



ASSET MANAGEMENT PLAN

Part B: Solid Waste

30 JUNE 2018

whakatane.govt.nz



Asset Management Plan

Part B – Solid Waste

Part B provides the specific Asset Management information for the Solid Waste activity, for the period 2018-2028.

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Foreword

Asset management is important for a number of reasons. Many public services rely on assets to support their delivery. Unless the assets are well managed, the services they support will suffer. Secondly, assets represent a significant investment by the community that needs to be protected. Assets are also often taken for granted until they fail. A failed asset can have both social and economic effects on the community. To avoid this, the Whakatane District Council (the Council) actively manages its assets.

Good asset management makes an essential contribution to the governance and management of a public entity's business and is an integral part of an organisation's wider service and financial planning process.

The Council is committed to the preparation and implementation of sound AMPs for its infrastructure.

1 Asset Management Plan – Part A

This document provides the overarching information and discussion of methodology for all the Council's Asset Management Plans (AMPs).

Our activities and assets all share a similar environment, be that legislative, demographic or economic. This key information has been rationalised into the one document, with the remaining activity/asset specific information available in Part B.

2 Asset Management Plan – Part B

These documents provide the specific information and outline how the Council intends to maintain and manage its assets to achieve its Community Outcomes.

Part A and Part B of the AMPs should be treated as one document and reflect each other in both structure and content.

Introduction

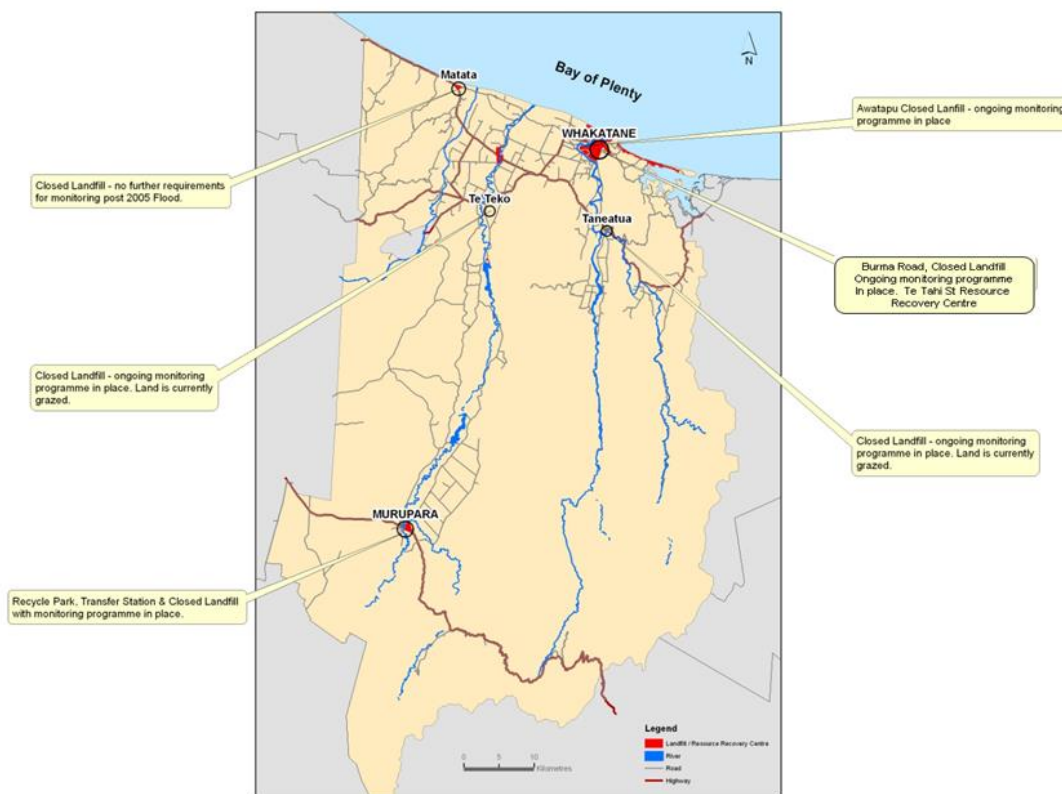
1 Solid Waste at a Glance

The Council provides a weekly refuse and fortnightly recycling collection in serviced areas of the District through a contractor. A fortnightly green waste collection service is also currently provided in urban areas.

There are no operating landfill sites in the Whakatane District. There are two council controlled transfer stations, one in Whakatane at Te Tahi Street and one in Murupara. Both transfer stations accept and separate recycling materials.

Council has a green waste composting facility on Keepa Rd, Whakatāne which commenced operations in August 2016. Council has also established two rural transfer stations at Ruatahuna and Minginui both of which are currently under community control with council support. Other sites indicated on the map below are closed landfill sites.

Figure 1: Area Location for closed landfills



An overview of the solid waste activity is shown in Table 1 below.

Table 1: Overview of Solid Waste

Assets	
Murupara Transfer Station	1
Whakatane Transfer Station	1
Whakatāne Green Waste Composting Facility	1
Closed Landfills	6
Value (2011/12)	
Replacement Cost	\$3,243,000
Production	
Total Weight of Residual Waste Produced (tonnes/yr)	10,000-11,000
Average Daily Residual Waste Production (tonnes/day)	28.8
Weight of Materials Recycled - Glass, Paper, Cardboard, Paper, Plastics (tonnes/yr)	4700
Weight of Materials Reprocessed – Green waste, Construct Materials, Tyres (tonnes/yr)	6000

2 Key Planning Assumptions and Limitations of this Plan

This AMP has been prepared based on:

- Subsidy will be received annually from Central Governments Waste Levy Fund,
- Increases in central government 'Waste Levy' and 'Emissions Trading Scheme' charges will take place but are estimated in this report.

Business Overview

1 Why we do it

The rationale for the Council's involvement in Solid Waste is as follows:

“The Council undertakes these activities in response to the needs and aspirations of the people of the District for aesthetic and health reasons”.

Other reasons that the Council is involved with solid waste are:

- To mitigate possible adverse health risks to the districts residents.
- Benefits the community by reducing the potentially harmful environmental impacts of waste disposal.
- To assist with education regarding waste minimisation.
- To meet its obligations under the Waste Minimisation Act 2008 and Health Act 1956.

This AMP has been developed on the basis that Council intends to be responsible for the provision of the solid waste activity for the Whakatane District, and considers the provision of the solid waste activity to be an essential function of Council.

2 Solid Waste Activities

The Council manages the following solid waste assets:

- Awatapu Closed Landfill
- Burma Road Closed Landfill
- Murupara Closed Landfill
- Tāneatua Closed Landfill
- Te Teko Closed Landfill
- Murupara Refuse Transfer Station (RTS)
- Whakatane RTS
- Keepa Rd Green Waste Composting Facility

Table 2 below lists the gross replacement value of each of the Council's solid waste assets.

Table 2: Summary of Solid Waste Assets 2018

Solid Waste Asset	Gross Replacement Value
Awatapu Closed Landfill	\$47,000
Burma Road Closed Landfill	\$80,000
Murupara Closed Landfill	\$118,000
Taneatua Closed Landfill	\$14,000
Te Teko Closed Landfill	\$34,000
Murupara RTS	\$350,000
Whakatāne Recycling Park/RTS	\$2,300,000
Keepa Rd Green Waste Facility	\$300,000

2.1 Refuse Collection

The Council provides approximately 13,660 kerbside collection services to mitigate possible adverse health risks to the District’s residents. Each service includes an 80 litre mobile garbage bin (MGB) for refuse, a 240 litre MGB for mixed recycling and a 60 or 45 litre crate for glass. Approximately 10,970 residents also have a 240 litre MGB for fortnightly green waste collection.

The areas that the Council services are based on customer demand and the capabilities of the contractor’s resources. Some rural areas are not serviced by council contractors.

2.2 Refuse Disposal

The Council does not operate a landfill site. Following the closure of the Burma Road Landfill in December 2009 all residual waste is transported to Tirohia Landfill. A transfer station was established at the Te Tahi Street site to facilitate the bulk transfer of waste.

2.3 Recycling

The Council provides a kerbside recycling collection service including a 240 litre MGB for mixed recycling (paper, cardboard, plastics (grades 1 – 7), tins and cans) and a 60 or 45 litre crate for glass (bottles and jars).

The public can drop off recyclables for free at both the Whakatāne RTS and Murupara RTS.

The Council has funded and built recycling and refuse transfer facilities in the rural communities of Ruatāhuna and Minginui. These centres are currently run by the local communities, waste and recycling is transported to the Murupara RTS where it is disposed of for free.

2.4 Green Waste

The Council provides a kerbside green waste collection service utilising a 240 litre bin for fortnightly collection. The council opened its own green waste processing/composting facility at Keepa Rd, Whakatāne in August 2016.

2.5 Hazardous Waste Management

Both the Murupara and Whakatāne RTS accept household hazardous wastes including waste engine oil.

2.6 Closed Landfills

There are six closed landfills within the district. These are operated under resource consents and currently monitored for environmental effects.

3 Delivery of Solid Waste Services

The Council has the following key service provider relationships for solid waste.

3.1 Contract Services

The Manager Solid Waste manages all the contracts related to waste management. Whakatane has three main service provider contracts in operation for the delivery of Solid Waste collection, transfer, recycling and disposal. These contracts provide the expected service standards or Level of Service (LoS) that Whakatane is prepared to pay for on behalf of its customers and ratepayers.

These contracts include but not limited to:

- Kerbside Collections, operation of Whakatāne and Murupara RTS and transportation of waste to Tirohia Landfill, Solid Waste Services Contract 16/18 Waste Management Ltd
- Disposal of residual waste at Tirohia Landfill, Contract 09/11 Waste Management (Tirohia) Ltd
- Operation of Keepa Rd Greenwaste composting facility, service agreement Ecocast Ltd

The Solid Waste Services Contract expires in 2024, the disposal contract expires in 2020, and the service agreement for the greenwaste composting expires in June 2021.

Table 3 outlines the roles and responsibilities of staff at the Council in dealing with solid waste.

Table 3: Solid Waste Roles and Responsibilities

Party	Role	Specific Responsibilities
Manager Solid Waste	Manage waste and minimisation services and projects for the district	Contract management Waste related customer services Development of waste related council plans and policies Management of waste infrastructure and assets
Capital Works Contractors (Various)	Responsible for implementation of new and renewal capital projects	Physical construction of specified network improvements
Professional Services Providers	Provision of professional services to the Manager Solid Waste	Professional advice Review of new developments and assets
WDC Customer Services Call Centre	Call Centre, Customer Contacts	Customer queries and requests
Operators and Collection Services	Solid Waste Services – Waste Management NZ Ltd Greenwaste composting – Ecocast Ltd	Collection of kerb side refuse and recycling, operation of transfer stations, haulage of waste to landfill and disposal Operation of the Greenwaste composting facility
Open Spaces Administrator	Administrative Support	Provide administrative support to Manager Solid Waste

4 Significant Negative Effects of this Activity

Schedule 10 of the Local Government Act 2002 (LGA) covers the information required to be included in the Long Term Plan (LTP). Part 2 (1) (c) states that a LTP must, in relation to each group of activities of the local authority:

Outline any significant negative effects that any activity within the group of activities may have on the social, economic, environmental, or cultural well-being of the local community.

This sub-section provides information in accordance with this legislative requirement.

The purpose of identifying significant negative effects is to ensure that the Council activities are conducted in accordance with the principles of sustainability. The Solid Waste activity has the potential to have negative effects on community needs. The possible negative effects are outlined in Table 4.

Table 4: Potential Negative Effects

Significant Negative Effect	Cultural	Social	Economic	Environmental	Sustainable Solution
▶ Changing weather patterns may result in extreme events causing damage to existing closed and operational landfill sites. There is also potential for previously unrecorded sites to be unearthed due to erosion.	✓	✓	✓	✓	Liaise with central and regional government with regard to trends and any monitoring that is being undertaken. Monitor sites.
▶ Economically, the cost of desired infrastructure improvements may exceed the community's ability to pay.		✓	✓		Consult with the community on all costs and options for Levels of Service through the LTP process.
▶ Increase in the amount of refuse to be disposed as population increases over time	✓	✓	✓	✓	The Council acts as the advocate for waste reduction through the adoption of the Waste Management and Minimisation Plan (WWMP). The Council also supports education initiatives and provides education material for its customers.
▶ Environmental impacts caused by the discharge of contaminants to land and water from closed landfills	✓	✓	✓	✓	Compliance with Resource Consent conditions that stipulate the frequency and parameters to be monitored.
▶ Cultural impacts caused by the discharge of contaminants to land and water and odour to the air at refuse transfer stations	✓	✓	✓	✓	Compliance with resource consents and aftercare management.
▶ Potential impacts on customer satisfaction due to service failure /delays /responsiveness		✓	✓		Monitor and report on Levels of Service and in service provider contracts. Seek to resolve customer complaints "close the loop".
▶ Health and safety risks associated with the operation, maintenance, or construction of solid waste infrastructure		✓	✓		Ensure compliance with legislation and Health & Safety Management Plans. Ensure robust health and safety compliance in contract management.

<p>▶ Health and Safety Risks associated with failure of contracted services or inability to collect, process or transport waste</p>		✓	✓	✓	<p>Ensure quick reaction to service failure and identification of alternative service providers and/or processing/storage sites.</p>
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The significant negative effects identified above can be managed and/or mitigated by effective risk management, options assessments, asset management and operational procedures.

5 Key Partnerships and Stakeholders

Cooperation with the private sector for economic and environmental sustainable waste management programmes will be actively investigated.

5.1 Key Partnerships

- Neighbouring District Councils
- Bay of Plenty Regional Council
- Community Groups
- Toi Te Ora Public Health and Ministry of Health
- Te Runanga O Ngati Awa
- Para Kore
- Waikato and Bay of Plenty Waste Liaison Group
- Waste Resources Advisory Group

5.2 External Stakeholders

- The Whakatane District community of owners, residents and ratepayers.
- Regulatory and monitoring bodies including Ministry for the Environment,
- Audit NZ
- Contractors
- Professional Service Providers
- Iwi organisations

5.3 Internal Stakeholders

- Whakatane District Council – Councillors, Committees and Community Boards, CEO and Managers
- Iwi Liaison Committee
- Policy and Planning Officers
- Regulatory Services
- Financial and Corporate Officers
- Information Services and GIS Team
- Human Resources.

6 Solid Waste Funding & Expenditure

6.1 Funding and weighbridge charges

The Council uses both general and targeted rates to fund solid waste services in the District. Revenue is created through drop-off charges at the Whakatāne Refuse Transfer Station. Refer to [Projects and Financial Forecasts](#).

6.2 Waste Minimisation Funding

The Council receives Waste Levy Funding from the Ministry for the Environment to fund waste minimisation programmes that align with Council's WMMP.

6.3 Expenditure

Expenditure on Solid Waste can be viewed under [Projects and Financial Forecasts](#).

7 Key Issues

7.1 Transport of waste out of the district

All of the Council controlled solid waste that is sent to landfill is transported to a site out of the district over 190Km away.

7.2 Organic Waste

Much of the waste sent to landfill is organic waste which has negative environmental impacts. The Council has developed its own green waste composting facility which helps alleviate this issue but this does not address the problem of food waste going to landfill.

7.3 Varying Demand

Demand for the Council's solid waste services varies both geographically and seasonally. Businesses and rural properties have different needs to urban households while the summer influx of visitors creates other demands.

7.4 Waste Legislation

The Council's costs of services is strongly related to any change in government waste related legislation. Any increase in waste levy and/or Emission Trading Scheme charges on waste disposal will affect the Council's operational costs. Central government has indicated there will be increases in both over the term of this AMP.

7.5 Recycling Markets

The ability of the Council to collect, process and recycle products is dependent on local, national and international markets. China's Green Sword Policy and controls on recycling imports has been a recent example of this with exports of recycling down to about 5% in 2018 of what they were in 2017. Commodity prices have also dropped by the same levels and some councils have stopped collecting or are stockpiling plastics and fibre (paper and cardboard).

8 Addressing Issues

The Council released its 6 year Waste Management and minimisation Plan (WMMP) in 2015. Part Two of this plan includes the Action Plan that council has developed to address some of the above issues.

This Action Plan sets out the Council's methodologies for managing waste in the District for the period covered by this WMMP. The Action Plan is intended to address the key issues listed earlier, and to ensure that we can accommodate any future growth and changes in the District. These actions will improve effective and efficient waste management and minimisation in the District, and will meet the

goals of the New Zealand Waste Strategy by reducing the harmful effects of waste and improving the efficiency of resource use.

The plan will also allow the Council to contribute to the applicable community outcomes of:

- Valuing our Environment
- Quality Services; and
- Community Needs.

In preparing this Action Plan, the Council has reviewed the Action Plan from the 2010 WMMP. The 2010 WMMP action plan included a large number of actions, some of which were optimistic and have proved difficult to achieve within the timeframes of the Plan. However, it is important to note that, the 2010 WMMP has only been operating for just over four years of its planned six year term. For these reasons, some actions in the previous WMMP were completed, some partially completed, and some were not completed.

This new Action Plan contains fewer actions, and concentrates on those which are priorities and are achievable over the next six years.

The Council provides most of the waste services for Whakatāne households and a significant proportion of services to businesses. The LGA require all councils to undertake a review of the services they provide and evaluate them for effectiveness and efficiency. This review took place in 2016 and the results were considered as part of Council's procurement of Solid Waste Services in the same year.

8.1 Solid Waste Action Plan

Table 5: Solid Waste WMMP Action Plan

Education and Information	
Action	Commentary
Continuing support for Pare Kore, Paper for Trees, Conscious Consumers, CReW, Keep Whakatāne Beautiful and Pride Whakatāne	Ongoing action funded through rates
Expand support for school education initiatives	New action funded through waste levy funds; 2015/16 financial year onwards
Support further implementation of Agrecovery in the District	Expanded action funded through waste levy funds; 2015/16 financial year onwards
Expand general waste education and marketing activities, in particular to rural and agricultural sectors	New action funded through waste levy funds; 2015/16 financial year onwards
In all cases, work in partnership with other Councils where possible to increase efficiency and reduce costs	Ongoing action not requiring funding.
Service Review and Procurement	
Action	Commentary

Conclude the service review requirements of the amended LGA by conducting a cost-effectiveness review of all contracts expiring within the next two years (kerbside collections, transfer station operations and haulage of waste to landfill).	Under Section 17A of the amended 2002 LGA, the Council is required to conduct a service review where current services may change significantly or where contracts are due to expire within the next two years, and have a value of over \$250,000 (the threshold agreed by Council). The service review will feed into the procurement process; from July 2015. This will be funded through rates.
Procure new waste services and use this process to assess the alternative management options available in the market for recycling, organic waste, residual waste collections, treatment, and processing including transfer station operations	The intention of the procurement process will be to achieve improved waste management and minimisation, depending on the options put forward by the private sector; from July 2015. This will be funded through rates.
General	
Action	Commentary
Review the existing solid waste bylaw to enable closer monitoring of wastes in the District	Action carried over from 2010 WMMP; from 2016/17 financial year once procurement process is concluded. Rates funded.
Continue development of the green waste processing site, which will enable increased green waste composting in the District.	Action continued over from 2010 WMMP period. Ongoing. An application has been made to the Ministry for the Environment for funding for capital works on the site. Other funding will depend on the outcome of the application but some funding will come from Waste Levy funds and rates.
Continue to support regional and cross-regional partnerships and liaison groups, including the Bay of Plenty and Waikato Waste Liaison Group and the Bay of Plenty Waste Resources Advisory Group.	Ongoing; no significant cost involved.
Monitoring and Reporting	
Action	Commentary
Waste streams will be monitored	Council will continue to monitor waste flows using data provided by contractors and through the Regional Council. Any new contracts developed during the procurement process will ensure that data continues to be supplied. See also Section 2.4. Ongoing action; low cost.
Reporting	Council will continue to report progress in solid waste management and minimisation through the Annual Plan. See also Section 2.4. Ongoing action; low cost.

Strategic Environment

1 Legislative Environment

Statutory requirements impact on the way in which Whakatane District Council operates to meet its obligations to its customers. Additional to the legislation outlined in Part A of the AMPs, some of the key legislation for Solid Waste activities is outlined below.

1.1 Waste Minimisation Act 2008

The Waste Minimisation Act 2008 encourages a reduction in the amount of waste we generate and dispose of in New Zealand and aims to lessen the environmental harm of waste.

This Act also aims to benefit our economy by encouraging better use of materials throughout the product life cycle, promoting domestic reprocessing of recovered materials and providing more employment.

In a nutshell, the Act:

- puts a levy on some waste disposed of in landfills to generate funding to help local government, communities and businesses reduce the amount of waste
- helps and, when necessary makes, producers, brand owners, importers, retailers, consumers and other parties take responsibility for the environmental effects of their products through product stewardship schemes
- 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
- clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation
- introduces a new Board to give independent advice to the Minister for the Environment on waste minimisation issues
- places a responsibility on council to produce a 6 yearly Waste Management and Minimisation Plan (WMMP).

1.2 Health Act 1956

This Act establishes the government structure required to enact and enforce health requirements, including the activities of local government.

1.3 Health and Safety at Work (Hazardous Substances) Regulations 2017

On 1 December 2017, the rules for the work-related use and storage of hazardous substances (including wastes) moved from the Hazardous Substances and New Organisms (HSNO) Act 1996 to the Health and Safety at Work Act 2015 (HSWA).

2 The Whakatāne District Council

Waste management is a key activity for the Council and the current approach is set out in the 2015 WMMP. This approach should contribute to and be consistent with the vision, purpose and community outcomes of the LTP. The six year 2015 WMMP was consulted on as part of the 2015-25 LTP consultation process. The next iteration of the WMMP in 2021 will be consulted on as part of the 2021-2031 LTP process.

The vision and purpose of the LTP describe where the District wants to be, and how we get there. Our vision is:

“To be known as the place of choice for people to live, work and play”

In achieving our vision;

- Our community will be safe and surrounded by people who are friendly and caring
- Businesses will be thriving
- There will be respect for and pride in our history
- We will be successful guardians of our natural environment.

The Council’s purpose is:

to lead the Whakatāne District to meet the current and future needs of our community.

As a Council we intend to achieve this through:

- Good governance, leadership and advocacy
- Integrated long term planning
- Effective and reliable community infrastructure
- Outstanding service delivery

2.1 Community Outcomes and Solid Waste

In achieving the vision and purpose outlined above, the Council has outlined six community outcomes that the Council’s activities contribute towards. These are:

- Effective Leadership
- Community needs
- Quality Services
- Valuing Our Environment
- Reliable and Affordable infrastructure
- Sustainable Economic Development

In addition, it is important that the Council manages and minimises waste in a way that aligns with its principles – being affordable, sustainable, responsible and enabling. The Solid Waste activity contributes primarily to the following community outcomes:

- Valuing our Environment
- Quality Services; and
- Community Needs.

2.2 Bylaws

Council’s updated [Waste Minimisation and Management Bylaw](#) commenced on 1 April 2018 and is available on the Council’s public website.

3 Relationship with other Strategies and Plans

As well as aligning to the 2015-25 LTP, our WMMP must also support and align with other strategies and plans:

Table 6: Strategies and Guidelines

Strategy Name	Status
NZ Waste Strategy 2010	Operative
Regional Water and Land Plan 2008	Operative
Regional Air Plan 2012	Operative
Regional Waste and Resource Efficiency Strategy (2013)	Operative

The Bay of Plenty Regional Waste and Resource Efficiency Strategy (2013) has a vision of “working together towards a resource-efficient region”. The strategy recognises waste as a resource, and includes five goals:

- to protect our communities, land, water and air from harmful and hazardous wastes
- to encourage resource efficiency and beneficial reuse of wastes that create sustainable economic growth in the region
- to work together to encourage and support innovative affordable solutions, with a preference for local solutions
- to reduce waste to landfill
- to promote consistent regulation and compliance monitoring requirements.

As an active member of the Waikato and Bay of Plenty Waste Liaison Group, and the Bay of Plenty Waste Resources Advisory Group, the Council will seek to support the regional waste strategy through its waste management and minimisation activities.

Levels of Service (LoS)

1 Linking LoS to Community Outcomes

1.1 Council Outcomes

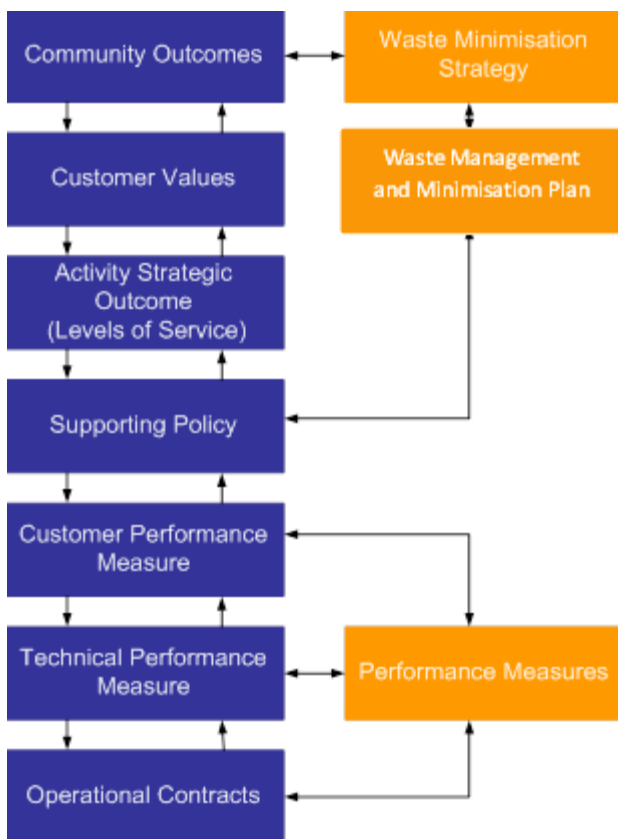
As outlined in the [Strategic Environment](#) section, the Council’s Solid Waste activities primarily contribute to the following community outcomes:

- Community needs
- Quality Services
- Valuing Our Environment

In order to deliver these outcomes, it is important that the Solid Waste customer services and technical, operational and maintenance contracts are clearly linked to achieve this.

Figure 2 shows the linkages as expressed in the Tables 8 and 9 below.

Figure 2: LoS Linkages



1.2 Establishing Core Values

Core Values provide the cornerstone to the development of Levels of Service from both a customer and technical point of view.

The core values considered to be important for the Solid Waste activity are as follows:

- Accessibility
- Affordability

- Community Engagement
- Sustainability
- Customer Interface
- Quality
- Efficiency
- Safety

1.3 Activity Strategic Outcomes

Community outcomes were developed as part of the 2015 LTP. Further work has been undertaken to develop Activity Strategic Outcomes for the solid waste activity. The Activity Strategic Outcomes developed with the LoS represented in the AMP are described in Table 7 below.

Table 7: Core Values and Activity Strategic Outcomes

Core Customer Value	Activity Strategic Outcomes (Levels of service)
Accessibility Affordability Customer Interface Safety	<ul style="list-style-type: none"> ▶ The community has access to kerbside collection, waste disposal and recycling facilities
Community Engagement Quality Sustainability	<ul style="list-style-type: none"> ▶ Waste minimisation is actively promoted within the community

1.4 Identify and Linking Customer and Technical Levels of Service

Tables 8 and 9 are based on the NZ NAMS “Developing Levels of Service and Performance Measures” Manual. It should be noted that these tables act as a template for developing levels of service.

2 Solid Waste Levels of Service, Performance Measures and Reporting

Table 8: Levels of Service Tables

Level of Service	The community has access to kerbside collection, waste disposal and recycling facilities				
Links to Community Outcomes	Reliable and Affordable Infrastructure	Quality Services	Effective Leadership	Valuing Our Environment	Community Needs
Customer Value	The core customer values this service aims to provide are:				
	<ul style="list-style-type: none"> ▶ Accessibility ▶ Quality ▶ Efficiency 				
Customer Measures	(1) Satisfaction with residential refuse disposal facilities, Customer Service Index (CSI) (2) Satisfaction with kerbside waste collection service, Customer Service Index (CSI)				
Targets	Current performance (2016/17)	Year 1 target 2017/18	Year 2 target 2018/19	Year 3 target 2019/20	Years 4-10 target 2020-27

Solid Waste – Asset Management Plan 2018-2028

(1)	Maintain Current Satisfaction Score of 92%	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.
(2)	Maintain Current Satisfaction Score of 93%	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.	Achieve Satisfaction Score of 90%.
Technical Measures	(1) Kerbside collection services are provided in accordance with the Solid Waste Services Contract (2) The council and contractor will investigate the feasibility of requests from residents (individuals) about the provision of collection services in their area on a case-by-case basis (3) Facilities are conveniently located and open during all advertised hours of operation (weather permitting) (4) The current fees schedule is posted onsite (5) Number and location of transfer stations in the District				
Targets	Current performance	Year 1 target 20018/19	Year 2 target 2019/20	Year 3 target 2020/21	Years 4-10 target 2021-28
(1)	100% compliance	100% compliance	100% compliance	100% compliance	100% compliance
(2)	100% compliance	100% compliance	100% compliance	100% compliance	100% compliance
(3)	100% compliance	100% compliance	100% compliance	100% compliance	100% compliance
(4)	100% compliance	100% compliance	100% compliance	100% compliance	100% compliance
(5)	Murupara Whakatane	Murupara Whakatane	Murupara Whakatane	Murupara Whakatane	Murupara Whakatane
How we will achieve this Level of Service	(1) Analysis, evaluation and responding to customer requests for kerbside collection and other waste services				
How we will measure if target is achieved	(1) Amount of council controlled waste received (weighbridge statistics) (2) Monthly reports to Council detailing weights received by waste type (3) Residents Perception Survey (4) Random audits (5) Monthly reporting				

Table 9: Solid Waste Levels of Service

Level of Service	Waste minimisation is actively promoted within the community				
Links to Community Outcomes	Reliable and Affordable Infrastructure	Quality Services	Effective Leadership	Valuing Our Environment	Community Needs
Customer Value	The core customer values this service aims to provide are: <ul style="list-style-type: none"> ▶ Whole of Community Benefits ▶ Sustainability ▶ Safety 				
Customer Measures	(1) Decrease in the amount of council controlled solid waste that is sent to Landfill				
Targets	Current performance (2016/17)*	Year 1 target 20017/18*	Year 2 target 2018/19	Year 3 target 2019/20	Years 4-10 target 2020-27

Solid Waste – Asset Management Plan 2018-2028

(1)	16,777 tonnes	10,800 tonnes	10,700 tonnes	10,600 tonnes	Decrease of 100 tonnes per year
Technical Measures	(1) Update and consult on the Waste Management and Minimisation Plan (WMMP)				
Targets	Current performance	Year 1 target 20018/19	Year 2 target 2019/20	Year 3 target 2020/21	Years 4-10 target 2021-28
1.	2015 WMMP	2015 WMMP	2015 WMMP	Implement 2015 WMMP	WMMP review 2021
How we will achieve this Level of Service	(1) Increasing the amount of recycled materials and decreasing the amount of waste sent to landfill (2) Involvement in and promotion of waste minimisation activities (3) Creating actions within the WMMP to promote waste minimisation * 2016/17 and 2017/18 tonnage to landfill largely increased due to the amount of flood related waste from the April 2017 floods.				
How we will measure if target is achieved	(1) Monthly analysis, recording and reporting on amounts of council controlled recycled materials and waste sent to landfill (2) 6 yearly review of WMMP (3) Annual reporting on waste minimisation activities				

Community Consultation

1 Consultation Methods

The Council has engaged in a variety of consultation approaches to seek both public opinion and to communicate its decisions and programmes to residents in the area.

Customer research carried out for solid waste is as follows:

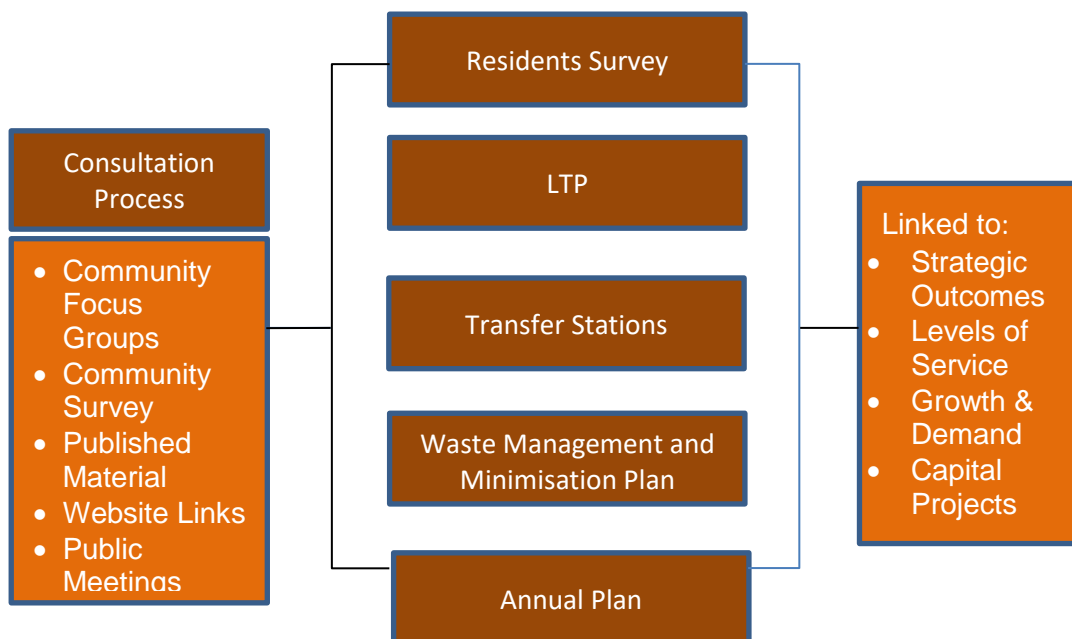
- Whakatane District Council Annual Residents Survey
- Customer service requests and complaints
- Consultation on the Waste Management and Minimisation Plan
- Other Waste Consultation
- Consultation carried out as part of the LTP and Annual Plan processes
- Consultation as part of the Ki Mua exercise – see AMP Part A

An outline and results of each approach are summarised in the sub-sections below.

2 Consultation Links

Consultation processes undertaken with the community help to underpin the overall direction and goals that the Council will follow. Figure 3 shows all of the ways that Whakatane community have been consulted with regarding the Council’s Solid Waste services and how this consultation links into outcomes developed as part of this Asset Management Plan.

Figure 3: Consultation with the Whakatāne District Community



3 Annual Residents Survey

The solid waste assets and services that were covered as part of the survey were:

- Refuse disposal facilities, i.e. transfer stations
- Kerbside waste collection services

The results pertaining to these assets and services are outlined below.

3.1 Refuse disposal facilities

Satisfaction with the Refuse Disposal Facilities

During the 2018 survey, 72% of residents were satisfied with the refuse disposal facilities, of these 43% were very satisfied. 9% were not very satisfied and 19% were unable to comment.

The percentage not very satisfied is below the national averages.

3.2 Kerbside waste collection

Satisfaction with the Kerbside Collection Service

During the 2018 survey, 91% of residents were satisfied with the kerbside collection service, of these 58% were very satisfied. 7% were not very satisfied and 2% were unable to comment. Kerbside Services were the highest scoring service in council's 2018 customer satisfaction survey.

The percentage not very satisfied are similar to the national averages.

4 Customer Service Requests and Complaints

The Council operates a customer calls register on the Ozone system. This system has been in place since March 2009 and provides detailed information on customer service requests which can be collated, trends can be analysed and a clearer understanding of opportunities for improvement can be identified.

Data for the 2015 to 2018 financial years has been collated and analysed below. This data was acquired from the Requests for Service (RFS) that were logged directly with in the Ozone system.

The data in Table 10 below shows a significant increase in RFS for the 2018 financial year. There are several reasons for this:

- The weather events of April 2017 caused a significant number of wheelie bins and crates to be lost and requests for replacements.
- The clean-up of waste from the April 2017 flood event caused a large number of RFS which were dealt with as General Enquires as they did not lie within any other existing category in the RFS system.
- The weather events also caused major disruption to services which resulted in missed collections (services) and complaints.
- The introduction of the new kerbside recycling system in October 2016 resulted in a large number of queries and also a significant increase in requests for new kerbside services.
- The replacement of bins can expect to increase as many bins have been in service for over 8 years.

Table 10: Solid Waste related RFS for 2015 to 2018

	2018	2017	2016	2015
Solid Waste				
Complaint	39	41	22	18
General Enquiry	135	498	43	57
Replace Bin	709	560	487	445
Service missed	330	315	141	194
New or Cancel Service request	139	257	88	65
	1352	1671	781	779

5 LTP Consultation

The Council issued its draft 2015 WMMP plan as part of the 2015 LTP consultation process. Fourteen submissions were received through the consultation process that related to the Solid Waste Activity. These included requests for consultation over changes to the Waste Bylaw, investigations into alternative services, expansion of services into rural areas, request for council to establish a local landfill and public recycling bins.

5.1 Waste Management and Minimisation Plan

The 2015 WMMP covers the period 2015 to 2021, therefore no consultation will take place as part of the 2018 LTP review. Consultation on the 2021 WMMP will take place as part of the 2021 LTP review.

Since 2010 the Council has made several changes and improvements to the way waste is managed in the District, especially in kerbside recycling collections and other waste minimisation practices.

5.2 Project and Services Committee and Community Boards

Information on waste management within the District is regularly reported to and consulted with both the Council Project and Services Committee and Community Boards. This information includes, waste data, proposed changes to services, new initiatives and any issues arising.

5.3 Draft Annual Plan Submissions

The Council will continue to consult over solid waste management as part of the Annual Plan process.

Growth and Demand

This section describes the strategy that Whakatane District Council will adopt for growth and demand related to the Solid Waste activity.

A detailed analysis of the data behind the growth and demand scenarios is provided in Section A.

1 Introduction

The Whakatane District consists of a number of urban communities that vary in population. The rural to urban shift, the shift to the increasing number of properties housing fewer people and the attraction of visitors to Whakatane as a holiday destination have resulted in increased demand on existing facilities in areas around the District, particularly Ohope and Coastlands.

Planning for future growth and demand is imperative to provide an economically sustained pathway to meet the needs of the District and its visitors. The provision of the Solid Waste activity and its management is an essential element in the planning process.

Growth and demand planning allows for the identification and quantification of areas within the District that are likely to experience significant pressures.

1.1 Growth vs. Demand

Although Growth and Demand are considered together in this section, it is worth noting that they have different implications regarding the ongoing function/delivery of the activity.

Growth, in relation to the Solid Waste activity, mainly refers to the growth in population or areas that are growing due to new residential developments and growth in commercial/industrial business. These changes potentially increase the amount of refuse that needs to be collected and transferred to various sites for processing, including the Council's two transfer stations, the greenwaste composting site and the Materials Recovery Facility in Tauranga.

Demand for services can be influenced by growth, developments (e.g. commercial/ industrial development), maintaining appropriate levels of service to meet customer expectations and the preservation of public and environmental health.

1.2 Overview of Key Demand Drivers

The key drivers that influence growth and demand are assessed in the following section. These include:

- Population Growth
- Household trends
- Economic Growth
- Recycling Markets
- Central Government Policy
- Lifestyle Consumption
- Rural Waste Sources
- Infrastructure
- Alternative Technologies
- Deprivation Index.

2 Population and Development Considerations

2.1 Population Growth

The population of Whakatāne District is currently 34,600 (2013 Census). The Statistics New Zealand 'medium' scenario forecasts that our population will peak in 2028 at 36,400 people and then start to decline from the mid-2030s.

It is not envisaged that population growth or decline will have any significant effect on future demand for waste minimisation and management services within the district during the term of this AMP.

2.2 Household Trends

Household growth is primarily a function of population growth. However, the number of households is projected to increase, while population decreases, due to a trend towards smaller household and family sizes. This will have an impact on waste generation due to the fact that more waste per capita is generated from smaller households than from larger ones.

It is not envisaged that household trends will have any significant effect on future demand for waste minimisation and management services within the district during the term of this AMP, with the possible exception of a slight increase in numbers of 'lifestyle' properties that may need different services to those currently offered.

2.3 Deprivation Index

The relative deprivation of the residents in the district may affect the solid waste activity across Whakatane, particularly if some settlements are unable to afford to pay for services or it is not economically feasible for services to be deployed to these areas.

2.4 Lifestyles and Consumption

As explained above, household waste growth is closely related to household consumption. The Organisation for Economic Co-operation and Development recognises the following driving forces behind current and projected household consumption patterns:

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

2.5 Economic Growth

Economic growth has traditionally been correlated with waste production. Higher levels of economic activity leads to greater production and consumption of goods and this in turn can lead to higher quantities of waste.

This said, the future for the Eastern Bay of Plenty is bright with approximately \$1.5 billion in capital expenditure expected to be invested on new industry developments over the next 2-10 years. This

would create an estimated 3,000 jobs of direct employment with a potentially significant multiplier effect for our economy and population.

The developments include aquaculture and horticulture in Ōpōtiki, and geothermal energy, container storage, timber and dairy processing in Kawerau. Whakatāne is well placed at the centre of these developments as the larger service centre for the Eastern Bay of Plenty, supporting our neighbouring regions and providing further niche sector growth opportunities of our own. However, it is not anticipated that economic growth will be a significant factor in putting pressure on waste management services.

3 Recycling Markets

Recovery of materials from the waste stream for recycling and reuse is heavily dependent on the recovered materials having an economic value and a viable market. Markets for recycled commodities are influenced by prevailing economic conditions and most significantly by commodity prices for the equivalent virgin materials.

China's Green Sword Policy and controls on recycling imports has had a significant effect on recycling markets and systems with exports of recycling down to about 5% in 2018 of what they were in 2017. Commodity prices have also dropped by the same levels and some councils have stopped collecting or are stockpiling plastics and fibre (paper and cardboard). The outcome of these changes is now clearly evident and may yet take further effect during the term of this AMP.

Development of a more localised recyclables processing market would require the Council, businesses and community groups to work together to identify potential opportunities.

4 Central Government Policy

There are a number of key policies and pieces of legislation that may influence demand for refuse and recycling services in Whakatane District. These include the WMA, the Emissions Trading Scheme and NZ Waste strategy.

The Waste Levy Fund (WLF) is a key part of the WMA and places a 'tax' on waste disposed of at landfills. The money raised from this levy is then distributed back to local authorities for use in waste minimisation projects or distributed under the Waste Minimisation Fund for other projects. 2017 saw both an internal and external review of the WLF with many recommendations. It is generally accepted that the levy will increase during the term of this AMP. Any increase in levy costs will be passed on to the local authority depositing their waste at landfills.

The WMA also includes the legislation for central government to 'label' materials as 'priority products'. This means that the producer/supplier of such products is required to implement solutions to minimise the resulting waste. There is continuing lobbying of government to use this legislation on products such as tyres and e-waste. Central Government has indicated that such controls could be put in place during the term of this AMP.

5 Rural waste sources

Many rural residents either use private collection services, which generally do not include a recycling collection, burn their waste or drop it off at the Whakatane and Murupara transfer stations. It is known that one local provider supplies 44 gallon drums and liners to rural residents in areas not covered by Council services and charges 'per empty'.

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 organisation 'Agrecovery' periodically collects hazardous substances and containers from rural properties. Some chemicals are free to collect while others are charged for. Council supports this programme through funding and promotion of collections and events.

6 Infrastructure

Landfill capacity within or near the District is an issue. The municipal landfill currently used in Tirohia presents no issue with capacity as such, but the distance for transport to this facility exposes the Council to an ongoing cost. During negotiations for the Solid Waste Services contract in 2016 the Council was able to negotiate very favourable disposal rates at the Tirohia landfill until 2031.

Disposal infrastructure presents an issue for the region as a whole as all Councils in the Bay of Plenty transport their residual waste well out of the district for disposal.

The Council opened its own greenwaste composting facility in 2016 and as a result now has the infrastructure to reprocess all its own greenwaste and possibly that of other councils in the future.

With the exception of a small amount of metals there is very little recycling infrastructure in the region. The Council's glass and tyres are transported to Auckland for recycling while mixed recycling is transported to a Materials Recovery Facility in Tauranga for sorting and dispatch to markets.

There are no facilities that accept and recycle putrescible waste (food waste) as a separate waste stream in the district or close enough to justify separate collection and transportation costs. This is an area where the Council will continue to research possible solutions.

7 Alternative Technologies

There are alternative technologies for converting waste to energy and re-useable materials. Many of these require levels of capital investment and waste volumes which mean they are not a viable option for the Council to develop. However, investment from private enterprise may make these available in the future.

8 Impacts on the Solid Waste Activity

With the exception of the current collapse of recycling markets, it is not expected that any of the other key drivers discussed above will have any significant effect on the council's waste management services in the foreseeable future. The Solid Waste Services Contract 2016, (kerbside collections, transfer stations and haulage to landfill) has a term until June 2024 with the possibility a further extension for another 7 years (including landfill disposal). It is expected that this contract will continue to meet the solid waste requirements of the district for this period.

However, it should be noted that if predictions are incorrect, any increase in population growth would lead to a general increase in the demand for recycling and waste reduction services. This would also lead to increased production and consumption of recyclable materials, higher costs for disposal, as well as the potential for more materials to be recovered in the future.

An increase in the population would likely lead to increased traffic volumes (needs to be quantified) and denser housing and commercial developments. For these reasons it would be necessary to review the collection and recovery strategies to seek greater efficiencies in truck movements as well as better provide adequate recycling services to a wider array of domestic and commercial premises. This

demand could drive the need for more local resource recovery infrastructure, such as transfer and recycling stations particularly in remote areas where it is not economically feasible for kerbside collections to be undertaken.

9 Current Demand

Figures 4 to 7 illustrate the amounts of waste streams (2014 – 2017) and therefore demand on assets and services.

Figures 4, 5 and 6 clearly show the annual cyclic pattern of waste volumes in the District. The increases in refuse, recyclables and green waste in the summer months are a result of an influx of holiday makers, Christmas / New Year celebrations resulting in increased amounts of glass and paper and people spending more time in the garden.

While there are these yearly cyclic patterns in waste volumes the overall amounts remain fairly constant. A small spike in public disposals of refuse in May 2014 was the result of a local flood event which effected properties and belongings.

Figure 4: Refuse from Whakatāne District and source 2014 -2017

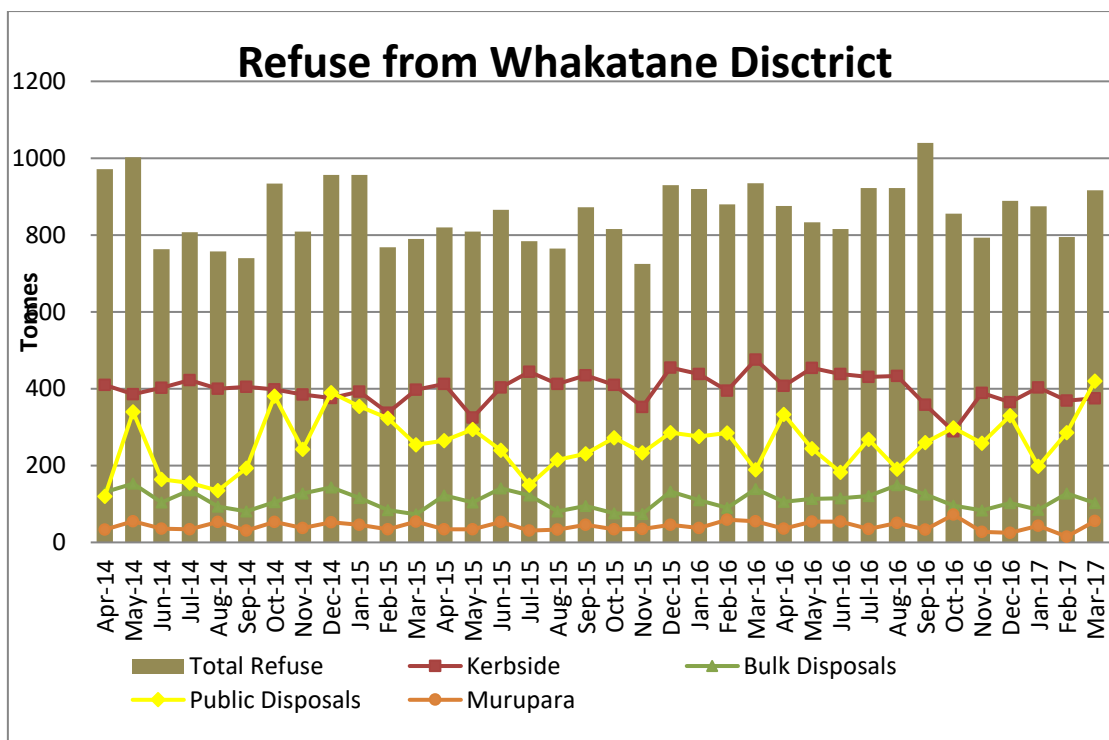


Figure 5: Recyclable Waste from Whakatāne District and type 2014 -2017

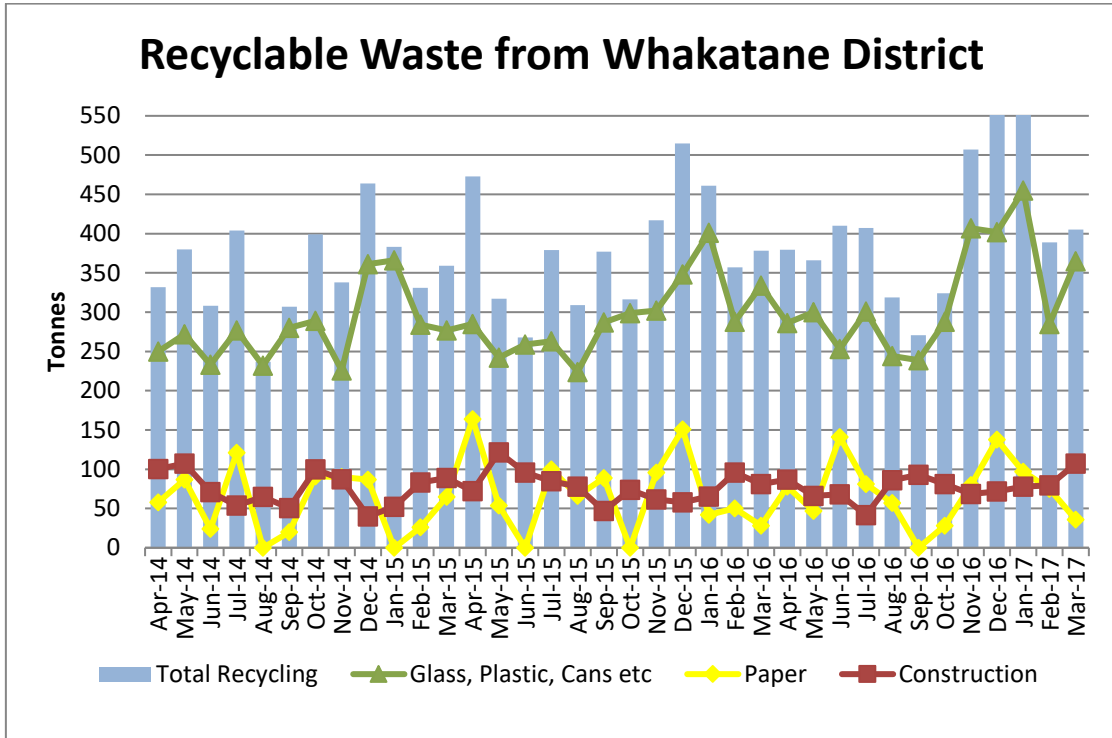


Figure 3

Figure 6: Diverted Green Waste from Whakatāne District and source 2014 -2017

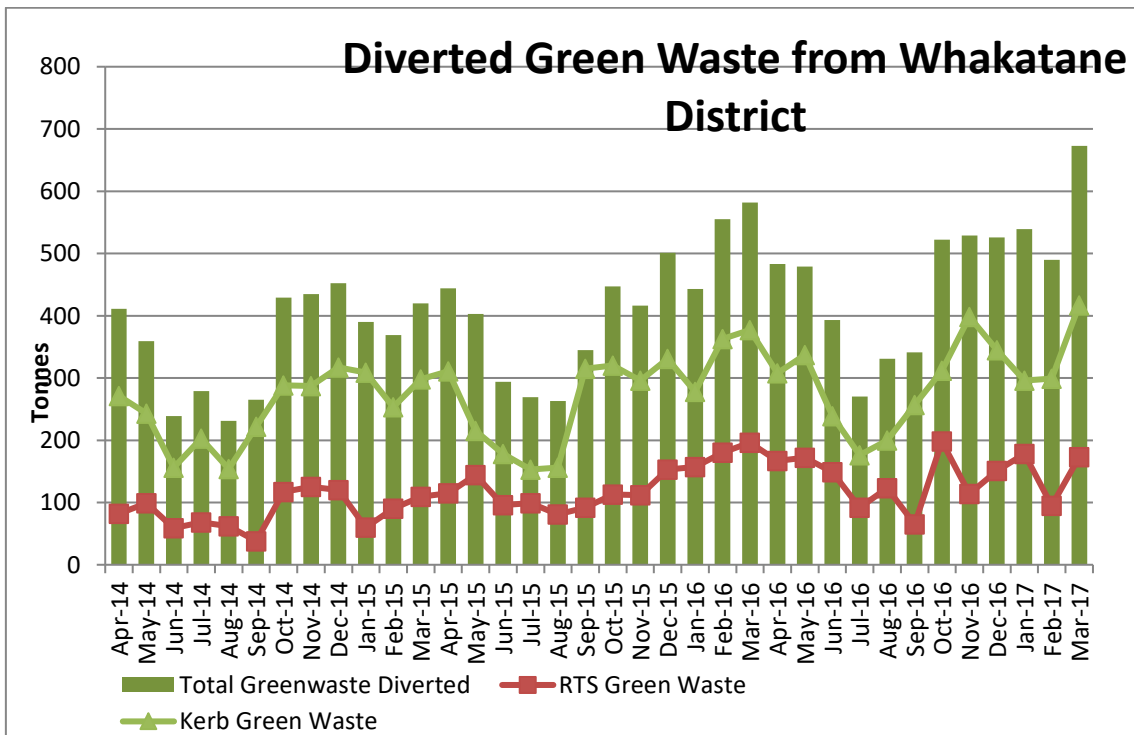
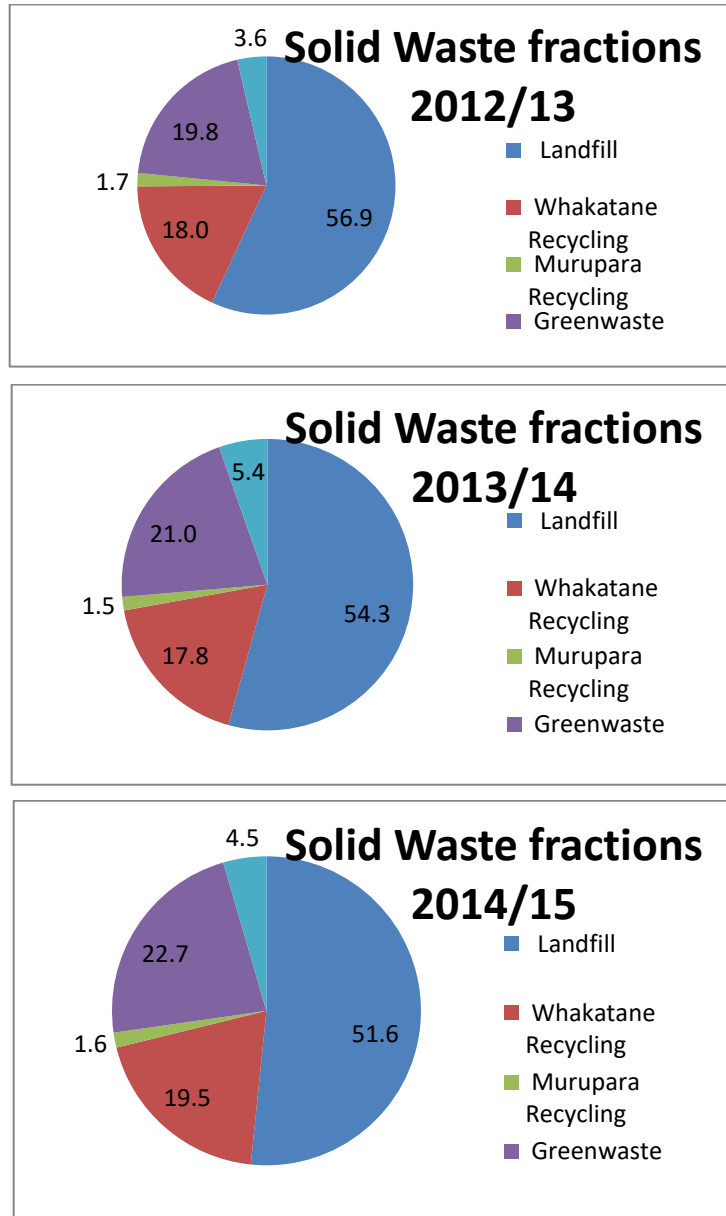
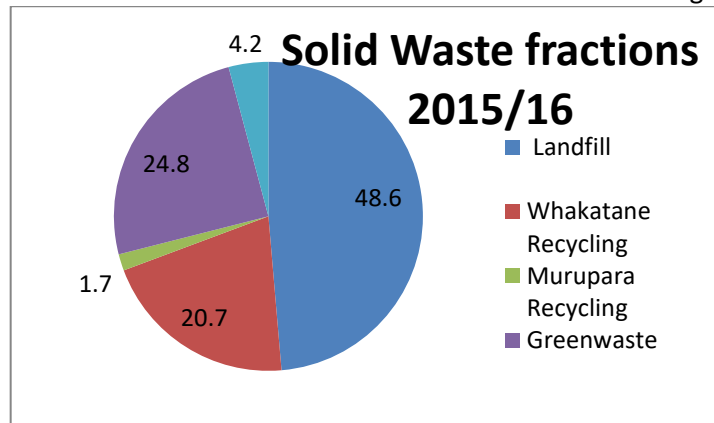


Figure 7 illustrates the percentages of solid waste that are recycled and sent to landfill. The decrease in the percentage of waste sent to landfill over this period represents Council’s commitment to waste minimisation.

Figure 7: Solid Waste percentages with amounts sent to landfill for the Whakatāne District 2012 -2016





9.1 Disaster Waste

In April 2017 the District experienced two extreme weather events, one of which resulted in extensive flooding and the evacuation of the Edgecumbe Township. Over 300 properties were flooded in Edgecumbe alone, which resulted in an unprecedented amount of waste from affected contents, materials from the strip out of wall linings and floors, demolition and other wastes such as fences, rebuild waste and silt deposited from flood waters. Strong winds also resulted in a large increase of greenwaste.

While the Council assets can cope with a certain level of increase in waste from disaster events such as in the 2014 flood event mentioned above, they were not able to manage the amount of waste created by the 2017 events. These required the temporary acquisition of a significant amount of resources. The cost of the clean-up from the 2017 events was approximately \$2.3 million and included extra staff, operational machinery, leasing of land and access to extra landfills and transfer stations. The tonnage of waste and silt sent to landfill from the clean-up of Edgecumbe alone was equivalent to the normal amount of waste in 8 months from the whole of the district.

A negative effect of this operation was that it also reduced the Council’s overall recycling rate from over 50% to 35% and resulted in the Level of Service targets for tonnages to landfill not being met for both financial years 2016/17 and 2017/18.

10 Future Demand

As advised above it is not expected that any change in demographics for the district will affect requirements for waste management assets and services in the foreseeable future. Figures 4 to 6 above show that waste volumes have been fairly constant over a number of years and yearly cyclic patterns have been dealt with under current resources.

Figure 7 above illustrates the Council’s aims to continuously increase amounts of recycled and diverted waste and decrease the amount sent to landfill. This pattern will hopefully cause an increase in recyclable volumes and a decrease in landfill disposal and related haulage amounts.

The Council’s solid waste assets are unable to deal with events as described in 9.1 section above. If such events occur again they will require the same approach by acquiring temporary assets to deal with the situation.

10.1 Management Strategies

The Council has statutory obligations under the Waste Management Act 2008 and Waste Strategy 2010 relating to the sustainable management of wastes. The Council has embraced sustainable waste management practices and outlines its actions towards this in its Waste Management and Minimisation Plan.

VISION, GOALS, OBJECTIVES AND TARGETS

In managing solid waste in our District, the Council aims to provide cost effective and efficient waste services, while also fulfilling our legal responsibility to move waste up the hierarchy – which means working to reduce our reliance on landfill disposal, while increasing reuse, recycling and reduction of waste. This is a difficult balance to achieve, particularly considering the current low cost of sending waste to landfill.

The Council’s vision for waste management and minimisation in the District is:

Minimise environmental harm while sustainably managing services, finances and community assets.

This is a change from the vision of the last WMMP. However, this vision reflects the need for the District to manage and minimise waste, while also providing value for money and responsible financial management.

The Council’s goals for waste management and minimisation in the District are:

Through this WMMP, the Council has produced goals and objectives that the Council, alongside the community, can work towards. The Council has developed these goals by thinking about our local issues and what the priorities are for the region and nationally.

- Goal: Provide quality, affordable services while meeting our responsibilities to reduce harm and improve efficiency.
- Goal: Reduce the amount of waste we send to landfill or other disposal while also achieving sustainable financial management.
- Goal: Reduce the risk of environmental damage resulting from our waste management methods.

The Council’s objectives for waste management and minimisation in the District are:

- Achieve responsible financial management, through prudent procurement processes and ensuring expenditure remains within planned budgets.
- Provide effective and efficient services that meet community needs and maintain or increase current levels of customer satisfaction in Council’s annual Residents’ Survey.
- Take a waste hierarchy approach, by increasing the amount of diverted waste (prevention, reuse, reducing, recycling or recovery) and decreasing the amount sent to landfill (see Overall Target below).
- Consider environmental impacts, by reducing the amount of waste sent to landfill and ensuring Council’s closed landfills meet resource consent requirements.
- Use resources more efficiently, by promoting minimisation activities and increasing the amount of reused, recycled and recovered waste.

The Council’s target for waste management and minimisation in the District is:

Reduce waste to landfill to 11,000 tonnes by 2015/16 and by 100 tonnes per year thereafter.

This target represents both an environmental improvement and a reduction in total cost to the community of waste management.

11 Community Expectations

Information is gained from customers with regard to their expectations on the effectiveness of the delivery and costs associated with Solid Waste services. This information is collected via a number of mechanisms that include:

- Customer Survey
- Submissions on the Annual Plan (AP) and LTP
- Analysis of customer calls
- Community consultation (i.e. Transfer Stations, Kerbside Collections)
- Analysis of facilities used

Further information on public submissions to the LTP, AP and WMMP can be found in the [Community Consultation](#) section.

11.1 Impacts on the Solid Waste Activity

The LTP, AP and WMMP are the key documents that the Council and the community have that define what the Council plans to do regarding the Solid Waste activity, why this will occur and when.

Community Expectations are related to the delivery and overall quality of the service. A harmonious relationship between expectations and service delivery can alleviate issues at critical planning stages. Levels of service for this activity are outlined in the [Levels of Service](#) section.

The key issue for the Council is the gap between expectations of the service and the ability/willingness of the community to pay. The economic disparity evident of different townships also exacerbates this as more affluent areas generally have higher expectations than others.

11.2 Management Strategy

Continued education, communication and consultation with local residents are all tools that can be combined to align expectations with levels of service and their associated costs.

Waste services within the District are in place to protect public and environmental health. In addition to the Council’s initiatives to avoid, reduce, reuse, recycle, recover, treat and dispose, it is also responsible for the aftercare of six closed landfills. The responsibility to manage these sites is administered under the RMA, which means that the Council has acquired Resource Consents for the discharge of contaminants from these sites to land and or ground/surface water. The Resource Consents contain conditions that stipulate monitoring to be undertaken and reported.

12 Demand Management Planning

The objective of demand management planning is to actively seek to modify customer demands for services, in order to maximise utilisation of existing assets or to reduce or defer the need for new assets, including non-asset solutions. Examples of new and improved services to meet customer demand include:

- Education (avoid, reduce, recover, reuse, recycle and dispose)
- Investigations to the use of user-pays schemes for satellite recycling and transfer stations
- Increased collections at key times of the year (i.e. Christmas)
- Safe disposal of Hazardous Wastes
- Environmental controls

Examples of the Council’s intended demand management planning actions are included in the WMMP and the [Business Overview](#) section of this AMP.

13 Management Strategies

Demand management strategies provide alternatives to the creation of new assets in order to meet demand and looks at ways of modifying customer demands in order that the utilisation of existing assets is maximised and the need for new assets is deferred or reduced.

Demand management is practiced continuously to maintain the total demand at reasonable and sustainable levels. The five key components of demand management when promoted as a package or strategy rather than in isolation can dramatically reduce the demand on the assets. The key components with examples are provided in Figure 8 below.

Figure 8: Demand Management Strategies

Demand Component	Management Strategy
Legislation/ Regulation	<ul style="list-style-type: none"> ▶ Review of the WMMP ▶ Compliance with resource consents ▶ Compliance with legislative changes
Education	<ul style="list-style-type: none"> ▶ Promote cleaner production and waste reduction plans ▶ Continue to provide educational material to the community and work with schools
Incentives	<ul style="list-style-type: none"> ▶ Provide incentives for the community and business to Reduce, Reuse, Recycle, Recover, Treat and Dispose
Operation	<ul style="list-style-type: none"> ▶ Maintaining the existing transfer stations ▶ Investigate recycling opportunities
Demand Substitution	<ul style="list-style-type: none"> ▶ Promote backyard composting, re-use and recycling

In addition to the above, new technologies can be effective in reducing impacts of growth and demand and the associated costs, such as:

- Continual refinement and research into recycling and associated costs
- New markets being available for the sale of recyclable materials

Environmental Stewardship

This section describes the environmental and legislative obligations that Council has in maintaining its Solid Waste Management assets. This includes those requirements specified as conditions of resource consents.

Future requirements and obligations are then anticipated within the existing legislative framework.

1 Legislation

There are a number of legislative mechanisms aimed to avoid or mitigate potential adverse environmental effects associated with solid waste management. These are set at national, regional and district level.

The following legislation summary is a general outline of the statutory provisions. Please refer to the specific provisions of the respective statutes for the exact wording.

1.1 National

The role of Central Government is one of setting policy for environmental management in the whole of New Zealand. This is achieved through the following statutes.

1.1.1 Waste Minimisation Act 2008

The Waste Minimisation Act 2008 encourages a reduction in the amount of waste we generate and dispose of in New Zealand and aims to lessen the environmental harm of waste.

This Act also aims to benefit our economy by encouraging better use of materials throughout the product life cycle, promoting domestic reprocessing of recovered materials and providing more employment.

Further details are outlined in the [Strategic Environment](#) section.

1.1.2 The Resource Management Act 1991 (RMA)

The RMA promotes the sustainable management of natural and physical resources. It specifies the roles and responsibilities in terms of managing effects on the environment.

In relation to solid waste management, the RMA requires the adverse effects associated with activities such as landfills and recycling facilities to be avoided, remedied or mitigated. This will be imposed through the Regional and District Plans.

Section 31 of the RMA requires District Councils to be responsible for achieving integrated management of the use of land and associated natural and physical resources of their District.

1.1.3 Local Government Act 2002 (LGA)

Specific to environmental stewardship the LGA includes the principles of making itself aware of community views; providing opportunities for Maori to participate in decision-making processes; collaborating and cooperating with other local authorities as appropriate; ensuring prudent stewardship of resources; and taking a sustainable development approach.

The LGA outlines the responsibilities of local authorities and the decision making process for activities undertaken on behalf of their community, primarily through the requirement to adopt a LTP. Councils are encouraged by the LGA to identify overall long-term priorities and to plan for the future.

- Solid Waste AMP was required for the first time under the LGA 2002

- The emphasis on sustainability – particularly the social, economic, environmental and cultural well-being of the community;
- The obligation to Maori – particularly relating to consultation and decision-making;
- The emphasis on collaboration and co-operation between councils, government agencies, other organisations and the community.

1.2 Climate Change Response Act 2002

The Climate Change Response Act 2002 put in place an emissions trading scheme (ETS) for methane emissions from landfills.

The Act requires landfill operators to surrender emissions units in proportion to calculated methane emissions from their landfills. Methane emissions are determined using default values or calculation based on waste composition and capture and destruction of methane (by flaring or energy production).

Emissions are accounted for in the year that the waste is received at the landfill. Emissions from closed landfills and legacy emissions from operating landfills are not included in the ETS.

1.3 New Zealand Waste Strategy 2010

The revised New Zealand Waste Strategy sets out the Government's long-term priorities for waste management and minimisation.

The Strategy's two goals provide direction to local government, businesses (including the waste industry), and communities on where to focus their efforts in order to deliver environmental, social and economic benefits to all New Zealanders. The goals are:

- reducing the harmful effects of waste
- improving the efficiency of resource use

1.4 The Health Act (1956)

Section 25 indicates that the Minister may require Territorial Authorities to ensure the provision of sanitary works including works for collection and disposal of refuse.

1.5 Health and Safety at Work (Hazardous Substances) Regulations 2017

On 1st December 2017, the rules for the work-related use and storage of hazardous substances (including wastes) moved from the Hazardous Substances and New Organisms (HSNO) Act 1996 to the Health and Safety at Work Act 2015.

1.6 Regional Council

The Bay of Plenty Regional Council has a key role under the RMA in developing Regional Policy Statements and Regional Plans to ensure the integrated and sustainable management of the region's resources.

In relation to solid waste this involves managing discharges to the environment from landfills (leachate, odour, gas), and preventing or mitigating any adverse effects via discharge consents to air (gas), ground, or water (leachate). As such Regional Plans outline the policies, objective and rules that need to be taken into account when considering potential discharges.

1.7 District Council

District Councils have policy and service-delivery roles to:

- Have in place a WMMP
- Ensure that there is provision of waste collection and disposal services
- Make provision for waste reduction, re-use, recycling and resource recovery
- Prevent ‘nuisances’ such as pests, litter and odour
- Investigate and control activities that may breach the Health Act or Litter Act; and
- Control the use, development or protection of land to prevent or mitigate any adverse effects arising from the storage, use, disposal, or transportation of hazardous substances.

1.7.1 District Plan

The Whakatane District Plan assists the Council to carry out its functions under the RMA in order to achieve the purpose of the Act to promote the sustainable management of natural and physical resources.

In this context, the Whakatane District Plan outlines the rules, objectives, policies and requirements for land based activities above Mean High Water Springs (MHWS). This would include the development of solid waste disposal landfills and associated activities. The District Plan also sets out the standards and controls for buildings, lighting, noise, hazardous substances and contaminated land.

1.8 Waste Management and Minimisation Plan (WMMP) 2015

Refer to the following sections: [Community Engagement](#) and [Growth and Demand](#).

2 Resource Consents

Resource consents are required for recycling parks, green waste composting facilities, refuse transfer stations and closed landfills. An Assessment of Environmental Effects (AEE) is required to support the resource consent applications to the respective Councils when seeking approval to implement such assets.

The AEE process involves the identification and assessment of both the potential and the perceived physical, social and cultural impacts that the proposed works may have on the existing environment, and includes the examination and comparison of options and alternatives for mitigating any identified adverse effects, and the confirmation and recommendations on the preferred options and methodology to carry out the works.

The critical environmental factors requiring consideration include the impact of the solid waste activities on landscape values, contamination and discharge issues. A number of these factors may require specialist input and consultation with the local community and asset users.

The Council has a database of consents that relates to solid waste activities, these are provided in Table 11 below. In accordance with both Regional and District Plans, there are a number of requirements that must be met during the life of the consent. These requirements will stipulate monitoring conditions in the consent and will require the consent holder to report on the compliance with those conditions.

Table 111: Resource Consents relating to Solid Waste

Consent No	Purpose	Status	Property Address	Expiry
Closed Landfills / Solid Waste				
24151	Discharge Landfill Leachate	Current	Matata Beach Dump, State Highway 2, Matata	31/12/2033
30102	Discharge Landfill Gases	Current	Matata Dump, State Highway 2, Matata	31/08/2033
24152	Discharge Landfill Leachate	Current	Taneatua Dump, White Pine Bush Road, Taneatua	31/12/2033
30101	Discharge Landfill Gases	Current	Taneatua Dump, White Pine Bush Road, Taneatua	31/08/2032
24153	Discharge Landfill Leachate	Current	Te Teko Dump, Tahuna Road, Te Teko	31/08/2033
30103	Discharge Landfill Gases	Current	Te Teko Dump, Tahuna Road, Te Teko	31/08/2033
24154	Discharge Contaminants	Current	Murupara Landfill, State Highway 38, Murupara	1/01/2035
30100	Discharge Landfill Gases	Current	Murupara Landfill, State Highway 38, Murupara	31/01/2035
61140	Discharge Contaminants To Land	Current	Awatapu Landfill, Whakatane	30/06/2036
63311	L/S Earthworks To Re Contour Land	Expired	RTS 60 Te Tahi Street, Whakatane	31/12/2006
65511	Discharge Contaminants to Air	Current	RTS, 60 Te Tahi Street, Whakatane	31/12/2033
24150	Discharge To Land And Water	Surrendered	Whakatane Landfill, Burma Road Landfill, Whakatane	06/10/2011
30099	Discharge Of Landfill Gases	Current	Whakatane Landfill, Burma Road, Whakatane	31/01/2035
63019	Discharge To Land And Water	Current	Whakatane Landfill, Burma Road, Whakatane	19/12/2050
63020	Discharge Stormwater To Stream	Current	Whakatane Landfill, Burma Road, Whakatane	19/12/2050
63021	Divert Water From Landfill Site	Current	Whakatane Landfill, Burma Road, Whakatane	19/12/2050
62943	Discharge Stormwater To River	Expired	RTS, 60 Te Tahi Street, Whakatane	31/04/2015
62824	Discharge to Air	Surrendered	RTS, 60 Te Tahi Street, Whakatane	31/12/2014
66811	Green Waste Site	Surrendered	Awakeri Quarry	20/09/2016
67951	Green Waste Site	Current	Keepa Road	1/10/2026
68214	Monitoring Bores	Expired	Keepa Road	28/02/2017
LL-2014-8261-00	Land Use Consent Green Waste Site	Current	Keepa Road	Ongoing
68057	Discharge Stormwater To River	Current	RTS, 60 Te Tahi Street, Whakatane	04/08/2040

2.1 Designations

The RMA gives requiring authorities the ability to have areas of land designated for use as network utilities or large public works. Those areas of land are identified in the District Plan, usually in the maps. This is called a 'designation' which means that the works can be carried out without the subsequent need to comply with District Plan rules.

Once the designation is put in place, the requiring authority may do anything in accordance with the designation, and the usual provisions of the District Plan do not apply to the designated site.

Although resource consent is not required for works on a designated site that are in accordance with the purpose and conditions of the designation, an Outline Plan is required instead. An Outline Plan is a plan or description of works that a requiring authority submits to the council when it intends to carry out works on the designated site. Outline Plans often contain details that were not available at the time the site was first designated in the district plan.

The District Plan notes four designations exist that relate to the solid waste activity. These are shown below in Table 12.

Table 122: District Plan Designations

Plan Ref	Purpose
D152	Works Depot, Landfill
D41	Transfer Station
D40	White Pine Bush Road, Refuse Disposal
D34	Keepa Rd, Sewerage Treatment and Plant

2.2 Compliance and Monitoring

The Council holds consents for six closed landfills, the green waste composting facility and the Whakatane Transfer Station. Murupara Transfer Operations are covered by the closed landfill consents. These consents require a combination of monitoring of ground and surface water and air discharges.

2.2.1 Whakatane Transfer Station

Figure 9: Whakatāne Transfer Station Location



Monitoring Frequency & Parameters

Stormwater is sampled twice yearly and analysed for pH, total suspended solids, conductivity and BOD. Compliance visits are undertaken by Regional Council staff in relation to both the stormwater and air discharge consents and odour complaints.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. While trigger levels for stormwater have not been exceeded, improvements have been made to the on-site stormwater management such as installation of diversion channels diverting certain areas to trade waste.

A number of complaints have been received regarding nuisance odours beyond the site boundary. An Odour Management Plan was implemented in December 2012 which decreased the number of complaints, however, they have not been completely eliminated. Further odour controls were installed early in 2017 and further options for odour control will be considered.

2.2.2 *Keapa Road Green Waste Composting Facility*

Figure 10: Keapa Road Green Waste Composting Facility Location



Monitoring Frequency & Parameters

The Resource and Land Use Consents for this site apply a range of strict monitoring conditions which can be altered over time depending from initial outcomes. Monitoring is required for stormwater and leachate during construction of the site and operation of the facility, discharge of dust and odour, surface waters, groundwater, weather conditions and noise. There are also requirements for operations to comply with NZS 4454:2005, Composts Soils, Conditioners and Mulches.

Compliance

Compliance for the site varies between the site operator, WDC and the Regional Council. An Operational Management Plan includes compliance of the resource consent. The site operator and the Council are responsible for compliance with this plan and related consents while the Regional Council will check compliance with both and require related monitoring results to be submitted.

2.2.3 Burma Road Closed Landfill

The Burma Road landfill was closed to the public and stopped receiving waste in December 2009 when it closed.

Figure 11: Burma Road Closed Landfill Location

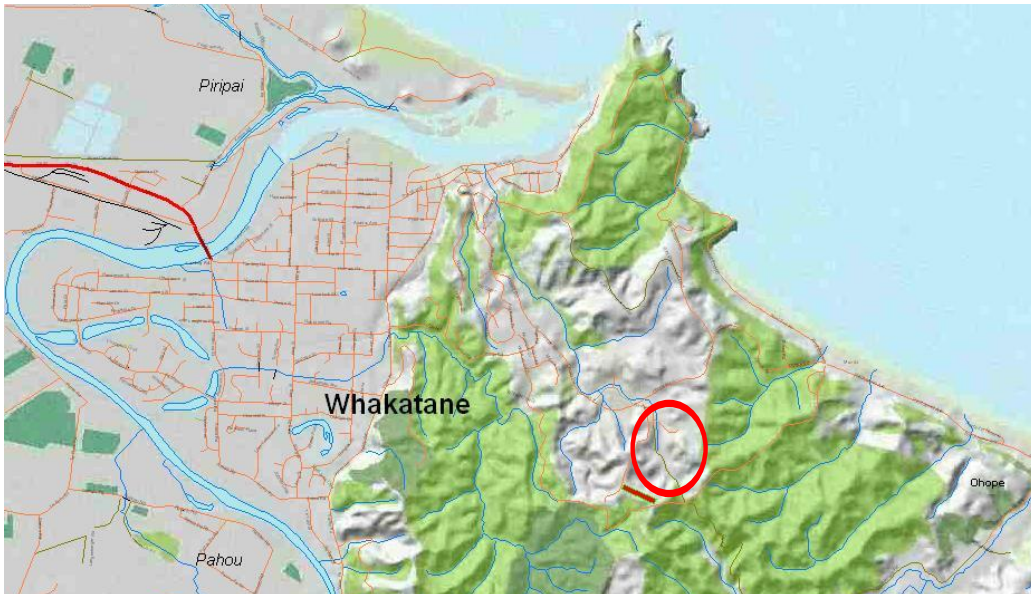


Figure 12: Burma Road Landfill Monitoring Locations



Monitoring Frequency & Parameters

Table 11 above lists the consents relating to this site which contain the groundwater, leachate and surface water monitoring requirements and the overall management of the site.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. There have been periods whereby trigger levels have been exceeded with the main boreholes. However, the concentrations have not required the need for remedial works. Concentrations of sampling criteria in the downstream surface water samples have not exceeded trigger levels.

Works to re-establish and upgrade stormwater controls were undertaken in 2018.

2.2.4 Awatapu Closed Landfill

The first known owner of the site was Dalgety NZ Ltd, who operated an abattoir and sales yard up until 1968. In 1968 the site was purchased by the Council and was used as a landfill until approximately 1975. Initially, refuse appeared to have been placed in the northern part of the site in trenches up to 10 m wide by 40 m long and 3 – 3.5 m deep. The trenches are reported to have not extended below groundwater level. Material excavated from the trenches was used to cover the refuse once the trenches were filled with refuse.

After 1971, refuse was dumped in an area of the site closer to Awatapu Drive. Investigations indicate that deep trenching was also used in this area. However, aerial photographs and the existing raised ground profile indicate that refuse was also piled high in this area.

Since the landfill closed in 1975, much of the land has been utilised as reserve land or for grazing by livestock owned by the local Riding for the Disabled Association (RDA). Some post-landfill closure site modification work is reported to have occurred in the reserve land in 1995. A contractor levelled much of the site, primarily to extend the grazing area for the RDA. The contractor reported that only soil, vegetation and concrete were encountered during the levelling operation.

The type and quantity of refuse disposed of at the site throughout its history is unclear. However, the refuse is believed to be general municipal refuse that was probably disposed of in an uncontrolled manner (i.e. no separation) (Assessment of Environmental Effects – Disused Awatapu Landfill Whakatane, Pattle Delamore Partners Ltd, 2001).

Figure 13: Awatapu Closed Landfill Location

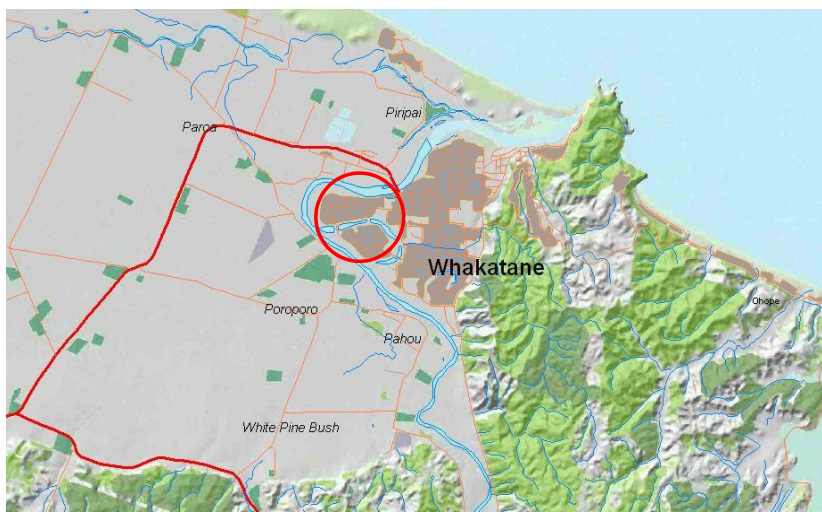


Figure 14: Awatapu Closed Landfill Monitoring Locations



Monitoring Frequency & Parameters

Table 11 above lists the consents relating to this site which contain the groundwater, leachate and surface water monitoring requirements and the overall management of the site.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. There have been periods whereby trigger levels have been exceeded, however the concentrations have not required the need for remedial works. Concentrations of sampling criteria in the downstream surface water samples have not exceeded trigger levels. The suit of analytes and frequency of monitoring has been reduced over the past few years based on positive monitoring results.

2.2.5 Matata Closed Landfill

The Matata site was completely covered by the 2005 debris flow. A successful application to BOPRC for permission to cease monitoring in September 2006 means that no further sampling or reporting is required.

Figure 15: Matata Closed Landfill Location

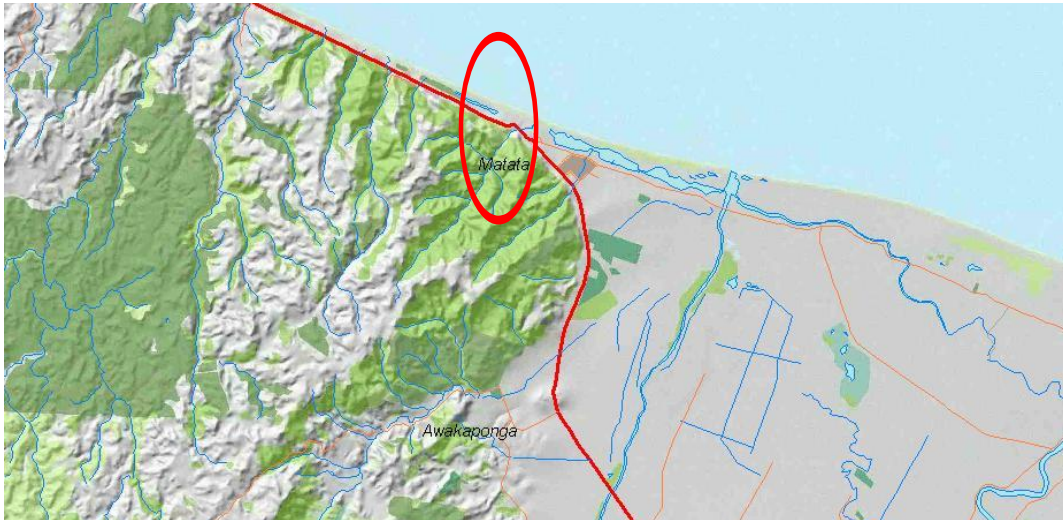


Figure 16: Matata Closed Landfill Location



2.2.6 Murupara Closed Landfill & Transfer Station

The Murupara Landfill was closed in 2004, at which time a Transfer Station was established to provide a service to the local communities. The facility transfers recyclable products, greenwaste and residual waste to the Whakatane Transfer Station. The site also has a number of ‘offal holes’ for community use. The landfill accepted municipal waste, which was disposed of in a controlled manner and now undergoes a monitoring programme in line with consent requirements.

Figure 17: Murupara Closed Landfill

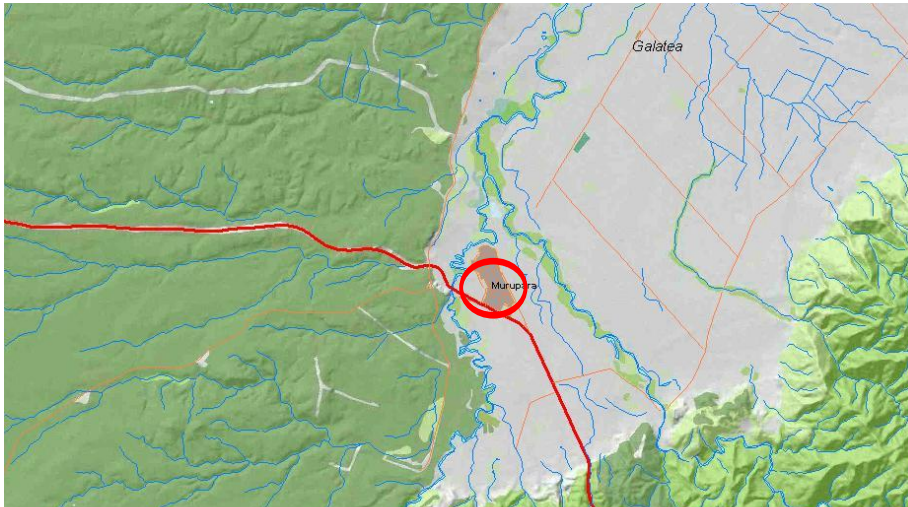
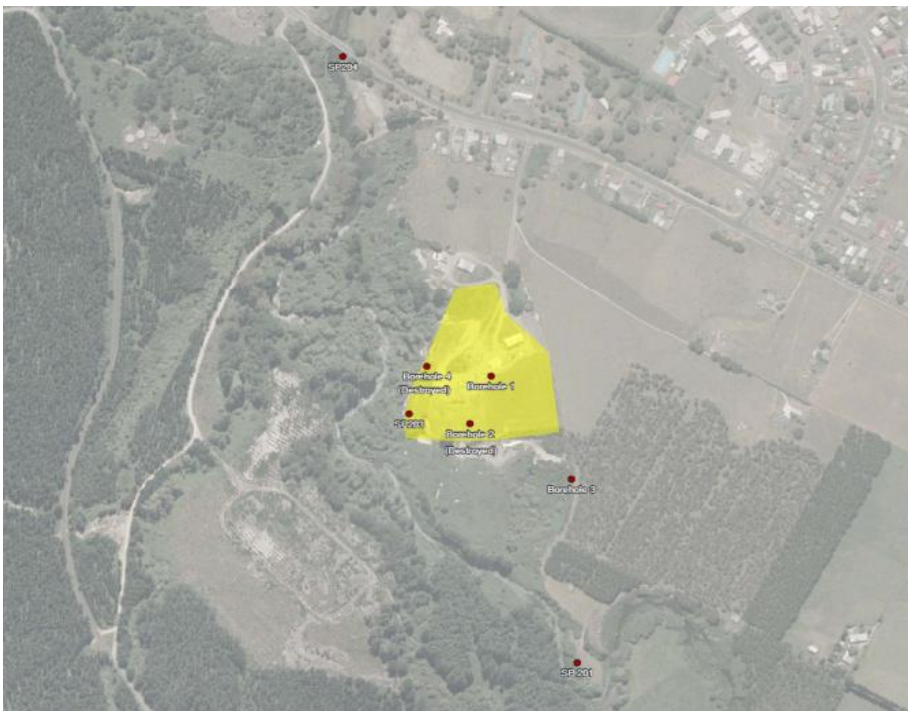


Figure 18: Murupara Monitoring Locations



Monitoring Frequency & Parameters

Table 11 above lists the consents relating to this site which contain the groundwater, leachate and surface water monitoring requirements and the overall management of the site.

Following an application to the Regional Council in 2009, an amendment to the consent was issued so that groundwater sampling now only occurs from boreholes 1 and 3.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. There have been periods whereby trigger levels have been exceeded, however the concentrations have not required the need for remedial works.

Concentrations of sampling criteria in the downstream surface water samples have not exceeded trigger levels.

2.2.7 Taneatua Closed Landfill

The Taneatua landfill ceased accepting refuse around 1995. Based on anecdotal evidence the site was in operation for approximately 40 years. It is believed that general municipal refuse was disposed at the former gravel pit. The type and quantity of refuse disposed of at the site throughout its history is unclear. However, the refuse is believed to be general municipal refuse that was probably disposed of in an uncontrolled manner (i.e. no separation and regularly burnt). The results of the current monitoring programme confirm that the site presents a low level of risk to the surrounding environment.

Figure 19: Taneatua Closed Landfill Location

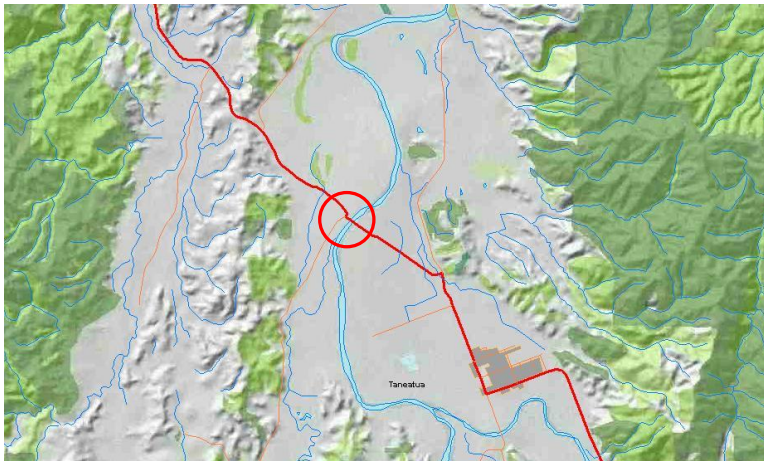


Figure 20: Taneatua Landfill Monitoring Locations



Monitoring Frequency & Parameters

Table 11 above lists the consents relating to this site which contain the groundwater, leachate and surface water monitoring requirements and the overall management of the site.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. There have been periods whereby trigger levels have been exceeded, however the concentrations have not required the need for remedial works. Concentrations of sampling criteria in the downstream surface water samples have not exceeded trigger levels. Based on positive monitoring results, the suit of sampling criteria and frequency of monitoring has been reduced since the consent was issued.

2.2.8 Te Teko Closed Landfill

Located on Tahuna Road, the Te Teko landfill site closed in 1993. The site was used for general dumping from around 1959 to its closure. In addition to general refuse the landfill also received a large volume of masonry and building material arising from the 1987 Edgecumbe earthquake, the bulk of this being dumped at the southern end of the site.

The area used as a dump is a river terrace and the central part of an old oxbow lake. A remnant pond is present at the northern end of the site, the southern pond has dried up and the area returned to pasture. Work has recently been completed to restore the rest of site to land to pasture while retaining the northern pond and wooded area to the northeast. The land will now be leased to a local farmer.

Figure 21: Te Teko Closed Landfill

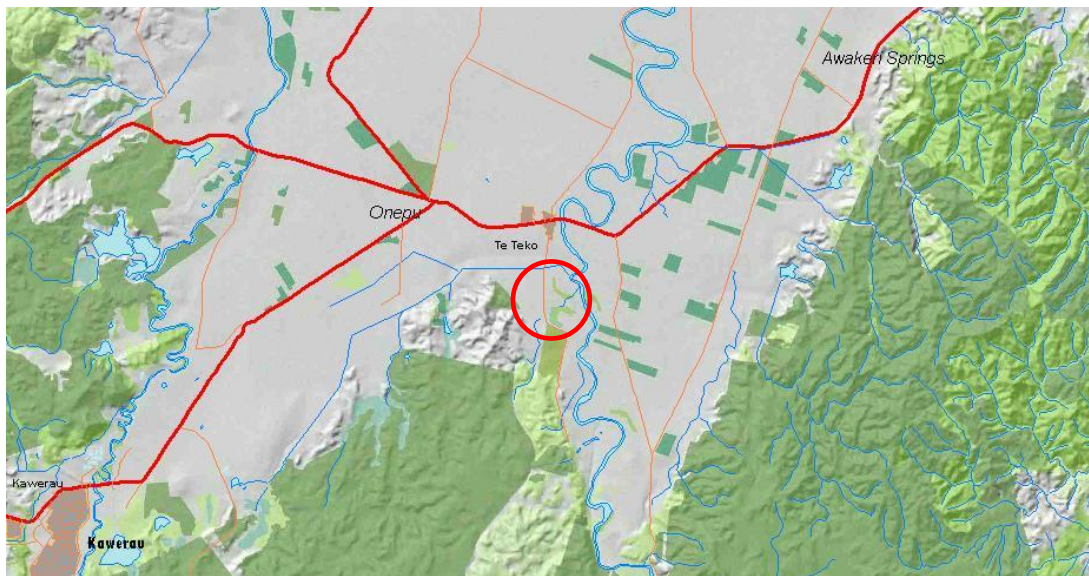


Figure 22: Te Teko Closed Landfill Monitoring Locations



Monitoring Frequency & Parameters

Table 11 above lists the consents relating to this site which contain the groundwater, leachate and surface water monitoring requirements and the overall management of the site.

Compliance

The conditions contained within the Resource Consents stipulate the reporting requirements in relation to the above monitoring. There have been periods whereby trigger levels have been exceeded, however the concentrations have not required the need for remedial works or follow up action. Based on positive monitoring results, the suit of sampling criteria and frequency of monitoring has been reduced since the consent was issued. As advised above work is being undertaken to restore some of the site to pasture as this a requirement of consent.

3 Potential Issues

The following information highlights some of the current issues associated with closed and operational sites.

3.1 Leachate Discharges

Leachate discharging from a landfill or green waste composting site can result in degradation of the receiving environment if the leachate is not minimised, contained or monitored.

Hazardous waste pollutants from a landfill site can enter the environment via a number of pathways which include the following:

- Heavy metals, such as copper, chromium and lead may be retained in the soil.
- Soluble materials, such as chloride, nitrate and sulphate may readily pass through the waste and soil to the groundwater system.

Mitigation Measures

- Monitoring
- Installation of leachate collection and disposal systems, stormwater interception systems
- Re-engineering of landfill linings, capping and containment structures

3.2 Contaminated Surface Run-off

Surface run-off from any site which holds or processes waste materials has the potential to pollute local waterways and soils.

Contaminates can be dissolved, suspended in solution or mobilised on the surface.

Mitigation Measures

- Monitoring
- Installation of stormwater interception systems
- Re-engineering sites
- Good housekeeping

3.3 Gas Emissions

Methane, ammonia, hydrogen sulphide, and nitrogen gases may be produced at landfill sites from compounds in the soil and the waste and may be released into the atmosphere. They present both environmental and health and safety issues.

Closed landfills can still produce significant quantities of methane over an extended period. It is also usual for gas to accumulate in an old landfill site and for there to be periodic uncontrolled emissions of gas. Site-specific investigations and specialist advice should be sought if any development is proposed on or within 50 metres of a closed landfill site.

Mitigation Measures

- Monitoring
- Flaring
- Capture and reuse
- Passive ventilation
- Preparation and implementation of Aftercare Management Plan

3.4 Odour Effects

The adverse effects of odour from any site which holds or processes waste can be a significant issue for surrounding communities. The resource consents for these sites will often contain conditions to control the release of odour from the site. These conditions are reflected in the Operating Management Plans for the sites.

Odours at sites can originate from the waste at the site, leachate and landfill gas. Odour can be a difficult effect to quantify and individual perceptions of odour often vary. Proven and effective operation and management practices can be implemented in order to minimise odour generation.

Mitigation Measures

- Monitoring
- Maintenance and review of a complaints register
- Preparation and implementation of an Operating and Odour Management Plans
- The use of odour reducing compounds (spraying and direct application)
- Complying with conditions of consent

3.5 Noise

Waste processing and storage sites generally produce noise as a result of traffic and machinery used in their operations. Measures to reduce noise levels can be incorporated in the site design including landscape planting, ground contours and bunds, sealing of the access roads and maintenance of machinery and vehicles.

Mitigation Measures

- Monitoring
- Preparation and implementation of an Operating Management Plan
- Compliance with conditions of consent

3.6 Dust

Dust can be caused at waste sites during dry, windy conditions from waste stored on site, waste being transported or traffic associated with the operation. The adverse effects of dust are soiling of structures and causing nuisance effects.

Mitigating Measures

- Implementation of dust control measures such as wetting down affected areas, covering waste and reducing traffic speed

3.7 Cultural/Social Effects

Discharges from waste sites may result in contamination, discolouration, odour, surface scum and detritus. These may result in the water being unsuitable for recreational purposes, or classified as wai piro or wai mate by local iwi. This may adversely impact on the public's enjoyment and use of waterways or the collection of shellfish and seafood from adjacent coastal areas.

Some closed landfills are capped and grassed and utilised as public open space or sports field facilities. The use of these areas by the public needs to be considered when considering health and safety issues relating to the use of closed landfills.

Mitigation Measures

- Monitoring of air and water quality
- Consultation with key stakeholders
- Development of protocols
- Due diligence prior to development

3.8 Landscape & Visual Effects

The disposal of solid waste in landfill sites results in a significant modification of the landform and the natural character of the landscape. The resulting visual effects need to be considered during the operation and after care of landfill and other waste sites so that it does not impact on the amenity of the wider environment.

Mitigation Measures

- Implementation and maintenance of landscape plan

3.9 Ecological Effects

Due to the toxic nature of discharges and emissions from waste sites, ecosystems are particularly vulnerable to increases in toxicity, heavy metals or nutrients in the land or water surrounding waste operations. The potential adverse ecological effects may include:

- Groundwater and soil contamination
- Ecosystem and habitat changes
- Deoxygenation of waterways
- Eutrophication (nutrient enrichment)
- Bioaccumulation (accumulation of contaminants in flora and fauna)

Mitigation Measures

- Monitoring
- Installation of leachate collection and disposal systems, stormwater interception systems
- Re-engineering of landfill linings, capping and containment structures

3.10 Health & Safety Issues

Health and safety issues of waste operation sites are managed by specific health and safety, and site management plans. A waste site may also constitute a risk to the health and safety of the public as well as employees. Health and Safety Management Plans should be strictly implemented and monitored at all sites. Discharges from sites can also cause adverse health and safety effects off-site and strict control of the mitigation measures mentioned in the previous sections can control these.

4 Future Requirements

The Whakatane Landfill (Burma Road) consent to deposit refuse expired in December 2009. Since then the refuse has been transported to a large privately owned landfill in the Waikato Region. It is unlikely that a regional landfill will be operated within the District or closer to the District in the near future. Therefore, the prediction is that the Council will be transporting the waste to the landfill in Waikato Region for the foreseeable future.

Council has six closed landfills; Whakatane, Te Teko, Taneatua, Awatapu, Murupara and Matata. With the exclusion of Matatā, the other closed landfills have ongoing monitoring requirements to ensure that any potential adverse effects are managed. Regular contact and reporting is provided to BOPRC and negotiations are held when required around the monitoring requirements based on the year's results, and whether or not these can be reduced or removed completely.

It is expected that monitoring at these closed landfills will decrease in future as the sites stabilise or consents expire.

Risk Management

This Solid Waste-asset specific risk management planning will provide the basis for future risk analysis and improvement planning. An overview of Risk Management is provided in Part A.

This section covers the risk management implemented by the Council and how these apply to the current and proposed future Solid Waste activities.

The objective of risk management is to identify the specific business risks, together with any possible risks to the health and safety of employees, other contractors and the general public, associated with the ownership and management of the Solid Waste assets. This can be used to determine the direct and indirect costs associated with these risks, and form a priority-based action plan to address them.

1 Key Risks

The Council's policies and operation cannot influence all the factors contributing to these events. However, the Council has a responsibility to assess the risks in order to best manage the assets within the resources available to avoid and mitigate the effects of any event.

2 Risk Register

The risk registers provided in the following tables for the current and future Solid Waste activities of Whakatane District have been developed in consultation with key staff and the Solid Waste Manager.

Table 133: Asset Management Risks - General

Risk Reference	Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)	Effectiveness	Net Risk (Considering measures in place)			Person(s) Responsible	Management Options	Improvement Plan Task Reference
			Consequence	Likelihood	Factor			Consequence	Likelihood	Factor			
SOL01	Lack of resources – the ability to attract key staff and or retain skilled staff.	Organisational Financial	4	4	16	<ul style="list-style-type: none"> ▶ District promotion (lifestyle) ▶ Dedicated HR staff ▶ Recruitment consultancy used (senior staff) ▶ Benchmarked salary levels. 	Good	4	1	4	<ul style="list-style-type: none"> ▶ HR Manager ▶ GM Infrastructure 	<ul style="list-style-type: none"> ▶ Look at review of recruitment policy - Family/Lifestyle friendly policies ▶ Look at improving Career development policy/programme needs completing ▶ Review salary levels and incentives ▶ Implement the Performance Development system 	

SOL02	Knowledge management – inability to retain knowledge or have sufficient systems in place to manage data/information, especially regarding asset performance and condition. Loss of institutional knowledge. IT failure.	Organisational Financial Operational Etc.	4	5	20	<ul style="list-style-type: none"> ▶ Asset changes/updates – Information currently provided by contractors ▶ Condition surveys undertaken ▶ IT practices (backup, virus, security etc.) 	Fair	4	4	16	<ul style="list-style-type: none"> ▶ HR Manager ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Responsibilities defined ▶ Suitable training for staff ▶ Protocols for update and ongoing auditing ▶ Customisation of Asset Management systems to meet needs ▶ Development of Staff Retention Policy ▶ Conduct AMP training for key staff 	
SOL03	Project Management – projects inadequately scoped, budgeted, managed and documented, and reviewed, inadequate consultation with owners, resource consent issues etc. resulting in time & cost, loss of image and other impacts.	Operational Financial Reputation/ Image Safety	4	5	20	<ul style="list-style-type: none"> ▶ Project Management Training for key staff ▶ Annual Plan/LTP Process (consultation) ▶ Use of trained external resource ▶ Have access to internal specialists. ▶ Media Communication Plan ▶ Appropriate resources (e.g. software/information systems) 	Good	3	3	9	<ul style="list-style-type: none"> ▶ HR Manager ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Ensure adequate (quality) training for key staff ▶ Initial project information better communicated ▶ Project Closure/Reviews improved ▶ Define accountabilities and mapping organisation wide impacts and priorities 	
SOL04	Operation and Contracts Management – unsatisfactory resulting in unnecessary or excessive costs and/or insufficient output or quality. Poor Contractor performance.	Operational Financial Reputation/ Image	4	5	20	<ul style="list-style-type: none"> ▶ Services Contracts ▶ Contract review and procurement process ▶ Contract conditions (KPI's, penalties) ▶ Financial reporting 	Good	3	3	9	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Improve Auditing and Reporting (including performance) ▶ Conduct a review of rural waste services ▶ Conduct a review of monthly reconciliation process 	SWIP16

SOL05	Capital Works Contract Management – unsatisfactory, resulting in unnecessary or excessive costs and/or insufficient output or quality. Poor Contractor performance.	Operational Financial Reputation/ Image	4	5	20	<ul style="list-style-type: none"> ▶ Standard Capital Works Contracts ▶ Approved design and specification ▶ Contract procurement process ▶ Contract conditions (KPI's, penalties) ▶ Financial reporting 	Good	3	3	9	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Improve Auditing and Reporting (including performance) ▶ Change at Te Tahi to manage odour (related to SOL8) 	SWIP8
SOL06	Asset Management – not up to date, or insufficient quality of process and output.	Operational Legislative Financial	4	4	16	<ul style="list-style-type: none"> ▶ Asset Management processes and practices ▶ Asset Information System 	Fair	4	4	16	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Finance 	<ul style="list-style-type: none"> ▶ Asset Management Plan - Improvement Plan ▶ Continuing Staff Development ▶ Ongoing budget provision 	SWIP13
SOL07	Inadequate condition/performance assessments – lack of reliable data for renewals/replacements and valuations.	Operational Financial	3	4	12	<ul style="list-style-type: none"> ▶ Internal and external feedback ▶ Condition assessments ▶ Some annual audits and monthly inspections 	Fair	3	3	9	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Continual assessments ▶ Review asset register for Solid Waste Assets ▶ Staff training ▶ Staff continuity ▶ Undertake a valuation assessment of all assets 	SWIP13

SOL08	Compliance with Legislation and legal requirements – inability or failure to comply with consents, statute and national standards. Increase in requirements.	Legislative Financial	4	5	20	<ul style="list-style-type: none"> ▶ Compliance with resource consents, RMA, funding requirements ▶ Contract Conditions ▶ Consents Conditions ▶ Internal audits ▶ Staff training and development ▶ Local government networking ▶ Use of external advice/resources ▶ Standard templates and some written Council procedures 	4	2	8	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Manager Policy 	<ul style="list-style-type: none"> ▶ Key staff to keep updated on current legislation ▶ Regular communications to staff ▶ Communicating effects of legislative change to Council/LTP/AP/WMMP processes ▶ Review Solid Waste Bylaw ▶ Create a reporting system for waste types and volumes from private operators ▶ Complete relevant sections of LTP and WMMP ▶ Investigate solutions for odour problems at Te Tahī St 	SWIP11 SWIP12 SWIP5 SWIP4 SWIP3 SWIP18
SOL09	Resource Consents – time and budget constraints impacting on project delivery (internal and external).	Legislative	4	4	16	<ul style="list-style-type: none"> ▶ Planning involvement at initial stage ▶ Monitoring of Consent requirements 	2	2	4	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Manager Planning 	<ul style="list-style-type: none"> ▶ Identify upfront what resource consents are required and develop a framework to ensure all legislative requirements are met 	SWIP11 SWIP12
SOL10	Public Health and Safety – accidents causing injury and or damage to Whakatane residents/visitors/or property resulting in claims and or negative publicity.	Public Health Financial Reputation/ Image	5	4	20	<ul style="list-style-type: none"> ▶ Programmes in place to identify areas, issues, risks that may impact on assets 	4	2	8	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ HR Manager ▶ Contract staff 	<ul style="list-style-type: none"> ▶ Implement H&S plans especially in Contract Management ▶ H&S and Environmental, contractor and site audits ▶ Incident/near-miss reviews 	

SOL11	Natural Hazards – (slips/flooding/coastal erosion/wind/tsunami/earthquake) causing damage to assets and or hindering development	Public and Environmental Health	5	4	20	<ul style="list-style-type: none"> ▶ Emergency response ▶ Civil Defence ▶ Hazard identification ▶ Design 		4	4	16	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Emergency Management Coordinator 	<ul style="list-style-type: none"> ▶ Liaise with Environment Bay of Plenty and Civil Defence to identify hazards and ensure emergency response mechanisms are in place in the event of a hazard occurring 	
SOL12	Technology – inability to track technology, engineering developments/techniques, local and national trends and to utilize where relevant.	Organisational	4	3	12	<ul style="list-style-type: none"> ▶ Activity group to actively keep up to date with industry advancements ▶ Regional Waste Committee involvement ▶ Membership of waste related groups and organisations 		3	1	3	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ IT Manager 	<ul style="list-style-type: none"> ▶ Staff training and exposure to latest trends (Waikato and Bay of Plenty Waste Liaison Group, Bay of Plenty Waste Resources Advisory Group, WasteMINZ) 	SWIP19 SWIP20
SOL13	Possible Political Interference , or inability of elected members to fulfil roles and responsibilities or disregard for community views.	Organisational	4	4	16	<ul style="list-style-type: none"> ▶ Councillors roles well defined and implemented ▶ Legislative requirements/ LTP/AP WMMP process ▶ Reports to Council and Community boards ▶ Councillor induction/ handbook ▶ Councillors conferences 		3	3	9	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Chief Executive 	<ul style="list-style-type: none"> ▶ Manage process through Executive Team, Council Committees and Community Boards 	SWIP15
SOL14	Decrease in funding – Including failure to acquire subsidies.	Organisational	3	2	6	<ul style="list-style-type: none"> ▶ Asset management process ▶ Prioritising projects/ LTP/AP/WMMP process ▶ Skill of staff/resources submitting external applications and reporting internally to Council 	Good	3	2	6	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Maintain and manage clear lines of communication with key external agencies ▶ Forecast likely scenarios regarding effects of budget changes ▶ Using sustainable practices ▶ Increasing efficiency ▶ Rationalise spending 	

Table 144: Asset Management Risks – Solid Waste

Risk Reference	Risk Descriptor – details the main component and provides an example of a risk(s) that may be attributable	Risk Type	Gross Risk (No effective measures in place)			Current Practice/Strategy (Avoidance and mitigation measures)		Net Risk (Considering measures in place)			Person(s) Responsible	Management Options	Improvement Plan Task Reference
			Consequence	Likelihood	Factor	Description	Effectiveness	Consequence	Likelihood	Factor			
SOL15	Asset Valuation: Inaccurate/out of date unavailable asset valuations	Financial	4	4	16	▶ Assets valued at interval	Fair	3	3	9	▶ Manager Solid Waste ▶ Finance	▶ Undertake review of Solid Waste Assets and obtain up to date valuations	SWIP13
SOL16	Building Failure: Defective building facilities causing injury, closure, loss of revenue.	Operational Public Health	4	4	16	▶ Building Maintenance Programme ▶ Contract agreements with building operators ▶ Professional Services Provider	Fair	4	2	8	▶ GM Infrastructure ▶ Manager Solid Waste	▶ Review Contract specifications	SWIP13
SOL17	Lack of Security – resulting in costs due to theft, damage, insurance, closure, loss of revenue.	Operational	2	4	8	▶ Controlling entry gates to facilities	Fair	2	3	6	▶ Manager Solid Waste	▶ Review contract specifications ▶ Audit security at sites	

SOL18	Leachate contamination from closed landfills and composting sites: Leachate seeps from landfill and contaminates surrounding environment.	Operational	3	4	12	<ul style="list-style-type: none"> ▶ Monitoring as per resource consent conditions 	Good	3	2	6	<ul style="list-style-type: none"> ▶ Manager Solid Waste ▶ Monitoring Consultants (OPUS) 	<ul style="list-style-type: none"> ▶ Continue with current practice 	SWIP11 SWIP12
SOL19	Illegal Dumping of Rubbish – due to decrease in service level (e.g. missed collections, costs of disposal, distance to travel).	Operational	3	4	12	<ul style="list-style-type: none"> ▶ Signs disallowing dumping of rubbish ▶ Management of contracts ▶ Monitor complaints ▶ Bylaw enforcement 	Fair	3	2	6	<ul style="list-style-type: none"> ▶ Manager Solid Waste ▶ Manager Community Regulation 	<ul style="list-style-type: none"> ▶ Advertise & promote reduction, recycling and zero waste 	
SOL20	Recycling Receiving Services - no longer require materials.	Operational/ Financial/ Environmental	3	2	6	<ul style="list-style-type: none"> ▶ Knowledge of recycling technology and demand 	Good	3	2	6	<ul style="list-style-type: none"> ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Continue with current practice 	
SOL21	Closed landfill – Safety.	Public Health	3	3	9	<ul style="list-style-type: none"> ▶ Monitoring and reporting ▶ Resource Consents ▶ Alternative processes 	Good	3	2	6	<ul style="list-style-type: none"> ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Continue with current practice 	SWIP11 SWIP12

3 Risk Action Plan

Table 15 is compiled from the Risk Register and highlights the most significant Net risks faced by the Solid Waste activity.

Table 155: Asset Management Risk Action Plan – Solid Waste

Risk Reference	Risk Descriptor	Risk Type	Net Risk	Action	Responsibility	Improvement Plan Actions	Timeframe
SOL04	Operation and Contract Management – unsatisfactory resulting in unnecessary or excessive costs and/or insufficient output or quality. Poor Contractor performance.	Operational Financial Reputation/ Image	9	<ul style="list-style-type: none"> ▶ Improve Auditing and Reporting (including performance) ▶ Conduct a review of rural waste services ▶ Conduct a review of monthly reconciliation process 	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Conduct a review of waste data in line with National Waste Data Framework ▶ Conduct a review of solid waste monthly reconciliation 	<ul style="list-style-type: none"> ▶ Aug 2018 ▶ Aug 2018
SOL05	Capital Works Contract Management – unsatisfactory, resulting in unnecessary or excessive costs and/or insufficient output or quality. Poor Contractor performance.	Operational Financial Reputation/ Image	9	<ul style="list-style-type: none"> ▶ Improve Auditing and Reporting (including performance) 	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Complete yearly review of 2016 Solid Waste Services Contract 	2017/18
SOL06	Asset Management – not up to date, or insufficient quality of process and output.	Operational Legislative Financial	16	<ul style="list-style-type: none"> ▶ Asset Management processes and practices ▶ Asset Information System 	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Finance 	<ul style="list-style-type: none"> ▶ Carry out a review of the current asset register, in terms of completeness and accuracy of information of solid waste assets. 	▶ 2017/18
SOL07	Inadequate condition/performance	Operational	9	<ul style="list-style-type: none"> ▶ Continual assessments 	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste 	<ul style="list-style-type: none"> ▶ Carry out a review of the current asset register, in terms of completeness 	▶ 2017/18

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	assessments– lack of reliable data for renewals/replacements and valuations.	Financial		<ul style="list-style-type: none"> ▶ Review asset register for Solid Waste Assets ▶ Staff training ▶ Staff continuity ▶ Undertake a valuation of all assets 		and accuracy of information of solid waste assets	
SOL08	<p>Compliance with Legislation and legal requirements – inability or failure to comply with consents, statute and national standards. Increase in requirements.</p>	Legislative Financial	8	<ul style="list-style-type: none"> ▶ Monitoring of expiring consents and identifying new consents to be improved ▶ Key staff to keep updated on current legislation ▶ Regular communications to staff ▶ Communicating effects of legislative change to Council/ LTP/AP/WMMP processes ▶ Review Solid Waste Bylaw ▶ Create a reporting system for waste types and volumes from private operators ▶ Complete relevant sections of LTP and WMMP 	<ul style="list-style-type: none"> ▶ GM Infrastructure ▶ Manager Solid Waste ▶ Manager Policy 	<ul style="list-style-type: none"> ▶ Review current Solid Waste Bylaw with the possibility of changing to include licensing of private operators and reporting of waste types/amounts. ▶ Create a reporting system for recording of waste types and volumes from private operators. ▶ Complete a review of Waste Management and Minimisation Plan in line with LTP process. ▶ Council will continue to report progress in solid waste management and minimisation through the Annual Plan and reporting to Project and Services Committee. 	<ul style="list-style-type: none"> ▶ 2018 ▶ 2018 ▶ 2021 ▶ Ongoing
SOL15	<p>Asset Valuation: Inaccurate/out of date unavailable asset valuations</p>	Financial	9	<ul style="list-style-type: none"> ▶ Undertake review of Solid Waste Assets and obtain up to date valuations 	<ul style="list-style-type: none"> ▶ Manager Solid Waste ▶ Finance 	<ul style="list-style-type: none"> ▶ Carry out a review of the current asset register, in terms of completeness and accuracy of information of solid waste assets 	<ul style="list-style-type: none"> ▶ 2017/18

Lifecycle Management

This Lifecycle Management (LCM) section provides the broad strategies and work programmes required to achieve the goals and objectives set out in previous sections of this plan. This section covers the assets listed in Table 16.

Table 166: Assets Covered in LCM

Site	Assets
Te Tahi Refuse Transfer Station	Recycling Building and associated components, Waste Transfer Station building and associated components, Fencing, Hard Stands etc.
Awatapu Closed Landfill	Boreholes
Murupara Transfer Station & Closed Landfill	Transfer Station (Shed, Concrete pit), Fencing, Boreholes, Roding, Septic Tank, Water Supply, Stormwater Control, Offal Pits
Burma Road, Closed Landfill	Leachate pond and pumps, Stormwater Pond, boreholes
Taneatua Closed Landfill	Boreholes, Fencing
Te Teko Closed Landfill	Fencing, Planting, Water Supply
Keepa Rd, Green Waste Composting Facility	Road, Fencing, Leachate/Stormwater pond/pump/pipes

This Plan covers the lifecycle of the solid waste activities including:

- Overview
- Key issues
- Asset description
- Asset age & condition
- Operations & Maintenance Plan
- Renewal Plan
- Capital Works Plan
- Disposal Plan

These items are discussed in more detail in the Asset Summary. Further analysis has been undertaken on sub groups of assets as required.

1 Work Category Definitions

Expenditure on infrastructure assets can be categorised into three main areas, which are discussed below

Operations and Maintenance

Operations and Maintenance expenditure is that required for the day-to-day operation of the network whilst maintaining the current levels of service.

Replacement (Renewals)

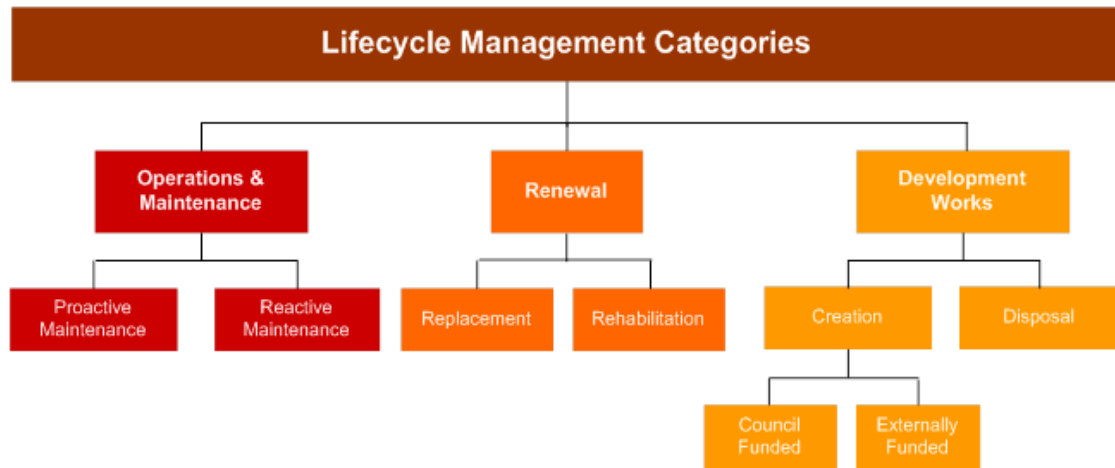
Renewal expenditure includes rehabilitation and replacement of assets to restore an asset to its original level of service, i.e. capacity or the required condition. Renewals expenditure forecasts cover the cost of asset renewal through its whole lifecycle through to disposal of the asset.

Capital Works (New Works)

Capital works (new works) involves the creation of new assets, or works, which upgrade or improve an existing asset beyond its current capacity or performance in response to changes in usage or customer expectations.

These categories are described in more detail in the section: [Projects and Financial Forecasts](#).

Figure 23: Components of lifecycle management categories.



2 Solid Waste Overview

This lifecycle management section focuses on the assets that deliver solid waste services throughout the Whakatane District.

Closed landfills have lifecycles in relation to the provision of aftercare through the on-going management of discharges so as to avoid, mitigate or remedy an adverse effects on the environment.

2.1 Key Issues & Strategies

The key issues relating to the management of the Solid Waste activity is as shown in Table 17.

Table 177: Solid Waste Key Issues & Strategies

Key Issue	Strategies to Address Key Issues
<ul style="list-style-type: none"> ▶ Ongoing monitoring of the closed landfills, transfer stations and composting facility 	<ul style="list-style-type: none"> ▶ Compliance with Resource Consents
<ul style="list-style-type: none"> ▶ Management of odour issues at Whakatane RTS 	<ul style="list-style-type: none"> ▶ Ongoing monitoring and Investigating options to manage the odour issues

3 Overview

3.1 Operational Asset Summary

Table 18 contains a summary of the solid waste assets currently owned by the Council, including average age and expected useful life. The Gross Replacement Cost (GRC), Optimised Depreciated Replacement Cost (ODRC), annual depreciation are based on 2018 valuations.

Table 188: Operational Asset Inventory

Asset	Base Life (Av) Life(Average)	Age (Average)	Condition (Average)	GRC (\$)	ODRC (\$)	Dep. (\$)
Murupara RTS	50	29		420,007	350,000	5,500
Whakatane RTS	56	29	-	2,300,000	2,300,000	46,535
Keepa Rd Composting Site	100	2		300,000	300,000	6,875
TOTAL				3,020,007	2,950,000	108,410

3.2 Non Operational Assets

Monitoring and management of five closed landfills is a significant aspect of the solid waste activity and the Council is working closely with the Bay of Plenty Regional Council on this as well as related consent requirements.

The Council-owned site facilities and infrastructure are not currently valued by the Council for formal depreciation and renewal purposes. Nevertheless, annual budget provisions are made for the replacement of minor site assets as required. The valuation of these Solid Waste assets is currently limited to valuation of the land and minor improvements only. The current land values are recorded in Table 19.

Table 199: Non-Operational Assets

Asset	Base Life (Av) / Life (Average)	Age (Average)	Condition (Average)	Land Value (\$)	Improved Value (\$)	Capital Value (\$)
Awatapu Closed Landfill	N/A	N/A	N/A	45,000	2,000 ²	47,000
¹ Burma Road Closed Landfill	N/A	N/A	N/A	N/A	80,000 ²	80,000
Murupara Closed Landfill	N/A	N/A	N/A	116,000	2,000 ²	118,000
Tāneatua Closed Landfill	N/A	N/A	N/A	12,000	2,000 ²	14,000
Te Teko Closed Landfill	N/A	N/A	N/A	32,000	2,000 ²	34,000
TOTAL				205,000	90,000	293,000

¹ Burma Road site is not owned by the Council

²

3.3 Data Confidence and Reliability

Table 20 provides the confidence framework (NAMS IIMM) used to determine the confidence in the asset data used in this AMP.

Table 200: Asset Data - Confidence Grades

Confidence Grade	General Meaning
Highly Reliable	Data based on sound records, procedure, investigations and analysis, documented properly and recognised as the best method of assessment.
Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
Uncertain	Data based on records, procedures, investigations and analysis which are incomplete or unsupported, or extrapolated from a limited sample for which a grade of highly reliable or reliable data is unavailable.
Very Uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.

3.4 Asset Condition

It is critical that the Council has clear knowledge of the condition of their assets and how they are performing. An asset register including condition has been compiled to enable understanding of future expenditure patterns and management decisions regarding maintenance, replacement and renewals.

The development and continued use of condition assessment data will allow preparation of verifiable predictive decay curves for particular asset types and hence permit prediction of remaining life.

3.5 Condition Assessment & Results

The condition assessment model in Table 21 should be the basis of assessing the asset condition of Council's assets.

Table 211: Typical Condition Rating Model

Grade	Condition	Description of Condition
1	Very Good	Sound physical condition. Asset likely to perform adequately without major work for 25 years or more.
2	Good	Acceptable physical condition; minimal short-term failure risk but potential for deterioration in long-term (15 years plus). Minor work required
3	Fair	Significant deterioration evident; failure likely within the next 5 years but further deterioration likely and major replacement likely within next 15 years, Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service.
4	Poor	Failure likely in short-term. Likely need to replace most or all of assets within 5 years. No immediate risk to health or safety but works required within 3 years ensuring asset remains safe. Substantial work required in short-term, asset barely serviceable

5	Very Poor	Failed or failure imminent. Immediate need to replace most or all of asset. Health and safety hazards exist which present a possible risk to public safety or asset cannot be serviced/operated without risk to personnel. Major work or replacement required urgently
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The condition of each asset sub group has been analysed under each location in the following sub sections.

3.6 Asset Valuation

3.6.1 Land and Improvement Values

For those assets which are now non-operational (closed landfills) the Council has adopted the respective site's land value to represent its investment. The total capital value of the closed landfill sites is \$205,000. See Table 19. Land is not depreciated by the Council.

3.7 Asset Capacity and Reliability

The Whakatāne and Murupara RTS provide reliable services and are capable of meeting demands from kerbside collections and public drop-offs.

All council owned landfills are closed and therefore considered as having reached their capacity.

The Keepa Rd green waste composting facility is capable of meeting demand for the foreseeable future.

Maintenance impacts can be restricted by preventative maintenance regimes, regular inspections and testing. Effective consultations with users of assets can also ensure they are meeting operational requirements.

4 Whakatane Refuse Transfer Station (RTS)

4.1 Overview

The Whakatāne RTS was established in 2005. The RTS provides for residents of the district to dispose of refuse and recoverable items. The site is mainly associated with the separation of recoverable materials including glass, paper/cardboard, plastics, steel, aluminium and green waste. The site also receives general household refuse, which is transported to the landfill.

The RTS transfer shed was built on site in 2009 to facilitate bulk transfer of waste into larger trucks for transport to Tirohia Landfill.

4.2 Key Issues

- Odour from the RTS continues to be an issue. Odour controls were upgraded in 2017 and the result is still been quantified.
- The use of a deodorising spray system has caused deterioration to the RTS shed.
- There has been slight subsidence in one corner of the concrete slab next to the saw-tooth public drop off area.

- During 2014 improvements were made to the stormwater management system and further improvements were made in 2017 to divert contaminated waters from the transfer shed.
- A new concrete operational pad was installed in 2016 to control run-off from wood waste and tyres.
- A new security gate was installed in 2017 to control access.
- An upgrade of the deodorising system was undertaken in 2017.

4.3 Asset Description

Table 22 provides an overview of the RRC/RTS in Whakatāne District. The RRC/RTS operates 7 days per week (closed 25 December, 1 January and Good Friday). There are a number of asset groups associated with the operation of the facility. Table 22 outlines the main asset groups that have been analysed as part of the AMP.

Table 222: Whakatāne RTS Asset Summary (2018)

Component			
Buildings			
Recycling Centre	738	m ²	\$315,000
Recycling Centre Canopy	94.7	m ²	\$15,000
Office	71.1	m ²	\$110,000
Office Canopy	8.4	m ²	\$5,000
			\$445,000
Refuse Transfer Station	617	m ²	\$825,000
Refuse Transfer Station Canopy	151	m ²	\$40,000
			\$67,000
Weighing Station	9	m ²	\$11,000
Weighing Station Decking	1	m ²	\$1,000
Weighbridge			\$55,000
			\$67,000
Total Buildings Value			\$1,377,000
Other Improvements			
Fencing, Sealed Yards and Roding			\$173,000
Total Other Improvements Value			\$173,000
Land			
Item	10726 m ²	@ \$70 per m ² =	\$750,820
Total Land Value			\$750,000
Market Value			\$2,300,000

4.4 Condition Assessment

It is critical that the Council has a clear knowledge of the condition of assets and how they are performing. An asset register including condition will need to be compiled to enable the Council to understand future expenditure patterns and management decisions regarding maintenance, replacement and renewals.

A formal condition assessment has not been carried out for these assets. However, one will need to be undertaken in future.

4.5 Maintenance & Operations Plan

The Council is mainly responsible for the RTS facilities, however, under Contract 16/18 it is the Contractors responsibility to undertake maintenance of a small number of these.

The Manager Solid Waste is the administrator of Contract 16/18 and periodically inspects the RTS operations. Other aspects of maintenance and operations include:

- Stormwater cesspits and the oil/grit separator are maintained by the contractor.
- Spray system is maintained by Pipe Line Plumbing.
- The Weighbridge and associated electronics are maintained by contractors, which includes an annual calibration of the equipment

4.6 Renewals Plan

The condition of assets is informally monitored routinely during the day-to-day operation of the facilities and inspection of the facility is undertaken by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required. At present due to the relatively young age of the facility, renewals requirements are minimal.

Refer to [Projects and Financial Forecasts](#).

4.7 New Works Plan

There are no new works planned at this time.

4.8 Disposal Plan

The Council has no plans to dispose of any RTS assets at this time with the exception of assets that reach the end of their useful life within the 20-year period and are replaced as part of the renewal program.

Refer to [Projects and Financial Forecasts](#).

5 Burma Road Closed Landfill

The Burma Road landfill has been closed since December 2009. The land area occupied by the landfill forms part of a large 34.5ha land parcel owned by Ngāti Awa Properties Limited. The Council has ongoing obligations through its resource consent requirements to monitor the site and maintain the stormwater and leachate collection systems.

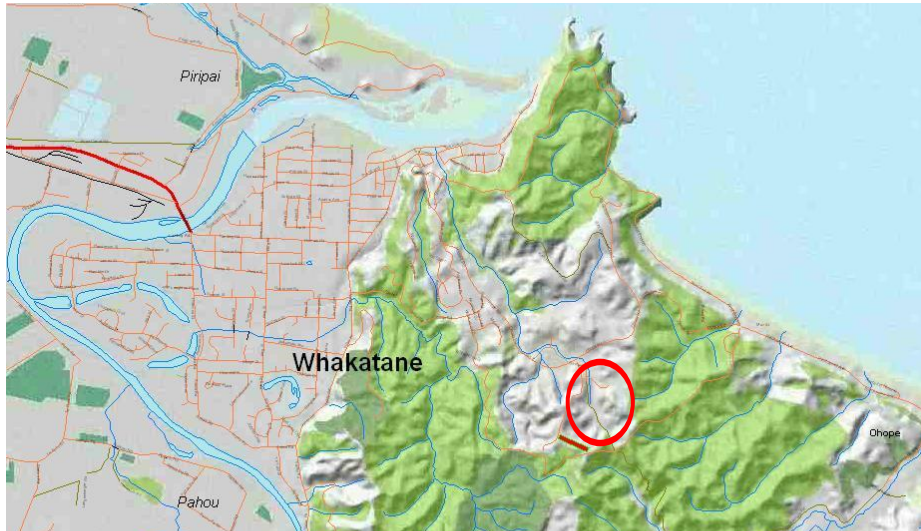
5.1 Key Issues

- Ongoing compliance with Resource Consents

5.2 Asset Description

Figure 24 shows an overview of the Burma Road Landfill.

Figure 24: Burma Road Landfill



The following main asset groups are located at the Burma Road Landfill:

5.2.1 Groundwater Control System

A subsoil drain system has been installed at a depth of 6 m across the base of the valley (installed 2000). This was installed down to the underlying sandstone. Flow picked up by the subsoil drain is directed to the leachate control system. The subsoil drain is backfilled with coarse gravel to ground surface, creating a soak-away area for runoff from the landfill face.

On the east boundary adjacent to the Ohope reserve the boundary was lined with a polypropylene liner to a depth of up to 12 m to ensure no flow would cross the groundwater divide to the reserve. This liner is now buried and in the retired area of the landfill (Dec 2006).

A further length of the sidewall in the southeast section against the reserve was lined with 1.5 mm HDPE in March 2007. This liner was installed primarily for gas control purposes.

5.2.2 Leachate Control System

The leachate control system is designed to intercept and extract as much leachate as possible from the fill, within the limitations of an existing unlined base. The leachate control system comprises of:

- The subsoil drainage system.
- A pump well, leachate delivery pump.
- An overflow pond (lined with HDPE) for use in event of heavy inflows or power outage
- A rising main, which delivers the leachate to the Whakatane sewerage system.

5.2.3 Gas Control

Gas control at the site consists of:

- Gas drainage trenches and vents on the north, east and west boundary within the Stage 1 retirement area.
- A herring bone gas collection trench system with 5 stack vents beneath the completed landfill cap of the Stage 1 retirement area.
- An HDPE gas barrier installed on the south east boundary against the Ohope Reserve (March 2007)

5.2.4 Access Road

The access road was partly sealed during operation of the landfill. Since the capping of the landfill the road has not been maintained and is in state of deterioration. No works are planned to maintain the road as it is no longer used.

5.3 Condition Assessment

No formal assessment of condition has been undertaken at this time. This information is critical to the overall life cycle management of assets, with regards to maintaining the asset at minimum cost, whilst maintaining required levels of service and minimising risk.

5.4 Renewals Plan

The condition of assets is informally monitored routinely during the inspections of the facilities. Renewal needs are recorded and remedial works prioritised and programmed as required.

The leachate pump was replaced in early 2007 following the planned maintenance and condition assessments carried out by the OBU. The pump is next scheduled to be replaced in 2017/18.

Refer to the [Projects and Financial Forecasts](#) section.

5.5 New Works Plan

New works were undertaken in 2018 to control stormwater and surface erosion which has been exacerbated by grazing cattle.

Refer to the [Projects and Financial Forecasts](#) section.

5.6 Disposal Plan

The Council has no plans to dispose of any Burma Road landfill assets at this time with the exception of assets that reach the end of their useful life within the 20-year period and are replaced as part of the renewal program. However, the site will be handed over back to the landowners once current capital works are completed and a time frame is agreed with the landowners.

Refer to the [Projects and Financial Forecasts](#) section.

5.7 Aftercare Plan

The maintenance of the closed Burma Rd Landfill is outlined in the council's 'Burma Road Closed Landfill – Aftercare Plan 2010'.

Aftercare will continue until such time as the leachate and gas monitoring shows the volume and strength of leachate to be reduced sufficiently for active management of leachate and gas to cease and no other significant problems are evident. The period for this will be determined in consultation with Environment BOP and Ngati Awa Group Holdings Ltd (NAGHL) but is expected to be at least 20 years after closure of the site.

5.8 Site use

The site will be used for grazing as part of the wider NAGHL farm operation. Areas will be retired and landscape planted.

5.9 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the Environmental Stewardship section of this AMP.

During 2013/14 new gas monitoring bores were installed at the landfill to assist with consent monitoring requirements.

6 Murupara Transfer Station and Closed Landfill

The Murupara landfill was closed in 2004, at which time a Transfer Station was established to provide a service to the local communities. The facility transfers greenwaste, residual waste and recyclable products to the Whakatāne Transfer Station.

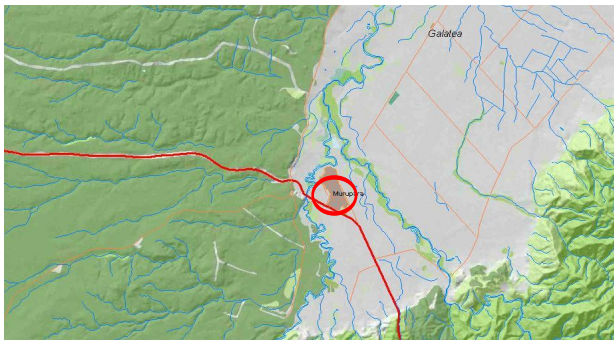
6.1 Key Issues

- Ongoing monitoring of the closed landfill

6.2 Asset Description

Figure 24 provides an overview of the Murupara Transfer Station and Closed Landfill.

Figure 25: Murupara Transfer Station and Closed Landfill



There are a number of asset groups associated with the operation of the facility, including the main building. The following table outlines the main asset groups that have been analysed as part of the AMP.

Table 23 summarises the Murupara Transfer Station and Closed Landfill Asset valuation.

Table 233: Murupara Transfer Station and Closed Landfill Asset Summary 2018

Depreciation Replacement Cost Approach			
Building(s)			
Item	Area	Rep.Rate	Cost
Recycling Shed	300.00 m ²	\$665 /m ²	\$199,500
Galvinised Iron Shed	57.0 m ²	\$480 /m ²	\$27,379
Dangerous Goods Shed	4.0 m ²	\$2,280 /m ²	\$9,120

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Workshop/Storage	274.8 m ²	\$520 /m ²	\$142,896
Total	635.8 m²	\$596 /m²	\$378,895

Other Improvements

Driveways, Fencing and concrete pads			\$10,000
Total Other Improvements			\$10,000

Professional Fees		8.00%	\$31,112
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Total Reinstatement Cost			\$420,007
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Less Depreciation		48.00%	-\$201,612
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Depreciation Replacement Cost of Improvements			\$218,395
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Land Value

Land-easy undulating	4.0000 ha	\$25,000 /ha	\$100,000
River Bank and rough cover	6.2815 ha	\$5,000 /ha	\$31,408
Total Land Value		Adopt	\$130,000

Indicated Market Value			\$348,395
		Adopt	\$350,000

6.3 Condition Assessments

No formal assessment of condition has been undertaken at this time. This information is critical to the overall life cycle management of assets, with regards to maintaining the asset at minimum cost, whilst maintaining required levels of service and minimising risk.

Condition surveys will be undertaken, once available this information will be updated into this section

6.4 Maintenance and Operations Plan

Waste Management NZ Ltd holds the contract to operate and manage the Transfer Station, including the cartage of wastes to the Whakatāne RTS. Maintenance activities are the responsibility of the Council.

Two of the landfill monitoring boreholes are no longer used and with agreement from the Regional Council they are no longer required for monitoring purposes. One of the remaining bores was damaged by farm machinery in 2013 and has been replaced.

6.5 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the [Environmental Stewardship](#) section of this AMP.

6.6 Renewals Plan

The condition of assets is informally monitored routinely during the inspections by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required.

Refer to the [Projects and Financial Forecasts](#) section.

6.7 Capital Works Plan

No significant capital works have been identified other than normal maintenance works.

6.8 Disposal Plan

Whakatane District Council has no plans to dispose of any Murupara Closed Landfill or Transfer Station assets at this time with the exception of assets that reach the end of their useful life within the 10-year period and are replaced as part of the renewal program.

Refer to the [Projects and Financial Forecasts](#) section.

7 Awatapu Closed Landfill

Since the landfill closed in 1975 much of the land has been utilised as reserve land or for grazing by livestock owned by the local Riding for the Disabled Association (RDA). The type and quantity of refuse disposed of at the site throughout its history is unclear. The refuse is believed to have been general municipal waste that was likely disposed of in an uncontrolled manner.

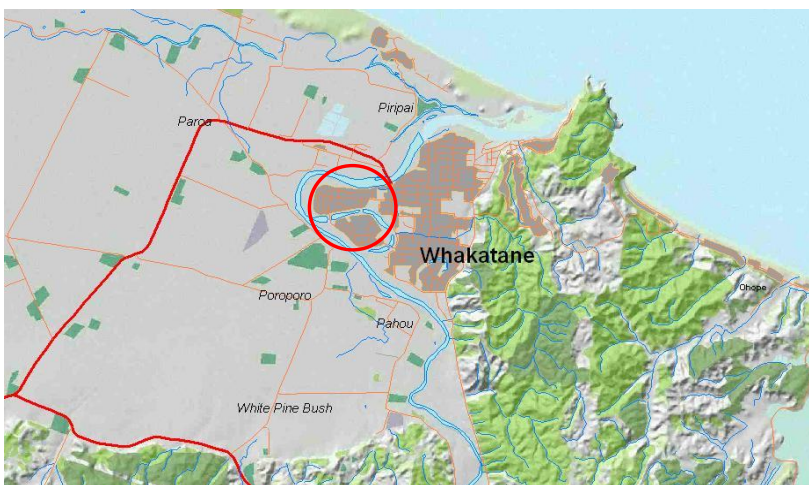
7.1 Key Issues

- Located in a small urban area. The Council has bought properties in the past that neighboured the site.
- Area is utilised by the Riding for the Disabled Association (RDA). Area is covered in grass and also has a hardstand area for the use by the RDA.
- Awatapu lagoon in close proximity. Monitoring results would suggest minimal impact on surface water.

7.2 Asset Description

Figure 26 provides an overview of the Awatapu Closed Landfill.

Figure 26: Awatapu Closed Landfill



7.3 Condition Assessment

No formal assessment of condition has been undertaken at this time. This information is critical to the overall life cycle management of assets, with regards to maintaining the asset at minimum cost, whilst maintaining required levels of service and minimising risk.

Condition surveys will be undertaken, once available this information will be updated into this section

7.4 Maintenance and Operations Plan

There is no scheduled maintenance associated with the Awatapu Closed Landfill site. The RDA utilise the site and subsequently graze the vegetated capping area.

7.5 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the [Environmental Stewardship](#) section of this AMP.

7.6 Renewal Plan

The condition of assets is informally monitored routinely during the inspections by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required.

Refer to the Projects and Financial Forecasts section.

7.7 Capital Works Plan

No significant capital works have been identified other than maintenance works as required.

7.8 Disposal Plan

The Council has no plans to dispose of any Awatapu Closed Landfill assets at this time with the exception of assets that reach the end of their useful life within the 20-year period and are replaced as part of the renewal program.

Refer to [Projects and Financial Forecasts](#) section.

8 Taneatua Closed Landfill

The Taneatua Landfill closed in 1995. The site was in operation for approximately 40 years, receiving waste from the surrounding area. The filling essentially took place in a retired gravel pit.

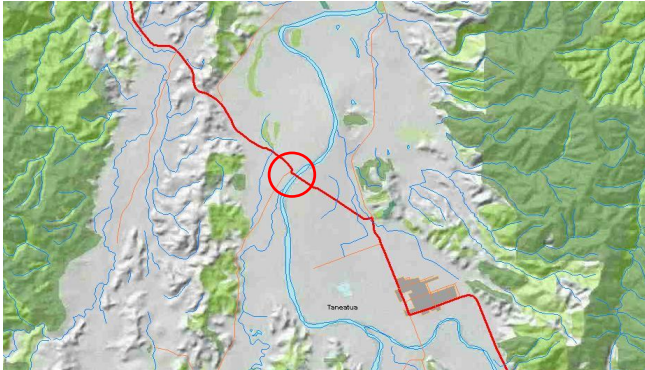
8.1 Key Issues

- Ongoing environmental monitoring

8.2 Asset Description

Figure 27 provides an overview of the Taneatua Closed Landfill.

Figure 27: Taneatua Closed Landfill



8.3 Condition Assessment

No formal assessment of condition has been undertaken at this time. This information is critical to the overall life cycle management of assets, with regards to maintaining the asset at minimum cost, whilst maintaining required levels of service and minimising risk.

Condition surveys will be undertaken, once available this information will be updated into this section

8.4 Maintenance Plan

There is no scheduled maintenance associated with the Taneatua Closed Landfill site. The site is leased out for grazing.

8.5 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the [Environmental Stewardship](#) section of this AMP.

8.6 Renewal Plan

The condition of assets is informally monitored routinely during the inspections by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required.

Refer to the [Projects and Financial Forecasts](#) section.

8.7 New Works Plan

No significant capital works have been identified other than normal maintenance works as required.

8.8 Disposal Plan

The Council has no plans to dispose of any Taneatua Closed Landfill assets at this time with the exception of assets that reach the end of their useful life within the 20-year period and are replaced as part of the renewal program.

The long term goal is to be able to sell the land once it is deemed appropriate for grazing purposes.

Refer to the [Projects and Financial Forecasts](#) section.

9 Te Teko Closed Landfill

The Te Teko Landfill closed in 1993. The site was in operation for approximately 40 years, receiving waste from the surrounding area. After the 1987 Edgecumbe earthquake, the Te Teko landfill received the bulk of the waste material generated.

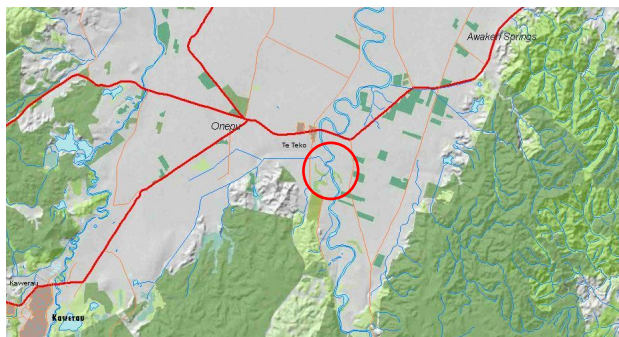
9.1 Key Issues

- Ongoing environmental monitoring
- Leasing for grazing

9.2 Asset Description

Figure 28 provides an overview of the Te Teko Closed Landfill.

Figure 28: Te Teko Closed Landfill



9.3 Condition Assessment

An assessment of the site was undertaken in 2014, although the landfill cap was not assessed at this time. During this assessment the site was found to be overgrown with pampas grasses, gauzes and non-native species. The gate and fence were found to be needing repairs and some illegal dumping had taken place on site.

9.4 Maintenance Plan

During 2016/17 the site was cleared of illegally dumped material, spraying and vegetation clearance took place along with fencing and riparian planting. The landfill was then returned to pasture and a lease in been put in place for a local farmer to graze the land.

9.5 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the [Environmental Stewardship](#) section of this AMP.

9.6 Renewal Plan

The condition of assets is informally monitored routinely during the inspections by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required.

Refer to the [Projects and Financial Forecasts](#) section.

9.7 New Works Plan

No significant capital works have been identified other than normal maintenance works as required.

9.8 Disposal Plan

The Council has passed a resolution to put this asset up for divestment, however, there is currently no timeline associated with this.

Refer to the [Projects and Financial Forecasts](#) section.

10 Keepa Rd Green Waste Composting Facility

The council owned Green Waste Composting facility was constructed during the 2015/16 financial year and became operational in August 2016.

10.1 Key Issues

- Ongoing environmental monitoring
- Ongoing landscaping maintenance
- Stormwater and leachate control

10.2 Asset Description

Figure 29 provides an overview of the Keepa Rd Green Waste Composting Facility.

Figure 29: Keepa Rd, Green Waste Composting Facility



There are a limited number of assets associated with the site. Table 24 outlines the main asset groups that have been analysed as part of the AMP.

Table 244: Green Waste Composting Facility Asset Summary (2018)

Depreciated Replacement Cost Approach			
Other Improvements			
Bunding and Leachate control			\$94,470
Fencing			\$15,000
Total Other Improvements			\$109,470
Total Reinstatement Cost			\$109,470
Less Depreciation	@ 10.27%	=	-\$11,247

Depreciate Replacement Cost of Improvements:				\$98,223
Land Value				
Land	2.8200 ha	@	\$70,000/ha	\$197,400
Total Land Value			Adopt	\$200,000
Inserted Market Value				\$298,223
				Adopt
				\$300,000

10.3 Condition Assessment

The site became operational in August 2016 and therefore is in good condition. The site has required some upgrade of drainage controls and deposition of metal to counteract the wet ground conditions.

10.4 Maintenance Plan

The site requires ongoing landscaping, grass cutting, weeding, planting etc., the site is monitored quarterly by a contractor for these works. The drainage network and stormwater/leachate controls also require ongoing monitoring and maintenance.

10.5 Site Monitoring

Monitoring is currently undertaken in line with consents as outlined in the [Environmental Stewardship](#) section of this AMP.

10.6 Renewal Plan

The condition of assets is informally monitored routinely during the inspections by the Council staff. Renewal needs are recorded and remedial works prioritised and programmed as required.

Refer to the [Projects and Financial Forecasts](#) section.

10.7 New Works Plan

There are no new works planned at this time.

10.8 Disposal Plan

There are no plans to dispose of this asset at this time.

11 Solid Waste Expenditure Plans

11.1 Operations & Maintenance Plan

The historical and projected operational expenditure for the Council's solid waste assets can be viewed in the [Projects and Financial Forecasts](#) section.

11.2 Renewal Plan

The required level of renewal (including replacement or rehabilitation) will depend on:

- The age profile

- The condition profile
- The level of on-going maintenance
- The economic lives of the materials used

Renewals are reviewed regularly, with any deferred work re-prioritised alongside new renewal projects and a revised programme established where required. These budgets may be adequate to maintain current Levels of Service, however, the potential number or size of problems that may be identified as confidence in the asset data increases may make these budgets inadequate in the future.

11.3 Capital Works Plan

The overall Levels of Service objective is to steadily renew assets considering the following:

- The age profile
- The condition profile
- The level of on-going maintenance
- The economic lives of the materials used
- Financial and customer risks

Renewals are reviewed regularly, with any deferred work re-prioritised alongside new renewal projects and a revised programme established where required.

11.4 Disposal Plan

The Council has no plans to dispose of any Solid Waste assets at this time with the exception of assets that reach the end of their useful life within the 20-year period and are replaced as part of the renewal program.

Projects and Financial Forecasts

To undertake a sustainable, long-term approach to asset management, it is essential to prepare long-term financial forecasts.

For an explanation of how these forecasts have been generated and an explanation of the categories, please see Part A.

1 Asset Management Assumptions

The following solid waste Asset Management assumptions have been made in preparing the 10-year expenditure forecasts:

- Only solid waste assets have been valued.
- All projected expenditure is stated in dollar values as at 30th June 2018. With no allowance made for inflation.
- Operational costs are largely based on historical expenditure
- Maintenance and operations allocations are largely based on maintaining current service levels.
- The Council staff have developed this programme. No formal consultation has been undertaken with the public.
- It is assumed that regulations such as the Waste Minimisation Act and Product Stewardship in relation to solid waste will have an impact on the demand for recycling and materials recovery services.

2 Summary Financial Forecast

Table 25 below contains the Solid Waste Activity Cost of Services statement, which incorporates the projected income and funding sources to fund operational, renewal and capital expenditure for the next 10 years.

Table 255: Solid Waste Operational Expenditure 2019 – 2028

2019 - 2028 LTP

*Displays total costs for Solid Waste

Post Code	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP	Working LTP
Depreciation	70,150	72,365	74,946	76,301	77,315	77,809	78,675	79,297	78,835	78,749
Interest Paid	131,413	122,951	115,095	106,145	97,276	86,190	76,027	65,824	55,983	51,087
Direct Costs	4,426,859	4,574,779	4,699,698	4,784,967	4,919,591	5,037,522	5,178,159	5,301,097	5,452,023	5,580,076
Overheads	502,195	513,083	527,968	532,458	543,373	560,183	564,787	576,661	594,808	599,204
Operations	4,929,054	5,087,861	5,227,666	5,317,425	5,462,964	5,597,704	5,742,947	5,877,758	6,046,831	6,179,280
Expenditure	5,130,618	5,283,177	5,417,707	5,499,871	5,637,555	5,761,703	5,897,649	6,022,879	6,181,649	6,309,116
Targeted Rates	2,595,157	2,731,699	2,829,587	2,925,401	2,992,242	3,055,626	3,119,389	3,193,497	3,202,487	3,277,636
Subsidies and Grants	110,000	112,200	114,400	116,710	119,130	121,660	124,190	126,830	129,580	132,330
Sundry Income	0	0	0	0	0	0	0	0	0	0
User Fees and Charges	710,000	724,200	738,400	753,310	768,930	785,260	801,590	818,630	836,380	854,130
Development Contributions	0	0	0	0	0	0	0	0	0	0
General Rates	1,849,297	1,924,331	1,996,944	2,046,912	2,102,200	2,127,957	2,181,312	2,219,151	2,230,732	2,269,265
Revenue	5,264,453	5,492,430	5,679,332	5,842,333	5,982,502	6,090,503	6,226,481	6,358,108	6,399,178	6,533,361
Profit & Loss	133,836	209,253	261,625	342,461	344,947	328,799	328,832	335,229	217,530	224,245

3 Capital & Renewal Forecasts

Table 26 below lists the solid waste projects which represent the renewal and capital expenditure for the next 10 years.

Table 266: Solid Waste Capital and Renewal Projects 2019 – 2028.

Capex Funding Summary 2018 - 28 LTP

	Funding	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Z21171*000 - Transfer Station Minor Replace - Expenditure & Income	RENEWAL 100	5,000	5,100	5,200	5,305	5,415	5,530	5,645	5,765	5,890	6,015
Z21172*000 - Murupara Transfer Station Impr - Expenditure & Income	GENRATE 100	5,000	5,100	5,200	5,305	5,415	5,530	5,645	5,765	5,890	6,015
Z21173*000 - Solid Waste Site Renewals (SPM - Expenditure & Income	RENEWAL 100	5,914	25,100	9,524	11,544	656	20,791	14,974	5,880	236	7,820
Z21174*000 - Transfer Station Renewals (SPM - Expenditure & Income	RENEWAL 100	4,500	0	3,713	0	9,857	2,559	2,278	6,478	5,339	9,813
Z21175*000 - Organic Waste Composting Plant - Expenditure & Income	RENEWAL 100	15,000	0	10,400	0	10,830	0	11,290	0	11,780	0
Z23167*000 - RECYCLING PARK MINOR IMPROVEME - Expenditure & Income	GENRATE 30 TARG 70	5,000	5,100	5,200	5,305	5,415	5,530	5,645	5,765	5,890	6,015
All Project Codes		40,414	40,400	39,237	27,459	37,589	39,940	45,477	29,653	35,024	35,677

Assumptions

Capital work programmes included in this AMP are based on the medium population projection by Statistics NZ over the next ten years. There are likely to be variations in this projected growth rate in parts of the District over this period.

4 Disposals

At this time the Council has no plans to dispose of any of its solid waste assets. Te Teko Landfill has been placed on a divestment list, however there is no timeline for the sale of the Te Teko Landfill site and it is now leased as grazing land.

Improvement Plan

The Council is determined to improve its Asset Management to ensure the best outcomes for the present and future. As part of this it is useful to gauge at what stage the Solid Waste AMP is currently at and then identify means to improve.

1 Asset Management Improvement Process

The Council has adopted a strategic management approach to improvement planning, continually developing Asset Management plans, and implementing improvement processes and practices. This Improvement Plan is integral to that approach, quantifying current business practice and measuring progress toward an identified future position.

The purpose of the Improvement Plan is to:

- Identify and develop implementation of Asset Management planning processes. This includes
- The cycle of asset management plan monitoring, review, revision and audit to improve the effectiveness of asset management plan outputs and compliance with audit criteria, legislative requirements and best appropriate practice
- The definition of service standards reflecting community outcomes through public consultation. The asset management plan is used to identify service level options and costs, and the delivery of services is a key objective of asset management planning.
- Identify and prioritise ways to cost-effectively improve the quality of the AMP, and therefore decision making and service delivery.
- Identify indicative time-scales, priorities, human and financial resources required to achieve Asset Management planning objectives.

The development of this AMP is based on existing levels of service, the best available current information and the knowledge of the Council staff. It is intended that the development of this plan is part of an ongoing process and that the document will be reviewed and updated regularly. This review process involves using improved knowledge of customer expectations (community consultation) and information from Asset Management Systems and databases. This will enable the Council to optimise decision-making, review outputs, develop strategies, improve risk management and extend the planning horizon.

Table 27 outlines the Council's Improvement Plan for the Solid Waste activity.

Table 277: Improvement Plan

Key AMP Criteria	Key points for achieving “Core” Criteria	Key points for achieving “Advanced” Criteria	Covered In AMP Section	In Development	Basic	Intermediate	Advanced	Comments
<p>Levels of Service</p> <p>Asset Management (AM) Planning should define the level of service or performance required of the asset, linked to the strategic/community outcomes of the organisation.</p> <p>The significant services (for which service levels should be subject to consultation and agreement) should be stated.</p>	<p>Asset Management (AM) Planning should define the level of service or performance required of the asset, linked to the strategic/community outcomes of the organisation.</p> <p>The significant services (for which service levels should be subject to consultation and agreement) should be stated.</p>	<p>► Community outcomes linked to LoS, customer and technical performance measures</p>	LoS					<p>Council has undertaken a robust process in the development of this plan to review the LoS statements and performance measures both from a customer and technical prospective. The LoS section outlines in detail the current situation and next phase of improvements for LoS development.</p> <p>A consultation strategy is currently under development</p> <p>Reporting on measures is largely occurring on a monthly basis from contractors, but publicly only through the Annual Report annually.</p>
		<p>► Evaluating LoS Options & Costs</p> <p>– Adoption by the Council or governing body of the levels of service and standards after consultation has taken place.</p>	LoS					
		<p>– Public communications of the levels of service and standards in a ‘Customer Charter’ or equivalent public document.</p>	LoS, Community Consultation	█				
		<p>– Regular monitoring and public reporting of the organisations adherence to agreed levels of services and standards.</p>	LoS			█		
		<p>► Ensuring the AM plans of each significant service reflect and are based on the agreed levels of service, including technical performance targets and measures which underpin the customer-agreed levels of service and standards.</p>	LoS			█		
		<p>Description of Assets</p> <p>An adequate description of the asset, both physically and in financial terms, with the ability to aggregate and disaggregate information.</p> <p>State the remaining useful lives of assets.</p> <p>A financial description of the assets that is linked to the physical description and meets the requirements of:</p> <p>► Financial Reporting Standards</p> <p>► Valuation Standards augmented by the NZ Depreciation and Valuation Guidelines</p> <p>► A financial description of the assets that is linked to the physical description and meets the requirements of NZIAS 16. Augmented by the NZ Depreciation and Valuation Guidelines</p>	<p>An adequate description of the asset, both physically and in financial terms, with the ability to aggregate and disaggregate information.</p> <p>State the remaining useful lives of assets.</p> <p>A financial description of the assets that is linked to the physical description and meets the requirements of:</p> <p>► Financial Reporting Standards</p> <p>► Valuation Standards augmented by the NZ Depreciation and Valuation Guidelines</p> <p>► A financial description of the assets that is linked to the physical description and meets the requirements of NZIAS 16. Augmented by the NZ Depreciation and Valuation Guidelines</p>	<p>► A reliable physical inventory of assets at both an individual asset level and at a network level. This would include:</p> <p>– Physical attributes such as location, material, age etc.</p>	LCM			
<p>– Systematic monitoring and analysis of physical condition.</p>	LCM							
<p>– Systematic measurement of asset performance (including utilisation / capacity).</p>	LCM					█		
	LCM					█		

Solid Waste – Asset Management Plan 2018-2028

Key AMP Criteria	Key points for achieving “Core” Criteria	Key points for achieving “Advanced” Criteria	Covered In AMP Section	In Development	Basic	Intermediate	Advanced	Comments
Financial Forecasts / Recognise Depreciation (Loss of Service Potential)	<p>AM Planning should translate the physical aspects of planned maintenance, renewal and new work into financial terms for at least the ensuing 10 years and in a manner that is fair, consistent and transparent.</p> <p>The forecasts should include sufficient information to enable decline in service potential (depreciation) of an asset to be measured. Guidance on depreciation is included in the NZ Valuation and Depreciation Guidelines.</p>	<p>AM Planning should translate the physical aspects of planned operational, maintenance, renewal and new works into financial terms;</p> <ul style="list-style-type: none"> Generally over the timeframe in which the asset network must deliver services. 	LCM, Projects and Financial Forecasts					<p>10 year Financial forecasts appear both in the LCM and projects and Financial Forecasts sections. LC analysis is undertaken using SPM.</p> <p>Financial forecasts Align with Councils LTP</p>
		<ul style="list-style-type: none"> In more specific terms, over the period for which the organisation has a strategic plan. 	Projects and Financial Forecasts					
		<p>The assumptions underpinning financial forecasts should be disclosed in the organisations strategic plans and AM plans.</p>	Projects and Financial Forecasts					
		<p>The compilation of financial forecasts should be consistent, reliable and provable.</p>	Projects and Financial Forecasts					
Planning Assumptions & Confidence Levels	<p>AM Planning should:</p> <ul style="list-style-type: none"> List all assumptions and provisos under which the plan and financial forecasts are prepared. Indicate the degree of confidence of the reliability of data underpinning the AM Plan, particularly: <ul style="list-style-type: none"> Data on asset condition Data on asset performance Accuracy of asset inventory Demand/growth forecasts On the basis of the preceding assumptions and confidence of underlying data, provide a level of precision or confidence on the expenditure forecasts for the asset network 	<p>As for ‘core’ plus”</p> <ul style="list-style-type: none"> List all the assumptions and provisos in the AM Plans, and note key assumptions regarding AM Planning in the organisations strategic plans. 	Introduction, Projects and Financials					<p>Assumptions have been outlined within the Introduction and the Projects and financial forecasts sections. These align with the LTP</p> <p>Confidence in Inventory condition and performance has been outlined in the lifecycle management section. Confidence in the main is medium – High although there are some improvements scheduled in the improvement section.</p> <p>See comments earlier.</p>
		<ul style="list-style-type: none"> Have degrees of confidence on the reliability of data as follows: 	LCM					
		<ul style="list-style-type: none"> Inventory data <ul style="list-style-type: none"> Grade 1 (critical assets) Grade 2 (non-critical assets) 	LCM					
		<ul style="list-style-type: none"> Condition data <ul style="list-style-type: none"> Grade 1 or 2 (critical assets) Grade 1, 2 or 3 (non-critical assets) Performance data <ul style="list-style-type: none"> Grade 1 or 2 (critical assets) Grade 1, 2 or 3 (non-critical assets) 	LCM					
Outline Improvement Programmes	<ul style="list-style-type: none"> AM Planning should state what needs to be done to improve AM processes and techniques Improvement programmes should outline: <ul style="list-style-type: none"> The weak areas and how these will be addressed The timeframe over which the improvements will occur and 	<p>As for ‘core’ plus:</p> <ul style="list-style-type: none"> Improvement programmes should outline key performance indicators (KPIs) for monitoring AM improvement. 	Business processes & Improvement Plan					<p>The improvement plan and business processes sections both cover this extensively. Improvements are based on an extensive Gap analysis with three year improvements outlined</p>
		<ul style="list-style-type: none"> The improvement plan should comment generally on achievements against the previous plan, and formally report against KPIs. 	Improvement Plan					

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Key AMP Criteria	Key points for achieving “Core” Criteria	Key points for achieving “Advanced” Criteria	Covered In AMP Section	In Development	Basic	Intermediate	Advanced	Comments
	– The resources (human and financial) needed	As for ‘core’ AM Plan criteria.	Improvement Plan					
Planning by Qualified Persons	▶ AM Planning must be undertaken by a suitably qualified person. A suitable qualification would be a Level 6 (Tactical) or Level 7 (Strategic) National Diploma in Asset Management or equivalent skill level.	As for ‘core’ AM Plan criteria.	Asset					Undertaken by suitably qualified Asset Management Consultants and conjunction with WDC staff. Community facilities staff are very experienced AM.
	▶ If plans are prepared by persons not suitably qualified, the plans should be independently assessed by a qualified person.	As for ‘core’ AM Plan criteria.						
	▶ The planning process should be peer reviewed.	As for ‘core’ AM Plan criteria.						
Commitment	▶ The Asset AM Plan must be approved and adopted by the governing body, Board or Council. This includes approval of the improvement element of the plan.	As for ‘core’ AM Plan criteria.	Team Page Improvement Plan					This AMP will be adopted by council in conjunction with the LTP
	▶ AM Plans must be seen as the key planning tool for infrastructure assets and/or significant physical assets which provide the inputs for Council’s strategic plans (LTP).	As for ‘core’ plus: ▶ The organisation must demonstrate that AM plan requirements are being implemented through operational plans and formally report discrepancies	LCM					WDC staff have all been very involved in the development of this plan, including workshops around key sections. There is a high level of commitment to improvement up skilling and knowledge.
Updating	▶ AM plans must be regularly updated to reflect the most current future plans for the assets (it is expected that ‘core’ AM planning will be significantly revised in the light of action under improvement programme. In the first few years annual revisions of AM plans are likely).	▶ AM Planning is seen as a constantly evolving process, with underpinning AM systems constantly providing better information.	Improvement Plan,					Strong awareness and ownership that is an on-going process, working towards the improvements documented in this plan
		▶ It is expected that formal asset management plans and overarching asset management strategies will be formally revised every three years, with the timing of revisions linked to the organisation’s strategic planning cycles.						
Risk Management	Risk management to identify critical assets and associated risks and risk management strategies.	Management of assets must include recognition and application of the principles of integrated risk management. Specifically;	Risk					This AMP includes a Risk section compliant with AS/NZ4360 and includes management options actions and monitoring/reports for key risks.
		▶ Risk management should be consistent with AS/NZSISO 31000:2009, and industry good practice such as the NZ Local Government Handbook for risk management.	Risk					
		▶ Risk management for assets should be integrated with other corporate risk management processes. .						

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Key AMP Criteria	Key points for achieving “Core” Criteria	Key points for achieving “Advanced” Criteria	Covered In AMP Section	In Development	Basic	Intermediate	Advanced	Comments
		<ul style="list-style-type: none"> Asset risk management should encompass: <ul style="list-style-type: none"> – Identification and risk management strategies for critical assets – The link to maintenance and replacement strategies. – Engineering lifelines based risk assessments and mitigation plans including reference to the organisations disaster recovery and business continuity plans 	Risk LCM & Sustainability Business Processes, & Sustainability					Corporate risk policy is being developed. A detailed risk register for each critical asset will be developed over the next 3 years.
Lifecycle (Optimised) Decision-Making	<ul style="list-style-type: none"> Identify gaps between current service capability and the required service capability to meet future demand and target service levels and reflect these gaps in an asset development programme. Evaluation and ranking based on suitable criteria of options for significant capital investment decisions. 	The ability to predict robust and defensible options for asset treatments that can assist in achieving optimal costs over the life cycle of the asset or network including: <ul style="list-style-type: none"> Applying appropriate economic evaluation tools (or other organisation endorsed prioritisation systems) in developing short term project lists. Using predictive modelling techniques to provide defensible long term financial forecasts. 	LCM LCM, Growth & Demand					Multi criteria assessment (MCA) has been developed based on community outcomes. Renewal profiling is undertaken in SPM.
Managing Growth	<ul style="list-style-type: none"> Demand forecasts for each network or facility for a 10-year period are based on latest growth forecasts. Demand management strategies and demand drivers are understood and documented 	<ul style="list-style-type: none"> Demand forecasts include analysis of the different factors that comprise demand. The sensitivity of asset development (capital works) programmes to demand changes is understood. 	Growth & Demand Growth & Demand					Factors that drive growth and demand have been well documented.