months and public holidays and lead to highly variable

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5 Background information on the Matamata-Piako District was obtained from the following documents: Matamata-Piako District Council (2010) Waste Minimisation Strategy 2010: Towards Waste Minimisation and a Sustainable District, February 2010; Matamata-Piako District Council (2010) Solid Waste Asset Management Plan.
tonnages and set-out rates during the year. This is predominantly an issue in Thames-Coromandel but to a lesser extent in some areas of Matamata-Piako and Hauraki. Seasonal fluctuations in population put pressure on infrastructure and resourcing and create challenges in optimising peak and off peak service levels.

- **Ageing populations**: projections for all three Districts show that they are growing areas for ageing resident populations as people choose to retire there and younger residents leave. This is resulting in the average number of residents per household reducing over time. Although smaller households generate less waste per household they generate more waste per capita. As a result, a stable population occupying a greater number of households will lead to an increase in waste generation.

- **Rural/urban**: there is a significant area of rural land in all three Districts, amongst which there are scattered urban communities. Although this in itself is similar across the Districts, the needs and desires of the different communities are likely to be variable. Thames in particular has quite challenging terrain with narrower and more mountainous roads connecting the centres, while Matamata-Piako is relatively flat, and distances are more easily covered. Hauraki is relatively flat but about 1/3 of the area is hilly.

## 2.0 Scope

### 2.1 General

As well as fulfilling a statutory requirement under section 51 of the WMA, this document is intended primarily to build a solid foundation that will enable the Councils to move forward on waste issues in an informed and effective manner. The assessment has been undertaken with reference to the Ministry for the Environment’s ‘Waste Management and Minimisation Planning: Guidance for Territorial Authorities’.

Legal opinions obtained by various Councils around New Zealand have made it clear that, under the WMA, the Waste Assessment must go beyond those waste and recovered material streams managed directly by the Councils and should include an assessment of all current commercial and industrial waste and recovered material streams, all relevant services provided by the private sector, a forecast of future demand, consideration of options to meet forecast demand, and determine the Councils’ intended role in meeting that demand.

The Councils therefore have a responsibility to plan for all waste generated in the District when considering waste infrastructure and services.

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2.2 Council Controlled and non-Council Controlled Waste Streams

Section 5.0 provides detail on the proportions of waste controlled by council in each district. In brief the key metrics for each council are summarised in Table 2-1.

Table 2-1: Summary of Waste Metrics

<table>
<thead>
<tr>
<th></th>
<th>Thames-Coromandel</th>
<th>Hauraki</th>
<th>Matamata-Piako</th>
</tr>
</thead>
<tbody>
<tr>
<td>% HH with Council kerbside service</td>
<td>89%</td>
<td>62%</td>
<td>64%</td>
</tr>
<tr>
<td>Council controlled waste to landfill</td>
<td>83%</td>
<td>54%</td>
<td>39%</td>
</tr>
<tr>
<td>Council controlled recycling/recovery</td>
<td>75%</td>
<td>77%</td>
<td>86%</td>
</tr>
<tr>
<td>Council-controlled kerbside refuse</td>
<td>84%</td>
<td>54%</td>
<td>21%</td>
</tr>
</tbody>
</table>

2.3 Consideration of Solid, Liquid and Gaseous Wastes

This Waste Assessment has focused on solid waste.

The guidance provided by the Ministry for the Environment on preparing Waste Management and Minimisation Plans states that:

“Councils need to determine the scope of their WMMP in terms of which wastes and diverted materials are to be considered within the plan”.

The guidance goes on to suggest that liquid or gaseous wastes which are directly managed by the Council, or are disposed of to landfill, should be seriously considered for inclusion in a WMMP.

Each of the Councils manage most liquid and gaseous wastes through other strategies, including assessments of services. This Waste Assessment therefore focuses on solid wastes, and excludes liquid and gaseous wastes, except where these are considered to have implications for solid waste management. These exceptions include biosolids from waste water treatment facilities that will require processing or disposal, gas from landfills, and some liquid hazardous wastes.

The management of other sewage wastes, such as liquid waste removed from septic tanks, has been assessed in detail at a regional level with the conclusion that generally, services and treatment are effectively managed by the private sector.

2.4 Public Health Issues

Protecting public health is one of the original reasons for local authority involvement in waste management. This was set out in the Health Act 1956 - although these
requirements have now been repealed\textsuperscript{7}. The NZ waste strategy (2010) contains the twin high level goals of “Reducing the harmful effects of waste”, and “Improving the efficiency of resource use”. In terms of addressing waste management in a strategic context, protection of public health can be considered one of the components entailed in ‘reducing harm’.

Protection of public health is currently addressed by a number of different pieces of legislation:

2.4.1 Health Act 1956
The Health Act 1956 places obligations on TAs (if required by the Minister of Health) to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part 2 – Powers and duties of local authorities, s 25). It specifically identifies certain waste management practices as nuisances (s 29) and offensive trades (Third Schedule). The Health Act enables TAs to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.\textsuperscript{8}

2.4.2 The Hazardous Substances and New Organisms Act 1996 (the HSNO Act)
The HSNO Act addresses the management of substances (including their disposal) that pose a significant risk to the environment and/or human health. The Act relates to waste management primarily through controls on the import or manufacture of new hazardous materials and the handling and disposal of hazardous substances.

Depending on the amount of a hazardous substance on site, the HSNO Act sets out requirements for material storage, staff training and certification. These requirements would need to be addressed within operational and health and safety plans for waste facilities. Hazardous substances commonly managed by TAs include used oil, household chemicals, asbestos, agrichemicals, LPG and batteries.

The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.\textsuperscript{9}

2.4.3 Resource Management Act (1991) (RMA)
Although the RMA focuses on the environmental effects of activities, in practice there is a significant crossover between environmental impacts and human health impacts. Therefore many waste management activities that are likely to have public health impacts are controlled through the RMA. This may include site discharges such as odour, groundwater contamination, particulates and other aerosols, presence of vermin etc.

2.4.4 Key Waste Management Public Health Issues
Key issues that are likely to be of concern in terms of public health include the following:

\textsuperscript{7} Refer: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.

\textsuperscript{8} From: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.


Eastern Waikato Councils
- Management of putrescible wastes
- Management of nappy and sanitary wastes
- Potential for dog/seagull/vermin strike
- Timely collection of material
- Management of spillage
- Litter and illegal dumping
- Medical waste from households and healthcare operators
- Storage of wastes
- Management of hazardous wastes
- Private on-site management of wastes (burning, burying, rural waste management etc)

2.4.5 Management of Public Health Issues

Broadly speaking waste management related public health issues are likely to relate more to how specific processes are managed than to processes themselves. From a strategic perspective the above issues are likely to apply to a greater or lesser extent to virtually all options under consideration. For example illegal dumping tends to take place ubiquitously, irrespective of whatever waste collection and transfer station systems are in place. Some systems may exacerbate the problem (infrequent collection, user charges, inconveniently located facilities etc.), but by the same token the issues can be managed through methods such as enforcement, education, providing convenient facilities etc.

In considering how public health issues should be addressed in the context of this Waste Assessment the view is taken that public health issues are likely to present at least some level of risk across all options. Public health issues should not therefore drive strategic decisions but should be evaluated across all options, and issues flagged where the level of risk is likely to require specific management controls or interventions.

In most cases public health issues will be able to be addressed through setting appropriate performance standards for waste service contracts and ensuring performance is monitored and reported on, and that there are appropriate structures within the contracts for addressing issues that arise.
3.0 Waste Facilities

The tables of information presented throughout this Section provide a summary of key strategic waste facilities that currently service households and businesses in the three Districts. These are shown in Figure 3-1.

Figure 3-1: Waste Facilities

Key

- TCDC Transfer Station
- HDC Transfer Station
- MPDC Transfer Station
- Landfill & Open-air Windrow Composting
- Composting Trial
3.1 Residual Waste Disposal

A high proportion of residual waste is transported from all three Districts to Tirohia Municipal Landfill, which is located in the district of Hauraki. This site is privately owned and operated by the contractor, H.G. Leach & Company Ltd. It is understood that a commercial arrangement exists between H. G. Leach and Transpacific Industries Group (NZ) Ltd, the largest waste operator in New Zealand, whereby Transpacific controls a significant proportion of the available ‘airspace’ at the Tirohia facility.

It is estimated that remaining landfill capacity is in excess of 25 years and it is consented until approximately 2035. Waste streams accepted at the site include non-hazardous residential, commercial and industrial solid waste, including special wastes. Sludges with less than 20% solid by weight are prohibited.

All three Districts hold a contract with H.G. Leach for the transfer and disposal of residual waste to landfill. The contracts started in October 2000 and are due to expire in October 2011 for MPDC, June 2011 for TCDC, and November 2011 for HDC.

TCDC: can dispose of up to 15,600 tonnes per year under the agreement.

This is the only operational landfill disposal facility across the three Districts. Other landfills within reasonable proximity to the three districts include:

- Hampton Downs Landfill, owned and operated by EnviroWaste Services Ltd
- Tokoroa Landfill, owned by South Waikato District Council
- Rotorua Landfill, owned by Rotorua District Council

Rotorua Landfill does not accept waste from outside the district. Hampton Downs is a privately owned landfill and although slightly less conveniently located than Tirohia, offers a genuine alternative disposal option when landfill contracts are renegotiated.

3.2 Closed Landfills

There are a number of closed landfills, for which each District has ongoing management and monitoring responsibility, as described in Table 3-1.
Table 3-1: Closed Landfills

<table>
<thead>
<tr>
<th>District</th>
<th>Number of Closed Landfills</th>
<th>Details of Closed Landfills</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCDC</td>
<td>26</td>
<td>Colville, Woods Road; Colville, Coromandel, Coromandel, Hauraki Road; Coromandel, Strongman Road; Coromandel, Wharf Road; Kennedy Bay; Kuaotunu; Mercury Bay; Omahu (Te Horete Road); Pauanui; Pauanui (Parsons Dell, east of Shepherd Avenue); Pauanui (relocated west of Shepherd Avenue); Port Charles; Purangi; Tairua; Thames, Barrett Road; Thames, Burke Street; Thames Gun Club (adjacent to Thames Aerodrome); Richmond Street; Thames, Victoria Park; Waikawau Bay Farm Park; Whangapoua Causeway; Whitianga; and Whitianga (Robinson Road); Whangamata</td>
</tr>
<tr>
<td>HDC</td>
<td>3</td>
<td>Sites at Waitakaruru, Kaiauau, Kaihere, Waihi and Paeroa.</td>
</tr>
<tr>
<td>MPDC</td>
<td>3</td>
<td>Sites at Tauranga Road (Matamata), State Highway 26 (Te Aroha) and Roache Road (Morrinsville).</td>
</tr>
</tbody>
</table>

The large number of closed landfills in TCDC reflects the geography of the district, with large numbers of valleys forming potential disposal sites combined with the difficulties of hauling waste from remote parts of the district.

3.3 Cleanfill Facilities
The Ministry for the Environment’s Cleanfill Guidelines define cleanfill material and cleanfills as follows:

“Cleanfill material
Material that when buried will have no adverse effect on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:
- combustible, putrescible, degradable or leachable components
- hazardous substances
- products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices
- materials that may present a risk to human or animal health such as medical and veterinary waste, asbestos or radioactive substances
- liquid waste.

Cleanfill
A cleanfill is any landfill that accepts only cleanfill material as defined above."  

The disposal of cleanfill over a threshold quantity requires a resource consent in Matamata-Piako and Hauraki Districts, but is not dealt with separately in the Thames-Coromandel District Plan. There are no consented cleanfill facilities in any of the three districts. The lack of cleanfill facilities is an issue in respect of management of cleanfill type material from roading and construction projects. Available records suggest that some of this material is accepted as landfill cover material at Tirohia and Hampton Downs but there is also anecdotal evidence that much of this material is informally disposed of on local farms.

3.4 Transfer Facilities

Across the three Districts there are 12 public transfer stations in total. All are owned by the Councils. The opening hours and days for transfer stations, by district, are shown in Table 3-2. This shows that TCDC has seven transfer stations, HDC has two and MPDC has three. Only TCDC have extended opening hours during the summer months.

The materials accepted and charges, by unit, are shown in Table 3-3. There is some variation in both the materials accepted and the charges administered across the Districts – but it can be seen the systems in place are broadly similar.
Table 3-2: Transfer Facilities: Opening Hours and Days

<table>
<thead>
<tr>
<th>District</th>
<th>Total Number</th>
<th>Location</th>
<th>Opening Hours and Days</th>
<th>Winter</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCDC</td>
<td>7</td>
<td>525 Hauraki Road, Coromandel</td>
<td>Monday/ Wednesday/ Friday</td>
<td>Closed</td>
<td>Weekdays 12.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tuesday / Thursday</td>
<td>13.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekends/Public Holidays</td>
<td>10.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td>TCDC</td>
<td>7</td>
<td>101 Matarangi Drive, Matarangi</td>
<td>Monday / Wednesday / Friday</td>
<td>Closed</td>
<td>Weekdays 10.00 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tuesday / Thursday</td>
<td>13.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekends/Public Holidays</td>
<td>10.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td>TCDC</td>
<td>7</td>
<td>887 Hikuai Settlement, Pauanui</td>
<td>Monday / Wednesday / Thursday</td>
<td>Closed</td>
<td>Weekdays 12.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Friday / Tuesday</td>
<td>13.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekends/Public Holidays</td>
<td>10.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td>TCDC</td>
<td>7</td>
<td>3 Red Bridge Road, Tairua</td>
<td>Monday / Wednesday / Friday</td>
<td>Closed</td>
<td>Weekdays 12.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tuesday / Thursday</td>
<td>13.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekends/Public Holidays</td>
<td>10.30 – 17.30</td>
<td>Weekends/Public Holidays 10.30 – 17.30</td>
</tr>
<tr>
<td>TCDC</td>
<td>7</td>
<td>102 Burke Street, Thames</td>
<td>Days: Monday – Friday Hours: 10.00 – 15.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>Total Number</td>
<td>Location</td>
<td>Opening Hours and Days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>----------</td>
<td>-----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDC</td>
<td>2</td>
<td>Grey Street, Paeroa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hours: 12.30 – 17.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days: Closed Wednesday and all Public Holidays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dean Crescent, Waihi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hours: 10.00 – 16.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days: Closed Tuesday, Thursday and all Public Holidays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPDC</td>
<td>3</td>
<td>Mangawhero Rd, Matamata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hours: 10.00 – 16.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days: Closed Monday and Friday and on Good Friday, Anzac Day (Until 1pm), Christmas Day, Boxing Day and New Years Day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roache Rd, Morrinsville</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hours: 10.00 – 16.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days: Closed Wednesday, Friday and on Good Friday, Anzac Day (Until 1pm), Christmas Day, Boxing Day and New Years Day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>State Highway 26, Waihou</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hours: 10.00 – 16.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days: Closed Monday, Tuesday, Thursday, Saturday and on Good Friday, Anzac Day (Until 1pm), Christmas Day, Boxing Day and New Years Day</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3-3: Transfer Facilities: Materials and Charges

<table>
<thead>
<tr>
<th>Material</th>
<th>TCDC</th>
<th>HDC</th>
<th>MPDC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit</td>
<td>Charge</td>
<td>Unit</td>
</tr>
<tr>
<td>Glass bottles &amp; jars</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Paper</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Aluminium cans</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Steel cans</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Plastics (1-7)</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Plastics (1&amp;2)</td>
<td></td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Scrap metal</td>
<td></td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Scrap steel</td>
<td></td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Oil</td>
<td>Household quantities</td>
<td>Free</td>
<td>Household quantities</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Household quantities</td>
<td>Free</td>
<td>Household quantities</td>
</tr>
<tr>
<td>Solvents (labelled)</td>
<td>Domestic quantities</td>
<td>Free</td>
<td>Domestic quantities</td>
</tr>
<tr>
<td>Material</td>
<td>TCDC</td>
<td>HDC</td>
<td>MPDC</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td></td>
<td>Unit</td>
<td>Charge</td>
<td>Unit</td>
</tr>
<tr>
<td>Cleaning fluids (labelled)</td>
<td>Domestic quantities</td>
<td>Free</td>
<td>Domestic quantities</td>
</tr>
<tr>
<td>Paints</td>
<td>Domestic quantities</td>
<td>Free (Domestic quantities)</td>
<td>Domestic quantities</td>
</tr>
<tr>
<td>Fertilisers, herbicides &amp; pesticides (sealed in clear bag &amp; labelled)</td>
<td>Domestic quantities</td>
<td>Free</td>
<td>Domestic quantities</td>
</tr>
<tr>
<td>Car batteries</td>
<td>Free</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Timber</td>
<td></td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Wire fencing (posts removed)</td>
<td></td>
<td>Free</td>
<td></td>
</tr>
<tr>
<td>Residual Waste</td>
<td>Official refuse bags</td>
<td>Free</td>
<td>Single bag (Kleensac size)</td>
</tr>
<tr>
<td></td>
<td>Unofficial refuse bags (per bag)</td>
<td>$2.00</td>
<td>Unofficial refuse bags (per bag)</td>
</tr>
<tr>
<td></td>
<td>Car (0.2m³ loose)</td>
<td>$10.00</td>
<td>Car</td>
</tr>
<tr>
<td></td>
<td>Utility/station wagon (0.4m³ loose)</td>
<td>$18.00</td>
<td>Single axle trailer Ute Station wagon</td>
</tr>
<tr>
<td></td>
<td>Uncompacted per m³</td>
<td>$41.00</td>
<td>Small trailer (1m³ loose)</td>
</tr>
</tbody>
</table>

Joint Waste Assessment 2011
<table>
<thead>
<tr>
<th>Material</th>
<th>TCDC</th>
<th>HDC</th>
<th>MPDC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit Charge</td>
<td>Unit Charge</td>
<td>Unit Charge</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compacted per m³</td>
<td>$123.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large trailer (2m³ loose)</td>
<td></td>
<td>$90.00</td>
<td></td>
</tr>
<tr>
<td>Per tonne</td>
<td>$147.00</td>
<td>Per tonne $150.00</td>
<td>Per tonne $137.00</td>
</tr>
<tr>
<td>High volume/low weight (e.g. non-recyclable packaging such as polystyrene)</td>
<td></td>
<td>$9.00/m³</td>
<td></td>
</tr>
<tr>
<td>Single bag (Kleensac size)</td>
<td>$2.00</td>
<td>Bag $1.50</td>
<td></td>
</tr>
<tr>
<td>Car (0.2m³ loose)</td>
<td>$7.00</td>
<td>Car $62.00/tonne Minimum charge $4.00</td>
<td></td>
</tr>
<tr>
<td>Utility/station wagon (0.4m³ loose)</td>
<td>$13.00</td>
<td>Single axle trailer Ute Station wagon $62.00/tonne Minimum charge $10.00</td>
<td></td>
</tr>
<tr>
<td>Per m³</td>
<td>$20.50</td>
<td>Small trailer (1m³ loose) $32.00 Commercial Tandem axle high side trailer $62.00/tonne Minimum charge $10.00</td>
<td></td>
</tr>
<tr>
<td>Large trailer (2m³ loose)</td>
<td>$63.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per tonne</td>
<td>$73.50</td>
<td>Per tonne $105.00</td>
<td></td>
</tr>
</tbody>
</table>

Eastern Waikato Councils
<table>
<thead>
<tr>
<th>Material</th>
<th>TCDC</th>
<th>hdc</th>
<th>mpdc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit</td>
<td>Charge</td>
<td>Unit</td>
</tr>
<tr>
<td>Car Tyres</td>
<td>Each</td>
<td>$6.00</td>
<td>Each</td>
</tr>
<tr>
<td>4WD Tyres</td>
<td>Each</td>
<td>$8.00</td>
<td>Each</td>
</tr>
<tr>
<td>Truck Tyres</td>
<td>Each</td>
<td>$12.00</td>
<td>Each</td>
</tr>
<tr>
<td>Tractor Tyres</td>
<td>Each</td>
<td>$25.00</td>
<td>Each</td>
</tr>
<tr>
<td>LPG Bottles</td>
<td>Each</td>
<td>$5.00</td>
<td></td>
</tr>
<tr>
<td>Car Bodies</td>
<td>Free</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clean condition, seats/ tyres removed, petrol tank pierced, fluids removed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>Free</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>White ware</td>
<td>Free</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Mussel farming waste</td>
<td>per tonne</td>
<td>$147</td>
<td></td>
</tr>
</tbody>
</table>

11 TCDC Tyre disposal prices are 2012-13 Charges

Joint Waste Assessment 2011
3.4.1 Thames-Coromandel District Council
Smart Environmental Ltd is contracted to operate and maintain TCDC’s seven transfer stations. Under this agreement Smart Environmental are responsible for removal of all materials from the site and all operations on the site. This is part of the main solid waste services contract which runs from June 2010 to June 2013.

3.4.2 Hauraki District Council
HDC’s transfer station facilities are operated by Council’s Construction and Maintenance Business Unit. The service contracts and arrangements which are in place to transport materials off the sites are shown in Table 3-4.

Table 3-4: Contractor Responsibilities at Transfer Stations

<table>
<thead>
<tr>
<th>Contract</th>
<th>Contractor</th>
<th>Contract Term</th>
<th>Start Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation and maintenance</td>
<td>HDC Construction and Maintenance.</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>General refuse &amp; greenwaste transfer</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td></td>
<td></td>
<td>2011</td>
</tr>
<tr>
<td>Recyclables (cardboard, plastic, cans, glass, steel) transfer</td>
<td>Smart Environmental Ltd.</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of gas bottles</td>
<td>Gas Pro</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of tyres</td>
<td>Carbon Recovery Ltd.</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of batteries</td>
<td>Central Metals Ltd</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of hazardous waste chemicals</td>
<td>Hazardous Waste Management</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation of used oil</td>
<td>NZ Marine Services</td>
<td>No contract</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There has been considerable public interest in developing a new green waste transfer station at Ngatea. Council undertook a feasibility assessment last year but results showed that it was an uneconomic option and Council took the decision not to pursue it further.

3.4.3 Matamata-Piako District Council
Table 3-5 sets out the Council contractors that undertake various operations to manage, operate and maintain each of the Council’s transfer stations:
Table 3-5: Contractor Responsibilities at Transfer Stations

<table>
<thead>
<tr>
<th>Contract</th>
<th>Contractor</th>
<th>Contract Term</th>
<th>Start Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation and maintenance</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td>10 yrs</td>
<td>October 2000</td>
<td>June 2012</td>
</tr>
<tr>
<td>Greenwaste services</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td>3.4 yrs</td>
<td>July 2008</td>
<td>June 2012</td>
</tr>
<tr>
<td>Scrap metal services</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td>3.4 yrs</td>
<td>July 2008</td>
<td>June 2012</td>
</tr>
<tr>
<td>Hazardous waste services</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td>3.4 yrs</td>
<td>July 2008</td>
<td>June 2012</td>
</tr>
<tr>
<td>Transfer of residual waste to Tirohia Landfill</td>
<td>H. G. Leach &amp; Co. Ltd.</td>
<td>10 yrs</td>
<td>October 2000</td>
<td>June 2012</td>
</tr>
<tr>
<td>Recyclables</td>
<td>Smart Environmental Ltd.</td>
<td>3.4 yrs</td>
<td>July 2008</td>
<td>June 2012</td>
</tr>
</tbody>
</table>

Matamata-Piako recently commissioned a cost-benefit analysis (CBA) of their refuse transfer stations to be undertaken as a direct action of their Waste Minimisation Strategy 2010. This looked at a series of scenarios of which the most cost-effective (having accounted for CO₂ impacts) was to undertake ‘medium’ development at Matamata and Morrinsville and to close Waihou. This option performed well because it has moderate levels of capital and operating costs whilst delivering high levels of diversion. As recommended in the CBA report, these changes will be considered as part of this Waste Assessment.

3.5 Recycling and Processing Facilities
There are a number of waste processing and recycling facilities available in the region or in neighbouring regions. These are listed in the following tables.

---

12 All of these operations were extended from October 2011 to June 2012 to line up with the potential joint procurement

### 3.5.1 Recycling Facilities

<table>
<thead>
<tr>
<th>Name/Operator</th>
<th>Key services/waste streams</th>
<th>Location</th>
<th>Capacity &amp; Estimated Operational life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Environmental</td>
<td>Bulking station</td>
<td>TCDC</td>
<td></td>
</tr>
<tr>
<td>Visy</td>
<td>Recyclable commodities</td>
<td>Onehunga, Auckland</td>
<td>70,000 tonnes per annum approximately</td>
</tr>
<tr>
<td>Jack Shaw</td>
<td>Cleanfill material</td>
<td>Tauranga</td>
<td></td>
</tr>
<tr>
<td>Owens-Illinois (NZ ) Ltd</td>
<td>Recycle glass</td>
<td>Penrose, Auckland City</td>
<td></td>
</tr>
<tr>
<td>CHH Fullcircle</td>
<td>Recycle paper and cardboard</td>
<td>Penrose, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Sims Pacific</td>
<td>Metal recycling</td>
<td>Otahuhu, Auckland</td>
<td></td>
</tr>
<tr>
<td>Ward Resource Recovery Ltd</td>
<td>Reuse and recycle construction and demolition waste</td>
<td>Onehunga, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Nikau Contractors Ltd</td>
<td>Reuse and recycle construction and demolition waste</td>
<td>Church St, Penrose and Taniwha St, Meremere</td>
<td></td>
</tr>
<tr>
<td>JJ Laughton</td>
<td>Tyre shredding</td>
<td>Glendene Waitakere City</td>
<td></td>
</tr>
<tr>
<td>Astron Plastics</td>
<td>Process pre-consumer plastic waste</td>
<td>Neales Road, East Tamaki</td>
<td></td>
</tr>
<tr>
<td>Interwaste</td>
<td>Hazardous waste treatment &amp; recycling (fluorescent tubes, dental amalgam, precious metals, quarantine, medical, pharmaceutical, secure waste, batteries and IT Equipment)</td>
<td>Auckland Airport</td>
<td></td>
</tr>
<tr>
<td>Visy</td>
<td>Processes dry recyclables from kerbside collections. Also accepts mixed dry recyclables at the gate.</td>
<td>Onehunga, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Transpacific Allbrite Ltd</td>
<td>Processes recyclables from kerbside and commercial collections</td>
<td>Takanini</td>
<td></td>
</tr>
<tr>
<td>CMA Recycling Ltd</td>
<td>Scrap metal recyclers</td>
<td>Onehunga, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Paper Reclaim</td>
<td>Collect, consolidate and on-sell paper, cardboard and other commodities (plastics, steel, aluminium, and glass)</td>
<td>Penrose, Auckland City</td>
<td></td>
</tr>
<tr>
<td>NZ Steel</td>
<td>Steel production</td>
<td>Glenbrook, Auckland</td>
<td></td>
</tr>
</tbody>
</table>
### 3.5.2 Organic Treatment Facilities

**Table 3-7 - Organic Waste Facilities**

<table>
<thead>
<tr>
<th>Name/Operator</th>
<th>Key services/waste streams</th>
<th>Location</th>
<th>Capacity &amp; Estimated Operational life</th>
</tr>
</thead>
<tbody>
<tr>
<td>HG Leach</td>
<td>Green waste and primary industry processing organic waste from all three districts</td>
<td>Tirohia landfill site</td>
<td></td>
</tr>
<tr>
<td>TCDC</td>
<td>Green waste, biosolids</td>
<td>Tairua RTS</td>
<td>Trial consents have expired. New consents are being applied for</td>
</tr>
<tr>
<td>Envirofert</td>
<td>Green waste, food wastes, plasterboard, cleanfill material</td>
<td>Tuakau, Waikato District</td>
<td>No specific tonnage limits as long as consent conditions maintained</td>
</tr>
<tr>
<td>Daltons</td>
<td>Bark, horticultural and agricultural wastes</td>
<td>Matamata</td>
<td></td>
</tr>
<tr>
<td>NZ Remediation</td>
<td>Green waste, Processing a range of organic wastes through vermicomposting including some wastes from Auckland food/meat processors. Also processing paunch and drilling mud from other parts of New Zealand.</td>
<td>Ureti (Taranaki)</td>
<td>8,000 tpa</td>
</tr>
<tr>
<td>WormTech</td>
<td>Pig manure</td>
<td>BOP</td>
<td>5,200 tpa. Unable to accept more under consent conditions</td>
</tr>
<tr>
<td>Lowe Corporation</td>
<td>High-protein putrescible wastes</td>
<td>Tuakau, Waikato District</td>
<td>Not specified, but additional capacity available</td>
</tr>
<tr>
<td>NZ Ester Fuels</td>
<td>Used cooking oil</td>
<td>Not specified, but additional capacity available</td>
<td></td>
</tr>
<tr>
<td>Plateau Bark &amp; Composts</td>
<td>Bark and some wood processing waste</td>
<td>Not specified; some additional capacity available</td>
<td></td>
</tr>
<tr>
<td>Vitec Fertilisers</td>
<td>Fish processing waste</td>
<td>At capacity (through choice). Currently processing 300 tpa</td>
<td></td>
</tr>
<tr>
<td>Brights Poultry</td>
<td>End-of-lay poultry</td>
<td>200 tpa. Generally at capacity</td>
<td></td>
</tr>
<tr>
<td>Nature’s Flame</td>
<td>Sawdust</td>
<td>54,000 tpa at present, and at capacity</td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>Hogged wood waste</td>
<td>Unknown but significant (over</td>
<td></td>
</tr>
<tr>
<td>Name/Operator</td>
<td>Key services/waste streams</td>
<td>Location</td>
<td>Capacity &amp; Estimated Operational life</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------</td>
<td>-----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Various</td>
<td>Animal manure</td>
<td>Unknown; currently absorbing perhaps 300 tpa</td>
<td>400,000 tpa), and market for more</td>
</tr>
<tr>
<td>Eco Stock Supplies</td>
<td>Waste food from manufacturers and processors</td>
<td>Wiri, Manukau</td>
<td></td>
</tr>
<tr>
<td>Living Earth</td>
<td>Compost garden waste</td>
<td>Puketutu Island, Manukau City</td>
<td></td>
</tr>
<tr>
<td>PVL Proteins</td>
<td>Fish and meat processing waste into fertiliser &amp; tallow products</td>
<td>Great South Rd, Penrose</td>
<td></td>
</tr>
<tr>
<td>Reharvest Timber Products Ltd</td>
<td>Waste wood</td>
<td>Hunua Rd, Papakura</td>
<td></td>
</tr>
</tbody>
</table>
4.0 Solid Waste Services Available

4.1 Council Kerbside Collection Services
The current Council kerbside collection services in place are very similar across the three Districts. The key similarities are:

- The kerbside collection service is weekly across all authorities, with the exception of the peak period in Thames-Coromandel (further described in Section 4.1.1 below); and the peak Christmas period at Whiritoa in the Hauraki District.
- The refuse and recycling are collected weekly on the same day and the recycling is sorted at the kerbside;
- The same recyclable materials are collected at the kerbside;
- The contractor, Smart Environmental Ltd., holds the current kerbside collection contracts. The contracts provide for Smart Environmental ownership of the recyclable materials;
- The refuse is a user-pays system (with variations across the authorities described in Table 4-4);
- There are no Council kerbside green waste or food waste collections in place.

4.1.1 Collection Schedules
This Section describes the collection schedules, by authority area. The off-peak collection days for refuse and recycling are complementary between Hauraki and Thames-Coromandel and Matamata-Piako has rounds scheduled for five days/week.

4.1.2 Thames-Coromandel District Council
Of the 26186 rating units in the District, 23,385 are provided with collection services.
During off-peak times the residual and recycling collection, which takes place on the same day, is weekly. During the peak period this collection is increased to three times per week in some of the busiest areas. This is shown in Table 4-1.
<table>
<thead>
<tr>
<th>Day</th>
<th>Area Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Whangamata, Onemana, Opoutere, Pauanui, Tairua, Mercury Bay South (includes Hot Water Beach, Hahei, Cooks Beach, Ferry Landing (excludes SH25 Whenuakite to Whitianga)</td>
</tr>
<tr>
<td></td>
<td>Whangamata, Onemana, Opoutere, Pauanui Mercury Bay South (includes Hot Water Beach, Hahei, Cooks Beach, Ferry Landing)</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Whitianga, Mercury Bay North (includes Wharekaho, Kuaotunu, Opito, Matarangi, Whangapoua), Coromandel Rural North (includes Oamaru, Colville, Port Charles, Little Bay, Kennedy Bay)</td>
</tr>
<tr>
<td></td>
<td>Whitianga, Tairua, Mercury Bay North (includes Wharekaho, Kuaotunu, Opito, Matarangi, Whangapoua), Coromandel Rural North (includes Oamaru, Colville, Port Charles, Little Bay, Kennedy Bay)</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Coromandel Urban, Thames Coast, Thames</td>
</tr>
<tr>
<td></td>
<td>Thames Rural South (includes Kopu, Matatoki, Puriri, Hikutaia)</td>
</tr>
<tr>
<td></td>
<td>Coromandel Urban, Coromandel Rural North (includes Oamaru, Colville, Port Charles, Little Bay, Kennedy Bay), Thames Coast, Thames, Thames Rural South (includes Kopu, Matatoki, Puriri, Hikutaia)</td>
</tr>
<tr>
<td>Thursday</td>
<td>Whangamata, Onemana, Opoutere, Pauanui Mercury Bay South (includes Hot Water Beach, Hahei, Cooks Beach, Ferry Landing)</td>
</tr>
<tr>
<td>Friday</td>
<td>Whitianga, Tairua, Mercury Bay North (includes Wharekaho, Kuaotunu, Opito, Matarangi, Whangapoua), Coromandel Rural North (includes Oamaru, Colville, Port Charles, Little Bay, Kennedy Bay)</td>
</tr>
<tr>
<td>Saturday</td>
<td>Whangamata, Pauanui, Coromandel Rural North</td>
</tr>
</tbody>
</table>

4.1.3 Hauraki District Council
The kerbside collection service operates in the following urban areas: Ngatea, Paeroa, Turua, Kerepehi, Waihi, Waikino, Karangahake, Mackaytown and Whiritoa. Since the adjustment of district borders accompanying the amalgamation of the seven councils in the Auckland region, the HDC service has recently expanded and now also serves all properties in the Kaiaua area (formerly in Franklin District), some of which are rural properties. This totals a kerbside service provision to over 5,932 properties (62% of all properties).

The collection schedule is shown in Table 4-2.
Table 4-2: Round Schedule in Hauraki District Council

<table>
<thead>
<tr>
<th>Day</th>
<th>Area Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Whiritoa</td>
</tr>
<tr>
<td>Thursday</td>
<td>Waihi, Waikino, Karangahake, Mackaytown</td>
</tr>
<tr>
<td>Friday</td>
<td>Ngatea, Paeroa, Turua, Kerepehi, Kaiapua</td>
</tr>
</tbody>
</table>

HDC provide 3 additional collections per week in Whiritoa during the holiday season between Christmas and New Year, and the week following New Year’s Day. This is due to the significant population increase experienced during that period.

4.1.4 Matamata-Piako DC
The Council provides kerbside refuse and recycling collection services across the District to approximately 8,200 residential properties and 800 commercial premises. The service area covers the three main urban centres: Matamata, Te Aroha, Morrisville and the following rural townships: Waharoa, Kutia, Walton, Waihou, Waitoa, Mangateparu and Tahuna.

The weekly collections take five days – Monday to Friday as shown in the schedule in Table 4-3.

Table 4-3: Round Schedule in MPDC

<table>
<thead>
<tr>
<th>Day</th>
<th>Area Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Matamata (town side of railway tracks).</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Matamata (Peria Rd side of railway tracks) Waharoa, Kutia, Walton.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Te Aroha.</td>
</tr>
<tr>
<td>Thursday</td>
<td>Morrinsville (CBD - Canada St to Anderson St, Hamilton side of Studholme St and odd numbers on Studholme St), Waihou, Waitoa, Mangateparu, Tahuna.</td>
</tr>
<tr>
<td>Friday</td>
<td>Morrinsville (Te Aroha side of Studholme St and even numbers of Studholme St).</td>
</tr>
</tbody>
</table>

4.1.5 Refuse and Recycling Receptacles and User-Pays Charges
Table 4-4 describes the receptacles used, and user-pays charges applied, in each of the three Districts. The refuse kerbside collection systems are all user-pays bags, and crates are used to collect dry recycling, using a manual kerbside sorting system.
Table 4-4: Kerbside Collection Service Containment

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>TCDC</th>
<th>HDC</th>
<th>MPDC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residual</strong></td>
<td>Official, pre-paid 60 litre bags. Bags cost $2.04 for 60L bags or $1.20 for 30L bags. No limit on the number of pre-paid bags that can be put out for collection. Maximum weight 15kg</td>
<td>Official, pre-paid 60L yellow bags. Bags cost $1.90 each. No limit on the number of pre-paid bags that can be put out for collection.</td>
<td>Official Council 60 litre black plastic refuse sacks. 52 bags provided with rates via a voucher. Additional user pays bags purchased $3.50 each. No limit on the number of pre-paid bags that can be put out for collection. Maximum weight 20kg</td>
</tr>
<tr>
<td><strong>Recycling</strong></td>
<td>Official 45 litre green recycling crates. Up to 2 will be collected from the kerbside. $0.99 per $10,000 of land value.</td>
<td>55 litre blue and black recycling crates. The Kerbside recycling collection cost to council is $1.40 per household per week and is funded by a portion of the $42 per annum targeted refuse rate.</td>
<td>45 litre recycling crate for free, additional crates $15 each. $163 Targeted Rate per property is budgeted in the 2011/12 Annual Plan</td>
</tr>
</tbody>
</table>

4.1.6 Materials
The following materials are collected and sorted at the kerbside in all three Districts:
- Plastics 1 – 7;
- Glass bottles & jars;
- Aluminium & steel cans;
- Paper; and
- Cardboard.

4.1.7 Contracts
The current kerbside collection contracts are described in Table 4-5.

---

14 MPDC undertook a consultation about user pays arising from an action in the Annual Plan (February 2010) with proposed change from 2011 to make a move away from the voucher system, to a full user-pays system. The consultation resulted in no change to the current system.
<table>
<thead>
<tr>
<th>Contract</th>
<th>Contractor</th>
<th>Contract Term</th>
<th>Start Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thames-Coromandel District Council</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside Refuse Collection Service</td>
<td>Smart Environmental Ltd</td>
<td>3 years</td>
<td>June 2010</td>
<td>June 2013</td>
</tr>
<tr>
<td>Kerbside Recycling Collection Service</td>
<td>Smart Environmental Ltd</td>
<td>3 years</td>
<td>June 2010</td>
<td>June 2013</td>
</tr>
<tr>
<td>Hauraki District Council</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside Refuse Collection Service</td>
<td>Smart Environmental Ltd.</td>
<td>4 years</td>
<td>July 2006</td>
<td>June 2012(^\text{15})</td>
</tr>
<tr>
<td>Kerbside Recycling Collection Service</td>
<td>Smart Environmental Ltd.</td>
<td>4 years</td>
<td>July 2006</td>
<td>June 2012(^\text{16})</td>
</tr>
<tr>
<td>Matamata-Piako District Council</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside Refuse Collection Service</td>
<td>Smart Environmental Ltd.</td>
<td>3 years</td>
<td>July 2008</td>
<td>October 2012(^\text{17})</td>
</tr>
<tr>
<td>Kerbside Recycling Collection Service</td>
<td>Smart Environmental Ltd.</td>
<td>3 years</td>
<td>July 2008</td>
<td>October 2012(^\text{18})</td>
</tr>
</tbody>
</table>

4.2 Drop-off Facilities

In the Thames-Coromandel District there are four sites with 24 hours per day, seven days per week Molok drop-off facilities for refuse and recycling. These are described in Table 4-6.

\(^{15}\) Original contract was to June 2009 and has been extended to 2012 with a view to aligning with the proposed joint procurement

\(^{16}\) Original contract was to June 2009 and has been extended to 2012 with a view to aligning with the proposed joint procurement

\(^{17}\) Original contract was to June 2011 and has been extended to 2012 with a view to aligning with the proposed joint procurement

\(^{18}\) Original contract was to June 2011 and has been extended to 2012 with a view to aligning with the proposed joint procurement
Table 4-6: Molok Provision in Thames-Coromandel District Council

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Total Number Moloks at the Site</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whangapoua (Tangiora Ave)</td>
<td>4 x 5m³</td>
<td>1 x Paper 1 x Plastic/Steel/Aluminium 2 x Residual waste</td>
</tr>
<tr>
<td>Matarangi Transfer Station</td>
<td>3 x 5m³</td>
<td>1 x Paper 1 x Plastic/Steel/Aluminium 1 x Residual waste</td>
</tr>
<tr>
<td>Opito Bay (Matapaua Bay Road)</td>
<td>3 x 5m³</td>
<td>1 x Paper 1 x Plastic/Steel/Aluminium 1 x Residual waste</td>
</tr>
<tr>
<td>Pauanui Transfer Station</td>
<td>3 x 5m³</td>
<td>1 x Paper 1 x Plastic/Steel/Aluminium 1 x Residual waste</td>
</tr>
</tbody>
</table>

Smart Environmental Ltd are contracted to collect and maintain Moloks, and to dispose of refuse and manage recyclables from Moloks, under the Solid Waste Services Contract (which was signed in June 2010 and runs through to June 2013).

There are no drop-off facilities in either HDC or MPDC with the exception of a temporary drop-off point for recyclable glass located in Whiritoa in HDC during the peak period.

4.3 Litter and Public Place Recycling

In TCDC and MPDC litter is managed under the kerbside collection contracts, therefore by Smart Environmental Ltd. At HDC the litter is managed by council using the Construction and Maintenance department to service the litter bins. Litter bins are located as required.

4.3.1 Public Place Recycling Bins

TCDC has installed “LoveNZ” recycling bins at the following locations:
- Whangamata – main shopping street
- Whangamata – Ocean Beach Esplanade
- Whangamata – Harbour Esplanade
- Hot Water Beach – shop parking area
- Hot Water Beach – Ocean Beach parking area
- Whitianga – main shopping street
- Whitianga – harbour foreshore play/picnic area
- Whitianga – Ocean Beach Reserve
- Ferry Landing (Purangi Road)
- Hahei foreshore reserve
Hahei shops.
The bins in the District take glass, plastics with recycling symbol 1 & 2 and cans.

4.4 Illegal Dumping

4.4.1 TCDC
Responsibility for illegal dumping comes out of bylaw enforcement budgets. Council uses a variety of local contractors with whom they have standing arrangements. If there are small amounts the bylaw enforcement officer will pick it up. The particular contractor engaged by council will depend on what is required by the job in hand for example the size of load, the content of the load (e.g. carcasses, e-waste etc.)

4.4.2 HDC
Council’s Construction and Maintenance department are responsible for clearing up any fly-tipped waste. The SWAMP indicates that where possible Council prosecutes the responsible parties. The SWAMP goes on to indicate that fly-tipping may become increasingly problematic in the future if transfer station prices continue to increase.

4.4.3 MPDC
Local contractors KVS are advised of and requested to clear up any fly-tipped waste. The SWAMP indicates that where possible Council prosecutes the responsible party

4.5 Private Kerbside Collection Services
There are a limited number of private services available in TCDC, HDC and MPDC, besides those provided by the Council.

All known operators offering a kerbside residual, recycling and/or organics collection in the Districts are shown in Table 4-7. These services include wheelie bin and skip services.

Table 4-7: Private Kerbside Collection Operators

<table>
<thead>
<tr>
<th>Operator</th>
<th>Service</th>
<th>TCDC</th>
<th>HDC</th>
<th>MPDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Environmental Ltd</td>
<td>Recycling/Refuse</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Clean-it Skips</td>
<td>Refuse</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baycomp Garden Bags</td>
<td>Green waste</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Waste Management/TPI</td>
<td>Recycling/Refuse</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Courts Greenwaste</td>
<td>Green waste</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Wheelie Bin Services</td>
<td>Refuse</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Envirowaste Services</td>
<td>Recycling/Refuse</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
4.6 Other Programs and Services

In addition to the core waste services, other programs and services are provided by the Councils or through a partnership supported by a Council.

All three Councils support the Waikato region Waste Exchange programme (http://waikato.nothrow.co.nz/) which encourages the exchange of unwanted materials and recyclables. This website has recently been overhauled.

In addition, there are the usual complement of scrap metal dealers and second-hand and charity stores in all three Districts. An assessment of these services is considered to be outside the scope of this Waste Assessment.

4.6.1 Thames-Coromandel District Council

Reuse: Seagull Centre Trust. The Seagull Centre Trust is a voluntary-sector organisation based in Thames. They focus on reusable household items such as furniture, whitegoods and electronics, clothes, crockery and utensils, and toys. The centre has been running since 2006 and is now located at the entrance to the Thames transfer station which helps provide good profile when households are taking loads to the transfer station. The Seagull Centre is well patronised and has been steadily growing its operations since its inception. It employs 5 staff (3.5 FTE) and 6 volunteers.

Schools: TCDC engages The Environmental Education for Resource Sustatinability Trust (EERST) and are part of their, ‘Paper for Trees’ programme.

E-Waste: The district participates in E-day annually. In addition Seagull Centre Trust is aiming to be part of a project with RCN Group and CRN that has WMF funding to establish permanent e-waste depots around the country.

Coastal Litter: the district participates in ‘Sea week’ which involves cleaning trash off beaches. The Great Coromandel Coastal Cleanup has also recently been initiated focussing on Coromandel town harbour. It is an initiative of ‘Sustainable coastlines’ and international not for profit organisation (www.sustainablecoastlines.org).

4.6.2 Hauraki District Council

4.6.2.1 Inorganic Collection

HDC provide a biennial inorganic collection service to the Whiritoa collection area. The newly acquired area of Kaiaua has historically carried out an annual inorganic collection. This will continue in the future but may change to biannual instead of annual.

Inorganic refuse includes the following:

- Furniture (Chairs, Tables, Cabinets, etc);
- Computer, TV’s;
- Carpet;
- Metal items from household renovations only; (Corrugated iron, pipes, etc).
- Appliances (Washing Machines, Stoves, Fridges)

No more than a car trailer load of inorganic refuse may be disposed of by any household during any inorganic refuse collection.

To the extent possible, the collected inorganic waste is recycled.

Eastern Waikato Councils
The following materials will not be collected during any inorganic refuse collection:

- Any Bagged Rubbish;
- Garden Waste, Tree Trimmings and Soil;
- Commercial and Farming Waste;
- Bricks and Broken Concrete;
- Glass, Small Loose Items, Oil, Paint and Chemicals;
- Fibrolite/Asbestos, Builders Waste
- Car Bodies and Tyres;
- Household renovations materials (excluding metals);
- Anything that cannot be lifted by two persons;

4.6.2.2 Electrical and Electronic Items
On an annual basis it is possible to take computer-related electrical items to the transfer stations in Hauraki District as part of the National e-waste day organised by the MFE.

4.6.2.3 Education
The council supports the Enviroschools programme in local schools and also provides full funding for Zero Waste Education in schools.

4.6.2.4 Agrecovery Programme
Since April 2010 HDC joined the Agrecovery Programme. This is a voluntary product stewardship programme which sees provision of collection sites for unwanted chemical containers and silage wrap. The site in the Hauraki District is located in Paeroa and is open from Monday to Friday from 9am to midday.

4.6.2.5 Planned Schemes
The Ten Year Plan states that a scheme called ‘Paper for trees’ is a programmed action for the 2009-19 time frame. This initiative would encourage schools to recycle paper through being rewarded with a tree for planting once they reached a certain quantity of recycled paper.

4.6.3 Matamata-Piako District Council
Chemical containers will continue to be collected through the Agrecovery scheme at Matamata transfer station.
5.0 Waste Data and Waste Flows

For local government planning purposes, the most important metrics relating to solid waste are the tonnage and composition of waste disposed of to landfill and the tonnage and composition of ‘diverted materials’. The Waste Minimisation Act 2008 makes a clear distinction between these two types of ‘waste’ materials, with ‘diverted materials being defined in the Act as “anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded”.

Measurements of waste disposed of to landfill are more readily compiled and more reliable than measurements of diverted materials. Waste to landfill is a well-defined, discrete material flow, handled by a relatively small number of operators with all material generally being weighed and recorded at a common point – the landfill weighbridge.

On the other hand, there is no general consensus on the boundaries of what constitutes a ‘diverted material’. Some materials, such as scrap metal and kraft collected for recycling, are widely accepted as being diverted materials, but for other materials, such as those handled by second-hand dealers, there is no such agreement. Compounding the difficulties of quantifying diverted materials is the large number of businesses operating in the industry (usually undocumented) and the wide range of unrelated disposal pathways for the materials. The commercial sensitivity of quantitative information is another major complication, with many businesses in the industry being reluctant to voluntarily provide data.

As a result of these factors, this summary of waste data and waste flows will focus on waste disposed of to landfill, as reliable data has been provided by the Councils HG Leach, the owner and operator of Tirohia landfill, where virtually all waste from the region is disposed of, and by private waste operators. The data on waste disposed of to landfill will be split into the waste streams directly controlled by the Councils and those controlled by commercial waste operators.

Data on diverted materials will be limited to Council-controlled recycling systems (i.e. kerbside recycling and transfer station drop-offs) and ‘commodities’ (i.e. paper, kraft, glass, plastic and metal containers) collected by commercial recyclers. No attempt has been made to quantify other diverted materials, such as:

- Scrap metal
- Concrete
- Construction and demolition materials such as timber
- Organic waste used for stock feed
- Tyres
- Second-hand goods
- Timber processing waste used for hog fuel

Sections 5.1 to 5.3 present data separately for each of the three councils. Section 5.4 provides comparisons between the three councils and with other districts in New Zealand.
5.1 Thames-Coromandel District

5.1.1 Waste Flows in Thames-Coromandel District

Using information provided by Thames-Coromandel District Council and private waste operators, the flows of waste materials in the District have been mapped as shown in Figure 5-1. The terms used in the diagram are defined as:

- **Private general** – All waste delivered to a disposal facility by the public
- **Council general** – Waste generated by Council activities such as litter bin emptying, parks and reserves maintenance, and street cleaning
- **Commercial general** – Waste delivered to a disposal facility by a private waste operator
- **Special waste** – Wastes such as biosolids and water treatment plant screenings

Figure 5-1: Waste Flows in Thames-Coromandel District
5.1.2 Waste and Recycling Quantities for Thames-Coromandel District

The quantities of landfilled waste and diverted materials were determined through analysis of Council records, landfill records provided by HG Leach, and information provided by private waste and recycling operators. The results for waste to landfill are presented in Table 5-1 below. The results for diverted materials are presented in Table 5-2 on the following page. Both tables are divided into materials controlled by Council and materials controlled by commercial waste and recycling operators.

Table 5-1: Thames-Coromandel District Waste to Landfill

<table>
<thead>
<tr>
<th>WASTE TO LANDFILL</th>
<th>Tonnes per annum</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Council-controlled waste streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside refuse collections direct to landfill</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Kerbside refuse collections into transfer stations</td>
<td>3,357</td>
<td>Council data 09/10</td>
</tr>
<tr>
<td>General waste into transfer stations including. Moloks</td>
<td>9,404</td>
<td>Calculated from other data</td>
</tr>
<tr>
<td><strong>Subtotal - Transfer stations to landfill</strong></td>
<td>12,761</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td>General waste to landfill</td>
<td>465</td>
<td>Calculated from other data</td>
</tr>
<tr>
<td>Special waste to landfill</td>
<td>1,673</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td><strong>Total – Council-controlled waste to landfill</strong></td>
<td>14,899</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td><strong>Commercial operator-controlled waste streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private kerbside refuse collections</td>
<td>800</td>
<td>Survey of commercial operators</td>
</tr>
<tr>
<td>General waste</td>
<td>2,329</td>
<td>Calculated from other data</td>
</tr>
<tr>
<td><strong>Total - Commercial operator-controlled waste to landfill</strong></td>
<td>3,129</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td><strong>TOTAL – WASTE TO LANDFILL</strong></td>
<td>18,029</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
</tbody>
</table>
Table 5-2: Thames-Coromandel District Diverted Materials

<table>
<thead>
<tr>
<th>DIVERTED MATERIALS</th>
<th>Tonnes per annum</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council-controlled diverted materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside recycling collections</td>
<td>2,772</td>
<td>Council data 09/10</td>
</tr>
<tr>
<td>Transfer station drop-off recycling including Moloks</td>
<td>3,294</td>
<td>Calculated from other data</td>
</tr>
<tr>
<td>Greenwaste from transfer stations</td>
<td>3,300</td>
<td>Envirofert&lt;sup&gt;19&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Total – Council-controlled diverted materials</strong></td>
<td><strong>9,366</strong></td>
<td>Council data 09/10</td>
</tr>
<tr>
<td>Commercial operator-controlled diverted materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commodities (glass, cardboard, plastics, etc)</td>
<td>2,000</td>
<td>Survey of commercial operators</td>
</tr>
<tr>
<td>Other materials – scrap metal, concrete, greenwaste, etc.</td>
<td>-</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Total – Commercial operator-controlled diverted materials</strong></td>
<td><strong>2,000</strong></td>
<td>Total of above</td>
</tr>
<tr>
<td><strong>TOTAL – DIVERTED MATERIALS</strong></td>
<td><strong>11,366</strong></td>
<td>Total of Council and commercial operator-controlled diverted materials</td>
</tr>
</tbody>
</table>

5.1.3 Waste Composition in Thames-Coromandel District

There is no information available relating to the composition of waste to landfill from Thames-Coromandel District.

<sup>19</sup> Based on data from Sept – Feb and extrapolated to a full year allowing for seasonal fluctuations. There is some uncertainty about the data as the tonnages recorded may include some stockpiled material.
5.2 Hauraki District

5.2.1 Waste Flows in Hauraki District
Using information provided by Hauraki District Council and private waste operators, the flows of waste materials in the District have been mapped as shown in Figure 5-2. The terms used in the diagram are defined as:

- **Private general** – All waste delivered to a disposal facility by the public
- **Council general** – Waste generated by Council activities such as litter bin emptying, parks and reserves maintenance, and street cleaning
- **Commercial general** – Waste delivered to a disposal facility by a private waste operator
- **Special waste** – Wastes such as biosolids and water treatment plant screenings

Figure 5-2: Waste Flows in Hauraki District
5.2.1.1 Waste and Recycling Quantities for Hauraki District

The quantities of landfilled waste and diverted materials were determined through analysis of Council records, landfill records provided by HG Leach, and information provided by private waste and recycling operators. The results for waste to landfill are presented in Table 5-3. The results for diverted materials are presented in Table 5-4 on the following page. Both tables are divided into materials controlled by Council and materials controlled by commercial waste and recycling operators.

Table 5-3: Hauraki District Waste to Landfill

<table>
<thead>
<tr>
<th>WASTE TO LANDFILL</th>
<th>Tonnes per annum</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Council-controlled waste streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerbside refuse collections direct to landfill</td>
<td>1,262</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td>Kerbside refuse collections into transfer stations</td>
<td>0</td>
<td>Council data</td>
</tr>
<tr>
<td>General waste into transfer stations</td>
<td>1,958</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td><strong>Subtotal - Transfer stations to landfill</strong></td>
<td>1,958</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td>General waste to landfill</td>
<td>103</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td>Special waste to landfill</td>
<td>17</td>
<td>Landfill records 11/09 - 10/10</td>
</tr>
<tr>
<td><strong>Total – Council-controlled waste to landfill</strong></td>
<td>3,340</td>
<td>Total of above</td>
</tr>
<tr>
<td><strong>Commercial operator-controlled waste streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private kerbside refuse collections</td>
<td>1,224</td>
<td>Landfill records 11/09 - 10/10 and survey of commercial operators</td>
</tr>
<tr>
<td>General waste</td>
<td>1,638</td>
<td>Landfill records 11/09 - 10/10 and survey of commercial operators</td>
</tr>
<tr>
<td><strong>Total - Commercial operator-controlled waste to landfill</strong></td>
<td>2,862</td>
<td>Total of above</td>
</tr>
<tr>
<td><strong>TOTAL – WASTE TO LANDFILL</strong></td>
<td>6,202</td>
<td>Total of Council and commercial operator-controlled waste</td>
</tr>
</tbody>
</table>
5.2.2 Waste Composition in Hauraki District

The composition of solid waste from Hauraki District was measured for Council by Waste Not Consulting in 2006. The results of the analysis are shown in Table 5-5 below for:

1) The composition of the Council’s kerbside refuse bag collection

2) The composition of the overall waste stream from the District being disposed of to landfill.

### Table 5-5: Hauraki District Waste Composition

<table>
<thead>
<tr>
<th>1) HDC kerbside refuse 2006</th>
<th>2) All waste to landfill from HDC 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>19.0%</td>
</tr>
<tr>
<td>Plastics</td>
<td>13.7%</td>
</tr>
<tr>
<td>Organics (food and greenwaste)</td>
<td>38.5%</td>
</tr>
<tr>
<td>Ferrous metals</td>
<td>10.0%</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
<td>0.8%</td>
</tr>
<tr>
<td>Material</td>
<td>2011</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Glass</td>
<td>8.1%</td>
</tr>
<tr>
<td>Textiles</td>
<td>2.4%</td>
</tr>
<tr>
<td>Nappies &amp; sanitary</td>
<td>5.3%</td>
</tr>
<tr>
<td>Rubble, concrete, etc.</td>
<td>1.0%</td>
</tr>
<tr>
<td>Timber</td>
<td>0.1%</td>
</tr>
<tr>
<td>Rubber</td>
<td>0.2%</td>
</tr>
<tr>
<td>Potentially hazardous</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Organic material, which includes primarily food waste and greenwaste, comprised the largest proportion of both the kerbside refuse and the overall waste stream to landfill. When the audit was conducted in 2006, there was no kerbside recycling service in the district. As a result, the kerbside refuse is likely to have contained higher proportions of recyclable materials (paper, plastics, glass, and metals) at the time than it would currently, after the introduction of kerbside recycling.
5.3 Matamata-Piako District

5.3.1 Waste Flows in Matamata-Piako District

Using information provided by Matamata-Piako District Council and private waste operators, the flows of waste materials in the District have been mapped as shown in Figure 5-3. The terms used in the diagram are defined as:

- **Private general** – All waste delivered to a disposal facility by the public
- **Council general** – Waste generated by Council activities such as litter bin emptying, parks and reserves maintenance, and street cleaning
- **Commercial general** – Waste delivered to a disposal facility by a private waste operator
- **Special waste** – Wastes such as biosolids and water treatment plant screenings

Figure 5-3: Waste Flows in Matamata-Piako District
5.3.2 Waste and Recycling Quantities for Matamata-Piako District

The quantities of landfilled waste and diverted materials were determined by analysis of the 2010 survey of waste to landfill undertaken by Waste Not Consulting and through discussions with private waste and recycling operators. The results for waste to landfill are presented in Table 5-6 below. The results for diverted materials are presented in Table 5-7 on the following page. Both tables are divided into materials controlled by Council and materials controlled by commercial waste and recycling operators.

Table 5-6: Matamata-Piako District Waste to Landfill

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Council-controlled waste streams</th>
<th>Commercial operator-controlled waste streams</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kerbside refuse collections direct to landfill</td>
<td>Private kerbside refuse collections</td>
</tr>
<tr>
<td></td>
<td>Kerbside refuse collections into transfer stations</td>
<td>General waste</td>
</tr>
<tr>
<td></td>
<td>General waste into transfer stations</td>
<td>General waste to landfill</td>
</tr>
<tr>
<td></td>
<td>Subtotal - Transfer stations to landfill</td>
<td>Special waste to landfill</td>
</tr>
<tr>
<td></td>
<td>Total – Council-controlled waste to landfill</td>
<td>Total – Commercial operator-controlled waste to landfill</td>
</tr>
<tr>
<td></td>
<td>WASTE TO LANDFILL</td>
<td>TOTAL – WASTE TO LANDFILL</td>
</tr>
<tr>
<td>Tonnes per annum</td>
<td>2010 SWAP survey</td>
<td>2010 SWAP survey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Council-controlled diverted materials</th>
<th>Commercial operator-controlled diverted materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kerbside recycling collections</td>
<td>Commodities (glass, cardboard, plastics, etc)</td>
</tr>
<tr>
<td></td>
<td>Transfer station drop-off recycling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Greenwaste from transfer stations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total – Council-controlled diverted materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL – WASTE TO LANDFILL</td>
<td></td>
</tr>
<tr>
<td>Tonnes per annum</td>
<td>Council data</td>
<td>Survey of commercial operators</td>
</tr>
<tr>
<td>Source of data</td>
<td>July 09/June 10</td>
<td></td>
</tr>
</tbody>
</table>
5.3.3 Waste Composition in Matamata-Piako District
The composition of solid waste from Matamata-Piako District was measured for Council by Waste Not Consulting in 2010. The results of the analysis are shown in Table 5-8 for:

1) The composition of the Council’s kerbside refuse bag collection
2) The composition of the overall waste stream from the District being disposed of to landfill.

Table 5-8: Matamata-Piako District Waste Composition

<table>
<thead>
<tr>
<th>Material</th>
<th>MPDC kerbside refuse 2010</th>
<th>All waste to landfill from MPD 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>12.0%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Plastics</td>
<td>13.0%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Organics (food and greenwaste)</td>
<td>46.8%</td>
<td>30.1%</td>
</tr>
<tr>
<td>Ferrous metals</td>
<td>3.1%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
<td>0.9%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Glass</td>
<td>2.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Textiles</td>
<td>3.7%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Nappies &amp; sanitary</td>
<td>14.5%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Rubble, concrete, etc.</td>
<td>1.5%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Timber</td>
<td>0.3%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Rubber</td>
<td>0.5%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Potentially hazardous</td>
<td>1.1%</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Organic material, which includes primarily food waste and greenwaste, comprised the largest proportion of both the kerbside refuse and the overall waste stream to landfill.

Paper, plastics and materials classified as ‘Nappies & sanitary’ all comprised similar proportions of the kerbside refuse, between 12% and 15%. All other materials in the kerbside refuse comprised less than 4% of the total.

Paper, plastics and timber all comprised similar proportions of the kerbside refuse, between 11% and 13%. All other materials in the kerbside refuse comprised less than 6% of the total.

5.4 Comparisons between Districts

5.4.1 Proportion of Properties Receiving Council Kerbside Services

Each of the Councils has a different policy determining which properties will receive the Council’s kerbside refuse and recycling services. As a result, each council provides services to a different proportion of properties within its district. This information is presented in Table 5-9.

Table 5-9: Proportion of Properties Receiving Council Kerbside Services

<table>
<thead>
<tr>
<th></th>
<th>Thames-Coromandel District</th>
<th>Hauraki District (1)</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td># of properties</td>
<td>26,186 (2)</td>
<td>9,553 (3)</td>
<td>14,180 (4)</td>
</tr>
<tr>
<td># of properties with Council kerbside services 2010</td>
<td>23,385 (5)</td>
<td>5,932</td>
<td>9,050</td>
</tr>
<tr>
<td>% of properties with Council kerbside services</td>
<td>89%</td>
<td>62%</td>
<td>64%</td>
</tr>
</tbody>
</table>

(1) Data for Hauraki District is from prior to creation of the Auckland Council and so does not include the area of the former Franklin District that is now included in Hauraki District
(2) Number of ‘rating units’ from 2009 Ten Year Plan at http://web.tcdc.govt.nz/docsprod/masterplan/enquirer/publishR.aspx
(3) ‘Total rateable properties at June 2005 from 2006 LTCCP Volume 1 Page 222
(4) ‘Rateable assessments’ from personal communication, MPDC
(5) Solid waste-rated properties 2009/10

Nearly 90% of rated properties in TCD receive Council’s kerbside refuse and recycling services. In HDC and MPD, just over 60% of rateable properties are serviced. A small number of properties in Hauraki District that were part of Franklin District until November 2010 receive only Council’s kerbside refuse service, but not the kerbside recycling service.

5.4.2 Council Market Share of Kerbside Refuse Services

In all three districts, kerbside refuse collection services are provided by both Council and private waste operators. It should be noted that this section is only referring to council’s share of household kerbside refuse services. There are no private kerbside recycling services offered to householders that compete with council. While the Councils’ services are used primarily by residential properties, anecdotal evidence suggests that the private
waste operators’ services are also used by a significant proportion of commercial properties. Using the data in Sections 5.1.2, 5.2.1.1, and 5.3.2, each Council’s market share of the kerbside refuse market is calculated in Table 5-10.

The data for Thames-Coromandel District includes refuse collected in Moloks. This is based on the assumption that the Moloks are used by residents for the disposal of the same type of refuse in the same manner as they would use the kerbside refuse collection, if kerbside services were to be available or as convenient.

A council’s market share of kerbside refuse collection services affects the financial parameters of the council’s collection and may affect the success of council’s waste reduction initiatives. Householders using a private user-pays MGB refuse collection service have no economic incentive to reduce the quantity of refuse they dispose of through the service. On the other hand, householders who use the user-pays council bag services can save money by reducing their waste to landfill.

Table 5-10: Council Market Share of Kerbside Refuse Services

<table>
<thead>
<tr>
<th>Tonnes per Annum</th>
<th>Thames-Coromandel District</th>
<th>Hauraki District</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council kerbside refuse</td>
<td>3,357</td>
<td>1,262</td>
<td>1,078</td>
</tr>
<tr>
<td>Moloks</td>
<td>801</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Private kerbside refuse</td>
<td>800</td>
<td>1,224</td>
<td>4,093</td>
</tr>
<tr>
<td>Total kerbside refuse</td>
<td>4,959</td>
<td>2,485</td>
<td>5,171</td>
</tr>
<tr>
<td>Council market share</td>
<td>84%</td>
<td>51%</td>
<td>21%</td>
</tr>
</tbody>
</table>

There is a substantial variation in the Councils’ market share of kerbside refuse services. Whereas TCDC’s kerbside services account for over 80% of the total kerbside refuse market, MPDC controls slightly over 20%. HDC’s kerbside services account for 51% of all kerbside refuse services.

These differences are associated with the different proportions of properties receiving kerbside refuse services, as shown in Section 5.4.1. TCDC provides kerbside services to a high proportion of properties, which provides private waste operators with less of an opportunity to establish an economically-viable collection service.

There may also be historical reasons for the differences if, for example, a council had only recently extended services to a rural area that had previously been served exclusively by private waste operators. Geographical factors must also be taken into account, as sparsely-populated areas or those with difficult terrain are less economically viable and hence less attractive to private waste operators.

5.4.3 Kerbside Refuse as a Proportion of Waste to Landfill

Kerbside refuse services are used primarily by residential properties, with small-scale commercial businesses comprising a much lower proportion (on the order of 5-15%, typically). Larger commercial and industrial operations use other types of refuse collections, such as stationary compactors, front-loader skips, or gantry bins. As a result, in districts with a relatively low level of commercial/industrial activity, such as rural
districts, kerbside refuse services represent a larger proportion of waste to landfill than districts with higher levels of commercial/industrial activity.

Another factor determining the proportion of waste to landfill comprised of kerbside refuse is the relative usage of private wheelie bins. Households that use private wheelie bins tend to set out greater quantities of refuse than households that use refuse bags. Table 5-11 on the next page shows the proportion of waste to landfill comprised of kerbside refuse.

Table 5-11: Kerbside Refuse as a Proportion of Waste to Landfill

<table>
<thead>
<tr>
<th></th>
<th>Thames-Coromandel District</th>
<th>Hauraki District</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total kerbside refuse</td>
<td>4,959</td>
<td>2,485</td>
<td>5,171</td>
</tr>
<tr>
<td>Total waste to landfill</td>
<td>18,029</td>
<td>6,202</td>
<td>13,234</td>
</tr>
<tr>
<td>Kerbside as % of total waste to landfill</td>
<td>28%</td>
<td>40%</td>
<td>39%</td>
</tr>
</tbody>
</table>

As shown in Table 5-11, in Thames-Coromandel District kerbside refuse accounts for a lower proportion of total waste to landfill than Hauraki and Matamata-Piako Districts. Although the reasons for this cannot be stated with certainty, this is likely to be associated with different types of economic activity in the districts and the differing levels of council kerbside market shares. The lower rate in TCDC may also relate to lower average occupancy rates for households in the district (due to the high number of holiday homes).

5.4.4 Per Capita Waste to Landfill

The quantity of waste disposed of to landfill in a given districts is related to a large number of factors, including:

1) The level and nature of economic activity
2) The relationship between the costs of landfill disposal and the value of recovered materials
3) The extent of resource recovery activity
4) Seasonal fluctuations in population
5) The affluence of the population.

By combining population data from the 2006 census and the landfill waste data in Sections 5.1.2, 5.2.1.1, and 5.3.2, the per capita per annum waste to landfill can be calculated as in
Table 5-12 below.
Table 5-12: Waste Disposal per Capita

<table>
<thead>
<tr>
<th></th>
<th>Thames-Coromandel District</th>
<th>Hauraki District</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2006 census)</td>
<td>25,941</td>
<td>17,190</td>
<td>30,483</td>
</tr>
<tr>
<td>Total waste to landfill</td>
<td>18,029</td>
<td>6,202</td>
<td>13,234</td>
</tr>
<tr>
<td>(tonnes per annum)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonnes/capita/annum of</td>
<td>0.695</td>
<td>0.361</td>
<td>0.434</td>
</tr>
<tr>
<td>waste to landfill</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Per capita waste disposal is substantially higher in Thames-Coromandel than the other two districts. A significant factor in this is the large number of visitors to the district and the resulting size of the tourism and hospitality industry. As the 2006 census data relates to the number of ‘usually resident’ individuals, it does not include visitors to the district. In functional terms, Thames-Coromandel acts as a much larger waste catchment than the census population figures would suggest. The differences also relate to the levels and types of economic activity in each district.

As is shown in Figure 5-4, a higher proportion of the population in Thames-Coromandel is employed in tourism-related industries than the other districts and a higher proportion in Matamata-Piako District is employed in manufacturing. In Hauraki District, health care and agriculture are the largest employers. The per capita waste disposal figures reflect the different economic bases of the three districts, with tourism and manufacturing generally creating more waste to landfill than agriculture and health care.
Figure 5-4: Employment by Sector in 2010 (Data source: Statistics New Zealand)
5.4.5 Per Capita Kerbside Refuse

By combining population data from the 2006 census and the combined council and private kerbside refuse data in Sections 5.1.2, 5.2.1.1, and 5.3.2, the per capita per annum kerbside refuse disposal figures can be calculated as in Table 5-13 below.

Table 5-13: Per Capita Kerbside Refuse

<table>
<thead>
<tr>
<th>Domestic and commercial kerbside refuse combined</th>
<th>Thames-Coromandel District</th>
<th>Hauraki District</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2006 census)</td>
<td>25,941</td>
<td>17,190</td>
<td>30,483</td>
</tr>
<tr>
<td>Total kerbside refuse</td>
<td>4,959</td>
<td>2,485</td>
<td>5,171</td>
</tr>
<tr>
<td>Tonnes/capita/annum of kerbside refuse</td>
<td>0.191</td>
<td>0.145</td>
<td>0.170</td>
</tr>
</tbody>
</table>

The per capita disposal rate of kerbside refuse is higher in TCD than in the other districts. This is likely to be related to the large number of visitors and holiday-home owners in the district who generate kerbside refuse but are not accounted for in the usually-resident population figures.

The relatively high generation of kerbside refuse in MPD is associated with the high market share of private kerbside refuse services in the district, as discussed in Section 5.4.2. Users of private MGBs generally generate more kerbside refuse per capita than users of user-pays bags.

5.4.6 Per Capita Diverted Materials

By combining population data from the 2006 census and the combined council and private diverted materials data in Sections 5.1.2, 5.2.1.1, and 5.3.2, the per capita per annum collection of diverted materials can be calculated as in Table 5-14 below.

It should be noted that ‘diverted materials’ in this context only includes the commodity-type materials, primarily paper, kraft, glass, and plastic and metal containers. Council kerbside recycling collections, transfer station recycling drop-offs, and transfer station greenwaste drop-offs are also included.

Table 5-14: Per Capita Diverted Materials

<table>
<thead>
<tr>
<th>Domestic and commercial diverted materials combined</th>
<th>Thames-Coromandel District</th>
<th>Hauraki District</th>
<th>Matamata-Piako District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2006 census)</td>
<td>25,941</td>
<td>17,190</td>
<td>30,483</td>
</tr>
<tr>
<td>Total diverted materials</td>
<td>11,366</td>
<td>2,230</td>
<td>3,111</td>
</tr>
<tr>
<td>Tonnes/capita/annum of diverted materials</td>
<td>0.438</td>
<td>0.130</td>
<td>0.102</td>
</tr>
</tbody>
</table>
While the quantity of waste per capita is significantly higher in TCDC due to the large number of visitors it also results in substantially more material being diverted. The quantities of per captia diversion are approximately four times higher in TCDC than in the other districts.

5.4.7 Comparisons with Other Districts – Waste to Landfill

In previous surveys for other councils, Waste Not Consulting has collected data on per capita disposal of waste to landfill. Table 5-15 compares the figures for a number of districts with TCD, HDC, and MPD. It is important to note that some of the data were gathered before the global financial crisis of 2008. Waste to landfill tonnages decreased on the order of 20% subsequent to that time.

Table 5-15: Per Capita Waste to Landfill Compared to Other Districts

<table>
<thead>
<tr>
<th>Overall waste (excluding cover materials and special waste)</th>
<th>Tonnes per capita per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waimakariri District 2010</td>
<td>0.336</td>
</tr>
<tr>
<td><strong>Hauraki District 2010</strong></td>
<td><strong>0.361</strong></td>
</tr>
<tr>
<td>Rodney District 2009</td>
<td>0.369</td>
</tr>
<tr>
<td><strong>Matamata-Piako District 2010</strong></td>
<td><strong>0.434</strong></td>
</tr>
<tr>
<td>Kapiti Coast District 2005</td>
<td>0.443</td>
</tr>
<tr>
<td>Tauranga City and WBoP District 2010</td>
<td>0.452</td>
</tr>
<tr>
<td>Southland District 2007</td>
<td>0.458</td>
</tr>
<tr>
<td>Whakatane District 2007</td>
<td>0.465</td>
</tr>
<tr>
<td>Waitaki District 2008</td>
<td>0.518</td>
</tr>
<tr>
<td>Gore District 2007</td>
<td>0.519</td>
</tr>
<tr>
<td>South Waikato District 2007</td>
<td>0.541</td>
</tr>
<tr>
<td>Whangarei District 2008</td>
<td>0.570</td>
</tr>
<tr>
<td>Rotorua 2009</td>
<td>0.574</td>
</tr>
<tr>
<td>Napier/Hastings 2009</td>
<td>0.581</td>
</tr>
<tr>
<td>Taupo District 2008</td>
<td>0.620</td>
</tr>
<tr>
<td>Invercargill City 2007</td>
<td>0.684</td>
</tr>
<tr>
<td><strong>Thames-Coromandel District</strong></td>
<td><strong>0.695</strong></td>
</tr>
<tr>
<td>Napier/Hastings 2007</td>
<td>0.743</td>
</tr>
<tr>
<td>Queenstown Lakes District 2008</td>
<td>1.228</td>
</tr>
</tbody>
</table>

The per capita figures for Hauraki and Matamata-Piako Districts are similar for those of other primarily rural districts. The per capita figure for Thames-Coromandel District is relatively high, but this is similar to other districts with large tourism sectors, such as Rotorua and Queenstown-Lakes Districts.
5.4.8 Comparisons with Other Districts – Kerbside Refuse

In previous surveys for other councils, Waste Not Consulting also collected data on per capita disposal of kerbside refuse. Table 5-16 compares the figures for a number of districts with TCD, HDC, and MPD. It is important to note that some of the data were gathered before the global financial crisis of 2008. Kerbside refuse tonnages decreased subsequent to that time, but not to the same degree as overall tonnages to landfill.

Table 5-16: Per Capita of Kerbside Refuse Compared to Other Districts

<table>
<thead>
<tr>
<th>Domestic and commercial kerbside refuse combined</th>
<th>Kg/capita/annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauraki District 2010</td>
<td>145</td>
</tr>
<tr>
<td>South Taranaki District 2010</td>
<td>149</td>
</tr>
<tr>
<td>Hutt City and Upper Hutt 2007/08</td>
<td>169</td>
</tr>
<tr>
<td>Matamata-Piako District 2010</td>
<td>170</td>
</tr>
<tr>
<td>Waimakariri District 2010</td>
<td>172</td>
</tr>
<tr>
<td>Tauranga City and Western Bay of Plenty 2010</td>
<td>183</td>
</tr>
<tr>
<td>Thames-Coromandel District 2010</td>
<td>191</td>
</tr>
<tr>
<td>Gore District 2007</td>
<td>202</td>
</tr>
<tr>
<td>South Waikato District 2007</td>
<td>208</td>
</tr>
<tr>
<td>Taupo District 2008</td>
<td>208</td>
</tr>
<tr>
<td>Waitaki District 2008</td>
<td>211</td>
</tr>
<tr>
<td>Rotorua District 2009</td>
<td>216</td>
</tr>
<tr>
<td>Stratford District 2010</td>
<td>218</td>
</tr>
<tr>
<td>Hastings District/Napier City 2009</td>
<td>227</td>
</tr>
<tr>
<td>Southland District 2007</td>
<td>238</td>
</tr>
<tr>
<td>Invercargill City 2007</td>
<td>243</td>
</tr>
<tr>
<td>Whakatane District 2007</td>
<td>244</td>
</tr>
<tr>
<td>New Plymouth District 2010</td>
<td>271</td>
</tr>
<tr>
<td>Queenstown Lakes District 2008</td>
<td>411</td>
</tr>
</tbody>
</table>

Hauraki District has the lowest per capita disposal of kerbside refuse of all the districts measured to date. While the rate in Thames-Coromandel District is higher than Hauraki or Matamata-Piako, the rate is lower than in many other districts. To an extent, these rates are influenced by the refuse collection services offered and promoted to businesses by private waste operators. In Whakatane District, for example, there were no front-loader trucks operating at the time of the survey, so more businesses used kerbside MGBs for refuse disposal than in other districts.

5.4.9 Seasonality of Waste Generation

The generation and disposal is recognised as being subject to seasonal variations. In most parts of New Zealand, waste disposal reaches an annual peak in December,
declines towards the middle of winter, and then increases again towards the end of the year. This pattern primarily relates to the annual cycles of commercial and manufacturing activity.

In Figure 5-5 below, the monthly tonnages of waste to landfill from each district are compared. The datasets that have been used for the comparison are not consistent, with the Matamata-Piako data being from a slightly different time period than the other two districts.

Figure 5-5: Comparison of Monthly Landfill Tonnages

While Hauraki and Matamata-Piako display a similar disposal pattern to most other parts of New Zealand, with waste disposal in December being the highest of any month of the year. Thames-Coromandel, on the other hand, peaks in January, when visitor numbers are the greatest. The large number of visitors in the district in January results in increased commercial and residential waste activity, and therefore more waste from these sources.

This January peak in waste and recycling caused by visitor numbers is illustrated by Figure 5-6, which shows the monthly tonnage of Council’s kerbside collections in Whangamata.
The January peak is similar in other areas with large number of summer visitors, such as Pauanui and Whitianga, but is absent in areas such as Thames.
6.0 Future Demand

There are a wide range of factors that are likely to affect future demand for waste and resource recovery services and infrastructure and the influence of these is likely to vary over time and in different localities. This means that predicting future demand has inherent uncertainties. Key factors are likely to include the following:

- Population growth. This includes both usual and temporary residents.
- Household growth
- Economic growth
  - Levels of waste generation have historically been linked to level of economic growth, which leads to greater levels of production waste, consumption and construction.
- Recycling markets
- Local and Central Government Policy
- Changes in lifestyles and consumption
- Community expectations

There are some factors which have been assessed only at a national level, either due to data limitations or because they are thought to impact similarly across all three districts. The discussions at a national level follow in Section 6.1, with discussions by District Council in the subsequent sections (Section 6.2 and 6.3).

6.1 National Indicators

6.1.1 Economic Growth and Consumption

A report by the OECD\(^{20}\) noted the following driving forces behind current and projected household consumption patterns:

1. Rising per capita income
2. Demographics (more working women, more single person households, larger retirement population)
3. Accompanying changes in lifestyles leading to individualised buying patterns
4. Shift towards more processed and packaged products
5. Higher levels of appliance ownership
6. Wider use of services and recreation
7. Technology
8. Institutions and infrastructure that create the prevailing conditions faced by householders

Figure 6-1 below shows the growth in municipal waste plotted against GDP and population. The chart shows that waste has tended to increase at a rate slightly below GDP but noticeably above the level of population growth.

\(^{20}\) ibid, p12.
A study by the EPA\textsuperscript{21} compared levels of GDP, population growth, and consumer spending as measures to predict the quantity of waste being generated. The study used historical data to establish the predictive accuracy of these measures and found the best predictor of waste generation levels to be consumer spending.

At a District level the data regarding economic growth projections is sparse. At a national level, The Department of Building and Housing report on projections from the Reserve Bank, whose GDP forecasts for 2011 stood at 2.8%, but which had previously been forecast at 3.5%. Recent New Zealand Institute of Economic Research (NZIER) predictions also became more pessimistic in September than they previously had been in June with a forecast of 2.2% growth in 2010 and 1.2% in 2011.\textsuperscript{22}

Forecasts therefore appear to be predicting gradual economic recovery – but the climate is uncertain. The implications for waste management are therefore that no significant increases should be expected as a result of any rapid growth in economic activity, but there is a need to ensure that planned changes in services and facilities are sufficiently ‘future proofed’.

6.1.2 Recycling Markets

Recovery of materials from the waste stream for recycling and reuse is heavily dependent on the recovered materials having an economic value. This particularly holds true for recovery of materials in the private sector. Markets for recycled commodities are influenced by prevailing economic conditions and most significantly by commodity prices for the equivalent virgin materials.


In the latter part of 2008, after the global financial crisis, international markets for recycled commodities fell sharply. Prices for aluminium cans dropped from $1000 a tonne to $100. Plastics, on average, fell from $280 a tonne to $200, steel from $700 to $100 and copper from $8000 to $4000. Cardboard and paper prices also dropped 90 per cent. Since this time demand and prices have recovered to a degree but not to previous levels. While the fall appears dramatic, prices were falling from record highs and have in real terms simply returned to pre-boom prices. This is illustrated in Figure 6-2.

![Figure 6-2: International Commodity Prices 2001-2009](image)


The fall in the markets led to stockpiling of materials by recyclers, and has put strain on the industry. Although the recycling industry struggled for a time and some collectors pulled back from collecting materials to the same extent as previously the industry did not experience any significant exits from the market or reduction in total capacity. Markets and market prices have to a large degree stabilised in the period since the global financial crisis, driven principally by the continued economic growth in China and other Asian economies.

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Therefore it seems likely that any increase in demand for processing would be able to be met by the private sector, contingent on the ongoing transport of recyclables to these markets.

Development of a more localised recyclables processing market would require the Council, business, and community groups working together to identify potential opportunities. These opportunities are likely to centre on materials that are less amenable to transport and which are more likely to have local uses such as construction and demolition material, and organic wastes.

6.1.3 Central Government Policy and Legislation
The key policies and legislation, described in the following Sections, are likely to influence demand for refuse and recycling services in the Districts.

6.1.4 Waste Minimisation Act
The Waste Minimisation Act 2008 (WMA) provides a regulatory framework for waste minimisation that had previously been based on largely voluntary initiatives and the involvement of territorial authorities under previous legislation, including Local Government Act 1974, Local Government Amendment Act (No 4) 1996, and Local Government Act 2002. The purpose of the WMA is to encourage a reduction in the amount of waste disposed of in New Zealand.

In summary, the WMA:

- Clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation e.g. updating Waste Management and Minimisation Plans (WMMPs) and collecting/administering levy funding for waste minimisation projects
- Requires that a Territorial Authority promote effective and efficient waste management and minimisation within its district (Section 42)
- Requires that when preparing a WMMP a Territorial Authority must consider the following methods of waste management and minimisation in the following order of importance:
  - Reduction
  - Reuse
  - Recycling
  - Recovery
  - Treatment
  - Disposal
- Puts a levy on all waste disposed of in a landfill, initially at $10 per tonne effective as of 1st July 2009; 50% of the funds collected will be provided to Territorial Authorities to be spent on the implementation of their Waste Minimisation and Management Plans. The remainder, less any administration costs, will go into a contestable fund for waste minimisation initiatives. The levy will help dis-incentivise landfill and levy funding will potentially be available to assist organic waste diversion projects;
- Facilitates or enforces producers, brand owners, importers, retailers, consumers and other parties to take responsibility for the environmental effects of their
products – from ‘cradle-to-grave’ through voluntary and mandatory product stewardship schemes. There may be implications for local authorities which currently deal with these products in their waste streams or who are party to voluntary programmes;

➢ Allows for regulations to be made making it mandatory for certain groups (for example, landfill operators) to report on waste to improve information on waste minimisation. This will impact on councils owning or operating landfills

➢ Introduces a new Waste Advisory Board to give independent advice to the Minister for the Environment on waste minimisation issues.

Various aspects of the Waste Minimisation Act are discussed in more detail below.

6.1.5 National Waste Disposal Levy

From 1st July 2009 the waste disposal levy came in to effect, adding $10 per tonne to the cost of landfill disposal. At $10 a tonne, the levy is not expected in the short term to encourage more businesses to find alternatives to landfilling their waste. The Government has indicated that the levy is likely to increase – however timeframes surrounding the increase are currently unknown. Nevertheless, when the increase is announced the impact will become gradually more significant as a proportion of disposal costs – a cost which will undoubtedly be passed directly onto customers. This provides a clear driver for reducing waste to landfill over the short to medium term in anticipation of the inevitable increasing costs associated with landfill.

The levy adds direct costs to council by increasing the cost of disposing of council waste streams. For TCDC this increase is likely to be in the order of $150,000 per annum, while for MPDC and HDC it will be in the order of $52,000 and $33,000 respectively.

There is opportunity for the councils to recoup these costs through transfer station gate charges and user pays bag charges (which is the intent of the levy). In addition the councils receive a share of the collected levy money. Under the Act councils receive a half share of the levy income pro-rated on a per capita basis. This is likely to assist in offsetting some of the increased costs of disposal – although under the Act the levy money must be spend on waste minimisation initiatives not disposal.

6.1.6 Product Stewardship

The Waste Minimisation Act (2008) (Part 2) makes provision for the government to introduce a requirement for products to be declared Priority Products and for such products to be required to be part of a Product Stewardship Scheme. The purpose of Product Stewardship schemes are to ensure effective reduction, reuse, recycling or recovery of the product and to manage any environmental harm arising from the product when it becomes waste25.

The Ministry for the Environment’s 2009 discussion document26 identifies three wastes: Agricultural Chemicals, Used Oil and Refrigerant Gases as primary candidates for Priority Products. A further 8 products are identified as potential priority products including computers and electronic equipment, packaging, paint, plasterboard and tyres. Several of these products are the subject of voluntary schemes currently and the

25 Waste Management Act 2008 2(8)

26 Ministry for the Environment (2009), Waste Minimisation in New Zealand – A discussion Document form the Ministry for the Environment. Wellington
Government has indicated it will monitor the outcomes of these voluntary schemes before deciding on their priority product status.

The following schemes have currently been accredited by the Minister for the Environment:

- Geocycle Holcim Used Oil Recovery Scheme – used oil collection and disposal scheme.
- The Plasback™ - scheme to recover used farm plastics for recycling.
- The Glass Packaging Forum’s glass packaging product stewardship scheme - scheme for reducing the amount of glass packaging sent to landfill.
- Agrecovery Rural Recycling Programme– scheme to recover agrichemical plastic containers, silage wrap, crop protection net and agrichemicals.
- Refrigerant Recovery- scheme to collect and destruct unwanted synthetic refrigerants, chlorofluorocarbons (CFC’s), hydrochlorofluorocarbons (HCFC’s) and hydrofluorocarbons.

The Councils have the opportunity to benefit from the introduction of Product Stewardship schemes as they may improve the recovery and diversion of products the Council currently manages. As previously noted, HDC and MPDC are already supportive of the Agrecovery scheme.

6.1.7 Waste Minimisation Fund

The Waste Minimisation Fund (WMF) has been set up by the Ministry for the Environment to distribute waste disposal levy money not paid to territorial authorities or used in the administration of the levy. The intent of the WMF is to help fund waste minimisation projects and to improve New Zealand’s waste minimisation performance through:

- Investment in infrastructure;
- Investment in waste minimisation systems and
- Increasing educational and promotional capacity.

The published criteria for the Waste Minimisation Fund are as follows:

1. **Only waste minimisation projects are eligible for funding. Projects must promote or achieve waste minimisation. Waste minimisation covers the reduction of waste and the reuse, recycling and recovery of waste and diverted material. The scope of the fund includes educational projects that promote waste minimisation activity.**
2. **Projects must result in new waste minimisation activity, either by implementing new initiatives or a significant expansion in the scope or coverage of existing activities.**
3. **Funding is not for the ongoing financial support of existing activities, nor is it for the running costs of the existing activities of organisations, individuals, councils or firms.**
4. **Projects should be for a discrete timeframe of up to three years, after which the project objectives will have been achieved and, where appropriate, the initiative will become self-funding.**
5. **Funding can be for operational or capital expenditure required to undertake a project.**
6. For projects where alternative, more suitable, Government funding streams are available (such as the Sustainable Management Fund, the Contaminated Sites Remediation Fund, or research funding from the Foundation for Research, Science and Technology), applicants should apply to these funding sources before applying to the Waste Minimisation Fund.

7. The applicant must be a legal entity.

8. The fund will not cover the entire cost of the project. Applicants will need part funding from other sources.

9. The minimum grant for feasibility studies will be $10,000.00. The minimum grant for other projects will be $50,000.00.

(Source: www.mfe.govt.nz)

Assessment criteria have also been published by the Ministry, and workshops have been held around New Zealand to explain the application process and the criteria. Those applying for funding need to remember the goals of the Fund, and ensure that their application demonstrates a contribution to these goals.

The latest information available on the Fund suggests that the main assessment point is likely to be what the Ministry describe as ‘largest net benefit over time’ e.g. amount of waste diverted from landfill per dollar of funding), alongside supporting criteria such as likelihood of success, reducing environmental harm, wider sustainability benefits, and longevity. Projects that can act as trailblazers for the rest of New Zealand will also be favoured. The Ministry strongly encourages partnership working and collaboration.

While no minimum ‘match’ funding has been specified, the Ministry has made it clear that projects with higher levels of match funding will be seen as demonstrating successful collaboration and a greater likelihood of success and longevity.

The first round of funding has been completed and projects are currently underway. Subsequent funding rounds are going to be run every 6 months, with the next deadline for applications being March 2011.

6.1.8 Emissions Trading Scheme (ETS)

In its current form, the Climate Change (Emissions Trading) Amendment Act 2008 will require landfill owners to surrender emission units to cover methane emissions generated from the landfill, thereby impacting upon the cost of landfilling. Should any future solid waste incineration plants be constructed, the Act would also require emission units to be surrendered to cover carbon dioxide, methane and nitrous oxide emissions from the incineration of household wastes. The waste sector formally entered the ETS on 1 January 2011, at which time Disposal Facility Operators (DFOs) can commence voluntary reporting. Mandatory reporting requirements will apply from January 2012 and emission units will need to be surrendered as of January 2013.

Emissions for waste will be accounted for within the year that the waste is disposed of to landfill – i.e. the total amount of methane that waste is expected to produce will be calculated, reported, and require emission units (NZUs) in the year it goes to landfill. This does mean that closed landfills will not require any reporting or NZUs. ‘Legacy’ closed landfills have been excluded from the ETS.

The definition of a disposal facility will be the same as applies in the Waste Minimisation Act (2008).
All landfills are initially assumed to emit landfill gas at the same rate. This rate is referred to as the ‘Default Emissions Factor (DEF). The DEF is current set in the regulations at 1.1 tonnes of carbon dioxide equivalent per tonne of waste.

This DEF assumes that no landfill gases are collected or destroyed in any way, and incorporates an assumption that 10% of methane in a capped landfill is oxidised to CO₂ before being emitted to the atmosphere. DFO, can apply for a Unique Emissions Factor (UEF) – this will usually be where they think their generation rates are lower than the default.

For a DFO to use a UEF, they must carry out a prescribed Solid Waste Analysis Protocol (SWAP) survey process for a year’s waste. This SWAP survey must categorise the waste by source, as municipal solid waste, commercial and industrial, building and demolition, and other. Within each source, the fraction of the following waste materials must be calculated: food waste, garden waste, paper, wood, textiles, nappies, sewage sludge, and other.

For each of these waste materials, a standard proportion of degradable organic carbon (DOC) has been calculated. These are shown in Table 6-1. ‘Other materials’ are assumed to have zero DOC.

Table 6-1: Proportions of Degradable Organic Carbon, by Material

<table>
<thead>
<tr>
<th>Waste Material</th>
<th>DOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food waste</td>
<td>0.15</td>
</tr>
<tr>
<td>Green waste</td>
<td>0.20</td>
</tr>
<tr>
<td>Paper</td>
<td>0.40</td>
</tr>
<tr>
<td>Wood</td>
<td>0.43</td>
</tr>
<tr>
<td>Textiles</td>
<td>0.24</td>
</tr>
<tr>
<td>Nappies</td>
<td>0.24</td>
</tr>
<tr>
<td>Sewage sludge</td>
<td>0.05</td>
</tr>
</tbody>
</table>

The regulations require landfill operators to undertake two waste surveys over a 12 month period with the surveys at least three months apart to allow for seasonal variation – although it could be argued this would be more accurately measured if surveys were required to be 5-6 months apart.

The users of SWAP surveys, and UEFs, are required to re-establish the composition of each waste source at 10 yearly intervals.

DFOs that reduce their methane emissions to the atmosphere by flaring or through energy production carry out a net methane calculation. Once again, these DFOs need to apply for a UEF. DFOs are required to calculate their own efficiency rate of methane collection and destruction. These calculations must incorporate an assumption that 10% of methane in a capped landfill is oxidised to CO₂ before being emitted to the atmosphere (although the TAG report notes that DFOs could apply to calculate their own unique oxidation factor).

The NZETS is likely to have a material impact on the cost of disposal. The MfE has indicated that for the purposes of calculating ETS costs and default price of carbon of NZ$50 per tonne should be assumed. At a DEF of 1.1 tonnes of CO₂ eq per tonne of waste this equates to an additional potential cost of $55 per tonne of waste disposed. If
the full cost of this is applied this would approximately double the cost of landfill disposal at Tirohia.

There are a number of reasons however why the actual cost for the 3 councils can be expected to be lower (at least initially):

- The two landfills in vicinity to the districts, Tirohia and Hampton Downs, both have landfill gas collection systems in place. This means they will apply for UEFs which could be expected to approximately halve (or more) the number of NZUs that will need to be surrendered. The extent to which the landfills choose to pass on this savings (as opposed to repaying the costs of installing gas capture systems) remains to be seen,

- The landfills may chose to lower their actual gate prices in order to maintain tonnages. This will particularly be the case where there are landfills in proximity that compete for tonnage. This has happened for example in the UK as their landfill tax has increased,

- The suggested price of carbon at $50 tonne is relatively high. Historically international carbon prices have been between $20-$30 tonne (they are currently around $30 per tonne). There is a possibility carbon prices could climb dramatically if internationally energy generation shifts to dirtier technologies like coal (meaning more carbon offsets need to be purchased) but it is difficult to forecast.

In our view it would be prudent to plan for an increase in disposal charges of the order of at least $15-20 per tonne, but careful attention should be paid to carbon markets and discussions held with disposal facility operators to determine what they estimate the likely level of ETS costs that they will pass on will be.

6.1.9 NZ Waste Strategy

The revised NZWS was released in October 2010. The new strategy adopts two of the three overarching goals from the previous (2002) NZWS. These are:

1. Reducing the harmful effects of waste
2. Improving the efficiency of resource use

The NZWS 2010 is a departure from the previous strategy in that it has moved away from an overarching objective of ‘zero waste’, and that it does not present any specific targets for waste minimisation.

The intent of the 2010 strategy is to enable a more flexible approach to waste management and encourage development of locally-appropriate targets and solutions, and to efficiently allocate waste management and minimisation effort and resources.

The promotion of these two overarching goals provides a useful measure against which to evaluate the objectives of a Waste Management and Minimisation Plan – in other words: to what extent do the proposed initiatives in the plan reduce the harmful effects of waste and improve the efficiency of resource use?

The harmful effects of waste can be reduced by reducing the quantities of waste and by improving management of potentially hazardous wastes.

Similarly the efficiency of resource use can be improved through waste prevention and through reuse, recycling and recovery of materials.
6.2 Thames-Coromandel District Council Future Demand

The most up-to-date projections for population and dwellings have been undertaken by BERL Economics on behalf of TCDC.

6.2.1 Population

The BERL work suggests that the usual resident population is expected to remain fairly constant over the next 30 years. Within the population profile the proportion of those who are 75 and over is shown to increase.

Figure 6-3: Resident Population Projections

Figure 6-4 shows that, by area, the Mercury Bay region is expected to see the greatest rise in the population, most likely due to its popularity as a retirement destination.
The main challenges for waste management arise from the peak population (Figure 6-5) which fluctuates throughout the year. As shown in Figure 6-6 during a peak summer period the District’s population grew from a usual population of 26,000 to an estimated population of 137,000.

Figure 6-5: TCDC Usual and Peak Population
6.2.2 Households

Data projections for dwellings in the District from BERL Economics predict a very gradual increase in dwellings in the short-term (as a result of the recession), but from 2015 the increase is likely to steadily rise. Aligning with the population projections the majority of dwelling growth is expected in the Mercury Bay region.

The large gap between houses being built/inhabited for the usual resident population, and those being built/inhabited as second homes is expected to close in the short-term. This is due to the increased demand expected from a growing ageing population, coupled with demand for second homes reducing in the short term as Auckland region unemployment rises. This is shown in Figure 6-8.
The recovery, from 2010 onwards, is shown in Figure 6-9 where the rise in unoccupied dwellings increases at a greater rate than occupied dwellings over the timeframe to 2042.
6.2.3 Economic Growth

Council’s Long Term Council Community Plan indicates that economic growth in Thames-Coromandel has declined in recent years, when compared to the national average. There has also been a shift in the growth within sectors in the District, with the service industry becoming more economically productive than the primary and secondary sectors – highlighting the increasing reliance upon tourism in the area.

6.2.4 District Policy

Thames-Coromandel District Council 2009-2019 Ten Year Plan

TCDC’s Ten Year Plan indicates that TCDC are looking to take a sustainable development approach when looking to the future. With regards to solid waste management the LTCCP states that:

“There are a number of sustainable environmental principles that the Council is working towards through this activity. The key words that demonstrate these principles are AVOIDANCE (by looking at better ways of working), REDUCTION, RE-USE (where possible), through RECYCLING and RECOVERY (by separating recyclable materials making it easier to access something that could potentially be re-used).”

The LTCCP includes a Council ‘Vision Statement’ in the section of the document entitled ‘The Council’s Contribution’. The opening part states the following:

The Council wants:

➢ To see the District working together as a ‘whole’. This means taking a “One Peninsula” approach.

➢ To acknowledge that the District continues to grow. This section of the vision acknowledges that growth is inevitable and that the challenge for Council is to guide that growth in a way that ensures that the District retains its special attributes.

The first of these is extremely important in this context. The ‘One Peninsula’ concept is one which recognises the diversity and variability which exists across the District but also demonstrates Councils responsibility to provide a consistent approach to decision-making, policy setting and service delivery across the region.

The second point also determines where Councils’ priorities lie, and therefore helps to shape potential future options for waste management in the District.

The LTCCP’s section on ‘Safeguarding the Environment’ provides an overarching direction for the future of waste management in the District. The aim, with regards to solid waste is to:

“Ensure that all rubbish is properly disposed of to protect the public and environment through kerbside collection and recycling”

In terms of future strategic considerations this section recognises that community expectations regarding environmental quality are likely to increase, at the same time as growth and development within the District occurs.

Thames-Coromandel District Council 2010/2011 Annual Plan

Furthermore, the Annual Plan 2009/10 includes the following actions for 2010/11:

1. Refuse transfer stations will be accessible and maintained
Performance targets
   a. 90% of urgent requests (rubbish bags not collected or streets missed in error) are responded to within one day;
   b. Seven communities have refuse transfer stations.

2. Refuse and recycling collection services will be provided and recycling actively promoted

Performance targets
   a. An annual decrease of 5% in volume of waste per rating unit;
   b. An annual increase of 1% in rubbish being recycled compared to landfill;
   c. 90% of urgent requests for service and complaints are responded to within one day;
   d. 85% of residents and non-resident ratepayers are satisfied with the solid waste services provided by the Council;

6.2.5 Community Expectation

Thames-Coromandel District Council 2009-2019 Ten Year Plan

The LTCCP recognises that community expectations regarding environmental quality are likely to increase. This is especially likely with the overarching ‘sustainable development’ agenda for the District that has been included in the Ten Year Plan.

Coromandel Blueprint

The Coromandel Blueprint, which has been under development since 2006, has attracted thousands of submissions. It aims to bring together plans which are in place from the community to the national level in order to present a clear, consistent message for future planning over the next 50 years.

However, to-date, the Blueprint has only published information on current infrastructure and services. This information highlights the most significant solid waste issue for the Council is securing a disposal site beyond 2012.

The next stage of the development of the Blueprint is the completion of the Local Area Blueprints. These will provide a clear, long-term direction for every area within the District, having considered and accounted for community expectation and views. This is a major part of the District’s future strategic planning but will not be completed in time in order to feed into the Waste Assessment document.

Thames-Coromandel District Council Communitrak Survey April 2010

The results from the 2010 annual survey of ‘Public perceptions and interpretations of council services and representation’ showed that 81% of resident and non-resident ratepayers were ‘satisfied’ with the rubbish collection (of which 46% were ‘very satisfied’).

Of the 14% who were not satisfied it is more likely they are non-resident ratepayers and/or longer term respondents having lived in the District more than ten years. Their main reasons for their lack of satisfaction were:
   - Charges/cost of bags/already pay in rates;

- Not suitable for non-residents/need a place to take rubbish;
- Bags tear open/not strong enough, prefer bins;
- Collectors could improve.

6.2.6 Expectations for Waste and Recycling Growth

While projections were made over the timeframe 2005-09, no recent projections have been made by the Council. These projections expected to see an increase in Council-controlled waste to landfill from 14,788 tonnes in 2005 to 15,400 tonnes in 2009. Data in Section 5.1 shows that, in 2009/10, 14,899 tonnes of waste under Council's control were sent to landfill, slightly less than predicted. Landfill tonnages peaked in 2005/06 at 16,280 tonnes.

It is expected that overall tonnages disposed of to landfill will gradually increase in the future, due to the steadily increasing number of dwellings – but that per capita quantities will remain steady in the short to medium term. It is unlikely that there will be any decline in waste generation per capita due to the high proportion of non-resident ratepayers. Waste prevention initiatives are unlikely to be particularly successful with non-residents.

6.2.7 Summary: Factors Affecting Service Demand

Although throughout 2010 growth in the District has slowed, and may continue to slow in the short-term as a result of the current economic climate, the Ten Year Plan emphasises the importance to continue to plan for future development of the District. Over the next ten years it is expected that growth will begin to pick-up as both the Auckland and national economies recover.

Within the overall picture of a recent slowdown, and the anticipated increase in economic activity, housing and population in the region, there are some important shifts in trends which are important when considering waste service provision.

Figure 6-10: Summary of Projections

Although the gap between the unoccupied and occupied housing recently closed as a result of the economic decline, it is predicted to widen again. As shown in Figure 6-10,
the increase in housing growth is likely to be predominantly for the non-resident population, as there is no predicted increase in the resident population.

Although rates associated with these additional properties will be funded by non-resident owners it is still an indication that pressures associated with ‘peak population’ will continue to arise. In other words, the increase in non-resident population signals a greater differential for infrastructure requirements during off-peak and peak holiday times – presenting a complex scenario for service providers in the District.

Meanwhile, the permanent population is likely to be an ageing population, as the Peninsula is a popular place to retire.

With customer expectations increasing and waste generation steadily increasing the provision of services in the area is likely to become more challenging.

The Ten Year Plan has made provision for the following relevant projects:
- New Moloks over ten years and a review of Molok provision in future
- New Whitianga refuse transfer station (timeframe 2017/18 – 2018/19)
- Mercury Bay South greenwaste station (timeframe 2018/19)

The statement of options (Section 7.0) considers the factors affecting the service demand, and the future plans which are in place with the aim of defining a service which is in-keeping with both the Ten Year Plan and the Coromandel Blueprint.

6.3 Hauraki DC Future Demand

6.3.1 Population

The total population of Hauraki District in 2006 was 17,190. Based on this historical data, projections through to 2031 have been made for the Long Term Council Community Plan. This shows an annual increase of 0.4% in population, resulting in a 4% increase over the ten year life of the plan (2009-19).

Figure 6-11: Historic and Projected Population

The sharpest increases in population are expected to be in Paeroa and Waihi – areas which are most attractive to visitors and tourists. This is shown in Figure 6-12.

Eastern Waikato Councils
The distribution of the population projections over time, by age group, are shown in Figure 6-13. The only group expected to increase in population is the 65+ group, which is expected to more than double between 2006 and 2031.

Hauraki District experiences a holiday peak population, although not to the same extent as Thames-Coromandel District. The peak mainly occurs in Whiritoa where during the summer holidays the population currently rises to 1,500, but research undertaken for the Wastewater Asset Management Plan suggests that over the long-term this peak could be up to 8,000.
6.3.2 Households
In a ten-year projection of the growth in ratings units, which generally equate to household numbers, the Solid Waste Asset Management Plan (SWAMP) states that, “Rating units will grow at a rate of 0.5% per annum [from 2009-19] in the first five years and possibly at 1% in the latter five years”.

6.3.3 Economic Growth
Economic growth in the district has continued to increase slowly in the primary (mainly agriculture) and secondary industrial sectors.

6.3.4 District Policy

**Hauraki District Council Annual Plan 2010/11**

The 2010/11 Annual Plan sets out the following targets:

<table>
<thead>
<tr>
<th>Current Levels of Service</th>
<th>Measure and Method of Measurement</th>
<th>Baseline</th>
<th>Target 2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenient and accessible waste management services are provided to the community</td>
<td>Number of properties within the targeted rating areas who have access to kerbside recycling and refuse bag collection service, as measured by G.I.S. database.</td>
<td>New measure</td>
<td>&gt;5300</td>
</tr>
<tr>
<td>Refuse is collected regularly</td>
<td>Percentage of customers satisfied with the refuse collection service, as measured by the triennial survey.</td>
<td>52%</td>
<td>55%</td>
</tr>
<tr>
<td>Refuse is collected regularly</td>
<td>Number of complaints of missed collections per annum, as measured by service request database.</td>
<td>58 collection only</td>
<td>Maintain&lt;80 collection and recycling</td>
</tr>
<tr>
<td>Refuse is collected regularly</td>
<td>Volume of refuse transferred to landfill from transfer station, as measured by reports from contractor.</td>
<td>5891 tonnes</td>
<td>Decreasing</td>
</tr>
</tbody>
</table>

**Hauraki Community Plan 2009-19**

The long-term plan includes a series of community outcomes. Of the nine outcomes the following three should be considered relative to the waste agenda:

1. “Management of our natural and physical environment in a sustainable manner”;
2. Providing quality health and safety services through the District;
3. “Long-term planning to ensure that our future infrastructure requirements meet the growth and development opportunities of our District”.

**Solid Waste Asset Management Plan**

The SWAMP describes a series of indicators and associated targets which assist with achieving the outcomes in the Community Plan. These are predominantly related to customer satisfaction levels, access to services, tonnages collected and health and safety measures. They are described in Table 6-2.
<table>
<thead>
<tr>
<th>Community Outcome</th>
<th>Performance Indicator</th>
<th>Baseline</th>
<th>Target Year 1</th>
<th>Target Year 2</th>
<th>Target Year 3</th>
<th>Target Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% customers satisfied with the kerbside collection</td>
<td>51%</td>
<td>&gt;60%</td>
<td>&gt;70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% customers satisfied with the operation of the transfer stations</td>
<td>59%</td>
<td>&gt;65%</td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of complaints per year relating to waste management</td>
<td>179</td>
<td>&lt;161</td>
<td>&lt;151</td>
<td>&lt;147</td>
<td>&lt;144</td>
</tr>
<tr>
<td></td>
<td>Number of days collection not completed on the scheduled day</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Number of complaints of missed collections per annum</td>
<td>101</td>
<td>&lt;86</td>
<td>&lt;80</td>
<td>&lt;78</td>
<td>&lt;76</td>
</tr>
<tr>
<td></td>
<td>Number of times changes not notified at least one week in advance in the community papers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>% properties that have access to collection/recycling/disposal services</td>
<td>65%</td>
<td>&gt;67</td>
<td>&gt;69</td>
<td>&gt;71</td>
<td>&gt;73</td>
</tr>
<tr>
<td></td>
<td>Number of reports/complaints of illegal dumping per year</td>
<td>34</td>
<td>&lt;31</td>
<td>&lt;29</td>
<td>&lt;28</td>
<td>&lt;25</td>
</tr>
<tr>
<td></td>
<td>Number of properties within the targeted rating area who have access to kerbside recycling and residual bag collection service</td>
<td>5,200</td>
<td>&gt;5,300</td>
<td>&gt;5,400</td>
<td>&gt;5,500</td>
<td>&gt;5,600</td>
</tr>
<tr>
<td></td>
<td>Percentage of the population who have access to community recycling facilities</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Number of complaints per annum attributable to facility opening hours</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Cost of waste collection and disposal per household per annum</td>
<td>$212</td>
<td>$221</td>
<td>$228</td>
<td>$236</td>
<td>$235</td>
</tr>
<tr>
<td></td>
<td>Average waste collection and disposal costs versus similar cost of regional peer group</td>
<td>10% less than peer group</td>
<td>&lt;10%</td>
<td>&lt;10%</td>
<td>&lt;10%</td>
<td>&lt;10%</td>
</tr>
<tr>
<td></td>
<td>The solid waste management plan is available on the internet and for circulation to the public on request</td>
<td>On internet and available to distribute</td>
<td>On internet and available to distribute</td>
<td>On internet and available to distribute</td>
<td>On internet and available to distribute</td>
<td></td>
</tr>
</tbody>
</table>

Joint Waste Assessment 2011
<table>
<thead>
<tr>
<th>Information is available by brochure and website on systems for dealing with different types of waste</th>
<th>In place and on website</th>
<th>In place</th>
<th>In place</th>
<th>In place</th>
<th>In place</th>
</tr>
</thead>
<tbody>
<tr>
<td>The amount of waste disposed of to landfill per year, per capita</td>
<td>0.29 tonnes</td>
<td>&lt;0.26</td>
<td>&lt;0.25</td>
<td>&lt;0.24</td>
<td>&lt;0.23</td>
</tr>
<tr>
<td>A long-term plan is in place and is updated every 3 years</td>
<td>In place</td>
<td>In place</td>
<td>In place</td>
<td>Review. In place</td>
<td>In place</td>
</tr>
<tr>
<td>Number of tonnage of recyclables collected per year</td>
<td>1,404 tonnes</td>
<td>&gt;1450</td>
<td>&gt;1500</td>
<td>&gt;1550</td>
<td>&gt;1600</td>
</tr>
<tr>
<td>Waste management plan adopted and operative</td>
<td>In place</td>
<td>In place</td>
<td>In place</td>
<td>In place</td>
<td>In place</td>
</tr>
<tr>
<td>Decrease in annual tonnage disposed to landfill</td>
<td>6%</td>
<td>&gt;6%</td>
<td>&gt;4%</td>
<td>&gt;3%</td>
<td>&gt;2%</td>
</tr>
</tbody>
</table>

| Providing quality health and safety services through the district | | | | | |
| Number of notifiable sicknesses or injuries attributable to waste or waste facilities | 4 | <3 | <3 | <2 | <2 |
| Number of reported injury accidents at waste management facilities in a year | 4 | <3 | <3 | <2 | <2 |
| Number of reported health problems directly attributed to waste collection/waste facilities | 0 | 0 | 0 | 0 | 0 |

This provides a summary of the information, more detailed information can be found in the Solid Waste Asset Management Plan, September 2011.
Waste Management Plan 2002

Council’s 2002 Waste Management Plan includes the following objectives:

- To minimise the generation of waste within the Hauraki District by applying guidelines to reduce, recycle, recover, treat and dispose of wastes.
- To work with our neighboring district councils and Waikato Regional Council within the framework of International Regulations and Agreements, Statutory Acts, the New Zealand Waste Strategy and other legal requirements to manage waste.
- To manage negative side-effects arising from the disposal of our solid waste, e.g. air pollution caused by burning rubbish.
- To ensure that management of waste does not itself cause a nuisance or become injurious to public health.
- To assist sustainable development by use of suitable economic instruments.
- To achieve a fair apportionment of waste management costs to the community.
- To consider energy efficiency with regard to side-effects of the disposal of waste.

Considerable changes have taken place to waste management operations in the District since HDC’s Solid Waste Management Plan was written in 2002.

6.3.5 Community Expectation

Hauraki DC has recently completed the latest annual residents’ survey. The results showed that 60% residents are satisfied with the collection of refuse, which is an 8% increase from the 2007 survey. 15% are neither satisfied or dissatisfied. Of the 16% dissatisfied residents the following reasons were commonly cited:

- Issues with paying for both user-pays bags and rates
- The lack of refuse collection
- Issues with paying a private contractor to collect refuse or having to travel to take refuse to the landfill.

As shown in Table 5-9, Council’s kerbside services are provided to 62% of properties, mostly in urban areas. Taking this into account, it is not unexpected that rural residents were far more likely to be dissatisfied or very dissatisfied with the collection of refuse than urban residents.

With regards to the recycling collection service results illustrate a similar picture, with 60% of residents being satisfied with the service. Of those dissatisfied, reasons cited were most commonly associated with the lack of collection.

Residents were questioned about the operation of the refuse transfer stations. 46% of residents were satisfied, a significant reduction from the 57% of residents reportedly satisfied in the 2007 survey. Those who are currently dissatisfied have increased from 10% to 16%. Of the reasons cited for dissatisfaction, the restricted opening hours and the cost of the service were the two most common.


Joint Waste Assessment 2011

WasteNot Consulting
Hauraki District’s Solid Waste Asset Management Plan (SWAMP) presents the findings from the “Levels of Service Review”, which provides some insight to current levels of customer satisfaction and expectations for the future. The key findings are presented in Table 6-3 below.

Table 6-3: Customer Survey Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Values</td>
<td>Active recycling, efficiency and reliability are the core customer values which were expressed.</td>
</tr>
</tbody>
</table>
| Comments               | 53% of participants commented on alternative options such as:  
  - desire for a transfer station at Ngatea;  
  - inorganic collections;  
  - additional greenwaste options;  
  - concrete and dirt (cleanfill) dump sites; and  
  - expanded recycling options.                                                                                                                     |
| Agreed level of service| 95% agreed with maintaining the current rate and level of service.  
  - 4% (Ngatea participants) sought an increase in the rate to approximately $75 per annum in exchange for increased services (a possible transfer station for general and greenwaste). |
| Overall rating         | 22% were less than satisfied or dissatisfied.  
  - 78% were satisfied to very satisfied.                                                                                                           |

Based on the generally positive feedback and high levels of satisfaction with the current service, the District’s long-term plan considers that the community expectations are not going to go beyond the desire to reduce total waste to landfill. The LTCCP states the following regarding demand management for solid waste services:

“It is expected that the demand management objective for the Solid Waste activity is to reduce the volume of residual waste that has to be disposed of at the landfill.

Based on the levels of service review undertaken and the recent high level of community satisfaction, there is not expected to be significant community pressure to do anything other than continue to reduce the volume of waste to the landfill.

However, taking into consideration the assumptions underlying the Hauraki Community Plan 2009-19, population growth is expected to increase slightly (by an estimated 4%). Although this is not a significant factor for some major infrastructural assets, an increase in population by over 600 people (estimated) means that the assumption could be made that this will make it difficult to reduce the volume of waste to the landfill with an extra 4% of residents.”

6.3.6 Expectations for Waste and Recycling Growth

The Solid Waste Asset Management Plan (SWAMP) (Appendix H) investigates future demand in the District. As a result of population growth, both resident and non-resident, there will be an increased requirement for solid waste services. However, as stated in the
SWAMP “future demand pressures are likely to be more in the area of the desirability of providing a more sophisticated service”.

6.3.7 Summary: Factors Affecting Service Demand

The LTCCP outlines Council’s concern regarding the community expectation to reduce the volume of waste to landfill. This concern stems from the expected population increase, which as noted above, is estimated to be 4% increase over the period of the ten year plan (2009-2019).

However, the SWAMP outlines a slightly less concerned view of Council in stating the following:

“The Council does not anticipate any major demand pressures in future years. The population assumptions for the 2009/19 planning window forecast a moderate population increase. Rating units will grow at a rate of 0.5% per annum in the first five years and possibly at 1% in the latter five years.”

Although the future projections regarding demographics of Hauraki are unlikely to put any significant pressure on the waste infrastructure the community feedback will magnify the challenge for the Council.
6.4 Matamata-Piako DC Future Demand

6.4.1 Population

The projected population trend for the District is one of steady population growth focused in urban areas, as shown in Figure 6-14.

Figure 6-14: MPDC Population Projections

The Council estimates by the year 2038 the District’s population will have increased by approximately 6,000 to a total of 37,000 people. The anticipated growth will occur in urban areas with the urban population expected to grow at around 1% per annum while the District’s rural population remains stable at around 14,000. This suggests that the towns of Matamata and Morrinsville will increase to around 8,500 – 9000 people each, and Te Aroha to approximately 5,000 people.

6.4.2 Households

Figure 6-15 illustrates the increase in the number of households in urban areas, a trend which is expected to continue. However, over the same time period the corresponding household size is expected to decrease (Figure 6-16). This trend is as result of an increasing ageing population in the District.
6.4.3 District Policy

LTCCP 2009-19

There are nine main Community Outcomes which are defined in the LTCCP. Those which relate to solid waste, and which have associated targets and performance measures, are shown in the following table.
Table 6-4: MPDC Waste Management Targets

<table>
<thead>
<tr>
<th>Community Outcome Theme</th>
<th>Community Outcome</th>
<th>Rationale</th>
<th>Level of service</th>
<th>Performance measures</th>
<th>Target</th>
<th>Measured by (how often)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 Healthy air, water, land: Healthy people</td>
<td>4.4 Pollution and waste (f) Our environment will be clear of toxins, contaminants, air pollution and litter</td>
<td>Reliable kerbside refuse and recycling ensures that Council is providing a healthy and safe environment</td>
<td>Reliable kerbside collection services will be available to community</td>
<td>Kerbside refuse and recycling collected on the usual collection day (current performance = 3.5 per month)</td>
<td>&lt;8 complaints on average per month</td>
<td>Complaints database</td>
</tr>
<tr>
<td>4.4 Pollution and waste (g) All residents will have easy access to organic and inorganic waste management services</td>
<td></td>
<td>Council provides recycling, green waste and refuse disposal options to all residents at transfer stations and kerbside refuse and recycling collection services for urban residents and rural townships.</td>
<td>Council will provide kerbside refuse and recycling collection service to urban and rural townships and transfer stations</td>
<td>65% of community satisfied/very satisfied with kerbside refuse, recycling collection services and transfer stations (current performance = 66% kerbside and recycling =69%transfer station facilities)</td>
<td>65% satisfied</td>
<td>Customer survey</td>
</tr>
<tr>
<td>7.0 Planning and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Eastern Waikato Councils
<table>
<thead>
<tr>
<th>Community Outcome Theme</th>
<th>Community Outcome</th>
<th>Rationale</th>
<th>Level of service</th>
<th>Performance measures</th>
<th>Target</th>
<th>Measured by (how often)</th>
</tr>
</thead>
<tbody>
<tr>
<td>development</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Joint Waste Assessment 2011
**Annual Plan 2010/11**


**Waste Minimisation Strategy 2010**

Prior to the agreement to develop a joint Waste Assessment MPDC produced a Waste Minimisation Strategy in 2010.

Within this document lies a strategic vision of ‘Towards Zero Waste and a sustainable New Zealand’. Under this there are no specific targets but a set of 4 Strategic Goals:

1. **Society**: Promoting public health and safety whilst lowering the costs and risks of waste to society (incorporating cultural beliefs, values and obligations)
2. **Environment**: Reducing environmental damage from the generation and disposal of waste
3. **Economy**: Increasing economic benefit by using material resources more efficiently
4. **Monitor and feedback**: Reviewing data collection, analysis, and monitoring to regularly evaluate the progress of the Strategy in achieving its Strategic Goals and Objectives.

As indicated under the fourth and final Strategic Goal, there are a set of objectives and associated actions which sit beneath these overarching goals. These have not been replicated within this document.

Under the previous National Waste Strategy a series of waste diversion targets were developed for Matamata-Piako District. These are described by waste stream in Table 6-5.

**Table 6-5: MPDC Waste Diversion Targets**

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Waste Diversion Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residual Waste</strong></td>
<td>Divert 60% of the total quantity of the district’s Council controlled waste from landfill by July 2014.</td>
</tr>
<tr>
<td><strong>Recyclable/Reusable</strong></td>
<td>Divert 70% of the total recyclable/reusable waste stream by July 2013. An increase of 35% from current levels.</td>
</tr>
<tr>
<td><strong>(Plastic/Glass/Paper/Cans)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Organic</strong></td>
<td>Divert 75% of the total organic waste stream to produce beneficial products through composting or alternate treatment processes by July 2013.</td>
</tr>
<tr>
<td><strong>(Putrescibles and Timber)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Concrete and Rubble</strong></td>
<td>Divert 80% of the total quantity of concrete and rubble (and other acceptable cleanfill materials) to compliant cleanfill sites by July 2014.</td>
</tr>
<tr>
<td><strong>Hazardous Waste</strong></td>
<td>Divert 60% of the total quantity of hazardous waste from landfill to reuse, recycling, recovery, treatment and appropriate disposal by July 2016</td>
</tr>
<tr>
<td><strong>Special Waste</strong></td>
<td>Divert 30% of the total quantity of special waste from landfill by July 2015</td>
</tr>
</tbody>
</table>
6.4.4 Community Expectation

In 2005 MPDC set up a community consultation group to assist with development of the Waste Management Plan. This group, which is still active today, has a wide-ranging membership and is an excellent way of gauging community expectation.

In addition the Council commissions an annual survey which is undertaken by Communitrak\textsuperscript{TM} in order to gauge public perception of Council services. The results for 2008 and 2009 are shown in Table 6-6.

Table 6-6: MPDC Community Survey Results 2008 & 2009

<table>
<thead>
<tr>
<th>Service/Facility</th>
<th>Matamata-Piako 2008</th>
<th>Matamata-Piako 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very/fairly Satisfied (%)</td>
<td>Not very Satisfied (%)</td>
</tr>
<tr>
<td>Rubbish Collection</td>
<td>71</td>
<td>16</td>
</tr>
<tr>
<td>Council’s kerbside recycling service</td>
<td>74</td>
<td>11</td>
</tr>
<tr>
<td>Transfer station facilities</td>
<td>69</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: Where figures don’t add to 100%, the balance is a ‘don’t know’ response.

The most interesting feedback to consider is from those who were ‘not very satisfied’ with the services. The main reasons for this dissatisfaction, by service/facility area, are listed below:

- **Rubbish Collection**
  - Refuse not picked up/not collected on right day; and
  - Collection times erratic / too late or too early.

- **Kerbside Recycling Collection**
  - Selective about what they take / not everything collected;
  - Recycling not picked up / not collected on right day; and
  - No kerbside recycling.

- **Transfer Station Facilities**
  - Too expensive ["get charged for everything so don’t use it. Expensive – Te Aroha”]
  - Opening hours / days ["times don’t suit a lot of people…not open every day – only three days- Te Aroha”]
  - Messy / needs update and reorganisation ["Morrinsville one quite messy. Could be kept cleaner…sometimes recycling bags overflowing and nowhere to put recycling – Matamata recycling station"]
6.4.5 Expectations for Waste and Recycling Growth

The Waste Minimisation Strategy (2010) makes the following assumptions regarding future waste generation:

“The future population projections for the district are stable and one could easily assume that waste generation would remain constant. However, due to increased consumerism, waste generation is linked to economic growth and if the economic status of the area rises the Council may experience an increase in the quantity of waste produced per person into the future.”

This seems like a reasonable expectation for the District, which is made even more likely when coupled with the ageing population. As the population ages, this will lead to household sizes decreasing. Although smaller households generate less waste in total than larger households, it is generally accepted that waste generation per person is greater in smaller households.

6.4.6 Summary: Factors Affecting Service Demand

Stable population and flat economic growth are likely to mean that waste generation is unlikely to grow substantially in the short to medium term, and the requirements of services and facilities are likely to remain within the current order of magnitude. However, the current expectations within the waste management and minimisation plan are for demand to shift from residual waste collection and disposal to increased recycling and reuse of materials. This means there will be a need to shift resource from disposal to recovery activities.

Another factor that must be bourn in mind is that private sector waste collection services have a significant presence within the district, and unless council moves proactively to increase it's market share this is like to continue and even increase. The degree of private sector activity will clearly impact the demand for council recycling and refuse collection and transfer services.
7.0 Linkages between Waste and District Plans

District Plans are statutory documents required by the Resource Management Act 1991 (RMA) and provide a framework for managing the Districts’ environments to meet the RMA’s objective of sustainable development.

The resource management objectives of District Plans potentially interact with the objectives of Waste Management and Minimisation Plans in a number of areas. Some of these areas include:

- The adverse environmental effects that can result from the disposal of solid waste in landfills
- The need to manage closed landfills to mitigate any environmental effects
- The provision for, and control of, cleanfilling activity
- The cultural concerns of Maori relating to the effects of the disposal of waste
- Providing for land use activities relating to handling and processing waste and recyclables to meet community outcomes
- The control of activities that are likely to involve generating, storing, or disposing of hazardous waste
- The storage of waste on business and industrial premises to minimise the likelihood of negative environmental effects
- The provision of waste storage facilities in business and industrial premises that will permit waste reduction activities to be undertaken

In the following sections, linkages between waste management and the District Plans of the three councils participating in the joint waste assessment are summarised.

7.1 Thames-Coromandel District Council

7.1.1 Public works

Section 217 of TCDC’s District Plan\(^{29}\) identifies “refuse transfer stations” and “landfills” as being amongst the public works that form the basic infrastructure needed throughout the District. The Plan includes several policies and methods for ensuring “public works and network utilities are established in a manner which does not have any major adverse effects on the environment” while providing for community well-being.

7.1.2 Council responsibility for waste management

Section 220 of the Plan deals specifically with the management of both solid and liquid wastes. In this section, the Council recognises its responsibility for “ensuring that appropriate waste disposal services and facilities are provided with new development.”

The Council’s objectives for waste management are identified as:

- “To avoid, remedy or mitigate the adverse environmental effects of waste generation and disposal
- To minimise the quantity of wastes requiring disposal”

The methods that will be used by Council to fulfill its responsibilities include:

.1 Facilitate establishment of a network of refuse transfer stations, septic disposal sites and wastewater facilities throughout the District. Facilities will be established in suitable locations in the District by:
   (a) Designation of sites;
   (b) District Plan rules allowing the private or public establishment of disposal facilities on suitable sites.
.2 Advocate waste minimisation techniques, e.g. water conservation and composting;
.3 Implement a system of "user pays" disposal charges for solid waste and liquid waste disposal;
.4 Provide opportunities for recycling at refuse transfer stations;
.5 Liaise with Waikato Regional Council in achieving integrated waste management;
.6 Implement joint stormwater management guidelines or codes of practice with the Regional Council;
.7 Support the investigation of practical new or alternative methods of waste disposal;
.8 Implement an asset waste management plan which includes action to deal with the following:
   (a) Waste minimisation;
   (b) Waste recycling;
   (c) Waste re-use;
   (d) Waste handling;
   (e) Identification of waste minimisation targets;
   (f) Community education and involvement

7.1.3 Monitoring effectiveness of Plan
The RMA requires Council to monitor the effectiveness of its District Plan. The Plan’s Monitoring Strategy will be based on an initial focus on four issues, one of which is waste generation and disposal.

7.1.4 Zoning rules
Zoning of land is used as a regulatory method for achieving the objectives of the Plan. Industrial zones are created for light and heavy industries that would have “difficulty mitigating their off-site effects sufficiently to make them compatible with residential areas”. This zoning would apply to most activities related to waste management, such as refuse transfer stations, recyclables processing, and compost facilities.

The zoning of land includes rules for controlling the different types of activities. “Solid waste collection and disposal arrangements” are matters over which Council may exercise control for controlled public works and utilities, commercial activities, and rural activities, but not for industrial activities.

7.1.5 Clean fill sites
Clean fill sites are defined by section 9 as being

“ dumping areas for clean fill only. Clean fill includes uncontaminated clays, silts, sands and gravels, concrete, steel (builders rubble and other metal building materials), broken pipes, and contain minor amounts of topsoil, vegetation and other organic material. Hazardous substances or hazardous waste are not accepted at clean fill sites under any circumstances.”
While there are controls in the Plan for earthworks, no further specific mention is made of clean fill sites.

7.1.6 Hazardous waste
Section 223 provides policies and methods for mitigating the adverse effects of hazardous substances, including hazardous wastes.

7.2 Hauraki District Council

7.2.1 Zoning rules
The Hauraki District Plan\(^{30}\) uses zoning of land and controlling activities as planning tools.

One of the Permitted Activities is “Up to 2000m\(^{3}\) of clean imported fill (not undertaken as part of an approved subdivision or building consent) comprising topsoil, subsoil, and/or demolition rubble may be placed on a property where Council is informed of the fill action before the activity is carried out.”

Landfills are classified as a Discretionary Activity.

Two of the General Assessment Criteria for Discretionary Activities relate to waste:

- “The extent to which wastes, spoil, sawdust, effluent etc is to be disposed of so as to avoid, remedy or mitigate nuisance for surrounding residents, damage to property, and pollution of the environment.”

- “The extent to which exterior storage areas of vehicles, equipment, machinery, materials, waste etc is located or suitably screened from neighbouring properties and any public road to avoid, remedy or mitigate any detriment to amenity.”

7.2.2 Siting of future landfills
Section 8.2.6 – Landfill Refuse Disposal - proposes that future land fill disposal operations will be considered and assessed through the ‘requirement’ process in section 167 of the Local Government Act.

7.2.3 Cleanfill
Section 4 of the Plan defines 'cleanfill' as:

“Fill consisting of any of the following material:
- Uncontaminated soil and/or sand
- Uncontaminated clay
- Uncontaminated gravel and or/rock
- Uncontaminated brick and rubble
- General demolition material that is not contaminated by substances subject to biological, chemical and/or physical breakdown.

Material excluded from cleanfill includes the following:
- Asphalt, asphaltic concrete and tarseal
- Sawdust or bark
- Combustible matter
- Organic matter including timber, trees and/or garden trimmings

- Sludges
- Contaminated soil
- Domestic, industrial and commercial waste
- Hazardous waste
- Medical or clinical waste.”

Section 4 outlines policies relating to the placement of fill, including cleanfill from road works. At a small scale, Council management is not considered necessary. The placement of fill material other than cleanfill is treated as a landfill operation, and requires consideration by the consent procedures specified for that activity.

7.2.4 Hazardous wastes

Section 8.8.8.4 outlines the procedures for managing the environmental effects of the storage and handling of process waste or waste containing hazardous substances.

7.3 Matamata-Piako District Council

7.3.1 Policies

Through policies and methods in section 3.3.2, the Plan seeks to manage waste disposal to avoid the generation of contaminant discharges and avoid potential land loss.

The adverse environmental effects of hazardous substances, including hazardous waste, are managed by specific policies in section 3.3.2.

Policies relating to ‘Works and network utilities’ include ensuring the appropriate storage, disposal and reduction of solid and hazardous wastes. This includes ensuring that all waste storage areas are effectively managed.

7.3.2 Zoning and activity rules

Assessment criteria for discretionary and non-complying resource consent applications include consideration of odour effects and air emissions from solid waste management disposal sites.

Another assessment criteria for discretionary and non-complying resource consent applications is for Council to have “regard to the degree to which the operation applies waste reduction and/or waste minimisation techniques”.

“Waste disposal” will be considered by Council when assessing ‘Temporary activities’.

Performance standards relating to all activities specify that:

“All activities shall provide solid waste storage areas which shall be visually screened when viewed from any adjoining site or public place.
No unauthorised dumping of solid waste materials shall be permitted.”

’Solid waste management and disposal sites’ are defined as a separate activity in section 8 “Works and network utilities’ and identified as being either a non-complying or discretionary activity, according to the zone.

7.3.3 Hazardous wastes

Minimum conditions for ‘hazardous facilities’ in section 5.7.4 (d) include several conditions relating to waste management at such facilities.

7.3.4 Clean fill

Clean fill activities involving the depositing of less than 1000 m$^3$ of material are specified as ‘Permitted’ activity in all zones other than conservation zones, where it is a non-complying activity.

Clean fill activities involving the depositing of more than 1000 m$^3$ of material are specified as ‘Discretionary’ activity in all zones other than conservation zones, where it is a non-complying activity. As such, this activity requires a resource consent. Specific assessment criteria for applications for clean filling resource consents are provided in Section 4.12.

8.0 By-laws

Bylaws are local legislation enforceable by the Council, and other nominated agencies such as the Police, that have been developed by the Council in consultation with the community. As part of the Waste Assessment it is useful to know what waste-related bylaws are currently in-place.

8.1 Thames-Coromandel District Council

TCDC have a consolidated bylaw in place since 2008, of which Part 6 relates to Solid Waste. The over-arching purpose of the bylaw is:

“to ensure that refuse is collected and disposed of in the interests of Public Health in an efficient and cost effective manner and at the same time ensuring that any obstruction of streets is kept to a minimum”\(^{32}\)

One of the more contentious elements of the bylaw as it is currently worded relates to households only being allowed to put refuse out for collection on the day of collection. Clause 604.3 states:

“Refuse must be placed for collection, only on the day and not later than the time specified by public advertisement from time to time. Any refuse left in a public place prior to collection day may be considered to be litter.”\(^{33}\)

In effect this means that householders cannot legally put their refuse out the night before collection. This is a particular issue for people with holiday homes who are leaving the district the night before the collection. The net result is that this part of the bylaw is not enforced because it is not practical. The intent of the bylaw is to prevent people putting refuse out too far in advance of collections and having refuse sitting on the streets and potentially subject to pest attacks. However in its current form its practicality and effectiveness must be questioned.


8.2 Hauraki District Council
HDC have a consolidated bylaw in place of which the solid waste section (Part 8) was adopted in January 2008. The purpose of the bylaw is:

“to provide for collection and disposal of refuse in an efficient and cost effective manner, serving the interests of public health, enhancing the amenity of the residential and business environment and protecting the natural environment while at the same time ensuring that any impact on the road network in the district is kept to a minimum.”

In addition, the bylaw covers:

“General issues relating to recycling, ownership of the waste stream, refuse storage, waste management and minimisation”34

8.3 Matamata-Piako District Council
Matamata-Piako also have a consolidated bylaw in place, in which the purpose of the bylaw is worded identically to that of Hauraki described above.35

9.0 Trade/Commercial Waste
This Section describes how each Council’s legislation approaches the issue of trade/commercial waste collection as part of a household waste collection round.

9.1 Thames-Coromandel District Council
Definition: Trade Refuse - any scrap or waste material resulting from the carrying on of any business manufacture, process, trade, market, or other undertaking.

Section 607.1 of Part 6 of the consolidated bylaw refers to ‘Removal of Trade Waste’. It states:

“Where Council has reached an agreement to remove trade refuse, such refuse will be removed or disposed of by Council, only when the refuse is contained within an official container.”

Although the household collections are only supposed to be for the removal of household generated refuse and recycling, in practice many businesses use the service, and council does not enter into trade waste agreements with businesses. This is an aspect of the operation of the bylaw that could use some clarification in both how it is worded and how it is applied.

9.2 Hauraki District Council
Definition: Trade Refuse - any scrap or waste material resulting from the carrying on of any business manufacture, process, trade, market, or other commercial undertaking.

34 Hauraki District Council, Hauraki District Council Consolidated Bylaw, Draft Part 8: (Solid Waste), Adopted January 2008.
Joint Waste Assessment 2011

Section 8 of Part 8 of the consolidated bylaw lays down the regulations surrounding removal of trade waste. Section 8 states:

8.1 Where the Council has reached an agreement to remove trade refuse, such refuse will be removed or disposed of by the Council, only when the refuse is contained within an official container;

8.2 Every owner or occupier of any premises shall ensure that there is no undue accumulation of trade refuse or salvaged material in, on, about or on any portion of such premises;

8.3 Any perishable or putrescible trade refuse shall be removed from the premises daily, except where stored in a container specifically allowed by a policy statement notified under clause 3 of this Part of this Bylaw and which does not cause a nuisance;

8.4 Where in the opinion of the Council an accumulation exists on any premises of trade refuse or salvaged materials which is or is likely to be injurious to health, or offensive, or to harbour vermin, or is likely to create a fire hazard, the Council may by notice in writing require its removal and disposal.

9.3 Matamata-Piako District Council

Definition: Commercial Waste- any scrap or waste material resulting from the carrying on of any business, manufacture, process, trade, market, or other undertaking. Commercial Waste does not include household waste, prohibited waste, hazardous waste or trade waste.

Under Part 1 of the solid waste bylaw 2008 the following statement is made regarding commercial waste:

“Any perishable or putrescible commercial waste shall be removed from a premises daily, except where stored in an approved manner which does not cause any nuisance.”

10.0 Summary of Stakeholder Consultation

Outcomes

Stakeholder workshops were held in both Thames-Coromandel District and Hauraki District— the key findings are summarised below and the full notes are found in Appendix A.2.0 and Appendix A.3.0 respectively. The format for both workshops was very similar, hence the two workshops are summarised in parallel in the following sections.

10.1 Workshop Purpose

The purpose of the workshops was to hear the views of key members of the community on how waste management and minimisation services in the district should be developed.

Although there is no formal requirement for consultation as part of the Waste Assessment, These Councils believe the views of key stakeholders in the community are vital in shaping any plans, and therefore commissioned this workshop to ensure these views are taken into account at an early stage.
As such, the workshops were not aiming to reach any form of consensus or broad agreement regarding the potential direction or content of the plan, but simply to canvass the range of views held by the community.

10.2 Plenary Session – Part One
The first part of the plenary session involved canvassing ideas on the overall direction for waste management in the districts, with a view to these ideas feeding into the development of a vision and set of aims and objectives for the WMMP.

10.2.1 TCDC Outcomes
The following points were noted from the session:

- Thames-Coromandel should aim for 50% recycling rate by weight
- The district needs to aim for a change of mindset – to view waste as a resource and to move away from being a throw-away society
- Thames-Coromandel should aim to maximise recycling
- All costs associated with waste and recovered materials should be made true and transparent
- Waste management in the district should aim to be as efficient as possible and provide a balance of cost and performance
- The principles of producer responsibility should be promoted
- There should be increased emphasis on re-use
- The possibility of generating energy from waste should be considered
- Waste management in the district should have the overarching aim of minimising environmental impact (as opposed to simply focussing on tonnage diversion from disposal)
- There should be greater emphasis an local sorting, processing and use of recovered materials with a view to generating more local employment

10.2.2 HDC Outcomes
The following points were noted from the session:

- The concept of a zero waste target was not considered to be suitable for the district as too many residents considered it to be an unrealistic target.
- While waste minimisation is an important objective, it is also important to ensure it is cost-effective
- Targets can be difficult to measure and may not be feasible
- Education needs to be an important part of the strategy
- Greenwaste is an important waste and needs to be addressed. Home composting is the best answer.
- Ways to reduce packaging and plastic bags need to be included.

10.3 Plenary Session – Part Two
The second part of the plenary session focused on generating ideas for the topics that would form the basis of the discussions in the groups.
10.3.1 TCDC Topics Developed for Discussion
The topics developed in the TCDC plenary session are shown in the following Table 10-1.

Table 10-1: TCDC Discussion Topics

<table>
<thead>
<tr>
<th>Group</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 1     | Kerbside collection services (incl peak collection)  
      | Drop off services |
| 2     | Transfer stations  
      | Joint working & contracts/service delivery options |
| 3     | Bylaws & enforcement  
      | Organic waste processing |
| 4     | Waste Prevention/ Behaviour Change  
      | Market development  
      | Product stewardship (incl e-waste) |

10.3.2 HDC Topics Developed for Discussion
The topics developed in the HDC plenary session are shown in the following Table 10-2.

Table 10-2: HDC Discussion Topics

<table>
<thead>
<tr>
<th>Group</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 1     | Kerbside collection services (green waste/consideration of costs  
      | Joint-working with other councils  
      | Cleanfill  
      | Public place recycling |
| 2     | Waste minimisation/behaviour change (home composting/education/packaging/plastic bags)  
      | Transfer stations (cost considerations)  
      | Drop-off services  
      | Hazardous waste |

10.4 Workshop Session
Participants were asked to choose the group they wanted to attend based on the topics selected for discussion in that group.

These group discussions were extremely insightful in terms of gathering local knowledge and feedback from members of community groups, ratepayer groups, Councillors, contractors, voluntary sector organisations and local businesses. Feedback gained ranged from highlighting specific issues with the current service, through to identification of solutions that may be feasible within the community. The details of these sessions are found in Appendix Error! Reference source not found. and Appendix A.3.0 for TCDC and HDC respectively.
11.0 Gap Analysis

Section 6.0 described the likely future demand situations for each of the three Councils. In light of this information, an analysis is provided by key waste stream and key areas for action are highlighted.

11.1 Recyclable Commodities

Recyclable commodities include glass, paper, plastics, and metals.

11.1.1 Households

All three authorities have similar recycling collection systems for key commodities from households. However while the performance of these systems is comparable with other localities there is still room for improvement. Audits of kerbside waste in Hauraki and Matamata-Piako indicate there are still quantities of recyclable material being disposed of in the refuse.

Options for increasing captures of recyclable materials include:

- Provision of larger capacity recycling bins (e.g., 2 bins, wheeled bins or multiple sacks)
- Provision and promotion of additional drop-off facilities
- Bylaws constraining disposal of recyclables in refuse
- Education
- Increase targeting and separation of commodities at transfer stations – (e.g., variable pricing, additional sorting staff etc)

11.1.2 Commercial Sources

Council does not currently target commercial recyclables however businesses may use the ratepayer funded service for household quantities (although this is not strictly enforced). The private sector is generally expected to provide commercial recycling services to businesses. However there is no obligation for the private sector to do so (nor for businesses to engage such services). Where provision of private sector services is insufficient there are a number of options open to council:

- Offer commercial (user pays) recycling services to business
- Use a bylaw to establish a requirement for private sector operators in the districts to provide recycling services alongside commercial waste services. This could be done through an operator licensing scheme.
- Work with the private sector to promote recycling services to commercial customers
- Increase targeting and separation of recyclable materials at transfer stations – (e.g., variable pricing, additional sorting staff etc)

11.1.3 Infrastructure

Collected recyclables from the three districts are currently partly sorted at the kerbside but are transported to Auckland for final sorting for markets. There exists the possibility of establishing a Materials Recovery Facility (MRF) within the vicinity of the three councils.
to undertake processing of collected recyclable materials. This could increase efficiency and improve the viability of recycling in the districts.

11.2 Organic Wastes

Organic wastes include garden/green waste, food waste and food processing wastes.

11.2.1 Household and Commercial Sources

At present all three authorities provide facilities to separate greenwaste at the transfer stations. There are no council or commercial collections targeting food waste or food processing wastes. Organic (food waste and green waste made up 46.8% of kerbside collected refuse in Matamata-Piako and 30.1% of the overall waste to landfill. The corresponding figures for Hauraki were: 38.5% and 29.4%. While TCDC does not have any composition data, it can be expected that the proportion of organic wastes would be in the same order of magnitude. Targeting of organic wastes is likely to be a priority in terms of the potential to reduce the total tonnage of waste and the potential harm from disposal in landfill. Furthermore there is opportunity recover the materials for beneficial use in gardening, horticulture and agriculture.

Potential initiatives to target organic wastes include:

- Kerbside collection of food and/or garden waste from households
- Collection of catering and/or food processing wastes from businesses
- Promotion and differential pricing for separation of garden wastes at transfer stations
- Bylaws constraining disposal of organics in refuse
- Education

Any collections of food wastes from households and/or businesses would have to give consideration to potential public health impacts.

11.2.2 Infrastructure

The collection of organic wastes requires appropriate facilities to process the material, and markets for the outputs. TCDC has a potential facility that could accept food wastes (although there may be capacity issues with food waste from other districts), and there are commercial operators who will accept food wastes (for example, Envirofert in Waikato District, Remediation NZ in Taranaki).

Collection of food waste will also require appropriate bulking facilities at transfer stations (depending on where material is to be processed).

11.3 Construction and Demolition Wastes

Construction and demolition waste is an area that has received relatively little attention in the planning and operation of waste services in the districts to date, however it is an area that may have significant potential for diversion.

In Hauraki District, in 2006, approximately 19% of all waste to landfill from the district was classified as ‘rubble’ or ‘wood waste’, the majority of this of which would be from construction and demolition projects.

The corresponding figure for Matamata-Piako is nearly 23%.
Thames Coromandel district does not have any available waste composition data, however it could be expected that the quantities of these materials would be higher due to the relatively large growth of new housing in the district. Anecdotally a large proportion of the material going through the transfer stations is wood waste, which is consistent with this view. A waste audit of TCDC facilities and collections is likely to beneficial in identifying materials that can potentially be diverted.

As noted in Section 3.3 above, the lack of a consented cleanfill facility in any of the districts is an issue which will need further consideration, as much of this type of material is likely to be going to uncontrolled disposal.

One option for development of new cleanfill sites could be disused quarries or existing quarry sites that require remediation.

This is discussed further in Section 7.0 on district plan issues.

In the resident survey discussed in Section 6.3.5, Hauraki District residents cited ‘concrete and dirt (cleanfill) dump sites’ as one of the additional services they would like to see in the District.

Much construction and demolition material can be reclaimed and there is a clear need, particularly in Thames-Coromandel District, to provide options for the legitimate controlled disposal of genuine clean fill material.

Potential options for addressing C&D waste issues include:

- Promotion and differential pricing for separation of construction and demolition wastes at transfer stations
- Establishment of legitimate cleanfill facilities
- Education and promotion of waste reduction at building sites
- Introduction of bylaws requiring site waste management plans on construction sites
- Establishment of a cleanfill bylaw governing what can be disposed of in cleanfill sites
- Provision of source separation services for construction projects
- Audits of transfer stations in TCDC to determine C&D waste quantities and diversion potential

11.4 Reuseable Goods (including E-waste)

The Seagull Centre Trust in Thames currently provides an outlet for reusable household items such as furniture, whitegoods and electronics, clothes, crockery and utensils, and toys that would otherwise be sent to landfill. The Seagull Centre is well patronised and has been steadily growing its operations since its inception. It employs 5 staff (3.5 FTE) and 6 volunteers. This is the only such operation in any of the three districts and there is clear opportunity to establish similar operations in other centres. Reuse operations do not necessarily divert significant tonnage but they do divert valuable materials, provide low cost goods for the community and provide employment. In TCDC there are several

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community centred organisations and individuals that have expressed interest in starting similar initiatives.

Options for diverting reusable goods include:
- Establishing reuse centres on or near transfer stations
- Introducing ‘Second-hand Sundays’ – planned programmed times for communities to display free re-usable goods in front of their properties
- e-days
- Establishing e-waste drop off centres at transfer stations/reuse centres

11.5 Liquid and Hazardous Wastes
As noted in2.3, this Waste Assessment focuses on solid wastes, and excludes liquid and gaseous wastes, except where these are considered to have implications for solid waste management. These exceptions include biosolids from waste water treatment facilities that will require processing or disposal, gas from landfills, and some liquid hazardous wastes. In TCDC a trial has been successfully conducted on composting of biosolids together with greenwaste. There is the possibility of extending this trial to eventually process all of the biosolids from the district. Beneficial reuse of biosolids is something that could be examined further by the other two districts.

The Agrecovery scheme for recovery of silage wrap and farm chemical containers is operate in HDC and for chemical containers only in MPDC. Potentially hazardous household wastes such a paint, oil, and chemicals are also collected at transfer stations. There is a need to review the provision of these services at the transfer stations to ensure proper storage and management procedures are followed, so as to protect the health of workers, the public and the environment.

Options for liquid and hazardous wastes include:
- Reviewing potential for beneficial use of biosolids
- Looking at the provision of the agrecovery scheme to ensure the service meets demand
- Reviewing management procedures at transfer stations for hazardous wastes
- Undertaking more detailed monitoring and reporting of hazardous waste types and quantities
- Improving public information about correct procedures for managing hazardous wastes

11.6 Residual Waste Management Collection
11.6.1 Kerbside Collection
The provision of user-pays bags seems to be considered a satisfactory system by residents in all three districts, and has the capacity to cope with future demand. There have been some issues highlighted with bird, dog and vermin strike, associated with bag-based collections (which can have street scene and public health impacts). One of the options to address this could be the provision of wheeled bin based collection services. A ratepayer survey conducted in TCDC found only minority support for this move however.
11.6.2 Moloks & Drop-Off Facilities

Moloks are a key part of TCDC’s waste service provision because they provide a flexible waste collection service, particularly for visitors to the area. Unlike a kerbside collection service, Moloks can be emptied more frequently at busy times, without huge cost to the Council. For visitors who are either unaware of the kerbside collection days, or who are not going to be staying over the collection day (and where leaving rubbish out for longer than necessary can lead to animal strike), the Moloks are an excellent solution.

With the temporary population increasing, and several Molok sites under severe pressure at peak times already, it is felt the current drop-off facility provision may need to be increased, as recognised in the Ten Year Plan by the following action:

> **New Moloks over ten years and a review of Molok provision in future**

Moloks have proven to be a success in Thames-Coromandel as a means to cope with peak population waste disposal during the summer months. It is therefore possible that peak populations in HDC, and to a lesser degree in MPDC, could be dealt with in a similar way. In addition for TCDC, temporary drop-off facilities at peak times may assist in further reducing the pressure on kerbside collection systems.

In addition to the Moloks TCDC provides after hours drop off facilities for waste at Tairua and Whangamata transfer stations.

11.6.3 Transfer Stations

There is potential across all three councils to target higher levels of resource recovery from the transfer stations.

A new refuse transfer station is planned for Whitianga (timeframe 2017/18 – 2018/19)

In Thames-Coromandel There are a number of individuals and organisations that have recently expressed interest in setting up re-use centres alongside the transfer stations to recover re-usable goods. These include the Coromandel Independent Living Trust (Coromandel town), and individuals in Tairua and Whitianga.

Options for addressing residual waste collection issues include:

- Investigation of wheeled bin collection services
- Provision of additional residual waste drop-off facilities (e.g. Moloks)
- Review bylaws governing the placement of refuse for collection and material that can be place in official collections
- Education and communication
- Targeting higher levels of resource recovery from Transfer Stations

11.7 Rural Waste Management Issues

Little is known about the waste management practices of rural residents and businesses beyond anecdotal evidence. Although some do use the Council refuse and recycling services, many rural properties are not provided with a kerbside collection. It is assumed that they make use of the transfer stations and or drop off facilities; however anecdotal evidence also suggests that there may be some self-management of waste on farms.

National experience suggests there may be issues specifically with this customer group relating to agricultural chemical containers, silage wrap, and on site disposal or burning of wastes.
The lack of reliable information on farm waste in the district and its potential impacts suggests a potential future work area to ascertain any significant issues and what responses, if any, are appropriate.

### 11.8 Residual Waste Disposal

Contracts held by all three Districts for residual waste disposal are due to expire during 2011. Tirohia landfill has consent until 2035 and contracts with a landfill operator need to be negotiated soon by the councils in order to secure disposal capacity site for the three Districts for the future. There is some sense in continuing with the current disposal arrangement, due to Tirohia’s location within Hauraki District, which reduces transport costs, its favourable consents and remaining capacity.

However due consideration should also be given to the EnviroWaste facility at Hampton Downs, which was not operational when the current contracts were drawn up with Tirohia. While the facility is not as conveniently located as Tirohia (particularly for Hauraki District where Tirohia is located), it may be of some advantage to negotiate with both landfills in order to obtain the most favourable arrangement. It may also be worthwhile considering splitting tonnage between the landfills and/or not entering into long term fixed tonnage contracts, in order to provide greater flexibility and incentive for waste minimisation.

The current contracts with H.G Leach were negotiated when Tirohia was the only genuinely viable landfill in proximity to the district that could receive TCDC’s waste. In the interim period Hampton Downs Landfill operated by Envirowaste Limited in the Waikato District has opened. This is a large commercial landfill that offers a genuine alternative for disposal. This therefore provides the opportunity to negotiate with both landfill operators and obtain the most favourable terms. The landfill companies will tend to favour long term fixed tonnage agreements, and are likely to offer the best tonnage rates for these sorts of arrangements. Long term fixed tonnage rates however remove the incentive to reduce waste, and savings are in fact likely to be greater if a slightly higher per tonne rate is paid but waste to landfill is substantially reduced.
### 11.9 Summary Table of Gaps and Potential Options

<table>
<thead>
<tr>
<th>Kerbside services</th>
<th>Drop off services</th>
<th>Transfer stations</th>
<th>Education</th>
<th>Bylaws</th>
<th>Monitoring</th>
<th>Joint working &amp; Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recyclable commodities</td>
<td>Increase capacity Target business</td>
<td>Increase drop off facilities</td>
<td>Target greater separation Differential charging</td>
<td>Promote prevention</td>
<td>Restrict disposal of recyclables in residual</td>
<td>RTS data Operator licensing data</td>
</tr>
<tr>
<td>Organic wastes</td>
<td>Kitchen and or garden waste collections</td>
<td>Promote separation of garden waste</td>
<td>Home composting</td>
<td>Restrict disposal of organics in residual</td>
<td>RTS data Operator licensing data</td>
<td>Potential efficiencies from joint collections</td>
</tr>
<tr>
<td>C&amp;D waste</td>
<td>Work with private sector to offer separation</td>
<td>Target greater separation Differential charging</td>
<td>Promote prevention</td>
<td>Site waste plans Cleanfill bylaw</td>
<td>Waste analysis RTS data Operator licensing data</td>
<td>Establish cleanfill</td>
</tr>
<tr>
<td>Reusable goods</td>
<td>‘Inorganic’ collection</td>
<td>Establish reuse centres</td>
<td>Encourage reuse Secondhand Sundays</td>
<td></td>
<td>RTS data Operator licensing data</td>
<td></td>
</tr>
<tr>
<td>Liquid and hazardous</td>
<td></td>
<td>Target greater separation Improve management</td>
<td>Promote good practice</td>
<td></td>
<td>RTS data Operator licensing data</td>
<td></td>
</tr>
<tr>
<td>Kerbside services</td>
<td>Drop off services</td>
<td>Transfer stations</td>
<td>Education</td>
<td>Bylaws</td>
<td>Monitoring</td>
<td>Joint working &amp; Infrastructure</td>
</tr>
<tr>
<td>-------------------</td>
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<td>------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Residual collection/RTS</td>
<td>Consider wheeled bins</td>
<td>Additional molok sites/more frequent empties</td>
<td></td>
<td></td>
<td>Waste analysis RTS data Operator licensing data</td>
<td>Potential efficiencies from joint collections</td>
</tr>
<tr>
<td>Residual disposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Waste analysis</td>
<td>Negotiate with landfill operators</td>
</tr>
</tbody>
</table>
12.0 Statement of Options

The following subsections each focus on a key area relating to the Councils’ role in waste management. In each subsection a range of options to manage the District’s waste in order to meet future demand is described. This array of options will assist Council with identifying priorities for future service provision and will help with the development of a WMMP, either jointly or separately. Each of the options presented below expands on those identified in the gap analysis.

12.1 Joint Working & Infrastructure

The extent to which the three Councils work together is going to impact on all subsequent decisions regarding future options – therefore it is preferable to have this discussion at the outset. The level of commitment to joint-working varies considerably in the following options shown in Table 12-1.

Table 12-1: Joint-working Options

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each Council adopts their own WMMP, signalling their intentions for future separate working</td>
</tr>
<tr>
<td>Strategic Assessment</td>
</tr>
<tr>
<td>Social/cultural: For the residents within each District this is a ‘business-as-usual’ option. Potential generation of local employment may not be realised.</td>
</tr>
<tr>
<td>Environmental: The lack of joint-working may have direct environmental consequences – but this entirely depends upon what the joint working would have been.</td>
</tr>
<tr>
<td>Economic: The lack of joint working may have some financial consequences. In particular since the incumbent contractor is contracted to all three Districts it is felt that efficiencies have been identified by the current contractor, from which some savings will already be passed to the Districts.</td>
</tr>
<tr>
<td>Comment &amp; Analysis of Impact on Future Demand</td>
</tr>
<tr>
<td>The extent to which each Council individually deals with respective future demands will depend upon the adopted WMMPs.</td>
</tr>
<tr>
<td>Council’s Role</td>
</tr>
<tr>
<td>Each Council will remain in control of their services. Joint-contracting of services is still possible.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Councils decide to develop a joint WMMP with the intention to</td>
</tr>
<tr>
<td>Strategic Assessment</td>
</tr>
<tr>
<td>Social/cultural: As a front-line service residents can find changes regarding waste services difficult to initially accept. However, it is unlikely this option will meet any significant opposition, especially in light of the fact that the same contractor currently services all three</td>
</tr>
<tr>
<td>Comment &amp; Analysis of Impact on Future Demand</td>
</tr>
<tr>
<td>Making the choice to jointly develop the WMMP sends a clear message about intentions for future joint working but does not commit</td>
</tr>
<tr>
<td>Council’s Role</td>
</tr>
<tr>
<td>This opens the door to joint-working for the Councils.</td>
</tr>
<tr>
<td>Jointly procure services.</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>Environmental</strong>: There are no environmental consequences associated with the joint development of a WMMP, but there may be subsequent to this when options are chosen regarding service provision.</td>
</tr>
<tr>
<td><strong>Social/cultural</strong>: As a front-line service residents can find changes regarding waste services difficult to initially accept. However, it is unlikely this option will meet any significant opposition, especially in light of the fact that the same contractor currently services all three Districts. <strong>Environmental</strong>: Benefits very much depend upon how the contract is set up, and the provisions made in the contract – however this.</td>
</tr>
<tr>
<td>The Councils decide to procure a joint-contract for waste collection services.</td>
</tr>
<tr>
<td>Establishment of a jointly owned/governed ‘East Waikato’ Waste Management Board to oversee the management of contracts and implementation of the WMMP for the three districts.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>A joint waste minimisation officer/waste education officer is recruited. This could be part of the procurement process if a joint approach is being taken. The successful contractor could be responsible for provision of personnel for this role.</td>
</tr>
<tr>
<td>Eastern Waikato Councils</td>
</tr>
<tr>
<td>Option</td>
</tr>
<tr>
<td>--------</td>
</tr>
</tbody>
</table>
| A materials sorting facility is jointly developed which serves all three Districts. | **Social/cultural:** This will go ahead on the basis that the collection system will change from a kerbside sort system to a commingled collection system. Arguably for residents this is a simpler system but will make most economic sense where material is co-mingled.  
**Environmental:** The environmental impact of commingling versus kerbside sort is a complex issue. However, an important variable is thought to be whether glass is included or not as this can impact upon material quality, and therefore future use.  
**Economic:** The economic impact of investing in the construction and running of a MRF requires a detailed cost-benefit analysis (CBA) appraisal in order to correctly account for the influencing factors. Material quality issues will need to be addressed to ensure that materials prices are not jeopardised. | The rationale for opting for a commingled collection and development of a MRF includes both increased capacity for recyclables, of which the Councils have control, and potential for a faster, more efficient collection system. | For this to be feasible buy-in from all Councils is required and a long-term commitment to change to a commingled collection is fundamental. |
| Joint procurement of a food waste treatment facility | **Social/Cultural:** no significant impacts. Some employment may be generated if the facility is constructed in one of the districts  
**Environmental:** Reduce organic waste to landfill. Provide an soil improver for agriculture/horticulture in the area.  
**Economic:** A cost benefit exercise would need to be undertaken to determine whether it was more economically viable to process material locally or transport to out of district facilities. | TCDC has potential through its Rotocom trial facility to processes food waste collected in the district. However this facility would not be off sufficient scale to accommodate material from other districts. One option could be to commission a processing facility to treat the collected foodwaste. Alternative the foodwaste could be transported to an existing facility out of district. (e.g. Envirofert in Waikato DC) | Undertake feasibility study |
<p>| Compost Biosolids from | <strong>Social/Cultural:</strong> potential social/cultural impacts if the biosolids are incorporated in to an organic waste process such as IVC as social | TCDC is likely to have sufficient processing capacity | Council to make decision on whether to proceed with |</p>
<table>
<thead>
<tr>
<th>WWTP together with green waste and other organic wastes (e.g. food wastes)</th>
<th>views, and market considerations will restrict the use of the end product</th>
<th>to handle biosolids within its own district. Transport of biosolids from other districts for processing is not likely to be feasible, practically or economically</th>
<th>composting of biosolids following trail outcomes, consult community on preferred options, and identify most appropriate strategic document for future management.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental: the biosolids have been assessed as having low heavy metal levels. The environmental impact of disposal will depend on which option is chosen. Processing in to a soil improver product will mitigate a large proportion of the environmental impact.</td>
<td>Economic: cost to dispose of or process the biosolids will vary depending what option is chosen.</td>
<td>Cultural/Social: no new impacts</td>
<td>Environmental: no new impacts</td>
</tr>
<tr>
<td>Economic: Landfill costs are likely to rise in future with the introduction of the ETS</td>
<td>Would not impact on status quo prediction of demand</td>
<td>Maintain existing service arrangements.</td>
<td></td>
</tr>
<tr>
<td>Refuse Disposal Status quo – Disposal contracts with Tirohia are rolled over on similar terms and conditions</td>
<td>Social/Cultural: no change in impacts</td>
<td>Both Tirohia and Hampton Downs have significant capacity remaining. Accessing both landfills will provide increased flexibility. Council should avoid being locked into long term fixed tonnage contracts as this reduces incentive to reduce waste and may be a more costly long-term option</td>
<td>Council to initiate Negotiations. If joint working is undertaken then this could provide the councils with greater ‘purchasing power’.</td>
</tr>
<tr>
<td>Environment: Could result in lower landfill costs in the short term which may reduce the incentive to reduce waste. However this situation would change from 2013 when the ETS comes into effect</td>
<td>Economic: Could result in lower landfill costs in the short term which may reduce the incentive to reduce waste. However this situation would change from 2013 when the ETS comes into effect</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.2 Waste Prevention, Education, Communication and Consultation

Waste prevention, which sits at the top of the waste hierarchy, can be a challenging subject for Councils to address. Currently waste prevention has not been given a high priority by the three Councils. Table 12-3 outlines some options which the Councils could adopt either individually or jointly.

Table 12-3: Waste Reduction, Education, Communication and Consultation Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
</table>
| Development of a ‘Waste Prevention’ section on the Councils’ website. This resource will provide information regarding a range of waste prevention initiatives. | **Social/cultural:** As a non-targeted resource this will only benefit those residents who are deliberately seeking information, and therefore arguably already interested in waste prevention measures. However, it may inspire community projects which may be further-reaching.  
**Environmental:** Limited positive environmental impact because waste prevention will not be encouraged to a great extent.  
**Economic:** The cost to Councils for provision of this information resource is minimal. | Limited impact on the demand for future waste services. | Requires limited commitment from Council, but nevertheless demonstrates their interest in the waste prevention agenda to residents |
| Inform the community and actively engage with the community to promote waste prevention initiatives – through for example, focus groups, consultation processes and community | **Social/Cultural:** community will be more aware of options, more engaged in the waste management process and should take a higher level of ownership of the issue  
**Environmental:** diversion from residual waste should increase with resultant reduction in environmental impact  
**Economic:** providing more frequent and detailed information to community will require more budget within the Council. Engagement with the community through consultation events and waste focus group meetings is relatively low cost. The greatest cost would be associated with the salary of the waste prevention officer. | Analysis of data suggests there is significant potential to reduce, reuse and recycle more waste. Zero waste philosophy supports this approach. Community should reduce their reliance on residual waste collections. Demand for recycling services will increase. | Council to produce and deliver more information, and work more closely with the community through focus groups and proactive consultation processes |
Eastern Waikato Councils

<table>
<thead>
<tr>
<th>Leadership. This may involve recruitment of a waste minimisation officer, either recruited jointly or individually by Councils.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social/Cultural:</strong> communities will be strongly engaged in the waste management process, with a high level of ownership of the issue and increased awareness. The Councils will need to take the risk of working with the community on these issues rather than having sole control of decisions. However as communities are involved in making decisions about waste management, any service changes should be easier to introduce and participation should be higher. <strong>Environmental:</strong> diversion from residual waste should increase above previous options with resultant reduction in environmental impact <strong>Economic:</strong> Councils may need to appoint a Council officer (either as part of an existing role or a new role) to lead on waste management strategy issues and work with the communities to make decisions. As noted above this may be a joint-role across the three Districts, or individuals based at each of the three Councils.</td>
</tr>
<tr>
<td><strong>Communities should further reduce their reliance on residual waste collections. Demand for recycling services will increase further.</strong> Council will take less of a sole-control approach to waste management issues, and will instead share decision making and risk management with the Communities. The communities will need to take responsibility for the decisions they are helping to make, and become more involved in delivery and participation.</td>
</tr>
<tr>
<td><strong>Actively encourage home</strong> Social/Cultural:** community will be more informed about garden waste options, and rural communities will be more able to use Customers will be more likely to divert green waste This is likely to be a key role for a waste minimisation</td>
</tr>
</tbody>
</table>
composting of food and garden waste. Provide shredding services in more remote parts of the Districts.

their own garden waste following shredding. Potential for community involvement through ‘composting champions’.

**Environmental:** diversion from residual waste should increase to a limited degree, with a resultant reduction in environmental impact

**Economic:** there would be a small cost to Council in encouraging home composting (potentially subsidising home composting bins) and providing shredding services. Some cost through salary associated with the waste minimisation officer. Cost of the greenwaste processing may reduce slightly if less tonnage is collected through the transfer stations due to home management.

from landfill, and manage it in ways that keeps it from the Council waste stream thus reducing demand for Council service

officer who would be seen to actively be providing residents with information.

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
</table>
| Switch the kerbside recycling collection from a kerbside sort system, to a commingled system. | **Social/Cultural:** This could require households to have wheeled bins, a topic which is known to commonly cause a division of opinions amongst residents. 

**Environmental:** The environmental impact of commingling versus kerbside sort is a complex issue. However, an important factor is whether glass is included or not as this can impact upon material quality, and therefore future use.

**Economic:** The economic feasibility of changing to a commingled system is very much dependent upon the feasibility for the three Councils to construct and operate a MRF (discussed above in Table 12-1). | In terms of helping to meeting future demand, and current peak season demands in areas popular for holidays and tourists, a commingled collection system is much faster than a kerbside sort system. Commingled materials could be collected in wheeled bins or in official see-through plastic sacks | This option may rely upon all three Councils agreeing to this system change, due to the requirement for a sorting facility which may only be feasible at a joint-working level. Council to set standards and monitor service delivery performance |

### 12.3 Kerbside Services

The current kerbside collection systems for dry recycling in all three Districts are of a similar high standard, nevertheless there are some options which can be considered for the systems both at the kerbside and the transfer stations.

Table 12-4: Dry Recycling Options
Council recycling collections – expand the range and amount of recyclable material that can be collected from more customer groups

**Social/Cultural:** competes with private sector recycling operators. Potential to increase employment.

**Environmental:** waste recovery would be promoted, recovery maximised and the environmental impact of waste reduced by diverting more waste from landfill

**Economic:** more material would be recovered, and materials would be used more efficiently.

Analysis shows that there is still recyclable material in the residual waste collection stream. Increasing the range and amount of materials in the recycling collection and expanding the customer groups would increase demand for this service.

Identify additional customer groups that the recycling collections could include (such as targeting businesses for paper/card and glass collections).

Identify further materials that could be added to the recycling collection systems.

Investigate ways that more material can be collected from each customer, such as reviewing the current arrangements for additional recyclables, and increasing the size/number of receptacles provided.

Details of new collections could be developed by Council, or could be developed in partnership with community.

Council to set standards and monitor service delivery performance.

### Table 12-5: Organic Waste Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
</table>
| Provide a free food waste collection to householders and | **Social/Cultural:** may discourage home composting but would also serve to inform residents about the extent of food wastage and change behaviour.  
**Environmental:** additional collection | Analysis of data suggests that the single largest component of the waste stream is food waste for all Districts. To divert this waste from landfill, collection services are required. New processing infrastructure would probably be required – or | Design and procurement of services. Collection could be in conjunction with garden |

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Businesses require additional processing facilities. Additional processing facilities may be necessary. It would reduce the environmental impact of waste. Waste avoidance and resource recovery would improve.

**Economic:** There would be a cost for additional service and processing facility, or transport to existing processing facility. Economic benefit through beneficial use of organic materials, and reduced landfill costs. Can support less frequent collection of residual waste but this may not be appropriate for TCDC due to high proportion of non-residents.

<table>
<thead>
<tr>
<th>Name/Operator</th>
<th>Key services/waste streams</th>
<th>Location</th>
<th>Capacity &amp; Estimated Operational life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Environmental</td>
<td>Bulking station</td>
<td>TCDC</td>
<td></td>
</tr>
<tr>
<td>Visy</td>
<td>Recyclable commodities</td>
<td>Onehunga, Auckland</td>
<td>70,000 tonnes per annum approximately</td>
</tr>
<tr>
<td>Jack Shaw</td>
<td>Cleanfill material</td>
<td>Tauranga</td>
<td></td>
</tr>
<tr>
<td>Owens-Illinois (NZ) Ltd</td>
<td>Recycle glass</td>
<td>Penrose, Auckland City</td>
<td></td>
</tr>
<tr>
<td>CHH Fullcircle</td>
<td>Recycle paper and cardboard</td>
<td>Penrose, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Sims Pacific</td>
<td>Metal recycling</td>
<td>Otahuhu, Auckland</td>
<td></td>
</tr>
<tr>
<td>Ward Resource Recovery Ltd</td>
<td>Reuse and recycle construction and demolition waste</td>
<td>Onehunga, Auckland City</td>
<td></td>
</tr>
<tr>
<td>Nikau Contractors Ltd</td>
<td>Reuse and recycle construction and demolition</td>
<td>Church St, Penrose and Taniwha</td>
<td></td>
</tr>
</tbody>
</table>

Consent for the trial facility (listed in Recycling Facilities Table 3-6 - Recycling & Processing Facilities)

Waste collection for householders – Council would need to assess relative cost/benefit of various collection options. Council(s) could be sole lead, or could work in partnership with community to provide services. Council to set standards and monitor service delivery performance.
<table>
<thead>
<tr>
<th>Company</th>
<th>Service Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>JJ Laughton</td>
<td>Tyre shredding</td>
<td>Glendene Waitakere City</td>
</tr>
<tr>
<td>Astron Plastics</td>
<td>Process pre-consumer plastic waste</td>
<td>Neales Road, East Tamaki</td>
</tr>
<tr>
<td>Interwaste</td>
<td>Hazardous waste treatment &amp; recycling (fluorescent tubes, dental amalgam, precious metals, quarantine, medical, pharmaceutical, secure waste, batteries and IT Equipment)</td>
<td>Auckland Airport</td>
</tr>
<tr>
<td>Visy</td>
<td>Processes dry recyclables from kerbside collections. Also accepts mixed dry recyclables at the gate.</td>
<td>Onehunga, Auckland City</td>
</tr>
<tr>
<td>Transpacific Allbrite Ltd</td>
<td>Processes recyclables from kerbside</td>
<td>Takanini</td>
</tr>
<tr>
<td>Name/Operator</td>
<td>Key services/waste streams</td>
<td>Location</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>CMA Recycling Ltd</td>
<td>Scrap metal recyclers</td>
<td>Onehunga, Auckland City</td>
</tr>
<tr>
<td>Paper Reclaim</td>
<td>Collect, consolidate and on-sell paper, cardboard and other commodities (plastics, steel, aluminium, and glass)</td>
<td>Penrose, Auckland City</td>
</tr>
<tr>
<td>NZ Steel</td>
<td>Steel production</td>
<td>Glenbrook, Auckland</td>
</tr>
</tbody>
</table>

### 12.3.1 Organic Treatment Facilities

#### Table 3-7 - Organic Waste Facilities
<table>
<thead>
<tr>
<th>Company</th>
<th>Waste Types</th>
<th>Location</th>
<th>Capacity/Tonnage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envirofert</td>
<td>Green waste, food wastes, plasterboard, cleanfill material</td>
<td>Tuakau, Waikato District</td>
<td>No specific tonnage limits as long as consent conditions maintained</td>
<td></td>
</tr>
<tr>
<td>Daltons</td>
<td>Bark, horticultural and agricultural wastes</td>
<td>Matamata</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZ Remediation</td>
<td>Green waste, Processing a range of organic wastes through vermicomposting including some wastes from Auckland food/meat processors. Also processing paunch and drilling mud from other parts of New Zealand.</td>
<td>Ureti (Taranaki)</td>
<td>8,000 tpa</td>
<td></td>
</tr>
<tr>
<td>WormTech</td>
<td>Pig manure</td>
<td>BOP</td>
<td>5,200 tpa</td>
<td>Unable to accept more</td>
</tr>
<tr>
<td>Company</td>
<td>Waste Type</td>
<td>Location</td>
<td>Capacity/Conditions</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------</td>
<td>------------------------</td>
<td>----------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lowe Corporation</td>
<td>High-protein putrescible wastes</td>
<td>Tuakau, Waikato District</td>
<td>Not specified, but additional capacity available</td>
<td></td>
</tr>
<tr>
<td>NZ Ester Fuels</td>
<td>Used cooking oil</td>
<td></td>
<td>Not specified, but additional capacity available</td>
<td></td>
</tr>
<tr>
<td>Plateau Bark &amp; Composts</td>
<td>Bark and some wood processing waste</td>
<td></td>
<td>Not specified; some additional capacity available</td>
<td></td>
</tr>
<tr>
<td>Vitec Fertilisers</td>
<td>Fish processing waste</td>
<td></td>
<td>At capacity (through choice). Currently processing 300 tpa</td>
<td></td>
</tr>
<tr>
<td>Brights Poultry</td>
<td>End-of-lay poultry</td>
<td></td>
<td>200 tpa. Generally at capacity</td>
<td></td>
</tr>
<tr>
<td>Nature’s Flame</td>
<td>Sawdust</td>
<td></td>
<td>54,000 tpa at present, and at</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>Waste Type</td>
<td>Location</td>
<td>Capacity</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------</td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>Hogged wood waste</td>
<td>Unknown but significant (over 400,000 tpa), and market for more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>Animal manure</td>
<td>Unknown; currently absorbing perhaps 300 tpa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eco Stock Supplies</td>
<td>Waste food from manufacturers and processors</td>
<td>Wiri, Manukau</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living Earth</td>
<td>Compost garden waste</td>
<td>Puketutu Island, Manukau City</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVL Proteins</td>
<td>Fish and meat processing waste into fertiliser &amp; tallow products</td>
<td>Great South Rd, Penrose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reharvest Timber Products Ltd</td>
<td>Waste wood</td>
<td>Hunua Rd, Papakura</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There would be reduced demand for residual collection and disposal

| Provide a user-pays green waste collection to householders | Social/Cultural: may discourage home composting. More convenient than travelling to the transfer station so may encourage greater diversion of green waste. Competes with private sector greenwaste collection operators. Environmental: additional collection services required. If green waste is drawn out of residual waste it would reduce the environmental impact of waste going to landfill. Economic: there would be cost for additional collection service but potential savings through reduced landfill costs and resultant compost product. | There would be reduced demand for residual collection and disposal | Design and procurement of services. Collection could be in conjunction with food waste collection for householders – Council would need to assess relative cost/benefit of various collection options. Council to set standards and monitor service delivery performance |
| Provide a rates funded green waste collection to householders | Social/Cultural: may discourage home composting. More convenient than travelling to the transfer station so may encourage greater diversion of green waste. Competes with private sector greenwaste collection operators. Environmental: additional collection services required. If green waste is drawn out of residual waste it would reduce the environmental impact of waste going to landfill. Experience shows that free services ‘draw out’ a lot of garden material that is otherwise managed on the property. | There would be reduced demand for residual collection and disposal | Design and procurement of services. Collection could be in conjunction with food waste collection for householders – Council would need to assess relative cost/benefit of various collection options. |
**Economic:** there would be cost for additional collection service. This can be quite high due to the extra volumes of material involved. Additional costs usually outweigh potential savings from reduced landfill costs and compost product sales.

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**Table 12-6: Refuse Collection**

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase kerbside collection services to more properties in each district</td>
<td><strong>Cultural/Social:</strong> Improved service levels <strong>Environmental:</strong> may result in reduced overall disposal, and opportunities to enhance recycling <strong>Economic:</strong> Will cost council more to provide services to outlying properties. Rural households would however benefit through reduced disposal costs.</td>
<td>Much of the dissatisfaction amongst residents of HD and MPD is due to the lack of services. Servicing more properties would give councils a chance to gain market share from the private sector and reduce the number of wheelie bins in use resulting in a decrease in residual waste and an increase in recycling.</td>
<td>A cost benefit evaluation needs to be done for each new area it is proposed to add to the service. Council would have provide the service (through contract), but may be able to recoup some costs through user pays charges, or targeted rates. Council to set standards and monitor service delivery performance.</td>
</tr>
<tr>
<td>Council residual waste collections – continue status quo</td>
<td><strong>Cultural/Social/Environmental/ Economic:</strong> no new impacts</td>
<td>Would not impact on status quo prediction of demand</td>
<td>Maintain existing service arrangements. Council to set standards and monitor service delivery performance.</td>
</tr>
<tr>
<td>Council residual waste</td>
<td><strong>Cultural/Social:</strong> international experience shows that residual waste collections are most successfully reduced (e.g. frequency reduced to fortnightly or container size reduced) when paired with the</td>
<td>Analysis shows that a large amount of recyclables is still in the residual waste stream.</td>
<td>Specify service changes and alter service delivery. Service changes could be</td>
</tr>
</tbody>
</table>

Eastern Waikato Councils
collections – change service configuration to further reduce the quantity of waste collected; for example reducing service frequency to fortnightly.  

| **Environmental** | Experience suggests that only restricting access to the residual waste service will change this significantly. | developed in partnership with the community, or with the Council having sole responsibility |
| **Economic** | Would reduce future service demand for residual collection but could increase demand for recycling/composting services. Business customers may be lost to alternative service providers who may not provide recycling services, therefore diverting waste to residual instead – this customer group may require a different approach altogether. | Council to set standards and monitor service delivery performance |

### Council residual waste collections – introduce wheeled bin collections

| **Cultural/Social** | This would require households to have wheeled bins, a topic which is known to commonly cause a division of opinions held by residents. | Specify service changes and alter service delivery. |
| **Environmental** | The introduction of wheeled bins may assist with logistical arrangements. The option of varying sizes would help to ensure that households were not supplied with too much capacity for their residual waste arisings. | Council to set standards and monitor service delivery performance |
| **Economic** | The refuse quantity may potentially increase, but money would be saved from reduced spills to clear up. | |

### Other waste streams - provide ongoing alternative option for some C&D

| **Social/Cultural** | no impacts identified | |
| **Environment** | Although the construction sector is currently slowing due to the economy, it is very unlikely that construction and demolition activity will ever cease altogether. C&D waste is a large proportion of waste generated. | Council could lead in development of alternative, or could work with private and community sectors (e.g. local iwi) in partnership for development, and/or with other local councils and |

introduction of a food waste collection. The other mechanisms that could reduce waste quantities collected – e.g. change from MGBs to bags or introducing user pays are not appropriate given the current user-pays bag system in place. There is potential for problems with increased fly tipping although there is little evidence to suggest this is likely to be a significant issue.

**Environmental**: reducing residual waste to landfill and encouraging more diversion of recycling will help to recover more materials and to achieve environmental goals.

**Economic**: there would be savings on residual waste collection, transport and disposal, but more would need to be spent on recycling/recovery services.

Experience suggests that only restricting access to the residual waste service will change this significantly.

Would reduce future service demand for residual collection but could increase demand for recycling/composting services. Business customers may be lost to alternative service providers who may not provide recycling services, therefore diverting waste to residual instead – this customer group may require a different approach altogether.

Specify service changes and alter service delivery. Service changes could be developed in partnership with the community, or with the Council having sole responsibility.

Council to set standards and monitor service delivery performance.

The introduction of wheeled bins may assist with logistical arrangements. The option of varying sizes would help to ensure that households were not supplied with too much capacity for their residual waste arisings.

Specify service changes and alter service delivery. |

Council to set standards and monitor service delivery performance.

Although the construction sector is currently slowing due to the economy, it is very unlikely that construction and demolition activity will ever cease altogether. C&D waste is a large proportion of waste generated.

Council could lead in development of alternative, or could work with private and community sectors (e.g. local iwi) in partnership for development, and/or with other local councils and
12.4 Drop Off Sites

Drop off sites are an important element of the waste disposal service provision, particularly in areas with large numbers or visitors who may require disposal and recycling facilities outside of normal collection times or transfer station operating hours. These facilities also add convenience by increasing the number of facilities and access to facilities.

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide (additional) drop-off facilities</td>
<td><strong>Social/Cultural</strong>: there is a possibility of negative social impacts as recycling drop-off areas can sometimes attract fly tipping and other anti-social behaviour. It can be a convenient service, especially for non-residents who may not be within the District on the scheduled collection day. <strong>Environmental</strong>: recycling could increase and the environmental impact of waste reduced by diverting more waste from landfill <strong>Economic</strong>: more material would be recovered, and materials would be used more efficiently for a relatively small outlay towards a service.</td>
<td>Analysis of data shows that there is still recyclable material in the household residual waste stream, and also going to landfill. Provision of drop-off facilities, particularly in areas with high peak holiday populations, at locations customers visit frequently (e.g. beaches or supermarkets) would encourage further recycling. These could also be provided as public place recycling</td>
<td>Councils would lead on provision of these facilities. TCDC has particular needs around drop off facilities at peak times. One option for TCDC is to provide temporary drop off sites at the peak times. This will help ease the strain on kerbside services. Council to set standards and monitor service delivery performance</td>
</tr>
<tr>
<td>Provide increased capacity for after hours drop off of refuse sacks</td>
<td>Social/Cultural: there is a possibility of negative social impacts as recycling drop-off areas can sometimes attract fly tipping and other anti-social behaviour. It can be a convenient service, especially for non-residents who may not be within the District on the scheduled collection day. Environmental: reduced illegal dumping</td>
<td>Economic: This would reduce costs associated with needed to clean up dumping</td>
<td>There is a need in peak holiday areas to provide after hours drop off facilities for holidaymakers who are leaving the area outside of collection or transfer station operating times.</td>
</tr>
</tbody>
</table>
12.5 Transfer Station Services

Due to the differences across the Districts at transfer stations it was felt more appropriate to consider options individually by District, as shown in Table 12-7 to Table 12-9. The level of detail across Districts varies due to the amount of information available. A review of the transfer stations has previously been undertaken in Matamata-Piako\textsuperscript{37} District and a service review is currently being undertaken in Thames-Coromandel District\textsuperscript{38}.

Table 12-7: Transfer Station Options – Thames-Coromandel District Council

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undertake an audit of transfer station waste flows</td>
<td><strong>Social/Cultural</strong>: No impact. <strong>Environmental</strong>: The extent for environmental benefit through provision of improved services at the transfer stations depends upon a greater understanding of the residual waste composition. <strong>Economic</strong>: This would be a relatively low-cost exercise which would allow future funding to be most strategically spent.</td>
<td>In acting upon data presented from the audit, this would ensure that the services more effectively meet both the current and future demand.</td>
<td>Councils will lead, but may require specialist technical assistance to undertake the audit.</td>
</tr>
<tr>
<td>Make site improvements to the current facilities including improved signage, greater areas of hard stand, more cover on site, etc.</td>
<td><strong>Social/Cultural</strong>: The sites would appear tidier, better managed and more user-friendly. <strong>Environmental</strong>: The main improvements would be associated with more hard-stand. In the first instance, leaching into groundwater would be reduced and secondly the recyclables would remain cleaner and easier to separate. <strong>Economic</strong>: Costs would vary depending upon the</td>
<td>In terms of managing waste quantities and types this option would have little impact.</td>
<td>Councils would lead on provision of these facility improvements.</td>
</tr>
</tbody>
</table>


Eastern Waikato Councils
improvements undertaken – ranging from low cost signage to higher costs associated with hard standing and cover.

**Set-up re-use centres**

**Social/Cultural:** Impacts can be far-reaching including upskilling of labour forces to work in the centres and provision of an inspiring centre which can provide materials for schools and affordable furniture and white goods.

**Environmental:** Reduced waste to landfill and both reduced consumption of new goods are benefits associated with re-use.

**Economic:** Affordable goods available to the general public and reduced costs associated with waste to landfill.

Will help to increase capacity at transfer stations by identifying those objects fit for reuse.

Re-use centres are most commonly run by third sector organisations in association with Councils, or with their support.

**Divert more wastes at RTS through:**

- more staff
- pricing tools
- changed layout
- more reuse and recycling options
- introducing incentives for the contractor etc

**Social/Cultural:** social and cultural impacts would depend how this is implemented – eg a high level of community involvement would have a positive social and cultural impact

**Environmental:** additional recyclable or cleanfill material could be diverted from the residual waste stream

**Economic:** increased diversion of waste at the transfer station would probably have additional operational costs. However reduced waste to landfill would have a positive economic benefit.

Analysis of data and experience elsewhere suggests that much more waste could be diverted from landfill at the transfer station stage.

Council may wish to lead on the provision of more reuse, recycling and recovery facilities, or to work with the community and private sector to encourage the development of these services. In this area in particular, there is significant potential to work with the community (e.g. local non-profit community groups).

Council to set standards and monitor service delivery performance

---

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undertake an audit of transfer station waste</td>
<td>Social/Cultural: No impact.</td>
<td>In acting upon data presented from the audit, this</td>
<td>Council will lead, but may require specialist technical assistance to</td>
</tr>
</tbody>
</table>
| flows | Environmental: The extent for environmental benefit through provision of improved services at the transfer stations depends upon a greater understanding of the residual waste composition.  
Economic: This would be a relatively low-cost exercise which would allow future funding to be most strategically spent. | would ensure that the services more effectively meet both the current and future demand. | undertake the audit. |
|---|---|---|---|
| Make site improvements to the current facilities including improved signage, greater areas of hard standing, more cover on site, etc. | Social/Cultural: The sites would appear tidier, better managed and more user-friendly.  
Environmental: The main improvements would be associated with more hard-standing. Firstly, leaching would be reduced and secondly the recyclables would remain cleaner and easier to separate.  
Economic: Costs would vary depending upon the improvements undertaken – ranging from low cost signage to higher costs associated with hard standing and cover. | In terms of managing waste quantities and types this option would have little impact. | Councils would lead on provision of these facility improvements. |
| Consider leasing of Council owned facilities to private and/or community sector operators who have a focus on waste diversion | Social/Cultural: social and cultural impacts would depend how this is implemented – eg a high level of community involvement would have a positive social and cultural impact  
Environmental: additional recyclable or cleanfill material could be diverted from the residual waste stream  
Economic: Council would avoid costs associated with transfer station operation but would also forgo potential income and cost savings from diversion | Analysis of data and experience elsewhere suggests that much more waste could be diverted from landfill at the transfer station stage. | Council could work with the community and private sector to encourage the development of these services. This could be done through waste diversion performance conditions on the lease. In this area in particular, there is significant potential to work with the community (e.g. local non-profit community groups). Council to set standards and monitor service delivery performance |
| Increase provision for hazardous waste | Social/Cultural: Provision of a collection point for hazardous materials can help to raise awareness  
Environmental: There is currently no provision for hazardous | Council to investigate with contractors as to how drop-off |
### Collection
Currently only batteries and oil are accepted at the sites. Could consider accepting solvents, cleaning fluids, paints, fertilisers, pesticides and herbicides.

**Environmental:** retrieving these harmful materials and diverting them from landfill can reduce harmful impacts these hazardous substances can have on the environment.

**Economic:** ongoing cost to provide facility with the exception of batteries and oil. It is therefore expected that this would be a well-utilised service, although tonnages are expected to be relatively small.

### Divert more wastes at RTS through:
- more staff
- pricing tools
- changed layout
- more reuse and recycling options
- introducing incentives for the contractor etc

**Social/Cultural:** social and cultural impacts would depend how this is implemented – eg a high level of community involvement would have a positive social and cultural impact

**Environmental:** additional recyclable or cleanfill material could be diverted from the residual waste stream

**Economic:** increased diversion of waste at the transfer station would probably have additional operational costs. However reduced waste to landfill would have a positive economic benefit.

### Set-up re-use centres co-located with transfer stations

**Social/Cultural:** Impacts can be far-reaching including upskilling of labour forces to work in the centres and provision of an inspiring centre which can provide art and craft materials for schools and affordable furniture and white goods.

**Environmental:** Reduced waste to landfill and both reduced consumption of new goods are benefits associated with re-use.

**Economic:** Affordable goods available to the general public and reduced costs associated with waste to landfill.

### Analysis of data and experience elsewhere suggests that much more waste could be diverted from landfill at the transfer station stage.

- Council to set standards and monitor service delivery performance

- Will help to increase capacity at transfer stations by identifying those objects fit for reuse.

- Re-use centres are most commonly run by third sector organisations in association with Councils, or with their support.
Table 12-9: Transfer Station Options – Matamata-Piako District Council

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status Quo</td>
<td><strong>Social/Cultural:</strong> no additional private costs imposed, no benefits from additional reuse or new facilities <strong>Environmental:</strong> No additional benefits <strong>Economic:</strong> low capital and mid level operating costs. Highest cost per tonne of material diverted.</td>
<td>Revamping the facilities will help ensure adequate facilities are available to divert more waste from landfill and improve health and safety.</td>
<td>Managing and monitoring contracts for transfer station operation.</td>
</tr>
<tr>
<td>Option 3(b) from the MPDC refuse transfer station CBA report (medium development at Matamata and Morrinsville, Waihou closed)</td>
<td><strong>Social/Cultural:</strong> low/moderate level of private costs imposed due to Waihou closing <strong>Environmental:</strong> High level of diversion potential relative to the baseline. Low level of additional CO2 impacts. <strong>Economic:</strong> Mid level capital and operating costs. Lowest cost per tonne of material diverted.</td>
<td>Revamping the facilities will help ensure adequate facilities are available to divert more waste from landfill and improve health and safety.</td>
<td>Overseeing transfer station design, construction and procurement processes. Managing and monitoring contracts for transfer station operation.</td>
</tr>
<tr>
<td>Option 1(b) from the MPDC refuse transfer station CBA report (high development at Matamata, medium development at Morrinsville, low development at Waihou)</td>
<td><strong>Social/Cultural:</strong> No significant negative impacts. Better local facilities for waste education, reuse and local economic development <strong>Environmental:</strong> High level of diversion potential relative to the baseline. No additional CO2 impacts. <strong>Economic:</strong> High capital and operating costs. Low cost per tonne of material diverted.</td>
<td>Revamping the facilities will help ensure adequate facilities are available to divert more waste from landfill and improve health and safety.</td>
<td>Overseeing transfer station design, construction and procurement processes. Managing and monitoring contracts for transfer station operation.</td>
</tr>
<tr>
<td>Option 3(a) from the MPDC refuse transfer station CBA report (medium)</td>
<td><strong>Social/Cultural:</strong> low/moderate level of private costs imposed due to Waihou closing <strong>Environmental:</strong> Moderate level of diversion potential relative to the baseline. Low level of additional CO2</td>
<td>Revamping the facilities will help ensure adequate facilities are available to divert more waste from landfill and improve health and safety.</td>
<td>Overseeing transfer station design, construction and procurement processes. Managing and monitoring contracts for transfer station operation.</td>
</tr>
<tr>
<td>Development at Matamata, low development at Morrinsville, Waihou closed)</td>
<td>Economic: Low level capital costs and mid level operating costs. Moderate cost per tonne of material diverted.</td>
<td>Impacts.</td>
<td>Landfill and improve health and safety.</td>
</tr>
</tbody>
</table>
12.6 Bylaws

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategic Assessment</th>
<th>Comment &amp; Analysis of Impact on Future Demand</th>
<th>Council’s Role</th>
</tr>
</thead>
</table>
| Undertake a review of the three councils bylaws and if appropriate adopt a consistent bylaw across all three councils | **Social/Cultural:** This would aim to ensure consistency in how people interact with services. It would lead to more fairness and more widespread understanding of expectations  
**Environmental:** may assist in efforts to reduce litter, contamination etc  
**Economic:** may reduce costs associated with litter and improper use of council services | Will have little impact on future demand but could be expected to improve compliance and result in efficiencies | Undertake the review, implement recommended outcomes, communicate and monitor bylaw compliance |
| Introduce a by-law or other regulatory mechanism to encourage more source-separation of wastes such as C&D | **Social/Cultural:** social and cultural impacts would depend how this is implemented – e.g. a high level of community involvement would have a positive social and cultural impact  
**Environmental:** additional recyclable or cleanfill material could be diverted from the residual waste stream  
**Economic:** the construction industry may experience additional costs in separating these wastes at source | Analysis shows that there is a large proportion of C&D waste still going to landfill  
Demand for alternative services will increase – such as C&D waste recycling and access to cleanfill disposal | Council may wish to lead on the provision of more C&D waste processing and recycling facilities, or to work with the community and private sector to encourage the development of these services |
| By-law to regulate private waste collectors. This could stipulate that a residual waste service must always be provided in conjunction with a dry recycling service. | **Social/Cultural:** This would make it more difficult for householders to avoid the obligation to recycle  
**Environmental:** | Private collectors usually just offer large wheeled bin services. These tend to discourage recycling. A requirement to provide recycling alongside refuse could enhance diversion | Very applicable to MPDC not so applicable to TCDC |
| Review existing bylaws to ensure they | **Social/Cultural:** no assessment possible at this stage  
**Economic:** | Bylaws can govern who can use the service, what | Conduct review |

Eastern Waikato Councils
<table>
<thead>
<tr>
<th>Cleanfill Bylaw</th>
<th><strong>Social/Cultural:</strong> no significant impacts</th>
<th>This type of measure may be critical when landfill prices increase (due to the ETS/increases in levy). If proper controls are not in place material will leak to illegal disposal.</th>
<th>Investigate bylaw and other management options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental: would increase information about disposal practices and could potentially guard against environmental degradation through illegal disposal.</td>
<td><strong>Economic:</strong> Cleanfill bylaw would be self funding. Would help constrain illegal dumping (lowering costs) and increase use of landfill.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental:</strong> no assessment possible at this stage</td>
<td><strong>Economic:</strong> no assessment possible at this stage</td>
<td>material they are allowed to put in each collection stream and when and how material must be placed out for collection</td>
<td></td>
</tr>
</tbody>
</table>

### 12.7 Measuring and Monitoring

<table>
<thead>
<tr>
<th>Option</th>
<th><strong>Strategic Assessment</strong></th>
<th><strong>Comment &amp; Analysis of Impact on Future Demand</strong></th>
<th><strong>Council's Role</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Status quo – occasional SWAP(^{39}) audits, participation surveys, and monitoring of waste flows through contracts</td>
<td><strong>Cultural/Social/Environmental/ Economic:</strong> no new impacts</td>
<td>Would not impact on status quo prediction of demand</td>
<td>Maintain existing service arrangements.</td>
</tr>
<tr>
<td>Increase monitoring to provide more</td>
<td><strong>Social/Cultural:</strong> could raise awareness of waste management in areas which currently very little is known.</td>
<td>Analysis of available data has shown that there are gaps in knowledge and</td>
<td>Council to initiate and oversee research, studies and audits and feed results in to future iterations</td>
</tr>
</tbody>
</table>

\(^{39}\) Solid Waste Analysis Protocol audits

Joint Waste Assessment 2011

132
| Information in certain areas, such as commercial waste composition, and waste management in rural areas, transfer station data, construction and demolition waste | **Environment:** if data highlights areas where additional services could be provided or certain customer groups targeted, then diversion of waste from landfill could be increased. **Economic:** if the above is achieved, transport and disposal costs would be reduced. There may be additional costs for new programmes put in place. | Understanding of several waste streams in each of the Districts. Availability of more data, and tailoring of services accordingly, could increase demand for recycling services and reduce waste to landfill. | of WMMP and action plans. |
13.0 Statement of the Councils’ Role

The Councils have a number of statutory obligations in respect of the planning and provision of waste services. These include the following:

- Under the WMA the council “must promote effective and efficient waste management and minimisation within its district” (s 42).
- The WMA also requires territorial authorities (TAs) to develop and adopt a Waste Management and Minimisation Plan (WMMP)40
- Under the Local Government Act 2002 (LGA) the Council must consult the public about its plans for managing waste
- Under the Resource Management Act 1991 (RMA), TA responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, non-complying and prohibited activities and their controls are specified within district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.
- Under the Litter Act 1979 Territorial Authorities have powers to make bylaws, issue infringement notices, and require the clean-up of litter from land.
- The Health Act 1956. Health Act provisions for the removal of refuse by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956.
- The Hazardous Substances and New Organisms Act 1996 (the HSNO Act). The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.

13.1 Joint Working

This Waste Assessment has been developed with a view to the three districts moving towards further joint-working in the future. Joint-working is considered to be an effective way of maximising efficiencies in the delivery of solid waste services.

There are a number of possibilities for how this joint working relationship could be taken forward. These options are outlined in the Options Assessment. Whichever option is chosen as part of the joint-working commitment, each Council will commit time and resource as necessary in order to work towards a sustainable solution.

The services put in place are not only intended to ensure that customers are satisfied with the service now, but also that it has the capacity to meet future customer demands. In adhering to the waste hierarchy, efforts will focus on education and waste prevention initiatives, reuse, recycling and safe disposal of residual waste to landfill. It should be

40 The development of a WMMP in the WMA is a requirement modified from Part 31 of the LGA 1974, but with even greater emphasis on waste minimisation.
noted that councils will ensure that public health is adequately protected in taking forward any of the proposed actions described in the statement of options.

The Councils’ intend to oversee, facilitate and manage a range of programmes and interventions to achieve effective and efficient waste management and minimisation across the three districts. The primary means through which the Council’s role will be carried out will be through joint contracting of waste management and minimisation services. The scope of the procurement of these services has not yet been determined, however it is expected to include the following:

- Kerbside collection of household refuse
- Kerbside collection of household recyclables
- Transfer station operation
- Servicing of rubbish and recycling drop off points
- Transport of waste to disposal
- Transport of recyclables to processing
- Monitoring and reporting of waste data
- Disposal of waste to landfill

In addition the following elements may be included in a joint procurement:

- Sorting and processing of recyclables
- Kerbside collection of food waste
- User pays kerbside collection of garden waste
- Composting of organic wastes
- Separation and resale of reusable items
- Education and communication
- Bylaw enforcement

Joint working arrangements are also expected to cover a range of activities including:

- Waste policy and planning
- Procurement
- Contract administration
- Communication and education
- Development and enforcement of solid waste bylaws
- Monitoring and reporting of performance against waste management and minimisation objectives

It is expected that The Councils will do this through the development of appropriate joint structures with delegated authorities for waste management. The joint working arrangements will be responsible for a range of contracts and programmes to provide waste management and minimisation services to the residents and ratepayers of the three districts.
In addition individual councils may make their own arrangements for services not covered by the joint arrangements. These services may include:

- Clearance of illegal dumping
- Street litter
- Servicing of litter bins
- Servicing of public place recycling bins
- Transport and treatment/disposal of biosolids

14.0 Statement of Proposals

As this Waste Assessment is provided in conjunction with the draft WMMP, Councils have agreed that a high level Statement of Proposals section here is not necessary when this is explored in more detail in the WMMP itself. Refer to the WMMP for a full statement of the Council’s Proposals.
A.1.0 Medical Officer of Health Statement

12 December 2011

Duncan Wilson
Eunomia Research and Consulting Ltd
PO Box 78 313
Grey Lynn
AUCKLAND 1245

Dear Mr Wilson,

JOINT WASTE ASSESSMENT: THAMES COROMANDEL, HAURAKI AND MATAMATA PIAKO DISTRICT COUNCILS

Thank you for the opportunity to comment on the Joint Waste Assessment. The collaborative approach taken by Thames Coromandel, Hauraki and Matamata Piako District Councils is to be commended and will help maximise the gains from the range of waste minimisation approaches used.

The analysis of the current issues with waste was very helpful and we support the identified priority waste streams. From a Public Health perspective a range of hazards exist associated with poor waste management including:

- Contamination of land and water by unsafe disposal of hazardous substances and from leakages of accumulated waste.
- Infectious disease from animal and insect vectors attracted by waste (rats, flies, mosquitoes) and from direct exposure to faecal material in waste.
- Physical hazards from waste accumulation blocking places where people move and through fire hazards.
- Nuisances from dust and odour.
- Poor processes in waste management leading to hazards e.g. Legionellosis from compost.

There are also a number of longer term issues which must be considered such as greenhouse gas emissions and leachate from poorly managed landfills or old landfill sites.

Maximising recycling and reuse are important and producing compost from organic material is a positive use of waste material. Minimising greenhouse emissions through further use of methane capture should also be explored.
Behaviour change through social marketing has a place but experience in the health sector has shown that this works best in conjunction with regulation. There may be opportunities in planning social marketing programmes to work with Population Health, health promotion staff given the experience in behaviour change that the health sector has.

Direct partnership with industry is also important with opportunities to decrease waste going to landfill through product stewardship programmes. It is also very important to work with community groups with an interest in these issues as this will maximise success.

Attention also needs to be paid to ensuring waste management activities are equitable across the district e.g. rural communities may have reduced access to waste collection and disposal points and social marketing programmes may need to be tailored to different audiences.

Once again thank you for the opportunity to comment. Population Health recognises that effective waste management contributes to better health outcomes for the community and would like to continue working with each of the councils in this area.

Yours sincerely

George Cowie
Health Protection Officer
On behalf of

Dr Dell Hood
Medical Officer of Health
A.2.0 TCDC Stakeholders Workshop

A.2.1 Introduction

A.2.1.1 Date & Time
The workshop was held from 2:00pm to 4:30pm, 2 February, at the Council Chambers 515 MacKay Street, Thames.

A.2.1.2 Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
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<tbody>
<tr>
<td>1:45pm</td>
<td>Registration and Tea and Coffee</td>
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<tr>
<td>2:00pm</td>
<td>Welcome by Greg Hampton, Operations Manager, TCDC</td>
</tr>
<tr>
<td>2:05pm</td>
<td>Presentations from Eunomia Research &amp; Consulting and Waste Not Consulting on the Waste Assessment and WMMP process, TCDC Waste Services, and Waste Data</td>
</tr>
<tr>
<td>2:35pm</td>
<td>Plenary Session</td>
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<tr>
<td></td>
<td>Discussion of broad aims and objectives</td>
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<td></td>
<td>Identification of key issues for discussion (e.g.):</td>
</tr>
<tr>
<td></td>
<td>• Kerbside collection services</td>
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<td></td>
<td>• Drop off services</td>
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<td></td>
<td>• Peak collection issues</td>
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<td></td>
<td>• Transfer stations</td>
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<td></td>
<td>• Joint working with other councils</td>
</tr>
<tr>
<td>3:15pm</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>3:30pm</td>
<td>Group working:</td>
</tr>
<tr>
<td></td>
<td>(Discussion of key issues)</td>
</tr>
<tr>
<td>4:15pm</td>
<td>Reporting back and summary of workshop</td>
</tr>
<tr>
<td>4:30pm</td>
<td>Session close</td>
</tr>
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</table>
## A.2.2 Workshop Attendees

### A.2.2.1 Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duncan Wilson</td>
<td>Eunomia Consulting</td>
</tr>
<tr>
<td>Bruce Middleton</td>
<td>Waste Not Consulting</td>
</tr>
<tr>
<td>Greg Hampton</td>
<td>Thames-Coromandel District Council</td>
</tr>
<tr>
<td>Bob Nicholls</td>
<td>Mercury Bay South Ratepayers Association</td>
</tr>
<tr>
<td>Kim Coppersmith</td>
<td>Pauanui Ratepayers and Residents Association</td>
</tr>
<tr>
<td>Barbara Swindles</td>
<td>Pauanui Ratepayers and Residents Association</td>
</tr>
<tr>
<td>Barry Swindles</td>
<td>Tairua/Pauanui Community Board</td>
</tr>
<tr>
<td>Justine Baverstock</td>
<td>Thames Community Board</td>
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<tr>
<td>Mark Bridgman</td>
<td>Thames Community Board</td>
</tr>
<tr>
<td>Paul Cook</td>
<td>Opito Bay Ratepayers Association</td>
</tr>
<tr>
<td>Mick Radford</td>
<td>Tairua Residents and Ratepayers Association</td>
</tr>
<tr>
<td>Erwin Drok</td>
<td>Whangapoua Ratepayers Association</td>
</tr>
<tr>
<td>Clive Monds</td>
<td>Seagull Centre Trust</td>
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<tr>
<td>Peter Wood</td>
<td>Seagull Centre Trust</td>
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<tr>
<td>Ben Woolf</td>
<td>Seagull Centre Trust</td>
</tr>
<tr>
<td>Colin Anderson</td>
<td>Smart Environmental</td>
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<tr>
<td>Grahame Christian</td>
<td>Smart Environmental</td>
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<tr>
<td>Stephen Hand</td>
<td>Smart Environmental</td>
</tr>
<tr>
<td>Steven Hill</td>
<td>HG Leach Ltd</td>
</tr>
<tr>
<td>Paul Mooney</td>
<td>TPI Waste Management</td>
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<tr>
<td>Stephen Matthews</td>
<td>TPI Waste Management</td>
</tr>
<tr>
<td>Marianna Tyler</td>
<td>Environment Waikato</td>
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<tr>
<td>Eric Souchon</td>
<td>H G Leach Ltd</td>
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<tr>
<td>Chris Lobb</td>
<td>Envirowaste</td>
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<tr>
<td>John Mc Keowen</td>
<td>Thames Demolition</td>
</tr>
<tr>
<td>Darla Blake</td>
<td>Thames-Coromandel District Council</td>
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<tr>
<td>John Whittle</td>
<td>Thames-Coromandel District Council</td>
</tr>
<tr>
<td>Peter Carter</td>
<td>Department of Conservation</td>
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<tr>
<td>Danny Goodoll</td>
<td>Thames Demolition</td>
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<tr>
<td>Bryce Louden</td>
<td>Thames-Coromandel District Council</td>
</tr>
<tr>
<td>John Birkbeck</td>
<td></td>
</tr>
<tr>
<td>Katina Conomos</td>
<td>Thames-Coromandel District Council</td>
</tr>
</tbody>
</table>
Helen McCabe
Councillor W Hoadley Thames-Coromandel District Council
Gloria Giles Tairua/Pauanui Community Board
Lester Yates Thames Community Board
Mary Taylor Whangamata Community Board

A.2.2.2 Unable to Attend

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Loes Beaver</td>
<td>Coromandel Business Association</td>
</tr>
<tr>
<td>Ken Bush</td>
<td>Pauanui Ratepayers and Residents Association</td>
</tr>
<tr>
<td>Councillor JT Wells</td>
<td>Thames-Coromandel District Council</td>
</tr>
<tr>
<td>Bob Renton</td>
<td>Tairua/Pauanui Community Board</td>
</tr>
<tr>
<td>Wayne Jones</td>
<td>Smart Environmental</td>
</tr>
<tr>
<td>Paul Bishop</td>
<td>Envirowaste</td>
</tr>
<tr>
<td>Noel Knight</td>
<td>Hot Water Beach Ratepayers Association</td>
</tr>
<tr>
<td>R Wightman</td>
<td>Whangamata Ratepayers Association</td>
</tr>
</tbody>
</table>
A.2.3 Presentations
Waste Assessment Stakeholder Workshop
Thames-Coromandel District Council
2 February 2011
Presented by:
Duncan Wilson
Bryce McDougal

Outline
Stakeholder Workshop
- Introductions
- Presentation
  - Waste Assessment Overview
  - Facilitators
  - Future Demand
  - Waste Data
- Discussion/Workshop sessions
- Reporting back/Summary

Introductions
Who are we:
- Eunomia and Waste Not - independent consultancies
- Specialists in waste field - been working in it for over 10 years.
- Waste Not’s key expertise in waste data,
- Eunomia is in strategy and policy
- Collaborated successfully many times

Introductions
Who is Represented:
- Commandel Business Association
- Counsellors
- Council Staff
- Environment Waikato
- Environment
- HCC Waste
- Mercury Bay Tourist Operators Association
- Syd Baw Renters and Residents Association
- Taumaru Community Board
- Thames Community Board
- TPI Waste Management
- Whangamata Community Board
- Whangamata Ratepayers Association
- Seapil Centre Trust
- Smart Environmental
- Taumaru Residents and Ratepayers Association
- Taumaru/Paakomu Community Board
- Thames Community Board
- TPI Waste Management
- Whangamata Community Board
- Whangamata Ratepayers Association

It is vital, when encountering a serious problem, not merely to try to solve the problem in itself but to confront and transform the processes that gave rise to the problem in the first place. Jennifer D. Mackenzie - Principles of Difference
Introduction

What is a Waste Assessment?
- Territorial Authorities must review WWMP by 1 July 2012
- Before review must undertake a Waste Assessment
- Waste Assessment must contain:
  - Description of waste & recycling services
  - Forecast of future demand
  - Statement of options to meet future demand
  - Statement of WA’s intended role
  - Statement of WA’s proposals to meet demand
  - Statement about extent to which plans protect health and promote effective and efficient waste minimisation

TCDC Timeframes and Considerations
- Current Waste Assessment undertaken jointly with MPDC and HBC
- Councils considering joint waste service procurement (Refuse and recycling collections, transfer station operation, bulk transport, and fill)
- Also concurrently undertaking a ‘Waste Service Review’
- Will probably lead to joint WMMP
- Finish WA: End Feb 2011
- Joint procurement completed by June 2012
- WWMP by June 2012

Introduction

Scopes of Assessment
- Must consider all waste and recoverable materials generated – not just those handled by Council
- Focus is solid waste incl hazardous. Liquid and gaseous wastes generally excluded except where these are considered to have implications for solid waste management.

Current Services and Facilities

<table>
<thead>
<tr>
<th></th>
<th>TCDC</th>
<th>MPDC</th>
<th>HBC</th>
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<td>26</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Landfill</td>
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<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Class 6</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Transfer Stations</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Drop Off</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlling</td>
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<td>0</td>
<td>1</td>
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<tr>
<td>Processing</td>
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</table>
Future Demand

Drivers of Demand

TCDC
- Key: population growth. Tourism key activity. (population growth related to economic growth)

Future Demand

TCDC

Waste and recycling flows in Thames-Coromandel District

Information gathered from:
- Council records and documents
- Landfill operator records
- Survey of private waste and recycling operators
- Previous surveys in region

Landfilled waste - Unbundling the waste stream
A.2.4 Plenary Workshop Session

The first part of the plenary session involved canvassing ideas on the overall direction for waste management in the district, with a view to these ideas feeding into the development of a vision and set of aims and objectives for the WMMP.

The following points were noted from the session:

- Thames-Coromandel should aim for 50% recycling rate by weight
- The district needs to aim for a change of mindset – to view waste as a resource and to move away from being a throw-away society
- Thames-Coromandel should aim to maximise recycling
- All costs associated with waste and recovered materials should be made true and transparent
- Waste management in the district should aim to be as efficient as possible and provide a balance of cost and performance
- The principles of producer responsibility should be promoted
- There should be increased emphasis on re-use
- The possibility of generating energy from waste should be considered
- Waste management in the district should have the overarching aim of minimising environmental impact (as opposed to simply focussing on tonnage diversion from disposal)
- There should be greater emphasis on local sorting, processing and use of recovered materials with a view to generating more local employment

The second part of the plenary session focused on generating ideas for the topics that would form the basis of the discussions in the groups. From the session the following topics were agreed:

1. Kerbside collection services (including peak collection issues)
2. Drop off services
3. Transfer stations
4. Joint working & contracts (with other councils) /service delivery options
5. Bylaws & enforcement
6. Organic waste processing
7. Waste Prevention/ Behaviour Change
8. Market development
9. Product stewardship (including e-waste)
A.2.5 Group Workshop Session

The topics developed in the plenary session and noted above were divided into four sets for each of four groups to work on. Participants were asked to choose the group they wanted to attend based on the topics selected for discussion in that group.

The groups and topics were follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 1     | Kerbside collection services (incl peak collection)  
        Drop off services |
| 2     | Transfer stations  
        Joint working & contracts/service delivery options |
| 3     | Bylaws & enforcement  
        Organic waste processing |
| 4     | Waste Prevention/ Behaviour Change  
        Market development  
        Product stewardship (incl e-waste) |

A.2.5.1 Workshop Notes

**Group 1:**

**Kerbside collection services (incl peak collection)**

- **Issues include**
  - Non completion of collections during peak period
  - Households not separating out recyclables
  - The smashing of glass
  - Non-complying bags being put out for collection
  - Overflowing recyclables not being collected

- **Potential solutions include:**
  - Reviewing the peak period collection methodology and planning and putting more emphasis on service provision at these times (less at other times?)
  - Review the 2008 solid waste bylaw –
  - Undertake daily kerbside collections (peak periods) – instead of Moloks
  - Opito Bay Moloks work well
  - Provide/require bins to contain bags and avoid seagull strike
  - Restructure off-peak collections
  - Review service options
  - Clear town centres first in the morning
  - Clear bags before recycling
  - 7:30 collection start – make it consistent
  - Collect Tairua first to avoid congestion
Drop –Off Facilities (incl Moloks)

- Issues
  - Molok bins overflow

- Solutions
  - Tailor drop off facilities better to peak volumes
  - Provide additional drop off points – Moloks outside all transfer stations for after hours drop off
  - Monitor drop off facilities

Transfer Stations (this group also discussed transfer stations in addition to group 2)

- Increase the transfer station opening hours
- Provide Reuse/Resource recovery facilities at all transfer stations
- Increase the number of recycling and reuse categories
- Cater specifically for Construction & Demolition waste recovery
- There is a need for cleanfills in the district
- Review prices for disposal of recoverable materials (charge less for recoverable materials?)
- Transfer station operations need to be considerate of neighbours (Tairua in particular)

Group 2
Transfer Stations

- Issues
  - Opening hours don’t match demand
  - Moloks too small – often overflow
  - No re-use at most transfer stations
  - Need a facility to take e-waste to
  - Need facilities for hazardous wastes e.g. household batteries
  - Reusable and recyclable material being dumped in the pit
  - Not sufficient space at transfer stations to store recovered materials

- Solutions
  - Work with local boards to review opening hours of transfer stations so they match the local needs – in particular they should be open when holiday makers leave at the end of weekends, holidays and long weekends.
o Install bigger or larger numbers of Moloks at Molok sites so they can cope with demand
o Establish ‘Seagull Centre’ reuse facilities at all transfer stations
o Provide e-waste facilities at transfer stations and use waste levy funding to establish local disassembly operation(s) and provide local employment
o Provide more frequent e-waste collections/e-days
o Lobby government to enact producer responsibility schemes for household hazardous wastes such as batteries
o Arrange transfer station operations so recoverable materials can be intercepted before they are tipped into the waste pit. Have Segull centres more closely attached to the transfer stations. Employ staff to sort the waste
o Look to establish/secure bigger sites for transfer station operations that can have sufficient space for the full range of services and storage of materials.

Joint Working Contracts and Service Delivery Options

➢ Issues
  o Council staff prefer to deal with a single contactor rather than lots of smaller contracts. This means smaller local organisations don’t have the opportunity to undertake the work. (This implies a preference not to undertake joint working with other councils).
  o The current contract does not achieve optimum waste minimisation

➢ Solutions
  o New contracts should be written to allow smaller operators to compete – move away from integrated contracts towards contracts related to types of services (e.g. recycling collection, rubbish collection, transfer station operation should all be separate). Contracts might also be split by local areas.
  o Target recycling/recovery of construction and demolition waste (wood, concrete, plasterboard etc)

Group 3:
Bylaws and Enforcement

➢ Issues
  o Lack of enforcement
  o The cost of enforcement
  o Difficulty of applying bylaws to visitors

➢ Solutions
  o Allow for alternative penalties like removal of service
  o Lobby Central Government to make enforcement easier (e.g. enabling the issue of infringement notices for specific waste related offences)
  o Use restorative justice techniques
o Promote involvement of the business community
o Conduct a review of existing by-laws

**Organic Waste**

- A cost benefit analysis needs to be done around the collection and treatment of organic wastes
- There are market development issues – currently it is hard to sell the compost that is created – if more organic waste is going to be diverted there needs to be markets
- On site composting should be promoted such as worm farms and home composting

**Group 4:**

**Waste Prevention & Behaviour Change**

- **Issues**
  - Lack of awareness about waste and options
- **Solutions**
  - An on the ground promotional campaign targeted at visitors as well as residents. Local involvement is important – look at bylaws
  - Need to make doing the right thing easy – more drop off centres

**Market Development**

- **Issues**
  - What do we do with the products once it has been collected – not always ready / viable markets for material
  - Markets need sufficient scale to be viable
- **Solutions**
  - Need more research and development – particularly around market requirements
  - What can be done regionally? – look at purchasing policies
  - Look at establishing new industries based on recovered materials – create new jobs

**Product Stewardship/e-waste**

- **Issues**
  - Inappropriate packaging – national mindset
- **Solutions**
  - Establish a high level lobbying group for central government to activate product stewardship schemes
  - Manufacturers need to take greater responsibility
- LGNZ should advocate for product stewardship to central government
- Seagull Centre Trust aiming to be part of a project with RCN Group and CRN that has WMF funding to establish permanent e-waste depots around the country
A.2.6 Further Actions
The purpose of workshop was to identify priorities for waste and recycling in the Thames-Coromandel District. As noted the outcomes of this workshop will feed into the Joint Waste Assessment for Thames Coromandel District Council, Hauraki District Council and Matamata-Piako District Council. The Waste Assessment is a foundation document for developing a Waste Management and Minimisation Plan for the districts.

These notes will be made available to workshop participants who will have the opportunity to comment on the notes. This will help ensure the notes present a full and fair record of the outcomes of the workshop.

A.2.7 Supplementary Submissions
A number of people offered supplementary submissions – either because they were not able to attend the workshop or they forwarded additional thoughts and ideas subsequent to the workshop. These contributions are provided below verbatim:

Sam Marshall, TCDC Area Manager for Whangamata, Tairua, Pauanui area:

- Summer collections and the importance of doing them correctly e.g. lateness or no pick ups, impact on customers, elected members etc.
- Managing contract costs such as how are we ensuring best value for money for TCDC and its ratepayers. Alternative contracting options.
- Contract performance generally and addressing issues such as non-collection.
- How we can provide better service especially for absentees
- National direction eg new legislation and its impacts
- Bylaw requiring kerbside 24hr prior placement of recyclables/rubbish - is it working adequately/appropriate. It seems inappropriate when we are not able to collect all the refuse/recycling on the due days and it is left to subsequent days.
- Late bag placement and how we address these to avoid rubbish etc being spread around
- Transfer stations - fees charged - are they appropriate etc

Peter Wood, Seagull Centre Trust
What is wanted in the TCDC Waste Management and Minimisation Plan
1. Specific use of levy money to achieve “four R’s’, (Reduce, Reuse, Recycle, Recover)
2. Goal of 50% recycling of entire waste stream
3. A plan for dealing with each individual type of waste with reduction to landfill goals starting at 50%
4. Setting aside an extensive area in each community to allow storage of waste for recovery
5. Use of government land to set up initiatives
6. Showing the true cost to ratepayers of waste disposal. This includes divulging contractors costs and where recycling income goes to
7. Public knowledge of government regulation on data, product stewardship, and standards for waste minimisation
8. A list of data that is to be kept so that the ‘Four R’s’ can be ascertained. And how that data is to be gathered.
9. The solid waste asset plans are to be copied to a solid waste forum for discussion in small parts
10. Who is responsible for submitting to government on product stewardship
11. Clarify By-law on fly-tipping and actions to avoid the same. Note clear action from RFS
12. Who owns rubbish etc. at kerb and rating burden off-sets from recycling
13. Promulgate of true costs to average property of waste operations (as for 11 and 12)
14. Old landfills listed and actions for each. Dilution of leachate
15. Role of elected members in formation of WMMP
16. Non-landfill future. i.e. very little to a landfill because of diversion
17. List of hazardous waste and individual type of disposal
18. Composting plant. Sources of waste, costs, and reuse system
19. List wastes on a volume basis and priorities reduction of most common, batteries
20. How community groups and individuals can help in the Waste Management and Minimisation. Encouragement of initiatives. How?
21. The WMMP should be a working and guiding document, not an academic language exercise.

Bob Nicholls, Mercury Bay South Ratepayers Association

Two main issues:

1. **Landfill**: One landfill serves the District currently. It is out of the District and hence the cost of transport must be significant. We are exposed to significant risk if the landfill becomes unavailable due to environmental issues, failure of the Company, and once it is full. Council should carry out a risk assessment and develop contingency plans. Possibly also look at alternative site(s) closer to the center of need mass. The impact of rising fuel and hence transport costs will be significant. Seems we are tied into a monopoly.

2. **Education**: There needs to be more emphasis on public education on matters relating to waste. We claim to be “green and clean” yet in comparison to many states we are miles behind. By educating through schools and the wider public gradual changes in mindset will occur. While this needs to be lead by Central Government there are local initiatives that need to be developed.
A.3.0 HDC Stakeholders Workshop

A.3.1 Introduction

A.3.1.1 Date and Time
The workshop was held from 2:00pm to 4:30pm, 10 February, at the Council’s Paeroa office, William Street, Paeroa.

A.3.1.2 Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
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<tbody>
<tr>
<td>1:45pm</td>
<td>Registration</td>
</tr>
<tr>
<td>2:05pm</td>
<td>Presentations from Bruce Middleton, Waste Not Consulting on the Waste Assessment and WMMP process, TCDC Waste Services, and Waste Data</td>
</tr>
<tr>
<td>2:35pm</td>
<td>Plenary Session led by Alison Holmes, Eunomia Research and Consulting</td>
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<tr>
<td></td>
<td>Discussion of broad aims and objectives</td>
</tr>
<tr>
<td></td>
<td>Identification of key issues for discussion (e.g.):</td>
</tr>
<tr>
<td></td>
<td>• Kerbside collection services</td>
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<tr>
<td></td>
<td>• Drop off services</td>
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<tr>
<td></td>
<td>• Transfer stations</td>
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<tr>
<td></td>
<td>• Joint working with other councils</td>
</tr>
<tr>
<td>3:15pm</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>3:30pm</td>
<td>Group working:</td>
</tr>
<tr>
<td></td>
<td>(continuation of discussion of key issues)</td>
</tr>
<tr>
<td>4:10pm</td>
<td>Reporting back and summary of workshop</td>
</tr>
<tr>
<td>4:30pm</td>
<td>Session close</td>
</tr>
</tbody>
</table>
### A.3.2 Workshop Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alison Holmes</td>
<td>Eunomia Research and Consulting</td>
</tr>
<tr>
<td>Bruce Middleton</td>
<td>Waste Not Consulting</td>
</tr>
<tr>
<td>Gordon Dabell</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>Mike Charteris</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>Cllr Sel Baker</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>Cllr Mary Carmine</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>Cllr James Thorp</td>
<td>Hauraki District Council</td>
</tr>
<tr>
<td>Keith Trembath</td>
<td>Hauraki-Coromandel Federated Farmers</td>
</tr>
<tr>
<td>Grahame Christian</td>
<td>Smart Environmental Ltd</td>
</tr>
<tr>
<td>Colin Anderson</td>
<td>Smart Environmental Ltd</td>
</tr>
<tr>
<td>Milijenko Pavlinic</td>
<td>HG Leach Ltd</td>
</tr>
<tr>
<td>Ian Stirling</td>
<td>TPI Waste Management</td>
</tr>
<tr>
<td>Bruce Jamieson</td>
<td>Allens United</td>
</tr>
</tbody>
</table>
A.3.3 Presentations

**Waste Assessment Stakeholder Workshop**
Hauraki District Council
10 February 2011

Presented by:
Alison Holmes
Bruce Middleton

**Agenda**
- Introduction
- Presentations
- Waste Assessment Overview
- Facilities
- Future Demand
- Waste Data
- Discussion/Workshop sessions
- Reporting back/Summary

**Introductions**
- Who are we
  - Eunomia and Waste Not - independent consultancies
  - Specialists in waste field - been working in it for over 12 years.
  - Waste Not's key expertise in waste data.
  - Eunomia's in strategy and policy
  - Collaborated successfully many times

**Introductions**
Who is Represented
- Alterns United
- Councilors
- Council Staff
- Hauraki-Gordontown Federated Farmers
- LG Leech Ltd
- Positive Fairfax
- Positively Promoting the Pains
- Smart Environmental Ltd
- Transpacific Industries (New Zealand) Ltd

**Introduction**
What is the national legislative framework?
- Waste Minimisation Act 2008

Part 1
Preliminary provisions
3 Purpose of this Act
The purpose of this Act is to encourage waste minimization and a decrease in waste disposal in order to—
(a) protect the environment from waste;
and (b) provide environmental, social, economic, and cultural benefits.
Introduction

What is the role of local government?

Part 4
Responsibilities of territorial authorities
In relation to waste management and minimisation

1. The territorial authorities are responsible for encouraging and facilitating the implementation of local authorities' waste management policies and initiatives.

2. Territorial authorities must ensure that all waste management activities are conducted in an environmentally sound manner.

Introduction

How is local government to achieve that?

Waste management and minimisation plans

4) Waste management and minimisation plans

(a) For the purposes of section 41, a territorial authority must adopt a waste management and minimisation plan.

Introduction

HDC Timeframes and Considerations

- Current Waste Assessment undertaken jointly with PFDC and TODC
- Councils considering joint waste service procurement (collection, recycling, and composting) and transfer station operation, bulk transport, landfill
- Likely to be led by joint WMMP
- Finish WA: End Feb 2011
- Joint procurement completed by June 2012
- WMMP by June 2013 (mandatory under WMA 2008)
Introduction

Scope of Assessment
- Must consider all waste and recoverable materials generated – not just those handled by Council
- Focus is solid waste including hazardous. Liquid and gaseous wastes generally excluded except where these are considered to have implications for solid waste management.

Current Services and Facilities

<table>
<thead>
<tr>
<th>TRANSFER STATIONS</th>
<th>TOCC</th>
<th>MPCR</th>
<th>HOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recyclables (dry)</td>
<td>Glass, paper, cardboard, Al &amp; Steel cans, plastic (1-7)</td>
<td>Glass, paper, cardboard, Al &amp; Steel cans, plastic (1-7)</td>
<td>Glass, paper, cardboard, Al &amp; Steel cans, plastic (1-7)</td>
</tr>
<tr>
<td>Mtr</td>
<td>Free</td>
<td>$400/tonne</td>
<td>Free</td>
</tr>
<tr>
<td>Oil &amp; Chemicals</td>
<td>3000 quintals inclusive</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>All others</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Tar</td>
<td>-</td>
<td>$0.25</td>
<td>Free</td>
</tr>
<tr>
<td>Green waste</td>
<td>$64/tonne</td>
<td>$45/tonne</td>
<td>$102/tonne</td>
</tr>
<tr>
<td>Furniture &amp; White good</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Residual Waste</td>
<td>$450/tonne</td>
<td>$0.05/tonne</td>
<td>$0.45/tonne</td>
</tr>
</tbody>
</table>

Joint Waste Assessment 2011
Future Demand

Drivers of Demand
- Population and household growth
- Economic growth
- Household size
- Trends (e.g., increasing use of disposables, more low-quality goods etc)
- Types of services provided
- Charges for disposal

Waste and recycling flows in Hauraki District

Information gathered from:
- Council records and documents
- Landfill operator records
- Survey of private waste and recycling operators
- Previous surveys in region

Landfilled waste - Unbundling the waste stream

The problem with kerbside collections

Waste flows in Hauraki District

Eastern Waikato Councils
Discussion Topics

Issues and solutions:

1. Kerbside collection services
2. Grey ash services
3. Transfer stations
4. Joint working with other councils
5. Waste Prevention/ Behaviour Change
6. Consultation
7. Hazardous Waste
8. Public place recycling...?

Workshop Session: Issues & Solutions

**Group 1**

1. Kerbside collection services
   - green waste
   - consideration of costs
2. Joint working with other Councils
3. Cleanfill
4. Public place recycling

**Group 2**

5. Waste Minimisation/ Behaviour Change
   - home composting
   - education
   - Packaging/plastic bags
6. Transfer stations
7. Cost consideration?
8. Ding-dong services
9. Hazardous waste

Coffee Break!

Thank you
A.3.4 Plenary Workshop Session

The first part of the plenary session involved canvassing ideas on the overall direction for waste management in the district, with a view to these ideas feeding into the development of a vision and set of aims and objectives for the WMMP.

The following points were noted from the session:

- The concept of a zero waste target was not considered to be suitable for the district as too many residents considered it to be an unrealistic target.
- While waste minimisation is an important objective, it is also important to ensure it is cost-effective.
- Targets can be difficult to measure and may not be feasible.
- Education needs to be an important part of the strategy.
- Greenwaste is an important waste and needs to be addressed. Home composting is the best answer.
- Ways to reduce packaging and plastic bags need to be included.

The second part of the plenary session focused on generating ideas for the topics that would form the basis of the discussions in the groups. From the session the following topics were agreed:

1. Kerbside collection services
2. Drop off services
3. Transfer stations
4. Joint working & contracts (with other councils) /service delivery options
5. Bylaws & enforcement
6. Organic waste processing
7. Waste Prevention/ Behaviour Change
8. Development of markets for recovered materials (added subsequently)
9. Event recycling (added subsequently)
10. Product stewardship (including e-waste)
A.3.5 Group Workshop Session

The topics developed in the plenary session and noted above were divided into two sets for each of two groups to work on. Participants were asked to choose the group they wanted to attend based on the topics selected for discussion in that group.

The groups and topics were follows:

A.3.5.1 Workshop Notes on Selected Issues

Kerbside Collection Services

- Issues include
  - While the Council does not provide kerbside services to rural areas, many rural residents handle their own waste management through burying and burning or by engaging private service providers. These residents may not want to be included in the Council collection area if it means a cost will be involved for service they do not require.
  - While there is anecdotal evidence of the occasional complaint with service, these are generally handled well by Council.
  - The cost of an organic collection would be too great.

- Potential solutions include:
  - Encourage home composting.
  - If an organic collection is considered, it could be limited to food waste only, with green waste excluded.
  - Wheelie bin recycling is the way of the future.

Drop –Off Facilities and Transfer Stations

- Issues
  - Only two permanent drop-off facilities in District – these are at the transfer stations.
  - In addition there is one temporary summer site in Whiritoa. These seems to be successful – although there are usually several complaints relating to noise and visual effects. No more are thought to be required.
  - Not much contamination in recovered materials.

- Improvements could include
  - Changing frequency of e-waste collection from annual to twice a year.
  - Accepting a wider range of electrical items in the e-waste collection – not just computing equipment.
  - Promoting the fact that transfer stations accept household quantities of chemicals and fertilisers.
  - Accepting paint which could be distributed for reuse.
  - A Seagull Trust type reuse operation at the transfer stations – if it is widely thought this would be successful in the Hauraki District. Discussions were focused on the community-type, and the extent to which an initiative such as this would be successful.
  - Continuing the two-yearly inorganic collection.

Markets for Recovered Materials
Issues
- Council has all greenwaste processed locally but does not provide a market for the finished product by purchasing compost for its parks and reserves.

Solutions
- Council could support the use of recovered materials such as compost and crushed concrete by building the requirements for their use into maintenance and roading contracts.

Joint Working Contracts and Service Delivery Options
Issues
- Residents may feel removed from the administration of the services if a different Council had to be contacted for service

Solutions
- Joint contracts should make economic sense and should be investigated further by the councils
- A joint administrator could be engaged by the three council to handle all joint contracts.

Cleanfill disposal
Issues
- There are currently no consented cleanfill sites in the District, although a resource consent is required above a threshold limit
- Little cleanfill such as construction and demolition material is disposed of at Tirohia landfill
- Anecdotal evidence suggests that roading contractors are known to make informal arrangements with neighbouring landowners for disposal of waste materials. Asphalt is one material that is known to have been disposed of, despite the fact it is in the District Plan as an unacceptable material to go to cleanfill,
- It is likely that some materials that do not meet the definition of ‘cleanfill’ are being disposed of improperly

Public place recycling (such as recycling bins in town centres)
Issues
- An expensive service to maintain
- Produces small amounts of low-quality material
- Presents a good image for visitors, particularly European tourists who expect to be able to recycle in public places.

Bylaws and Enforcement
Issues
- Difficulty of enforcement
- The cost of enforcement
- Difficulty of applying bylaws to visitors

**Event recycling**
- **Issues**
  - No current requirement for events using public facilities to implement waste reduction measures, missing an opportunity to educate the public
- **Solutions**
  - Council could require Waste Management Plans from event organisers.

**Waste Prevention & Education**
- **Issues**
  - All schools in the district belong to the Waste Wise Schools programme or deliver Zero Waste education
  - Schools is the best place to start waste education as the students then educate their parents
  - Promoting home composting of greenwaste would tie in with the current trend towards growing your own food
  - Schools could compost on-site
  - Community could lobby to reduce waste, for example, by requesting retailers to reduce fresh produce packaging
  - Promotion of reusable shopping bags will eventually produce results

**Transfer stations**
- **Issues**
  - Transfer stations are currently losing money, how can this be solved?
  - Cross-boundary movement of waste results in district with lowest cost disposal rates subsidising disposal from other districts
  - Hauraki District refuse bags are less expensive than in other areas, so used by people from outside of the district
  - There is no weighbridge at the Waihi transfer station, which can lead to certain types of loads being taken there rather than Paeroa
A.3.6 Further Action

The purpose of workshop was to identify priorities for waste and recycling in Hauraki District. As noted the outcomes of this workshop will feed into the Joint Waste Assessment for Hauraki District Council, Thames Coromandel District Council and Matamata-Piako District Council. The Waste Assessment is a foundation document for developing a Waste Management and Minimisation Plan for the districts.

These notes will be made available to workshop participants who will have the opportunity to comment on the notes. This will help ensure the notes present a full and fair record of the outcomes of the workshop.