Waste Management and Minimisation Activity Management Plan 2018

Referred to as the Solid Waste Activity in the Long Term Plan

Quality Assurance Statement		
	Version:	June 2018
Tasman District Council	Status:	For Adoption
189 Queens Street **Private Bag 4**	Project Manager:	Jenna Neame
Richmond 7050 **Telephone: (03) 543 8400** **Fax: (03) 5439524**	Prepared by: AMP Author	David Stephenson
	Approved for issue by: Engineering Manager	Richard Kirby

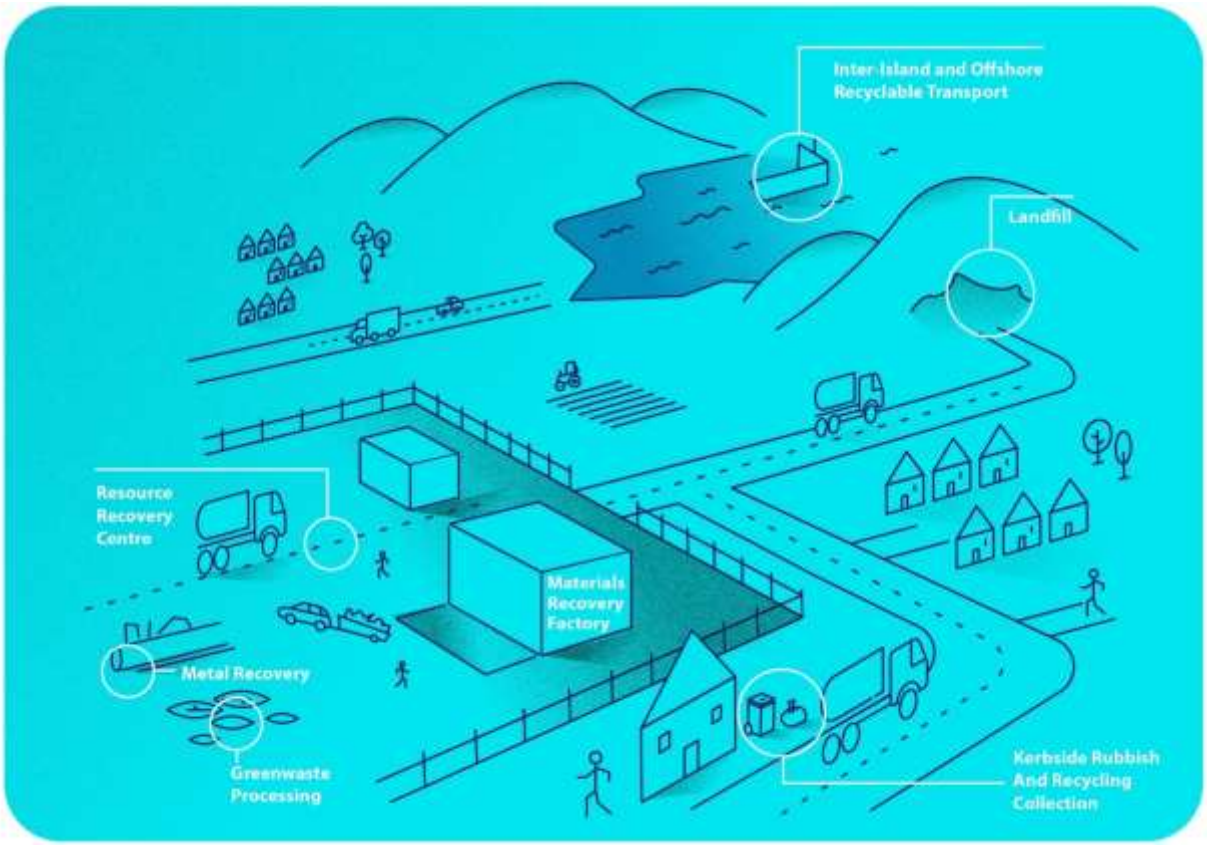
Contents

1 Executive Summary

1.1 What We Do

The Council provides a comprehensive range of waste management and minimisation services by providing

- kerbside recycling and waste collection services,
- five Resource Recovery Centres – at Richmond, Mariri, Takaka, Collingwood and Murchison,
- processing facilities for recycling,
- contracting a greenwaste processor,
- transport services to move these materials around the district, and
- a range of waste minimisation initiatives to reduce the production of waste and minismise harm.



All public and commercial waste disposal is through the Resource Recovery Centres. Waste from these sites is transferred to landfill. We divert recyclable materials, greenwaste and cleanfill away from landfill and they are processed and on-sold by Council's contractors. We also recover hazardous materials at these sites, and ensure that they are processed safely.

Council promotes waste minimisation through kerbside collection of recyclable materials, on-going engagement programmes and drop off facilities for green waste, reusable and recyclable materials.

Council also monitors and maintains 22 closed landfills around the district.

Landfill services in the region are now provided regionally, through the Nelson-Tasman Regional Landfill Business Unit, which is a joint committee of the Nelson City Council and Tasman District Council. This business unit commenced operations on 1 July 2017. From this date the Eves Valley Landfill (which we previously managed) stopped receiving waste and all waste is now directed the York Valley Landfill (located in Nelson City). Regional landfill operations are outlined in a separate Activity Management Plan of the business unit.

1.2 Why We Do It

We provide waste management and minimisation services to protect our public's health and our natural environment. Our waste minimisation activities promote efficient use of resources, reduces waste for businesses and households and extends the life of the region's landfill assets.

The Waste Minimisation Act 2008 has increased the requirement for waste minimisation in Council's planning. The Act aims to protect the environment from harm by encouraging the efficient use of materials and a reduction in waste.

Under this legislation Council is required to prepare a Waste Management and Minimisation Plan (WMMP). This plan sets the strategic direction of Council for waste management and minimisation management. Council has elected to do this jointly with Nelson City Council. The goals of Councils' 2012 Joint Waste Management and Minimisation Plan are shown below.

Council's long-term goals for waste management and minimisation management are contained in the Nelson Tasman Joint Waste Management and Minimisation Plan (2012). They are to:

- avoid the creation of waste;
- improve the efficiency of resource use;
- reduce the harmful effects of waste.

1.3 Levels of Service

Council aims to provide the following levels of service for this activity:

"We provide effective waste minimisation activities and services."

"Our kerbside recycling and bag collection services are reliable and easy to use."

"Our resource recovery centres are easy to use and operated in a reliable manner."

Providing safe and secure infrastructure services is a priority for Council. Over the next ten years we are planning to make improvements at our resource recovery centres to make them safer, more convenient and reduce their environmental impact. We will also provide additional public recycling infrastructure and continue to promote good practice to increase diversion of waste from landfill. We expect this investment will lift Council's performance against the waste minimisation level of service and maintain customer satisfaction levels.

1.4 Key Issues

The most important issues relating to the waste management and minimisation activity and our proposed responses are shown below in Table 1.

Table 1: Key Issues

Key Issue	Discussion	How we are responding
Population and waste growth	Our region is currently growing strongly. This is leading to higher waste volumes and demand for kerbside services.	Our kerbside services are designed to manage growth and we monitor this continuously. We include growth projections when designing upgrades to our resource recovery centres.
Growing demand for waste diversion	There is a growing demand for us to divert an increasing range of products and materials from landfill. We will need to consider which products are highest priority and how to fund these services.	While we expect to see increases in recycling over time, not all recycling services need to be provided by Council. We are proposing to support and partner with third parties to provide waste diversion services in the region. These third parties are often able to provide services more efficiently than Council.

Key Issue	Discussion	How we are responding
Increasing need for risk reduction measures	We will need to continue improving our risk reduction measures in the activity. The waste industry is reasonably high risk and manages difficult and sometimes hazardous materials.	We have included budgets to continuously improve the safety of our kerbside services and resource recovery centres. We are planning to increase the range of hazardous waste services in the district.
Cost of landfill disposal	Our largest single cost for this activity is the cost of landfill disp0sal. It determines the cost of most of our activities and the fees that we charge for many of our services. The cost of landfill disposal is also a key factor in the demand for and viability of waste minimisation services and influences the total waste to landfill. The cost of waste disposal is also a key influencer of our customer satisfaction. The cost of landfill disposal is set by the Nelson-Tasman Regional Landfill Business Unit, with input from the Nelson City and Tasman District Councils.	We expect that the cost of landfill disposal will continue to increase over time. We will signal changes early and transparently so that our communities can plan with certainty.
Regional waste management	Waste activities and services operate in a commercial environment, with free movement across the Nelson – Tasman boundary and beyond. We need to coordinate our waste management across the wider region.	We operate under a Joint Waste Management and Minimisation Plan with Nelson City Council. It sets the strategic goals and objectives for the Councils and for the Nelson-Tasman Regional Landfill Business Unit. The Joint Waste Management and Minimisation Plan is currently being reviewed and will set the direction for the next six years.

1.5 Operational Programme

The operational programme covers all day to day activities that are required to manage this activity. It includes the cost of providing services (such as kerbside recycling) and the cost of maintaining our infrastructure (such as our resource recovery centres).

The operational programme includes direct costs (e.g. payments to suppliers and contractors) and indirect costs (e.g. staff costs, interest costs and depreciation).

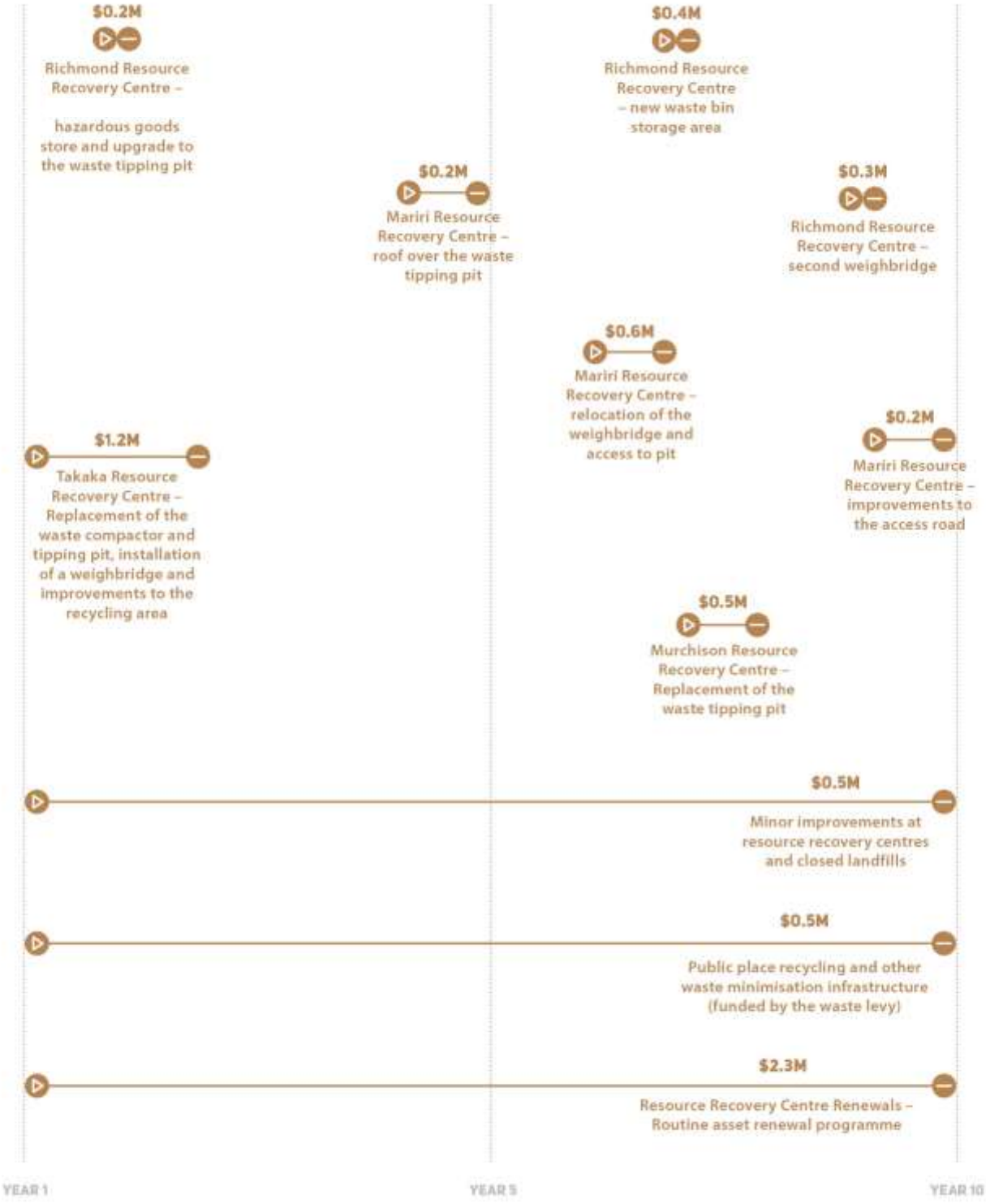
Over the next 10 years we plan to spend $83.2m of direct expenditure in the following areas:

- Kerbside recycling and rubbish collection $21.4m
- Resource Recovery Centres – operations and maintenance $16.9m
- Resource Recovery Centres – waste transport $3.9m
- Resource Recovery Centres – waste disposal $37.4m
- Waste minimisation (funded by central government) $2.0m
- Waste management policy $0.3m
- Insurance $0.3m
- Hazardous waste $0.4m
- Clearance of Illegal dumping $0.3m
- Closed landfill management $0.3m

1.6 Capital Programme

We plan to invest approximately $6.9m to renew, upgrade and provide additional assets to respond to the key issues. Of the $6.9m, $2.3m will be to renew assets and $4.6m will be used to improve the level of service.

We are planning the following key capital projects over the next ten years:



1.7 Key Changes

Table 2 summarises the key changes for the management of this activity since the 2015 Activity Management Plan.

Table 2: Key Changes

Key Change	Reason for Change
Establishment of the Nelson Tasman Regional Landfill Business Unit	The Nelson Tasman Regional Landfill Business Unit commenced operations on 1 July 2017. It now manages the Eves Valley Landfill and York Valley Landfill on behalf of the Nelson City and Tasman District Councils. The Eves Valley Landfill has now been closed and the York Valley Landfill operates as a regional facility. This change provides the opportunity for increased efficiency, better use of capital and improved opportunity for waste minimisation in the Nelson-Tasman region. It also removes the commercial incentive to compete for landfill volumes. In 2017 we amended the LTP 2015-2025 because the establishment of the business unit changed control the Eves Valley Landfill (which was a strategic asset).
Regional recycling capacity	We now operate a Materials Recovery Facility (MRF) at the Richmond RRC. This MRF provides capacity for the Nelson City Council through a commercial agreement with our contractor and the Nelson City Council contractor.
Household hazardous and agrichemical collection	From 1 July 2018 collection and acceptance of redundant farm agrichemicals will fall within this activity. This will include supporting annual or bi-annual on-farm collections and receipt of selected household chemicals. Council is also monitoring other pilot recycling schemes for rural properties.

1.8 Key Risks and Assumptions

There are factors outside of our control that can change having an impact on our ability to do what we planned. Sometimes the impact can be significant. There is always uncertainty in any planning process but the key to good quality planning is to make clear assumptions to help address this uncertainty. The following are the key risks and assumptions that relate to this activity.

The key assumptions are:

- That the landfill disposal prices will be as included in the Nelson Tasman Regional Landfill Business Unit 10 year budget (dated 15 September 2017);
- That there will be revenue distribution of $2.2 million per annum from the Nelson Tasman Regional Landfill Business Unit;
- That there will be no material change in waste to landfill (other than the gradual reduction per capita forecast in this plan);
- That there will be no significant change to operating costs over time;
- That amount of funding from central government from the national waste disposal levy will continue at current rates; and
- That any changes in central government policy will not be significant and existing and proposed programmes will be sufficient to addresses any changes.

The key risks associated with this activity are:

- That changes in recyclable products markets make recycling less affordable or not possible for some products;
- A serious harm or fatal accident in our operations;
- A hazardous goods incident or fire at a resource recovery centre; and
- Premature deterioration, obsolescence or catastrophic failure of a key asset.

2 Introduction

The purpose of this activity management plan is to outline and to summarise in one place, Council's strategic management and long-term approach for the provision and maintenance of its Waste Management and Minimisation activity.

2.1 Rationale for Council Involvement

Council's involvement in waste management and minimisation activities is mandated by two key pieces of legislation:

- the Local Government Act (2002);
- the Waste Minimisation Act (2008)

Waste management and minimisation services have been provided by Council and its predecessors for a substantial period of time, and are expected to continue as core services for the foreseeable future.

2.2 Description of Assets & Services

We provide comprehensive waste management and minimisation services through provision of kerbside recycling and waste collection services, and five resource recovery centres – at Richmond, Mariri, Takaka, Collingwood and Murchison.

All public and commercial waste disposal is through the resource recovery centres. Waste from these sites is transferred to landfill and recyclable material is processed and on-sold by Council's contractor.

Council promotes waste minimisation through kerbside collection of recyclable materials, on-going educational programmes, public place recycling bins and provides drop off facilities at resource recovery centres for green waste, reusable and recyclable materials.

Operational landfills in the region are provided regionally, through the Nelson-Tasman Regional Landfill Business Unit, which is a joint committee of the Nelson City Council and Tasman District Council. This business unit commenced operations on 1 July 2017. From this date the Eves Valley Landfill stopped receiving waste and all waste is now directed to the York Valley Landfill (located in Nelson City). Regional landfill operations are outlined in a separate Activity Management Plan of the business unit.

Council also maintains 22 closed landfills around the district, provides hazardous waste services and clears illegal dumping of refuse and litter.

The transportation and reserves and facilities activities of Council also provide litter bins and clearance of litter and detritus from roads and reserves. Enforcement of littering and illegal dumping activities is performed through the public health and safety activity of Council.

2.2.1 Kerbside Services

In October 2014 Council entered into an eight year contract with Smart Environmental Ltd for kerbside collection services (and operation of four of Council's five RRCs).

Key components of the collection service are:

- fortnightly collection of mixed recyclable materials in 240 litre wheelie bins and glass in 55 litre recycling crates from around 18,600 properties
- weekly Council rubbish bag collections, with Smart Environmental responsible for the sale, supply, distribution and marketing of rubbish bags
- operation of a materials recovery facility ("MRF") at the Richmond RRC for sorting recyclable materials
- management and sale of all recyclable material collected at the kerbside and RRCs

2.2.1.1 Kerbside Rubbish Bag Collection

Services:

Council offers, through Smart Environmental, a rubbish bag collection to approximately 18,600 properties within the Refuse Recycling rating area (Figure 1, below). The coverage of the district is reasonably widespread, with the exception of the Murchison area, Motueka Valley, Dovedale and parts of the Moutere Valley. The service covers approximate 89% of the district population.

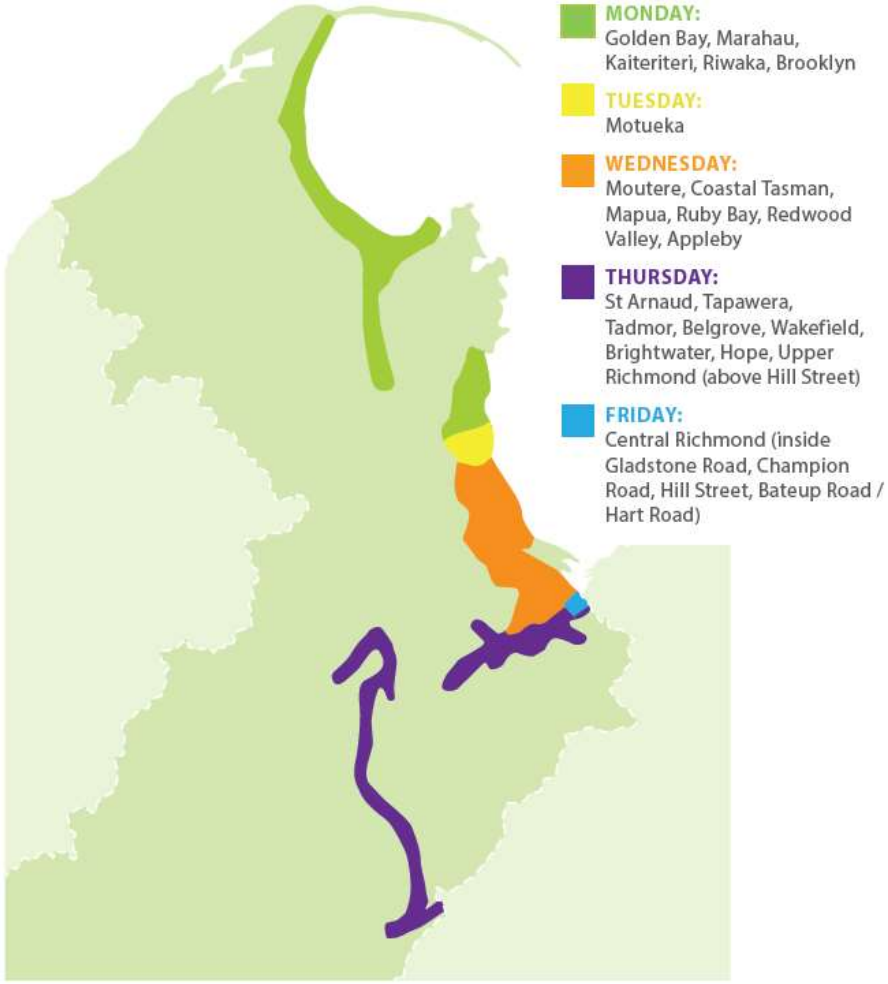


Figure 1: Extent of Kerbside Collections

The Council contracted service includes 45 and 60 litre pre-paid rubbish bags. These bags are available from Council offices and supermarkets and other stores throughout the district. The revenue from bag sales and disposal costs for rubbish collected lie with Smart Environmental.

Within the District there are also a significant number of private companies offering residential rubbish collection in strong competition with Council. These companies hold a significant share of the residential market and offer a variety of bin and bag options. Private collection companies generally deliver collected solid waste to Council's RRC sites, although some dispose outside of the district.

The private solid waste collection services are extremely competitive in the urban areas of the district and the majority of services contracted wheelie bin collections. Private contractors generally focus on offering a 'lowest cost mixed solid waste' service and this may discourage recycling in favour of convenience.

Assets:

Council does not own any assets associated with this service. This AMP considers just the services provided under contract for Council.

2.2.1.2 Kerbside Recyclable Collection

Services:

Council offers kerbside recycling collection to approximately 18,600 properties in the Refuse Recycling rating area (Figure 1,). The coverage of the district is reasonably widespread, with the exception of the Murchison area, Motueka Valley, Dovedale and parts of the Moutere Valley. The service is funded by Refuse Recycling targeted rate and covers approximate 89% of the district population.

This service expands continuously with in-fill and subdivision within the targeted rating area. From time to time, and normally at the time of the Long Term Plan review, Council considers extensions to the rating area.

Assets:

The assets associated with the kerbside recycling service include the blue glass recycling crates and black wheelie bins ("mobile recycling bins", or "MRBs"), public place recycling bins, collection vehicles and buildings and equipment for processing of recyclable materials at the Richmond RRC. The majority of these assets are owned by the contractor.

The MRBs and processing facility (Figure 2) are owned by Smart Environmental until the end of the contract term when they will be purchased by Council at an agreed depreciated value. For this AMP it has been assumed that ownership of these assets will transfer to a new contractor in 2023 and that no net payment will be made by Council.

Additional MRBs and glass collection crates are supplied by the Council, but are not regarded as fixed assets as they are of low value and difficult to secure.

Figure 2: Exterior Photo of Richmond RRC

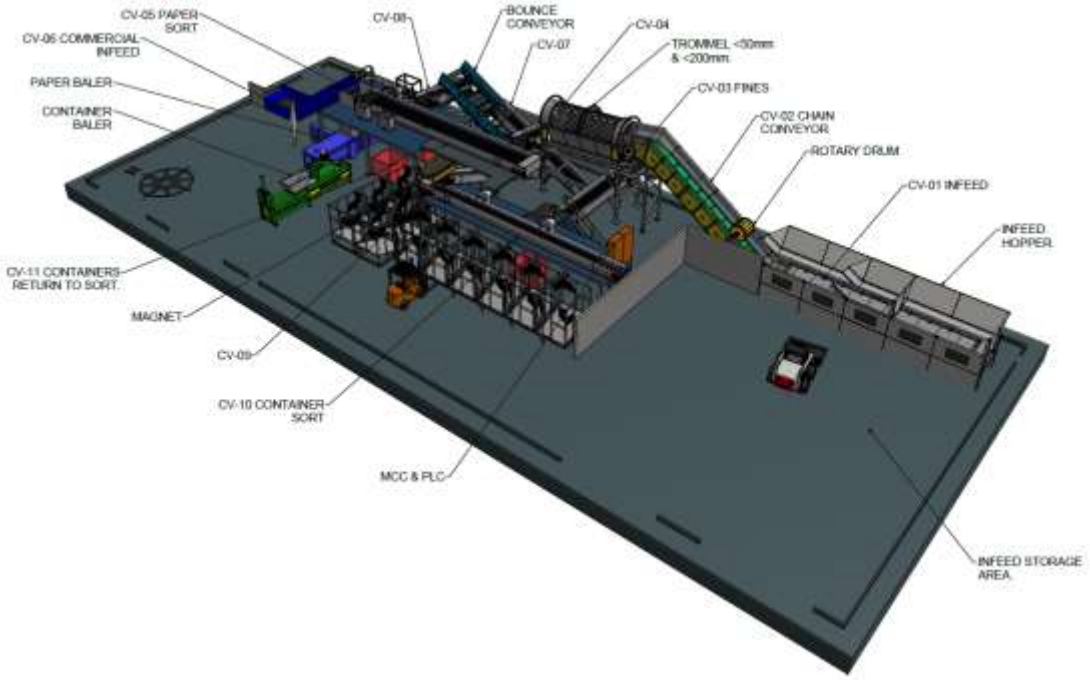


Figure 3: Materials Recovery Facility (MRF) at Richmond

Council has provided a new 1000 m² building at the Richmond RRC in which the MRF is housed and new pavement areas around the building. The value of these assets is approximately $1.4m.

Collection vehicles (Figure 4) for the services under Contract 1020 are owned by the contractor and the contractor's owner-drivers.

Figure 4: New Vehicles for Recycling Services

As the majority of these assets are not owned by the Council this AMP focuses on the services provided under contract for the Council.

2.2.2 Resource Recovery Centres

Council currently owns five Resource Recovery Centres (RRCs) located in Richmond, Mariri (Motueka), Takaka, Collingwood and Murchison.

Waste from each of these RRCs is transported to landfill for disposal and recyclable materials are dispatched direct to market or via the Richmond RRC.

Council currently contracts out the day-to-day operation and maintenance of its RRC's. Each RRC varies in size and capacity and provides varying degrees of service.

The operation and maintenance of the Richmond, Mariri, Takaka, and Collingwood RRCs is managed under Contract 1020 by Smart Environmental Ltd. Waste from these four RRCs is transported to landfill by Fulton Hogan through Contract 1092.

The service provided at the larger RRCs (Richmond, Mariri and Takaka) includes loading waste into the hopper of compactor units, removing full bins from the compactor, and positioning them for collection by the haulage contractor. It also includes movement of empty bins into position at the compactor or loading point.

At Collingwood RRC the contractor provides skip bins for collecting waste. When the bins are full they are hauled to Takaka RRC by Smart Environmental Ltd where the waste is tipped into the hopper on site and transferred to compactor bins for onward haulage to landfill.

The Murchison RRC and waste haulage operation is managed by Fulton Hogan under Contracts 652. Under this contract Fulton Hogan Ltd is responsible for the day to day operation and management of the Murchison RRC site, maximising recycling and recovery of materials and ensuring the site is kept clean and tidy. Waste is emptied into a short-term storage pit and transferred to open top bins for haulage and disposal at landfill.

2.2.2.1 Richmond Resource Recovery Centre

The Richmond RRC was commissioned in 1989 and is located at 14 Fittal Street (off Beach Road), Richmond. It is the largest of the five RRCs and handles around 63% of all municipal waste in the Tasman District. It is also a key hub for the processing and dispatch of recyclable materials from around the District.

Figure 5: Richmond RRC – Recycling Drop Off with Kiosk and Waste Pit in Background

The Richmond RRC serves Richmond, Brightwater, Wakefield and the wider Waimea Plains area. It provides the following services:

- receipt of solid waste, recyclables, hardfill, car bodies, whiteware and scrap metal etc from the general public and commercial operators
- collection of disposal and handling fees on behalf of the Council
- handling, compaction and loading of solid waste for transportation to disposal at landfill
- handling, stockpiling, compaction of recyclables, car bodies, whiteware and scrap metal. These materials become the property of the contractor and are disposed of at markets at their discretion
- management and disposal of tyres (currently quartered and disposed of at landfill)
- acceptance of items for product stewardship schemes (currently paint and empty agricultural chemical containers)
- acceptance of waste oil which is collected by a separate contractor as part of a nationwide scheme
- acceptance of car and household batteries, which are recycled
- acceptance of LPG cylinders, which are recycled

2.2.2.2 Mariri Resource Recovery Centre

The Mariri RRC was commissioned in 1992 and is located at 93 Robinson Road, Mariri, south of Motueka. The site is partly formed over a closed landfill, which operated on site until 1992.

Figure 6: Mariri RRC – Entrance from Robinson Road

Mariri RRC serves the Motueka Plains and Valley, Moutere, Coastal Tasman and Dovedale areas. It provides the following services:

- receipt of solid waste, greenwaste, recyclables, hardfill, car bodies, whiteware and scrap metal etc from the general public and commercial operators
- collection of disposal and handling fees on behalf of Council
- handling, compaction and loading of solid waste for transportation to disposal at landfill
- handling of greenwaste for removal by another contractor
- handling, stockpiling, compaction of recyclables, car bodies, whiteware, and scrap metal. These materials become the property of the contractor and are disposed of at markets at their discretion
- management and disposal of tyres (currently quartered and disposed of at landfill)
- acceptance of items for product stewardship schemes (currently empty agricultural chemical containers)
- acceptance of waste oil which is collected by a separate contractor as part of a nationwide scheme
- acceptance of car and household batteries, which are recycled
- acceptance of LPG cylinders which are recycled

2.2.2.3 Takaka Resource Recovery Centre

The Takaka RRC was commissioned in 1994 and is located at 45 Scott Road, Takaka in Golden Bay. The site was commissioned in 1995, replacing a solid waste tip in Rototai Road, Waitapu.

Figure 7: Takaka RRC – from Rear of Site, with Solid Waste Compactor and Bins in Background

The RRC provides the following services:

- receipt of solid waste, greenwaste, recyclables, hardfill, car bodies, whiteware and scrap metal etc. from the general public
- collection of disposal and handling fees on behalf of Council
- handling and loading of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to landfill for disposal
- handling of greenwaste, for removal by another contractor
- handling, stockpiling, compaction of recyclables, car bodies, whiteware, and scrap metal. These materials become the property of the contractor and are disposed of two markets at their discretion
- management and disposal of tyres (currently quartered and disposed of at landfill)
- acceptance of items for product stewardship schemes (currently empty agricultural chemical containers)
- acceptance of waste oil which is collected by a separate contractor as part of a nation-wide scheme
- acceptance of car batteries which are recycled for lead content
- acceptance of LPG cylinders which are recycled for scrap metal content
- operation of a reuse shop on site

2.2.2.4 Collingwood Resource Recovery Centre

The Collingwood RRC is located at 97 Collingwood-Bainham Road, south of Collingwood in Golden Bay. The site was commissioned in 1999 replacing a solid waste tip which operated on the same site.

Figure 8: Collingwood RRC – Entrance from Collingwood-Bainham Road

The Collingwood RRC serves Collingwood, the Aorere Valley and many of the small nearby coastal settlements. It provides the following services:

- receipt of solid waste, greenwaste, recyclables, hardfill, car bodies, whiteware and scrap metal etc. from the general public
- collection of disposal and handling fees on behalf of the Council
- handling and loading of solid waste for transportation to the Takaka RRC and then to Landfill
- handling of greenwaste for removal by another contractor
- handling, stockpiling, compaction of recyclables, car bodies, whiteware and scrap metal. These materials become the property of the contractor and are disposed of two markets at their discretion
- management and disposal of tyres (currently quartered and disposed of at landfill)
- acceptance of items for product stewardship schemes (currently paint)
- acceptance of waste oil
- acceptance of car and household batteries, which are recycled
- acceptance of LPG cylinders which are recycled for scrap metal content
- operation of a reuse container on site

2.2.2.5 Murchison Resource Recovery Centre

The Murchison RRC was constructed on the landfill site on Matakitaki West Bank Road in Murchison in 2008. It replaces a landfill that operated on the same site from 1990 to 2009.

Figure 9: Murchison RRC – Recycling Shed on Left Background and Closed Landfill to the Right

The Murchison RRC services the township of Murchison and the surrounding area. The RRC provides the following services:

- receipt of solid waste, greenwaste, recyclables, hardfill, car bodies, whiteware and scrap metal etc. from the general public
- collection of disposal and handling fees on behalf of the Council
- handling, loading and transport of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to landfill for disposal
- handling of greenwaste for disposal
- handling, stockpiling, and compaction of car bodies, whiteware, and scrap metal. These materials become the property of the contractor and are disposed of at markets at their discretion
- acceptance of waste oil which is collected by a separate contractor as part of a nation-wide scheme
- acceptance of car batteries which are recycled
- acceptance of LPG cylinders which are recycled for scrap metal content
- operation of a reuse shop on site

2.2.3 Hazardous Waste

Some of the materials and chemicals that are routinely used in our homes, farms, towns and workplaces may themselves be hazardous or may contain hazardous chemicals.

When these products are no longer needed it is necessary that they are disposed of in an appropriate manner to ensure that the environment is not contaminated and that there is no risk to people's health.

The RRCs offer hazardous waste facilities for the following hazardous materials:

- batteries
- paint
- LPG cylinder gas bottles
- oil
- fuels
- agri-chemicals containers
- household batteries.

For the safe disposal of other household hazardous waste Tasman District Council provides a drop off service in conjunction with Nelson City Council. There is a nominal fee to be paid at the Nelson City Council Transfer Station for use of the service.

2.2.3.1 Redundant Farm Agrichemicals

Numerous chemicals and substances have been historically used for agriculture and horticulture in the Tasman district. Some are still in current use. Such waste needs to be disposed of safely to protect human and animal health as well as the environment.

The agrichemical industry assists with the disposal of unwanted agrichemicals and their containers from farming activities. The Agrecovery Rural Recycling Programme coordinates this disposal service. Refer to their website for more details, http://www.agrecovery.co.nz/.

From 1 July 2018 collection and acceptance of redundant farm agrichemicals will fall within this activity. This will include supporting annual or bi-annual on-farm collections. Council is also monitoring other pilot recycling schemes for rural properties.

2.2.3.2 Commercial Hazardous Waste

Commercial premises are responsible for the correct disposal of hazardous waste that they produce. There are a number of companies that specialise in the disposal of commercial hazardous waste. Council plans to investigate options to improve support of commercial hazardous waste services from 1 July 2018.

2.2.4 Closed Landfills

2.2.4.1 Services & Assets

Within the Tasman District Council area there are 19 known locations which have historically been used to dispose of various materials including domestic waste, rubble, farm waste, scrap metal etc.

Some of these locations have been natural low points in the topography and have been filled by previous landowners or used as community tips, others have been historic fly tipping locations and at some sites the material has been deposited above the natural ground level. Since the disposal of material at these sites has ceased, each of the sites have been covered and restored to varying degrees. Many of the sites are now overgrown with vegetation.

These 19 sites are classified as "closed landfills" and have been named as follows for identification purposes:

- Appleby
- Cobb Valley (Ernies Flat)
- Collingwood
- Kaiteriteri
- Lodders Lane
- Mariri RRC
- Mariri old
- Murchison RRC
- Murchison
- Ngatimoti
- Old Wharf Road
- Pah Point
- Richmond RRC
- Rototai St Arnaud
- Tapawera
- Waiwhero

There are three privately owned closed landfills:

- Hoult Valley
- Upper Moutere
- Upper Takaka

Council has arranged biennial inspections on each of the sites over the past 13 years. These inspections are based on visual observations of each of the sites and surrounding areas, as well as sampling of any potential contamination identified at the time of assessment. Some remedial works have been carried out following these inspections.

Section 10.3.2 details the resource consents held and designations that affect the closed landfills within the district.

Site characteristics of each closed landfill are summarised in Table 3.

Table 3: Current Site Characteristics of Each of the Closed Landfills in the District

Site	Landfill Characteristics						Vegetation				Nearby Environment			Management4		Ownership		
	Years closed1	Size2	Capped	Lined	Waste burned	Contains hazardous waste	No vegetation	Grassed	Overgrown	Re-vegetated	Downstream drinking water bore3	Coastal environment	River	Actively managed	Passively managed	Tasman District Council	Crown land	Private Land
Appleby	15-40	•	✔		✔			✔			✖		✔	✔		✔		
Cobb Valley (Ernie's Flat)	15-40	•				?			✔		✖		✔		✔		✔	
Collingwood (RRC)	5-15	•	✔			?	✔				✖			✔		✔		
Hoult Valley *	15-40	•	✔		✔	✔		✔			✖				✔			✔
Kaiteriteri	15-40	•	✔			?	✔	✔			✖			✔			✔	
Lodders Lane	15-40	•	✔		✔	?		✔		✔	✖	✔		✔		✔		
Mariri (old)	15-40	●	✔		✔	✔			✔		✖	✔			✔			
Mariri (RRC)	15-40	•	✔		✔	✔	✔				?	✔		✔		✔		
Murchison (old)	15-40	•	✔		✔	?		✔			✖		✔	✔		✔		
Murchison (RRC)	<5	•	✔	✔			✔		✔		✖		✔	✔		✔		
Ngatimoti	15-40	•	p		?	✔			✔		✖		✔		✔	✔		
Old Wharf Rd	15-40	●	✔		✔	?	✔	✔			✖	✔		✔		✔		
Pah Point	15-40	•	✔		✔	?				✔	✖		✔	✔				
Richmond (RRC)	15-40	•	✔		✔	✔	✔				✖	✔		✔		✔		
Rototai	5-15	●	p	p	✔	?			✔		✖	✔		✔		✔		
St Arnaud	5-15	•	✔		✔	?		✔			✖				✔	✔		

Site	Landfill Characteristics						Vegetation				Nearby Environment			Management4		Ownership		
	Years closed1	Size2	Capped	Lined	Waste burned	Contains hazardous waste	No vegetation	Grassed	Overgrown	Re-vegetated	Downstream drinking water bore3	Coastal environment	River	Actively managed	Passively managed	Tasman District Council	Crown land	Private Land
Tapawera	15-40	•	✔		✔	✔	✔				✕		✔		✔	✔		
Tasman/Highway	15-40	•	✔			✔				✔	✕	✔			✔	✔		
Tasman/Kina	15-40	•	✔		✔	?				✔	✕	✔			✔	✔		
Upper Moutere *	15-40	•	✔	✔	✔	?		✔			✕				✔			✔
Upper Takaka *	15-40	•			?	✔			✔		✕		✔		✔			✔
Waiwhero	15-40	•	✔	p	✔	?					✕			✔		✔		

1 Years since closure: MfE guideline ranges regarding need for monitoring

2 Size: ☒ <15,000m³ ☒ 15,000-100,000m³

3 Downstream drinking water bores identified using Explore Tasman (GIS system used by Tasman District Council)

4 Managed by Tasman District Council ☒= yes ☒= no p = partially capped/lined ? = unknown

* Privately owned

2.2.5 Waste Minimisation Activities

The most significant drivers for waste minimisation is the Nelson Tasman Joint Waste Management and Minimisation Plan (the "joint WMMP"). This plan was adopted in 2012 and is being reviewed in 2018.

One of the three goals of Council in the joint WMMP and in the waste management and minimisation activity is "to avoid the creation of waste". Method 1.2.1.1 of the joint WMMP states:

> *"The Councils will identify opportunities to develop, implement and promote activities, events and programmes that engage the community, in waste reduction. These programmes will be directed by Council priorities around waste stream reduction."*

Council works towards this goal through the implementation of waste minimisation initiatives. Waste minimisation covers all those initiatives that either seek to reduce the amount of waste being produced or divert waste from being disposed of in a landfill where it will effectively be lost as a resource.

To achieve this goal Council can:

- provide services and facilities
- manage or create demand
- enable positive changes in the community.

The bulk of Council activity in the waste management and minimisation area involves providing services (like RRCs and kerbside recycling) and managing or creating demand (by setting disposal prices or regulating activities).

The Council's other waste minimisation activities largely aim to enable positive change. The Council seeks to do this by:

- collecting and disseminating information and advice
- part funding or supporting waste minimisation activities (through grants, contracting for services or other support)
- working with business and communities to identify and remove barriers to waste minimisation
- promoting and recognising successful initiatives

The Council's waste minimisation activities are mainly delivered by:

- promoting waste minimisation through the Enviroschools programme and initiatives led by Community Development staff
- a range of small initiatives that fund or promote waste minimisation.

These smaller waste minimisation initiatives include the following activities:

- waste minimisation publicity
- compost bin incentive scheme and other composting initiatives
- promoting and supporting event recycling
- support of the Paintwise and Agrecovery programmes
- support of product stewardship initiatives as they arise
- provision of grants or other funding support for initiatives

All of these activities are coordinated (and in some instances jointly delivered with) Nelson City Council.

3 Strategic Direction

Strategic direction provides overall guidance to the council and involves specifying the organisation's objectives, developing policies and plans designed to achieve these objectives, and then allocating resources to implement the plans. The strategic direction for this activity is set by the Nelson Tasman Joint Waste Management and Minimisation Plan.

3.1 Our Goals

The goals for this activity are set by the Nelson Tasman Joint Waste Management and Minimisation Plan (2012).

Table 4: Activity Goal

Activity Goal
The goals for this activity are to: • avoid the creation of waste; • improve the efficiency of resource use; and • reduce the harmful effects of waste.

At the time of preparing this document the Council was conducting a review of the Joint Waste Management and Minimisation Plan, and this review is scheduled for completion in 2018.

3.2 Contribution to Community Outcomes

Table 5 summarises how this activity contributes to the achievement of the Council's Community Outcomes.

Table 5: Community Outcomes

Community Outcomes	Does Our Activity Contribute to the Community Outcome?	How Our Activity Contributes to the Community Outcomes
Our unique natural environment is healthy, protected and sustainably managed.	Yes	We protect our natural environmental by providing comprehensive waste disposal services for our community. We reduce the impact of landfill disposal by providing a wide range of other services to divert waste from landfill and reduce waste production. We operate our facilities in compliance with our resource consents. We also ensure that we have operational plans for our services and site management plans for the facilities we operate.
Our urban and rural environments are people-friendly, well-planned, accessible and sustainably managed.	Yes	By providing recycling and rubbish collection services we ensure our built urban and rural environments are functional, pleasant and safe. We provide facilities that are convenient, clean and safe and we promote the sustainable use of resources.
Our infrastructure is efficient, cost effective and meets current and future needs.	Yes	We operate our facilities and services in a safe and efficient manner. We plan for future growth and to provide waste and recycling services that the community is satisfied with.
Our communities are healthy, safe, inclusive and resilient.	No	

Community Outcomes	Does Our Activity Contribute to the Community Outcome?	How Our Activity Contributes to the Community Outcomes
Our communities have opportunities to celebrate and explore their heritage, identity and creativity.	No	
Our communities have access to a range of social, cultural, educational and recreational facilities and activities.	No	
Our Council provides leadership and fosters partnerships, a regional perspective, and community engagement	No	
Our region is supported by an innovative and sustainable economy.	No	

3.3 Infrastructure Strategy

Council's Infrastructure Strategy covers the assets needed to support the Council's water supplies, stormwater, wastewater, rivers and flood control, and transportation activities.

The purpose of the Strategy is to identify the significant infrastructure issues for Tasman over the next 30 years, and to identify the principal options for managing those issues and the implications of those options.

When setting out how Council intends to manage the District's infrastructure assets and services, it must consider how:

- to respond to growth or decline in demand;
- to manage the renewal or replacement of existing assets over their lifetime;
- planned increases or decreases in levels of service will be allowed for;
- public health and environmental outcomes will be maintained or improved; and
- natural hazard risks will be addressed in terms of infrastructure resilience and financial planning.

There are three parts to the Strategy; the Executive Summary, the Strategic Direction, and the Activity Summaries. The Strategic Direction section sets the direction for infrastructure management and outlines the key priorities that Council will focus on when planning and managing its infrastructure. The Activity Summaries section provides an overview of each activity and is largely a summary of the relevant activity management plan.

The four key infrastructure priorities included in the Strategy are:

- Providing infrastructure services that meet the needs of our changing population
- Planning, developing and maintaining resilient communities
- Providing safe and secure infrastructure and services
- Prudent management of our existing assets and environment

These priorities have been used to determine and prioritise what is required to be included in the programmes of work for each activity management plan.

3.4 Financial Strategy

The Financial Strategy outlines Council's financial vision for the next 10–20 years and the impacts on rates, debt, levels of service and investments. It will guide Council's future funding decisions and, along with the infrastructure strategy, informs the capital and operational spending for the Long Term Plan 2018-2028.

Three key financial limits are established in the Financial Strategy that set Council's overall financial boundaries for its activities. These include:

- Rates Income - limited to $65 million per annum and targeted rates to $60 million per annum.
- Rates Increases - limited to a maximum of 3% per annum, plus an allowance for annual growth in rateable properties.
- Debt - net external debt limited to a maximum of $200 million

Infrastructure expenditure forms a large proportion of Council's spending being 39% of operational expenditure and 80% of capital expenditure over the next 10 years. Because of this, the Infrastructure Strategy and Financial Strategy are closely linked to ensure the right balance is struck between providing the agreed levels of service within the agreed financial limits. Often these financial limits will influence how Council manages and develops existing and new assets. This is especially so for the next 10 years.

Over the next 10 years, forecast rate income increases and debt levels are projected to be near Council's limits. Council has had to work hard to prioritise and plan a work programme which addresses key issues while staying within these limits. Given Council's debt is projected to peak at $199.6m in Year 2020/21 there is very little scope to add further work programmes in the next five years.

3.5 Key Issues

The most important issues relating to the waste management and minimisation activity and our proposed responses to these issues are shown below in Table 6.

Table 6: Key issues for the Waste Management and Minimisation Activity

Key Issue	Discussion	How we are responding
Population and waste growth	Our region is currently growing strongly. This is leading to higher waste volumes and demand for kerbside services.	Our kerbside services are designed to manage growth and we monitor this continuously. We include growth projections when designing upgrades to our resource recovery centres.
Growing demand for waste diversion	There is a growing demand for us to divert an increasing range of products and materials from landfill. We will need to consider which products are highest priority and how to fund these services.	While we expect to see increases in recycling over time, not all recycling services need to be provided by Council. We are proposing to support and partner with third parties to provide waste diversion services in the region. These third parties are often able to provide services more efficiently than Council.
Increasing need for risk reduction measures	We will need to continue improving our risk reduction measures in the activity. The waste industry is reasonably high risk and manages difficult and sometimes hazardous materials.	We have included budgets to continuously improve the safety of our kerbside services and resource recovery centres. We are planning to increase the range of hazardous waste services in the district.
Cost of landfill disposal	Our largest single cost for this activity is the cost of landfill disp0sal. It determines the cost of most of our activities and the fees that we charge for many of our services. The cost of landfill disposal is also a key factor in the demand for and viability of waste minimisation services and influences the total waste to landfill. The cost of waste disposal is also a key influencer of our customer satisfaction. The cost of landfill disposal is set by the Nelson-Tasman Regional Landfill Business Unit, with input from the Nelson City and Tasman District Councils.	We expect that the cost of landfill disposal will continue to increase over time. We will signal changes early and transparently so that our communities can plan with certainty.
Regional waste management	Waste activities and services operate in a commercial environment, with free movement across the Nelson – Tasman boundary and beyond. We need to coordinate our waste management across the wider region.	We operate under a Joint Waste Management and Minimisation Plan with Nelson City Council. It sets the strategic goals and objectives for the Councils and for the Nelson-Tasman Regional Landfill Business Unit. The Joint Waste Management and Minimisation Plan is currently being reviewed and will set the direction for the next six years.

3.6 Prioritisation

Council cannot afford to undertake all work at once due to financial and resource constraints. This means that Council needs to prioritise what work it undertakes first, and what work can wait until later.

There are multiple factors that affect the priority of individual works. These include:

- The need to protect public health & safety
- Statutory compliance
- Meeting the needs of tomorrow's population
- Readiness to implement works
- Co-funding opportunities
- Enabling pleasant community environments
- Benefits and risks
- District distribution
- Strategic fit

Council has taken all of the above into consideration when planning its programme of work. Generally, mandatory requirements such as statutory compliance take priority, and discretionary activities have been programmed second to this.

Table 7 summarises our proposed approach to the key issues for this activity. We have generally prioritised risk reduction measures ahead of waste minimisation initiatives. We have done this with the expectation that some waste minimisation services and initiatives will be provided by commercial companies and not-for-profit organisations and that transparency in disposal prices may lead to changes in consumer behaviour.

Table 7: Council's Response to Key Issues

Key Issue	How we are responding
Population and waste growth	Our kerbside services are designed to manage growth and we monitor this continuously. We include growth projections when designing upgrades to our resource recovery centres.
Growing demand for waste diversion	While we expect to see increases in recycling over time, not all recycling services need to be provided by Council. We are proposing to support and partner with third parties to provide waste diversion services in the region. These third parties are often able to provide services more efficiently than Council.
Increasing need for risk reduction measures	We have included budgets to continuously improve the safety of our kerbside services and resource recovery centres. We are planning to increase the range of hazardous waste services in the district.
Cost of landfill disposal	We expect that the cost of landfill disposal will continue to increase over time. We will signal changes early and transparently so that our communities can plan with certainty.
Regional waste management	We operate under a Joint Waste Management and Minimisation Plan with Nelson City Council. It sets the strategic goals and objectives for the Councils and for the Nelson-Tasman Regional Landfill Business Unit. The Joint Waste Management and Minimisation Plan is currently being reviewed and will set the direction for the next six years.

4 Key Linkages

There are multiple factors that influence how Council manages this activity. They can be internal or external and include legislation, policies, regulations, strategies and standards. This section summarises these key linkages.

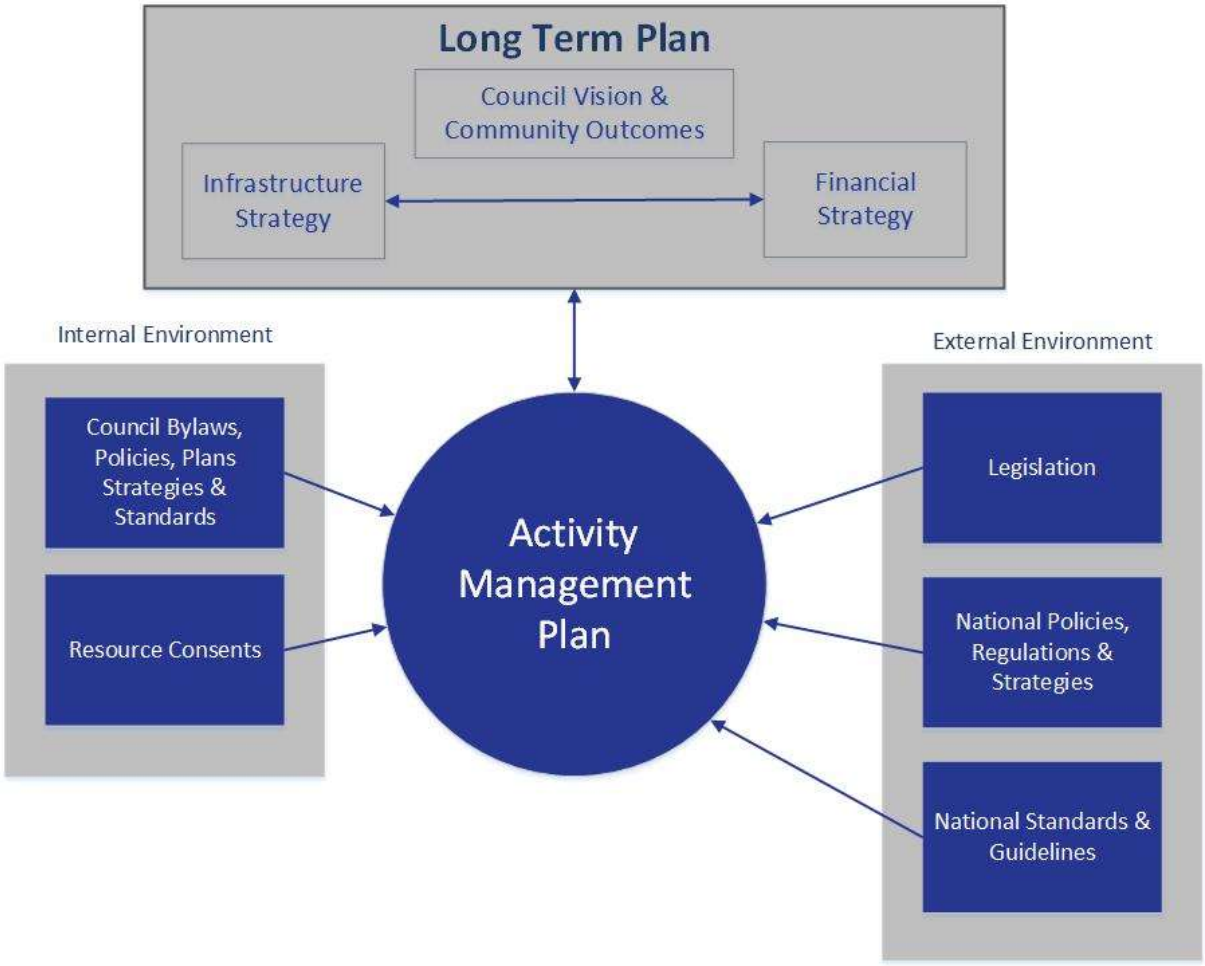


Figure 10: How the Waste Management and Minimisation AMP Relates to Other Documents

In preparing this AMP the project team has taken account of:

- National Drivers – for example the drivers for improving Asset Management through the Local Government Act 2002
- Local Drivers – community desire for increased level of service balanced against the affordability
- Industry Guidelines and Standards
- Linkages – the need to ensure this AMP is consistent with all other relevant plans and policies
- Constraints – the legal constraints and obligations Council has to comply with in undertaking this activity.

The main drivers, linkages and constraints are described in the following sections.

4.1 Key Legislation

The Acts below are listed by their original title for simplicity however all amendment acts shall be considered in conjunction with the original Act, these have not been detailed in this document. For the latest Act information refer to http://www.legislation.govt.nz/.

Table 8: Legislative Acts that Influence this Activity

Key Legislation	How it relates to this activity
Waste Minimisation Act 2008	The Waste Minimisation Act 2008 (WMA) is the key legislative driver for the Council's waste management and minimisation activities. Part 4 of the WMA sets out the responsibilities of territorial authorities in relation to waste management and minimisation. Section 42 of the WMA states that the Council "must promote effective and efficient waste management and minimisation within its district". Activities required of the Council by the WMA include: • adoption of a Waste Management and Minimisation Plan (WMMP); • review of the WMMP at least every six years; • preparation of a Waste Assessment prior to review of the WMMP.
Local Government Act 2002	The Local Government Act requires local authorities to prepare a ten-year Long Term Plan and 30-year Infrastructure Strategy, which are to be reviewed every three years. The Act requires local authorities to be rigorous in their decision-making by identifying all practicable options and assessing those options by considering the benefits and costs in terms of the present and future well-being of the community. This activity management plan provides information to support the decisions considered in the Long Term Plan. In 2008 some responsibilities of the Council with respect to waste management and minimisation were transferred to and modified in the Waste Management Act. Section 11A of the LGA 2002 indicates that solid waste collection and disposal are core services of a territorial authority and that the Council, in considering its role, "must have particular regard to" the contribution these make to its communities.
Resource Management Act 1991	Sets out obligations to protect New Zealand's natural resources such as land, air, water, plants, ecology, and stream health. Resource consents draw their legal authority from the Resource Management Act 1991. The RMA is administered locally by Tasman District Council, as a unitary authority, through the Tasman Resource Management Plan (TRMP). The following section discusses key consents that Council holds in order to undertake this activity.
Litter Act 1979	Defines the offence of littering on public or private land. Requires Council (and other landowners) to provide and maintain litter bins in places where litter is likely to be deposited, and to empty these bins at regular intervals. It also gives powers to Council to appoint Litter Control Officers and Litter Wardens and to enforce the provisions of the Act.
Hazardous Substances and New Organisms Act 1996	The purpose of this Act is to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms. The Act places restrictions and controls on the transport and storage of hazardous substances. This places requirements on the Council in the receipt and handling of some materials accepted at Resource Recovery Centres and any collection services.

Key Legislation	How it relates to this activity
Climate Change Response Act 2002	The Climate Change Response Act 2002, Climate Change (Waste) Regulations 2010 and Amendments to the Climate Change (Unique Emissions Factors) Regulations are implemented through the New Zealand Emission Trading Scheme (NZ ETS). The NZ ETS requires those emitting greenhouse gases to pay for increases in emissions, whilst rewarding emission reductions. The waste sector is affected by the NZ ETS, as those who operate landfills are required to participate in the scheme, report emissions and surrender emission units (NZU's). The cost of emission units is passed on to customers of landfills through increased prices for waste disposal. Emissions from closed landfills are not captured by the NZ ETS. Price impacts of the NZ ETS on the Council's landfill activities were initially modest but in recent years the cost of carbon has become a significant cost in landfill operations. The Council has faced NZ ETS obligations since 2013 due to its ownership and operation of a landfill. This obligation now lies with the Nelson Tasman Regional Landfill Business Unit, but the costs of emissions are passed through to the Council in disposal charges.
Public Works Act 1981	The Public Works Act provides the statutory authority to acquire land for a public infrastructure.
Health and Safety at Work Act 2015	Health and Safety legislation requires that staff and contractors are kept safe at work. New legislative changes to the act will mean improved health and safety measures will be required. The Health and Safety at Work Act regulations also control how some hazardous materials must be handled and managed.
Te Tiriti o Waitangi – The Treaty of Waitangi	The Treaty of Waitangi is an agreement between Māori and the Crown. Under Section 4 of the Local Government Act 2002 local authorities are required to 'recognise and respect the Crown's responsibility to take appropriate account of the principles of the Treaty of Waitangi and to maintain and improve opportunities for Māori to contribute to local government decision-making processes'. Further sections of the Act, particularly 77 and 81, detail the scale of requirement for local authorities to seek contributions and involvement from Māori in consultation and decision-making processes.

4.2 Key Planning, Policies and Strategies

4.2.1 National Policies & Strategies

The New Zealand Waste Strategy is the primary national strategy document that affects this activity.

Table 9: National Polices, Regulations & Strategies

National Polices, Regulations & Strategies	How it relates to this activity
New Zealand Waste Strategy 2010	The first New Zealand Waste Strategy (NZWS) was launched in 2002, reviewed in 2006 and again in 2010. In contrast to previous strategies the current NZWS does not contain specific targets, but provides a high level direction to guide the use of the tool available to manage and minimise waste in New Zealand. The NZWS's flexible approach also aims to ensure that waste management and minimisation activities are appropriate for different local situations. To achieve these aims the NZWS sets the following two goals. • Goal 1: Reducing the harmful effects of waste; • Goal 2: Improving the efficiency of resource use. The aims of these two goals are to "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 Council's Waste Management and Minimisation Plan must have regard to the Waste Strategy and should guide local spending of the TA's portion of the waste disposal levy. In particular circumstances central government may direct a Council to amend its WMMP, although this provision of the act has not been used to date.

4.2.2 Regional Policies & Strategies

The Council also has several planning policy and/or management documents detailing its responsibilities under the legislative drivers listed above. Those which impact on the provision of this activity are listed in Table 10.

Table 10: Council Policies and Strategies

Council Documents	How it relates to this activity
Nelson – Tasman Joint Waste Assessment 2010 & 2017	Waste assessments are required to be prepared every six years. These assessments review the provision of services and the Council's proposed response to future demand. The first waste assessment was prepared jointly with Nelson City Council in 2010 and a second waste assessment was prepared in 2017.
Nelson – Tasman Joint Waste Management and Minimisation Plan 2012	The Nelson – Tasman Joint Waste Management and Minimisation Plan was prepared in 2012 and is being reviewed in 2018. The existing plan is available at: www.tasman.govt.nz/policy/plans/joint-waste-management-and-minimisation-plan/
Tasman District Council District Plan – Tasman Resource Management Plan (TRMP)	A combined regional and district plan with statements of issues, objectives, policies, methods and rules addressing the use of land, water, coastal marine area and discharges into the environment. Part V applies to all uses of water including taking, diverting and damming.
Tasman Regional Policy Statement (TRPS)	An overview of significant resource management issues with general policies and methods to address these. Part 7 Fresh Water Resources outlines the control of land use for the purposes of water management.
Tasman District Council Engineering Standards and Policies 2013	Sets out the standards for the design of engineering works associated with the development of urban supplies, eg, material types, capacity of pipes.
Tasman District Council Financial Strategy	Sets out the how Council funds its activities, projected population growth rates, funding expenditure, projected debt levels and management of investments.
Tasman District Council Infrastructure Strategy	Identifies infrastructure issues, principal options for managing issues and implications of those options.
Tasman District Council Procurement Strategy	The procurement strategy dictates the process for all procurement at the Council. The strategy does cater for scale and size of the acquisition.
Long Term Plan	The Local Government Act 2002 requires Council to produce a Long Term Plan (LTP) every three years. The LTP outlines activities and priorities for ten years, providing a long-term focus for decision-making.

5 Levels of Service

A key objective of this plan is to match the levels of service provided by this activity with the agreed expectations of our customers and their willingness to pay for that level of service. These levels of service provide the basis for the life cycle management strategies and works programmes identified in this Plan.

Levels of service can be strategic, tactical or operational. They should reflect the current industry standards and be based on:

- Customer Research and Expectations: information gained from stakeholders on expected types and quality of service provided.
- Statutory Requirements: Legislation, regulations, environmental standards and Council bylaws that impact on the way assets are managed (e.g. resource consents, building regulations, health and safety legislation). These requirements set the minimum level of service to be provided.
- Strategic and Corporate Goals: Provide guidelines for the scope of current and future services offered and manner of service delivery, and define specific levels of service, which the organisation wishes to achieve.
- Best Practices and Standards: Specify the design and construction requirements to meet the levels of service and needs of stakeholders.

We consult on the levels of service and performance measures as part of the LTP consultation process.

5.1 Our Levels of Service

Table 11 details the levels of service and associated performance measures for this activity. The table sets out Council's current performance and the targets we aim to meet over the next three years, and by the end of the next 10 year period. The yellow shaded rows show those that are included in the Long Term Plan and reported in the Annual Plan. Unshaded white rows are technical measures that are only included in the Activity Management Plan.

Table 11: Performance against Current Levels of Service, and Intended Future Performance

Levels of Service	Performance Measure	Current Performance (2016/17)	Future Performance Targets			
			Year 1	Year 2	Year 3	Year 10
			2018/19	2019/20	2020/21	2028/29
We provide effective waste minimisation activities and services.	There is an increase in resources diverted from landfill by Council services. As measured monthly and reported annually on a per capita basis.	167 kg per person	>174 kg	>177 kg	>181 kg	>208 kg
	There is a reduction in waste per capita going to landfill. As measured by Nelson – Tasman tonnage recorded at landfill.	696 kg per person	<689 kg	<686 kg	<682 kg	<655 kg
	There are high levels of participation in our kerbside recycling service As measured through annual resident survey of those provided with Council's kerbside recycling collection services who use it three times or more per annum.	96%	95%	95%	95%	95%
	Contamination levels in our kerbside recycling are low As measured by our contractor at the Materials Recovery Facility	5.5%	<5.0%	<5.0%	<5.0%	<5.0%

Levels of Service	Performance Measure	Current Performance (2016/17)	Future Performance Targets			
			Year 1	Year 2	Year 3	Year 10
			2018/19	2019/20	2020/21	2028/29
Our kerbside recycling and bag collection services are reliable, easy to use.	% customer satisfaction with kerbside recycling services. As measured through annual resident survey of those provided with Council's kerbside recycling collection services.	92%	90%	90%	90%	90%
	% customer satisfaction with kerbside bag collection services. As measured through annual resident survey of those provided with Council's kerbside bag collection services.	73%	70%	70%	70%	70%
	Customer Service Requests relating to waste management activities are completed on time. Percentage of enquiries to our contractor resolved within contracted timeframes. As measured through Confirm.	93%	95%	95%	95%	95%
Our resource recovery centres are easy to use and operated in a reliable manner.	Percentage of customer satisfaction. As measured by annual customer on-site surveys at RRCs who are very satisfied or fairly satisfied.	99%	95%	95%	95%	95%
All Council waste management and minimisation activities, facilities and services comply with the TRMP, site management plans and other appropriate legislative requirements.	No enforcement actions are issued with regard to Council's resource recovery and waste management activities. Enforcement actions are regarded as: (a) abatement notices (b) infringement notices (c) enforcement orders, or (d) convictions.	0	0	0	0	0

5.2 Level of Service Changes

Council reviews its levels of service every three years, as part of the Long Term Plan development. Table 12 below summaries the key changes Council has made during development of the Long Term Plan 2018 – 2028.

Table 12: Summary of Areas Where Council Has Made Changes to Levels of Service

Performance Measure	Summary of change
Levels of participation in our kerbside recycling service	This is a new measure. We consider that participation rates in part indicate the effectiveness of our service. We will measure through an annual resident survey of those provided with Council's kerbside recycling collection services.
Contamination levels in our kerbside recycling	This is a new measure. We have set a target of no greater than 5% contamination in our kerbside recycling material. Contamination is dirty or unrecyclable material and reduces the quality and value of recycling. Keeping contamination low increases the effectiveness of our service.
Waste per capita going to landfill.	We have amended this to be a Nelson-Tasman regional measure, to reflect that waste travels freely across the Nelson-Tasman boundary and that we are now operating a single regional landfill. We have amended our target from <560kg in 2017/18 in the previous AMP to <689kg in 2018/19 in this AMP. This reflects the new baseline set following increases in recent years.
Resources diverted from landfill by Council services	We have amended our target from >206kg in 2017/18 in the previous AMP to >174kg in 2018/19 in this AMP. Some greenwaste previously diverted by Council services is now diverted commercially. The change in target reflects this and other changes to waste diversion trends.

5.3 Levels of Service Performance & Analysis

We have analysed our levels of service performance and summarise our analysis in the following sections addressing each level of service.

5.3.1 Effective waste minimisation activities and services

Level of Service	Performance Measure
We provide effective waste minimisation activities and services.	There is an increase in resources diverted from landfill by Council services. As measured monthly and reported annually on a per capita basis.
	There is a reduction in waste per capita going to landfill. As measured by Nelson – Tasman tonnage recorded at landfill.
	There are high levels of participation in our kerbside recycling service As measured through annual resident survey of those provided with Council's kerbside recycling collection services who use it three times or more.
	Contamination levels in our kerbside recycling are low As measured by our contractor at the Materials Recovery Facility

The provision of effective waste minimisation activities and services is fundamental to this activity, but determining appropriate performance measures for this objective is difficult. Decreasing waste to landfill and increasing diversion from landfill are standard objectives in our sector but they are often influenced by factors outside Council's control.

Resources Diverted from Landfill

Figure 11 shows the total quantity of materials diverted from landfill over the last seven years and Figure 12 presents this on a per capita basis, with kerbside recycling totals for comparison. The figures illustrate

- the variability of diversion from year to year,
- that kerbside recycling makes up less than half the total diversion from landfill and
- that greenwaste diversion makes up a significant proportion of material diverted from landfill.

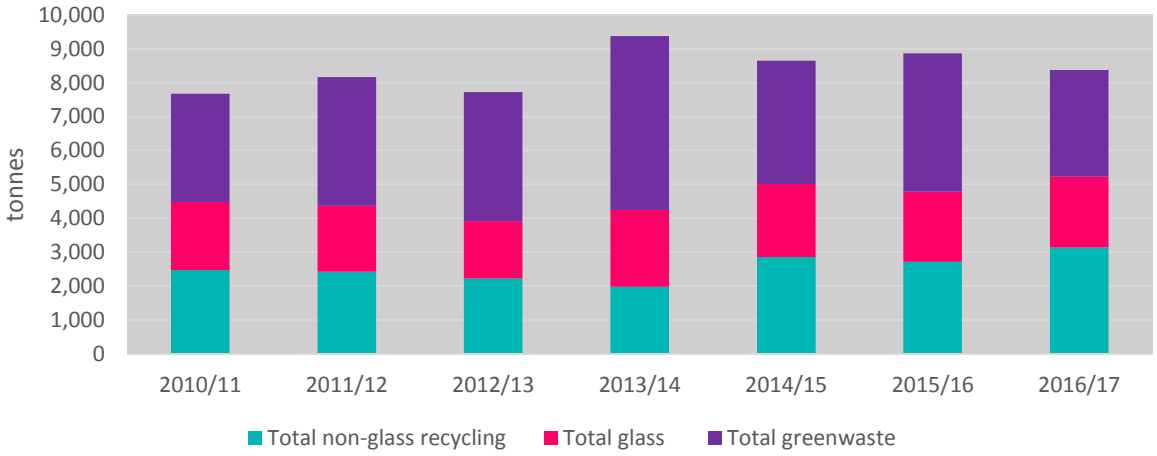


Figure 11: Total Material Diverted from Landfill

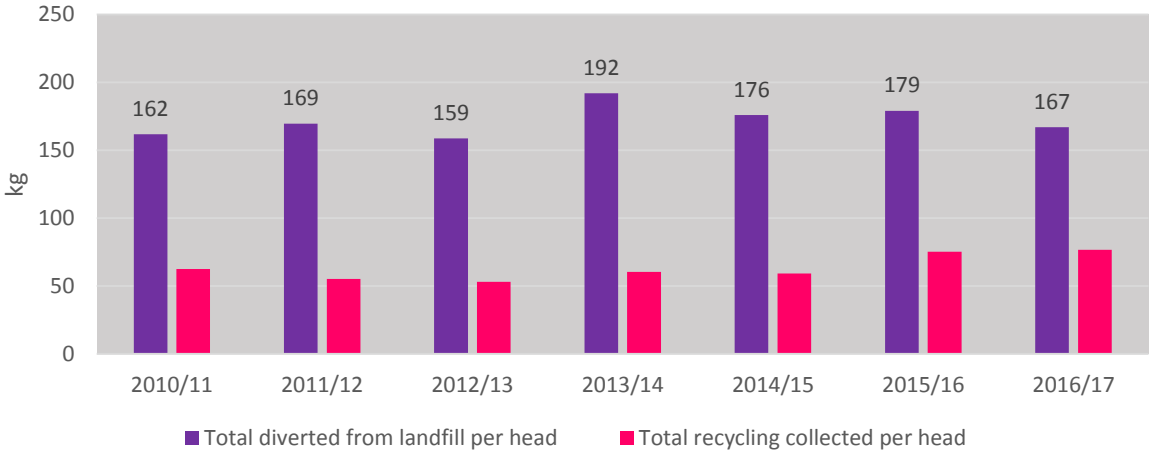


Figure 12: Total Material Diverted per Capita

In 2014/15 the greenwaste total reduced, and materially reduced Council's overall diversion for the year. This reduction was a reflection of a change in measurement – prior to 2014/15 greenwaste was estimated using as cubic metre measurement and after this date totals were calculated using weighbridge data. In 2016/17 the total tonnage of greenwaste dropped again, but this was because greenwaste from Richmond was processed as a fully commercial service, separate from Council.

Our performance target for future years is a 2% increase in diversion per annum (3-4kg per person).

Waste to Landfill per Capita

Waste to landfill per capita is nationally accepted as a waste efficiency indicator. Figure 14 shows the 12 month rolling average of waste to landfill for the last seven years and Figure 13 shows the waste per capita over this period (between 562 and 693kg per person).

Waste to landfill can be influenced both by Council services and initiatives (for example recycling services and promotion of waste minimisation). It is also affected by general regional economic activity and by growth (such as building and development). Large one-off events or development may generate large waste volumes, and these may negate any reductions in waste as a result of Council initiatives.

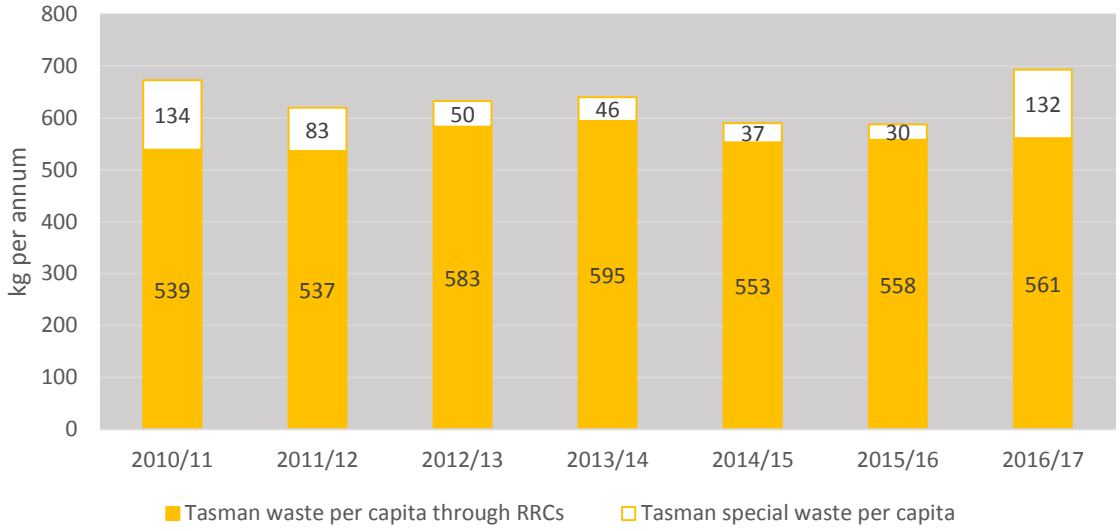


Figure 13: Tasman District Waste to Landfill per Capita

Figure 13 shows that while total waste to landfill moves around from year to year, the waste through resource recovery centres did not vary significantly. This is because the total waste to landfill includes "special waste" from large one-off events, such as contaminated soil from site development. The most significant change in resource recovery centre waste totals happened in March 2013, when a flood in Richmond resulted in disposal of significant material from homes and businesses (Figure 14). The Nelson City Council refuse transfer station was also closed during this period, with residential waste from Nelson being taken to Richmond.

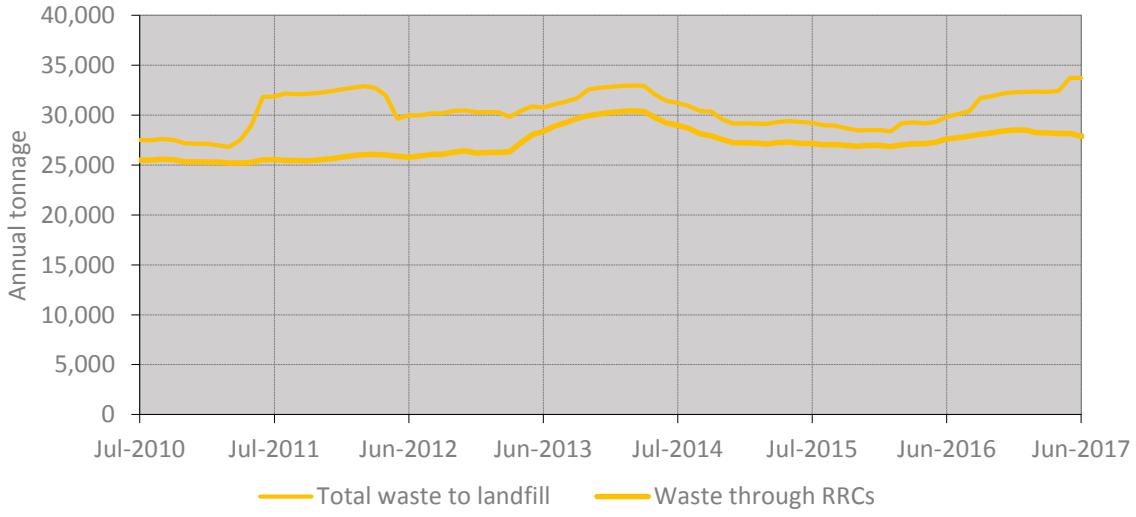


Figure 14: Tasman District Waste to Landfill 12 Month Rolling Average

We have amended our waste to landfill measure from a Tasman District measure to a Nelson-Tasman measure. This is because from 1 July 2017 waste from Tasman District Council has been landfilled at the York Valley landfill. Some of this material is transported via RRCs and some is transported direct to landfill.

A comparison of Tasman and Nelson waste per capita (Figure 15) indicates that these are similar and, in recent years, lower than the New Zealand average.

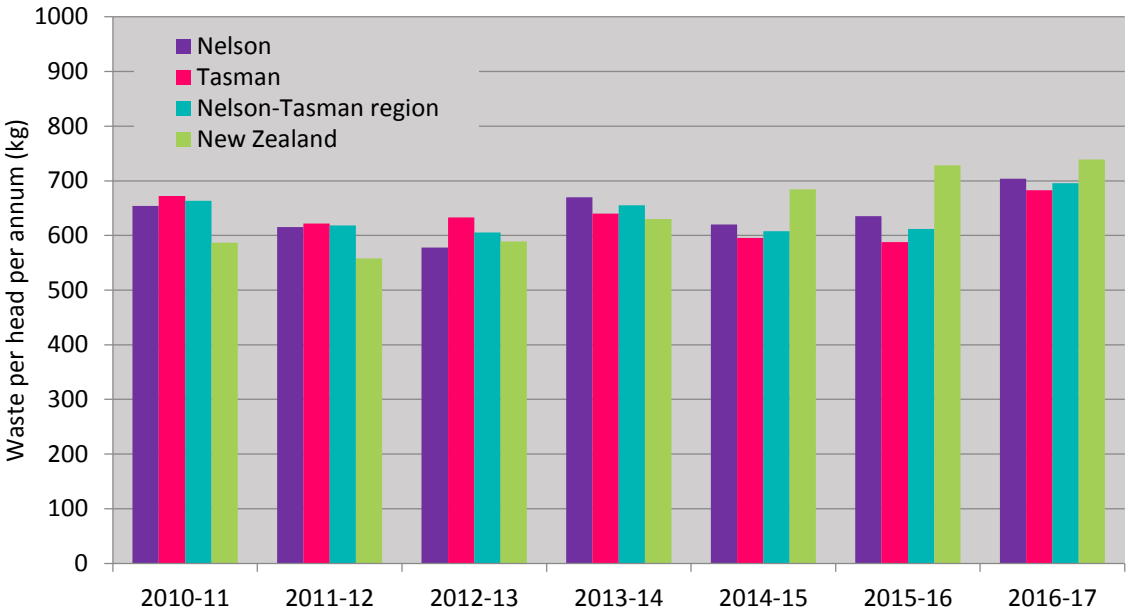


Figure 15: Comparison of Tasman, Nelson and New Zealand Waste to Landfill per Head of Population

The proposed target for waste to landfill is a reduction equivalent to our increase in diversion (3-4kg per person per annum). This assumes that an equivalent reduction will occur for Nelson City Council, but does not assume increasing waste diversion by commercial operators or reductions in waste generation.

Kerbside Recycling Participation and Contamination Rates

These are new performance measures and indicate the effectiveness of the kerbside recycling service. A high participation level indicates that the service is effective because it is being used. The contamination measure indicates the quality of the material being presented by residents, which affects the value and recyclability of the materials collected.

5.3.2 Kerbside Recycling and Bag Collection Services

Level of Service	Performance Measure
Our kerbside recycling and bag collection services are reliable, easy to use.	% customer satisfaction with kerbside recycling services. As measured through annual resident survey of those provided with Council's kerbside recycling collection services.
	% customer satisfaction with kerbside bag collection services. As measured through annual resident survey of those provided with Council's kerbside bag collection services.
	Customer Service Requests relating to waste management activities are completed on time. Percentage of enquiries to our contractor resolved within contracted timeframes. As measured through Confirm.

Kerbside Service - Customer Satisfaction

We survey customers annually on their satisfaction with kerbside recycling and rubbish collection and treat this as a measure of the reliability and ease of use of the services. We have not changed the performance measures for these services (90% satisfied or very satisfied with recycling and 70% with rubbish collection).

Kerbside Service - Reliability

We also measure the resolution rate of our collection contractor as a measure of the reliability of the service. This performance measure (95% resolution within contracted timeframes) is unchanged from the previous activity management plan.

5.3.3 Resource recovery centres

Level of Service	Performance Measure
Our resource recovery centres are easy to use and operated in a reliable manner.	Percentage of customer satisfaction. As measured by annual customer on-site surveys at RRCs who are very satisfied or fairly satisfied.

Resource Recovery Centres - Customer Satisfaction

We conduct on-site customer satisfaction surveys at our resource recovery centres every year and include questions in our Communitrak telephone surveys from time-to-time. We use the on-site surveys for reporting purposes, as they reflect the views of users, immediately after using the service. We have not changed the performance measure for this activity (95% satisfied or very satisfied).

Over the next ten years we are proposing the following capital projects to lift levels of service:

- Public place recycling and other waste minimisation infrastructure (Years 1-10) – this should increase waste diverted and increase the effectiveness of Council services
- Takaka Resource Recovery Centre - Replacement of the waste compactor and tipping pit, installation of a weighbridge and improvements to the recycling area (Years 1-2) – this should increase customer satisfaction through fairer pricing and more convenient recycling
- All Resource Recovery Centres – Minor improvements – we have allowed for additional minor improvements to improve customer satisfaction

6 Our Customers and Stakeholders

The Council consults with the public to gain an understanding of customer expectations and preferences. This enables the Council to provide a level of service that better meets the community's needs.

6.1 Stakeholders

There are many individuals and organisations that have an interest in the management and/or operation of the Council's assets. The Council has a Significance and Engagement Policy which is designed to guide the expectations with the relationship between Council and the Tasman community. Council has made a promise to seek out opportunities to ensure the communities and people it represents and provides services to have the opportunity to:

- be fully informed;
- provide reasonable time for those participating to come to a view;
- listen to what they have to say with an open mind;
- acknowledge what we have been told;
- inform contributors how their input influenced the decision the Council made or is contemplating.

Engagement or consultation:

- is about providing more than information or meeting a legal requirement;
- aids decision-making;
- is about reaching a common understanding of issues;
- is about the quality of contact not the amount;
- is an opportunity for a fully informed community to contribute to decision-making.

The key stakeholders the Council consults with about this activity are:

- elected members (Community Board members);
- Nelson City Council*;
- Iwi (Council's treaty partners)*;
- Public Health Service* (Medical Officer of Health at NMDHB);
- key customers and other service suppliers (commercial waste and recycling companies);
- neighbours of operational sites (landfills and resource recovery centres)

*Representatives of the Nelson City Council, Iwi/Maori and the Public Health Service are members of the Nelson-Tasman Joint Waste Working Party.

6.1.1 Consultation

The Council consults with the public to gain an understanding of customer expectations and preferences. This enables the Council to provide a level of service that better meets the community's needs.

The Council's knowledge of customer expectations and preferences is based on:

- feedback from residents surveys;
- other customer/user surveys;
- levels of service consultation on specific issues;
- feedback from staff customer contact;
- ongoing staff liaison with community organisations, user groups and individuals;
- feedback from elected members, advisory groups and working parties;
- analysis of customer service requests and complaints;
- consultation via the Annual Plan and Long Term Plan processes; and
- consultation on the Joint Waste Management and Minimisation Plan.

The Council commissions residents surveys on a regular basis (the National Research Bureau Ltd has provided this service since 2008). These NRB Communitrak surveys assess the levels of satisfaction with key services, including provision of community facilities, and the willingness across the community to pay to improve services. We also survey users at Council's resource recovery centres, on site, on an annual basis. Other informal consultation is undertaken with community and stakeholder groups on an issue by issue basis, as required.

6.1.2 Consultation Outcomes

The most recent NRB Communitrak™ survey was undertaken in May 2017. This asked whether residents were satisfied with the District's kerbside services and resource recovery centres.

We also conducted a satisfaction survey at the resource recovery centres in December 2016 – January 2017.

6.1.2.1 Kerbside Recycling

The results from this survey for recycling are shown in Figure 16. Not all residents surveyed are provided with the service and, so we measure overall satisfaction and satisfaction where the service is provided. We use the latter for reporting performance measurement of our levels of service.

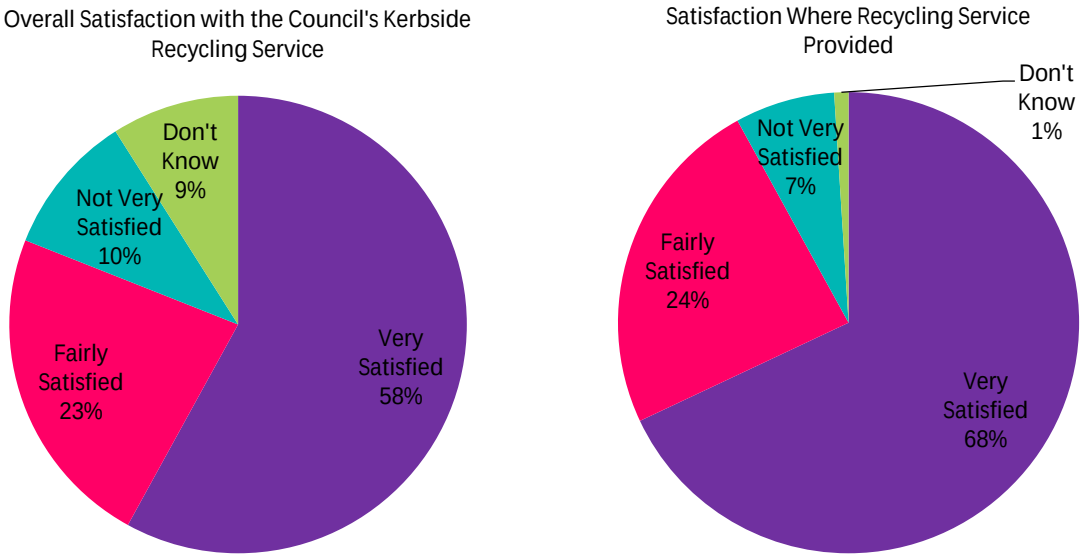


Figure 16: Satisfaction with Kerbside Recycling

The 2017 overall satisfaction score for the service (81%) is higher than the Council's peer group for 201 (75%) and on par with the national average (81%).

Figure 17 shows the change in satisfaction over time. It shows an increase in satisfaction in 2016, following the introduction of wheelie bins for recycling.

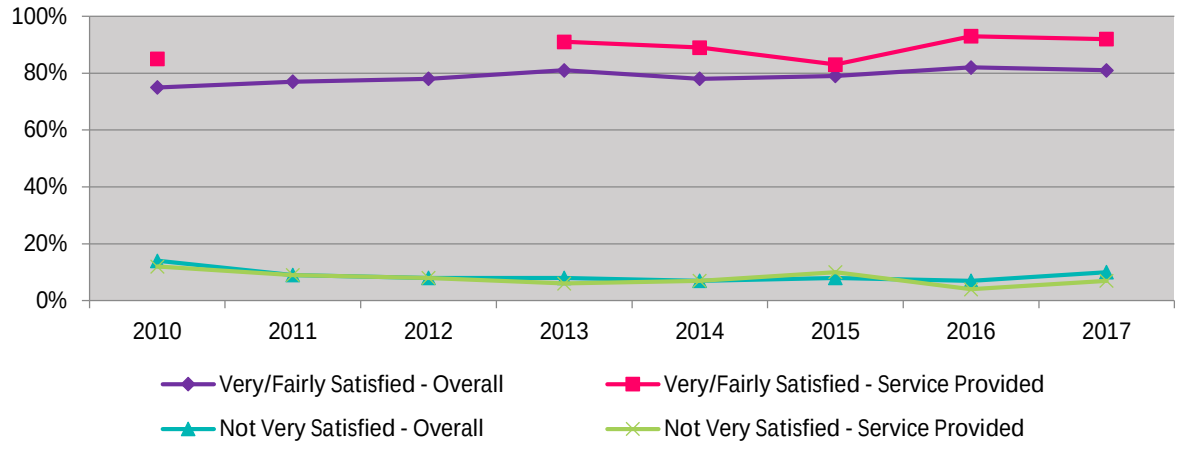


Figure 17: Satisfaction with Kerbside Recycling Services Over Time

The 2017 survey indicated that the most prevalent reason for dissatisfaction with recycling services was that they were not provided with the service where they lived. In response to this we are proposing to roll out drop of recycling options for rural residents. A trial in Murchison and Kaiteriteri has so far indicated good support for this option.

Some residents also reported dissatisfaction that the collection contractor does not collect all material. In response to this we will continue to provide education and information to the public why some materials cannot be collected.

A total of 86% of customers surveyed responded that they wanted us to spend "about the same" on recycling services (up from 83% in 2014, see Figure 18). Our programme of work reflects this preference.

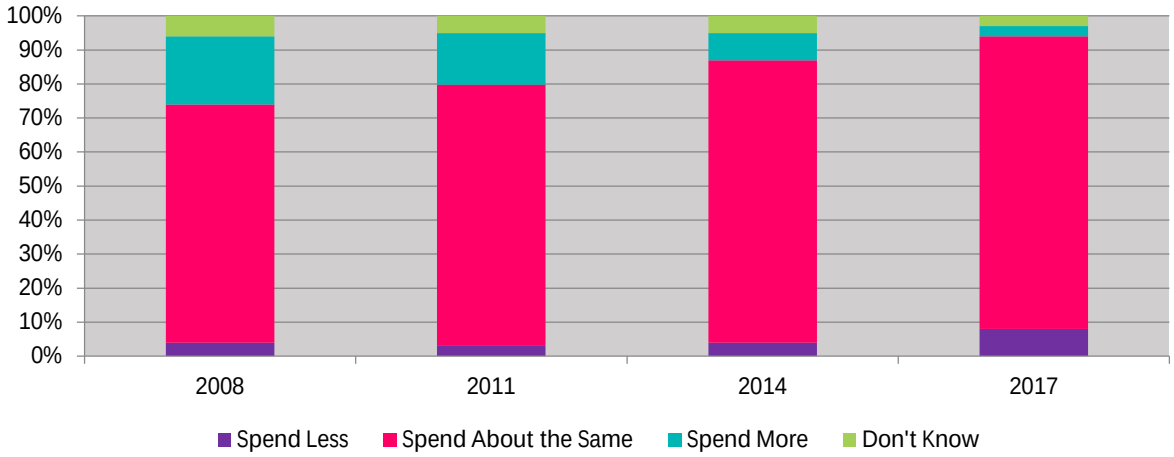


Figure 18: Kerbside Recycling - Spend Emphasis

6.1.2.2 Rubbish Collection

The results from this survey for rubbish collection are summarised in Figure 19.

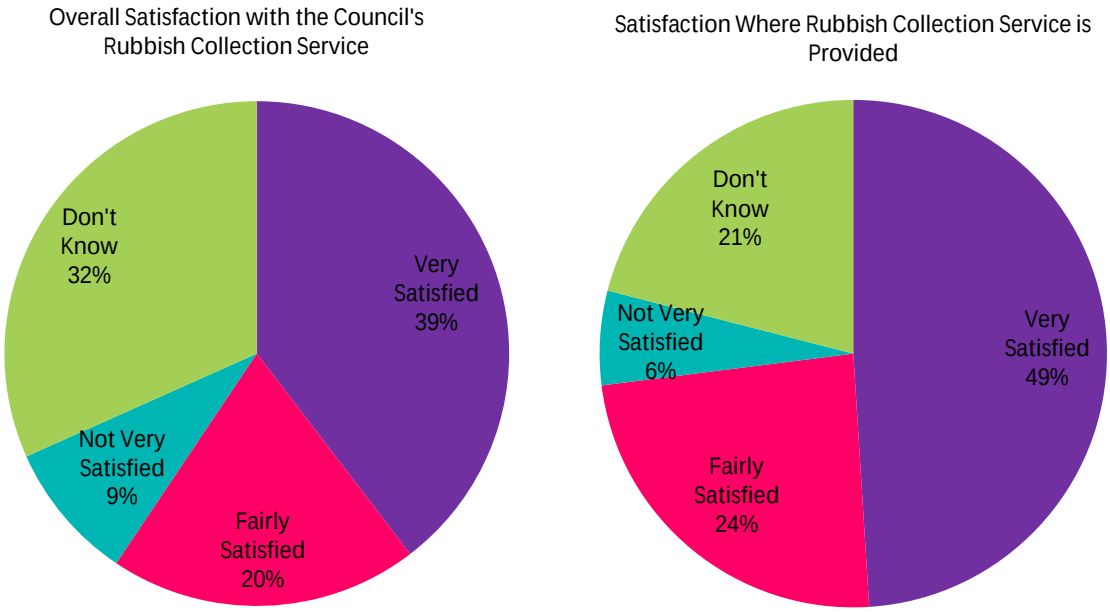


Figure 19: Satisfaction with Rubbish Collection

The 2017 overall satisfaction score for the service (60%) is lower than the Council's peer group for 2017 (66%) and lower than the national average (80%). The dissatisfaction rate (9%) is lower than our peer group (13%) and on par with the national average (9%).

The bag collection service is largely user pays, and many residents do not use the service and have answered "don't know".

Figure 20 shows the change in satisfaction over time. It shows a small increase in satisfaction.

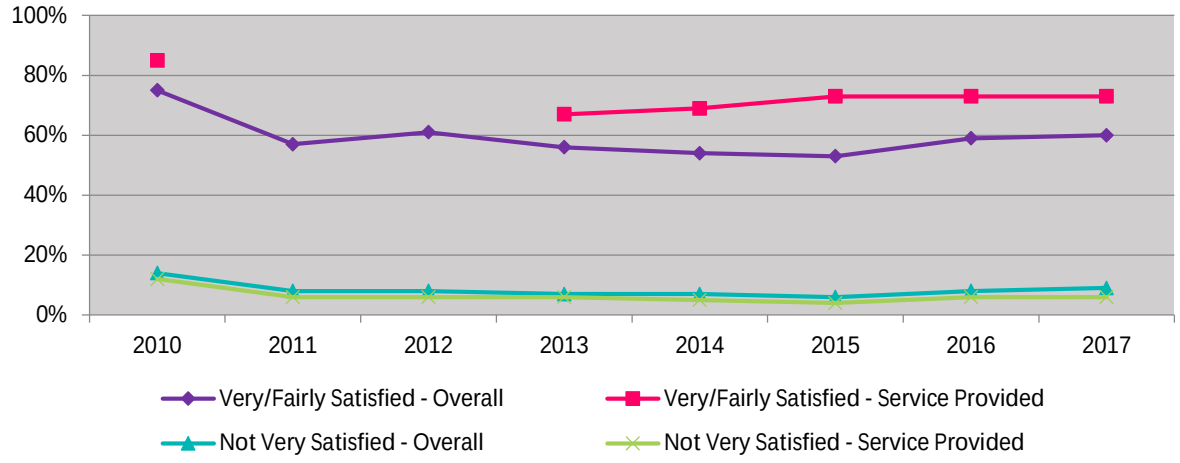


Figure 20: Satisfaction with Rubbish Collection Over Time

The 2017 survey indicated that the most prevalent reason for dissatisfaction with rubbish collection services was that they were not provided with the service or they used another contractor. Council has elected to move towards commercial rubbish collection services by passing the majority of the cost and income of the service to the collection contractor. While we require the contractor to provide the service we may need to better explain to our residents that little of their targeted or general rate support this service.

A total of 79% of customers surveyed responded that they wanted us to spend "about the same" on rubbish collection services (up from 74% in 2014, see Figure 21). Our programme of work reflects this preference.

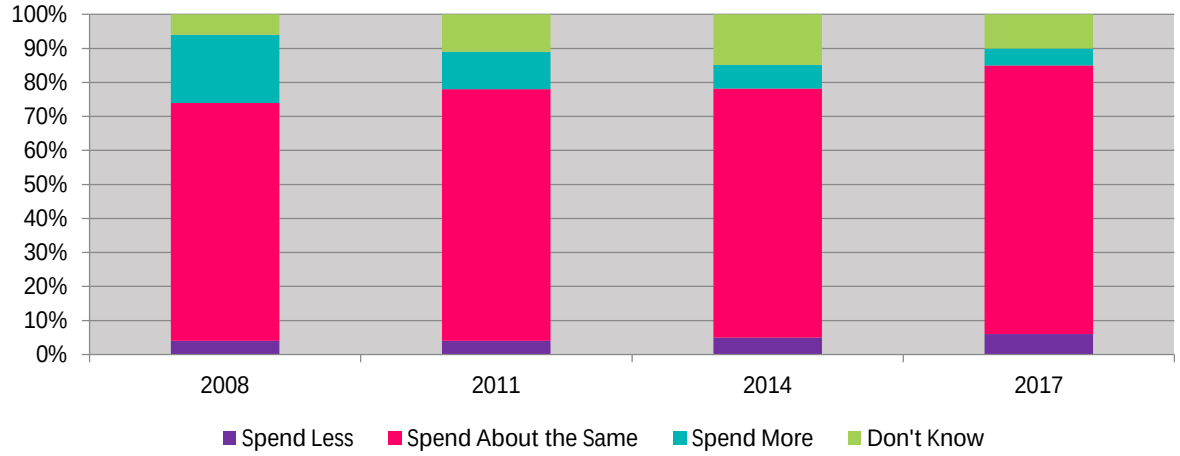


Figure 21: Rubbish Collection – Spend Emphasis

6.1.2.3 Resource recovery centres

Council surveys customers at the resource recovery centres each year, using contracted Council staff over the December-January period. The sites are generally surveyed on one week day and one on the weekend. In 2016-17 just over 300 customers were surveyed. The survey generally focuses on domestic and small commercial customers and also includes questions on suggested site improvements, customers recycling and greenwaste habits and invited suggestions on Council's kerbside and greenwaste services.

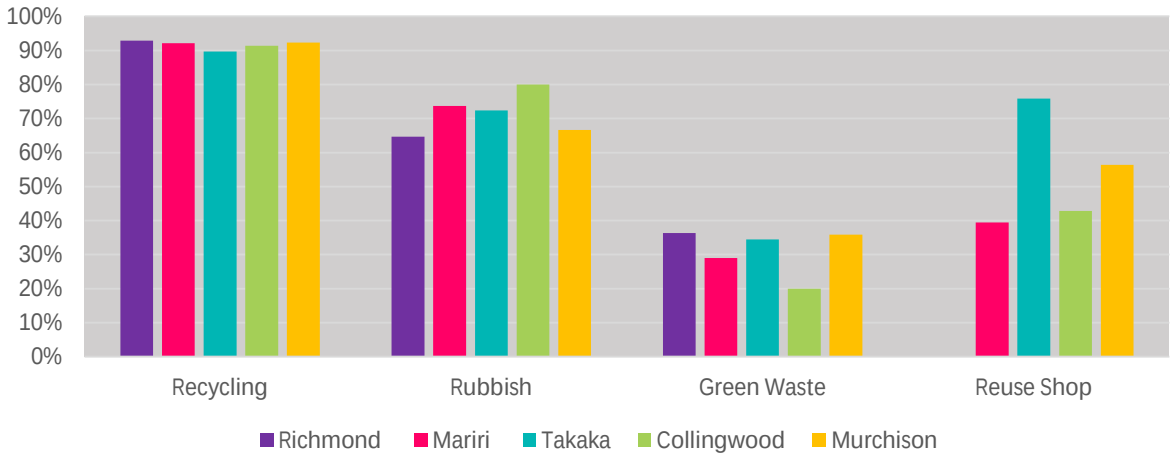


Figure 22: Use of Services at Resource Recovery Centres

Figure 22 shows that the most regularly used service at the resource recovery centres is the recycling service and only around two thirds of all users use the rubbish disposal service. Greenwaste and reuse shops are quoted as being well used at most sites also (note that Richmond and Mariri do not have reuse shops, but that one is provided near Mariri by a third party and that greenwaste is provided by a third party near Richmond).

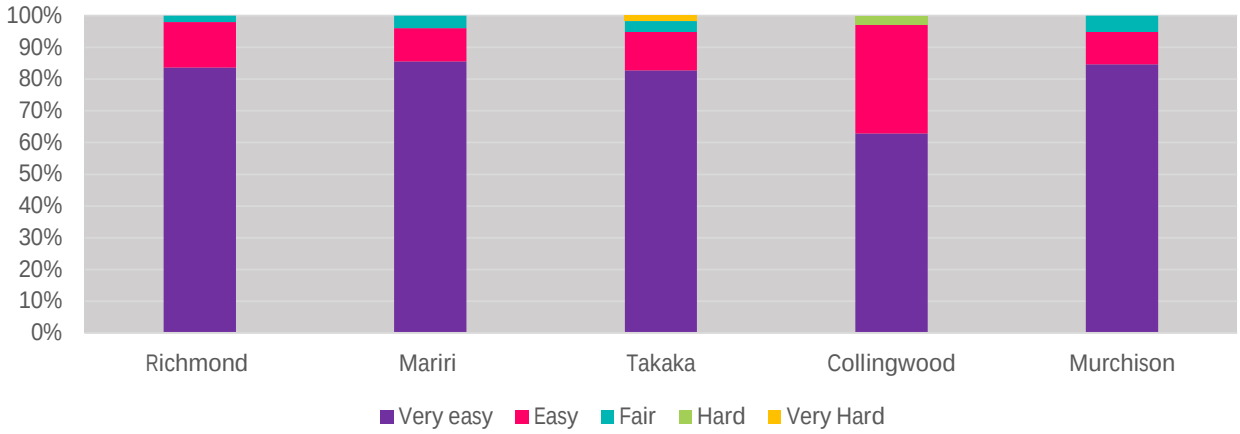


Figure 23: Ease of Use at Resource Recovery Centres

Figure 23 shows that generally over 80% of all users find the resource recovery centres to be "very easy" to use and that over 95% of all users find the sites to be "easy" or "very easy". The Collingwood site is smaller and requires users to load refuse into a skip from cars or trailers, and is generally the reason cited for difficulty of use.

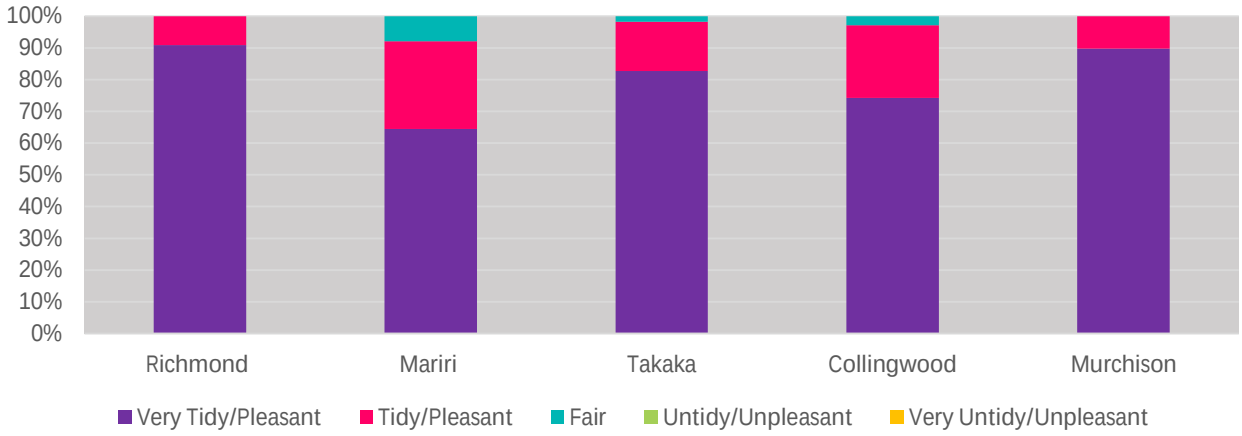


Figure 24: Tidyness and Pleasantness at Resource Recovery Centres

Figure 24 shows that there is some variation in tidiness and pleasantness across the resource recovery centres, although at most sites almost all users regard the site to be "very tidy and pleasant" or "tidy and pleasant". The Mariri site has until recently required waste to be loaded into open top bins and historically this has led to litter issues. Work in progress in 2017-18 should reduce this litter once complete. Further work is planned at Mariri in later years to including roofing of the waste pit.

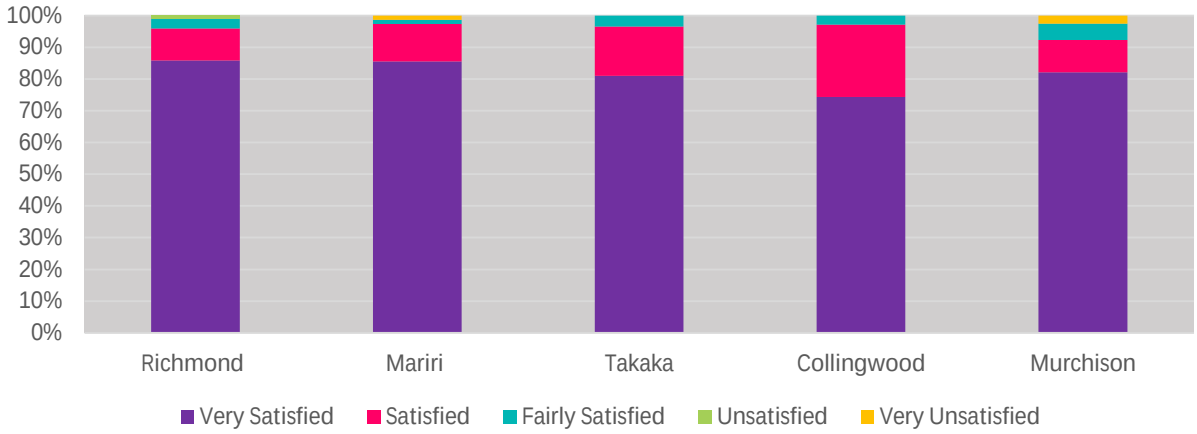


Figure 25: Over Satisfaction at Resource Recovery Centres

Figure 25 shows that overall satisfaction at resource recovery centres is very high. At all sites at least three quarters of users are very satisfied and at most sites over 95% of users are "satisfied" or "very satisfied". Dissatisfaction from customers at the Collingwood site appears to be driven by the difficulty using the refuse disposal service.

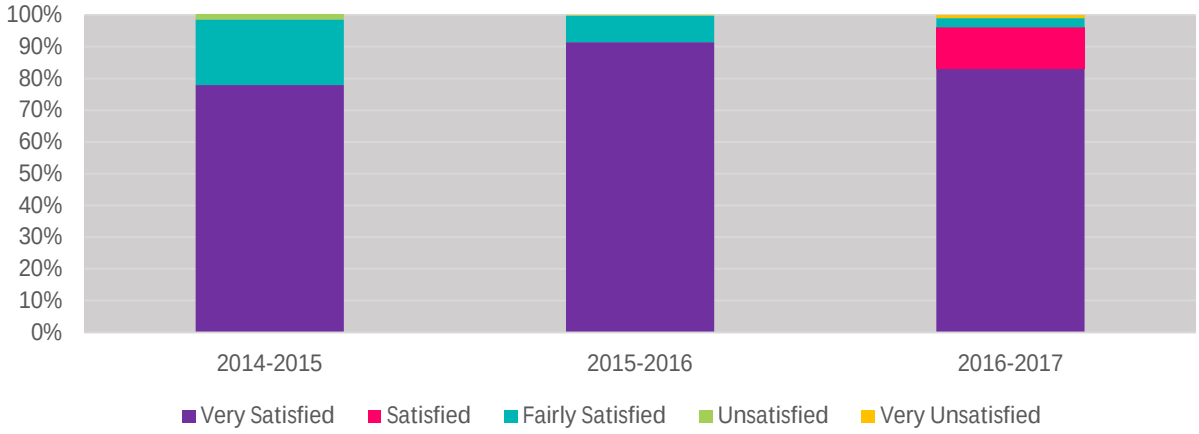


Figure 26: Satisfaction Over Time at Resource Recovery Centres

Figure 26 shows that customers that were "very satisfied" or "satisfied "has increased over time and customers that were "fairly satisfied" has decreased. (Note that 2014-15 and 2015-16 surveys only asked whether customers were "very satisfied", "fairly satisfied" or "unsatisfied".)

Overall the on-site customer surveys indicate a high level of satisfaction from users that is increasing over time. The sites have been progressively upgraded over this period and this work appears to improve satisfaction.

The most common suggestion from users was to reduce disposal costs for waste, followed by improved at access to recycling drop-off and longer opening hours at some sites. Council has now provided 24/7 access for recycling in Murchison and is planning to improve access to recycling drop off at Takaka (2019-20) and Mariri (2024-25).

The 2017 Communitrak survey included questions on council's resource recovery centres (referred to as "refuse/waste transfer stations" in the survey). The survey indicated 70% satisfaction and 15% dissatisfaction. This is on par or slightly better than our peer group (63% satisfaction and 13% dissatisfaction) and slightly better than the national average (64% and 17%) but lower than the on-site surveys. We consider the on-site surveys are more representative because they are a survey of users, during or immediately after using the site.

The main reasons for dissatisfaction were the cost of disposal (11%) and limited opening hours (2%, but 20% in Lakes-Murchison). Dissatisfaction with the cost of disposal of waste is a common theme in this activity and reflects the difficult balance between keeping disposal costs affordable and passing on the cost of disposal to waste generators. This balance is considered each year when disposal fees and general rate requirements are reviewed.

We have responded to concerns about opening hours by including a question on opening hours in the on-site surveys conducted in late 2017, and will consider the responses in due course. We have responded in Murchison by opening on Friday mornings (since mid-2017) and by providing 24/7 access to recycling since October 2017. We have received positive responses on these initiatives and will consider expansion of 24/7 drop-off services over time.

6.1.2.4 Survey conclusions

It is concluded from this survey that:

- the majority of residents are satisfied with the kerbside recycling service provided by council, but satisfaction with the service is no longer increasing;
- satisfaction with council's rubbish collection service is on a par with our peers (when the effect of "don't know" responses are excluded) ;
- there is a high level of participation in the council kerbside recycling scheme and recycling drop-off at resource recovery centres;
- there is a high level of satisfaction with resource recovery centres, but some dissatisfaction with disposal fees, opening hours and access to recycling on some sites;
- demands to spend more on kerbside recycling and rubbish collection have dropped away significantly, indicating that any improvements to services would need to be in line with historical budgets.

7 Current and Future Demand

The ability to predict future demand for services enables Council to plan ahead and identify the best way of meeting that demand. That may be through a combination of demand management and investing in improvements. This section provides and overview of key drivers of demand and what demand management measures Council has planned to implement.

7.1 Demand Drivers

Demand considers who is currently using the District's resource recovery centres, kerbside recycling and rubbish services and waste minimisation advice and education, and who else wants to use them. We look at current levels of use, patterns of use, the profile of use, and the desired level of use.

Key factors driving demand for waste management and minimisation facilities and services include:

- population growth
- on-going development activity in the district
- economic growth and waste production
- a growing demand for us to divert an increasing range of products and materials from landfill
- cost of landfill disposal and the relative cost of alternative options, and
- increased requirements to reduce risk in our activity.

7.2 Assessing Demand

7.2.1 Population growth

Council has estimated future population growth using a district specific growth model. The purpose of the growth model is to provide predictive information (demand and supply) for future physical development, to inform the programming of a range of services, such as network infrastructure and facilities, and district plan reviews. The model generates residential and business projections for 17 settlement areas and 5 ward remainder areas.

The key demographic assumptions affecting future growth are:

- Ongoing population growth over the next 30 years with the rate of growth slowing over time. The overall population of Tasman is expected to increase by 4,420 residents between 2018 and 2028, to reach 55,690.
- Higher growth in Richmond, Motueka, Mapua, Brightwater, and Wakefield for 2018-2028. For 2018-20208, Council has used Statistics New Zealand's high growth projections for Richmond, Brightwater, Wakefield, Motueka, and Mapua/Ruby Bay, and medium growth projections for the rest of the District. Medium growth projections have been used for the whole District for 2028-2048.
- An ageing population, with population increases in residents aged 65 years and over. The median age in the Tasman District in 2013 was 44. This is expected to increase to 53 (high projection) /54.1(medium projection) by 2043. The proportion of the population aged 65 years and over is expected to increase from 18% in 2013 to 36% (high projection)/ 37% (medium projection) by 2043.
- A decline in average household size, mainly due to the ageing population with an increasing number of people at older ages who are more likely to live in one or two person households.

The following provides a summary of the outputs from the growth model that have been determined by using the above input assumptions and parameters.

- Residential growth is measured in the number of new dwellings. Council has estimated demand for 2,955 new dwellings over the next ten years, and a further 3,040 dwellings between 2028 and 2048. This is based on population and household size projections, and also allow for demand for dwellings for non-residents, such as holiday houses or temporary worker accommodation. The growth model projects demand for new dwellings to be an average of 365 a year for Years 1-3 (2018-2021), dropping to 266 a year for 2021-2028. In recent years, Tasman has experienced increased growth in the number of new dwellings, with an average annual increase in the last three years of 365 new dwellings. The average over the last ten years was 291 new dwellings a year.

- Business growth is measured in the number of new business lots. Council has estimated demand for 243 new business lots in our settlements over the next ten years, and a further 212 new lots between 2028 and 2048. This is based on a business land forecasting model from Property Economics using medium population projections, national and regional economic trends, employment projections and employment to land ratios.

Generally an increase in solid waste production is directly related to population increases and economic growth. Solid waste reduction (or diversion) is directly related to the extent and effectiveness of waste prevention and minimisation initiatives that may be introduced.

Figure 27 and Figure 28 shows historical waste volumes over the last seven years and the impact of current recycling and composting initiatives on the amount of material being landfilled. We have estimated an increase in diversion by Council of 2% per annum (3-4kg per capita over the next 10 years). These projections have been used to determine future waste management and minimisation asset capacity requirements and additional operation and maintenance costs. Waste reduction from waste prevention measures (e.g., education and promotion) have not been estimated as the impact of these measures is difficult to measure and predict.

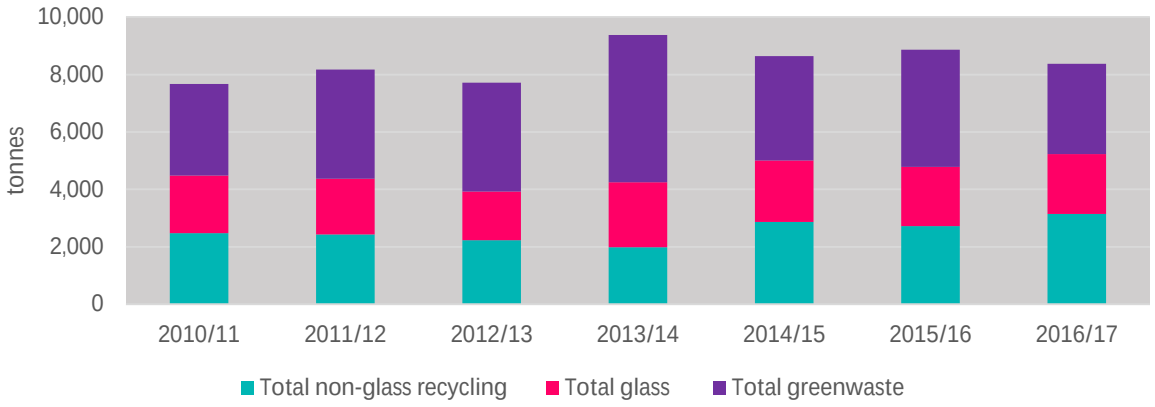


Figure 27: Recent Waste Diversion from Landfill Totals

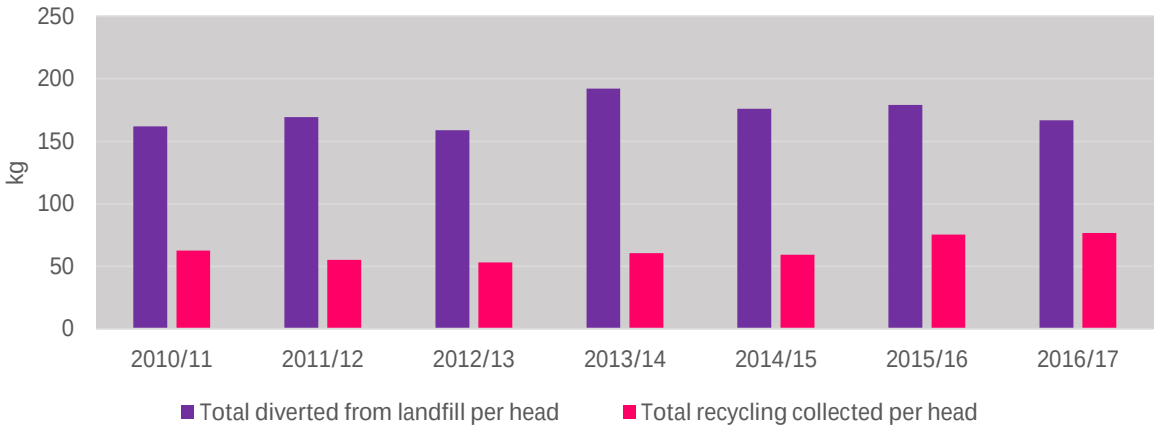


Figure 28: Historical Waste Diversion per Capita

Over the next 30 years the Council plans to maintain kerbside recycling and greenwaste processing services, and to encourage diversion of residual waste from landfill through waste minimisation initiatives.

Changes in projected growth rates, waste quantities and effectiveness of waste prevention and minimisation measures will impact on the remaining life of the York Valley Landfill and the need to reopen Eves Valley. This matter is addressed in the Nelson Tasman Regional Landfill Business Unit Activity Management Plan.

7.3 Demand Management

The objective of demand management (sometimes called non-asset solutions) is to actively seek to modify customer demands for services in order to:

- optimise utilisation/performance of existing assets;
- reduce or defer the need for new assets;
- meet the Council's strategic objectives;
- deliver a more sustainable service; and
- respond to customer needs

Demand and supply for waste services is not constrained by the District boundary. Collection of waste to landfill and recycled goods is a commercial activity and materials pass freely across boundaries (particularly between Nelson and Tasman districts). Waste volumes are also relatively variable, due to one-off fluctuations, normally due to large infrastructure projects (biosolids or contaminated land) or from adverse events (such as flooding or fire).

These factors have historically made it difficult to plan for income, expenditure and new waste infrastructure, particularly for landfill facilities. This difficulty was a key driver for the establishment of the regional landfill business unit.

7.3.1 Council's Approach to Demand Management

The Council's approach to demand management centres around three key areas:

- full cost disposal pricing;
- education and promotion; and
- waste minimisation services

Council's approach when estimating volumes is to calculate the total waste to landfill per head of population from historical data and then to deduct from this forecast any expected increases in waste diversion.

The following graph (Figure 29) shows historical waste to landfill for Nelson-Tasman and the expected waste per capita for the next ten years.

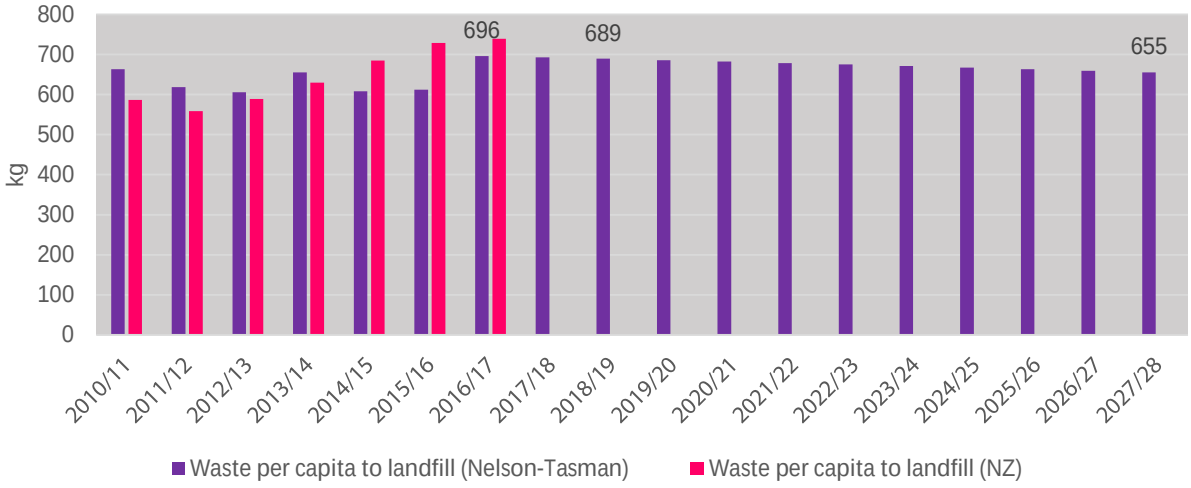


Figure 29: Historical Waste to Landfill per Capita (to 2016/17) and Projections from 2017/18 to 2027/28

We are projecting a 3-4kg reduction per annum, based on a 2% increase of materials diverted by Council. These measures are not expected to reduce total waste generated, but will reduce landfill demand.

Landfill disposal charges are set by the regional landfill business unit, but may reduce waste disposal volumes if they increase above inflation, although we have not been able to find any clear evidence of landfill pricing affecting total waste to landfill over the last ten years. Most increases or reductions in waste appear to be related to economic activity (particularly construction) or natural events (like flooding). The effect of the economic recession in 2008-09 is evident in waste quantities to landfill.

Our projection does not assume any change in waste generation or increase in diversion by commercial operators (because of the difficulty of projecting these changes).

The rationalisation of landfills in the Nelson-Tasman region will enable the two councils to further explore demand management measures with much lower revenue risk. If successful, these will delay capital expenditure for landfill construction. This will be considered in the upcoming review of the waste management and minimisation plan.

8 Lifecycle Management

Lifecycle cost is the total cost to Council of an asset throughout its life including, creation, operations and maintenance, renewal, and disposal. Council aims to manage its assets in a way that optimises the balance of these costs. This section summarises how Council plans to manage each part of the lifecycle for this activity.

8.1 Asset Condition and Performance

8.1.1 Resource Recovery Centres

Asset condition at resource recovery centres is not monitored formally. Assets are generally inspected as part of the management of the Operations contract. Some assets at the RRCs (waste pit, compactor, sealed pavements) are high wear assets, with some showing definite signs of wear and tear and require considerable on-going maintenance. There may also be a need to re-evaluate normal life for some of these high wear assets.

The assets at the Richmond RRC are a mixture of nearly new and moderately young (around 30 years) assets. Overall the site is moderately young in terms of infrastructure. Some assets at the RRC (waste pit, compactor, sealed pavements) are showing definite signs of wear and tear and will require considerable maintenance over the next 20 years. There may also be a need to re-evaluate normal life for some of these high wear assets.

The assets in the Mariri RRC are relatively young in their asset life expectancy. This Marri RRC is in good condition with a new waste pit, compactor, bin weight indicator and waste bin loading area commissioned in late 2017. In 2012 the Council also upgraded the site by providing a new drop-off loop on the lower level to separate recycling from solid waste operations. The staff facilities are less than 10 years old. The wastewater treatment system is underperforming and is need of replacement, which is scheduled for 2017/2018.

Most assets at the Takaka RRC (waste pit, compactor, sealed pavements) are over 20 years of age are showing signs of wear and tear and have required additional maintenance over recent years. There may also be a need to re-evaluate normal life for some of these high wear assets. The waste compactor and waste pit has required significant repair and maintenance over the last two years and is scheduled for replacement in 2018/19.

Generally, the assets in the Collingwood RRC are relatively young in their asset life expectancy and have lower wear and tear than other resource recovery centres. The site is relatively small with mainly manual transfer of materials.

The infrastructure at the Murchison RRC is generally basic this RRC but in reasonable good condition, the majority being constructed in 2008/09. However, some assets at the RRC are showing definite signs of wear and tear and will require considerable maintenance (or renewal) in the near future. Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract.

8.1.2 Kerbside Collections

The majority of assets relating to this category are owned and maintained by the contractor. All mobile plant (vehicles, loaders, forklifts etc.) are owner by the operations contractor. The materials recovery facility (MRF) will pass to Council ownership in 2023.

The MRF building was constructed in July 2015, and is in very good condition.

8.1.3 Waste Transport

Council owns a total of 19 waste transport bins (14 compactor bins and 7 open top bins) and 4 mobile recycling transport bins. The bins is monitored and maintained the by the waste transport contractor.

The waste compactor bins are all less than 6 years old, and in generally good condition. The open top bins are all older than 10 years and in fair condition. These bins require increasing maintenance are due for replacement in the next three years. The mobile recycling bins were purchased in late 2017 and are in new condition.

8.1.4 Other Assets

Other waste assets include public place recycling bins (single bins and 5 bin pods) and closed landfill assets (such as rock works and drainage structures). The public place bins are just under 10 years old, not formally monitored and may be in need of maintenance (or renewal). The closed landfill assets are inspected, and their condition reported every two years as part of the closed landfill inspection.

8.2 Operations and Maintenance

8.2.1 Key Maintenance and Operational Themes

The majority of assets in this activity are generally maintained on a reactive basis. Because the majority are above ground deterioration is normally visible before failure, and the risk of failure is relatively low. However, we are looking to improve our maintenance and condition monitoring of key assets (waste compactors, waste bins and pavement a key sites) over the next three years. This will include regular inspections and formal reporting of condition and programming of heavy maintenance (or renewals).

8.2.2 Maintenance Contracts

Council currently contracts out the day-to-day operation and maintenance of waste management and minimisation assets and services with the aim of maintaining agreed levels of service in a cost-effective manner. A list of each of the current waste management and minimisation contracts and the contractor responsible for delivering the service are detailed in Table 13 below.

Table 13: Current Waste Management and Minimisation Contracts

Contract No.	Operations Responsibility	Description	Comment
1020	Smart Environmental Ltd	Operation and maintenance of Richmond, Mariri, Takaka, and Collingwood RRCs.	Commenced 29 June 2015, expires 30 June 2023.
		Provision of kerbside solid waste and recyclables collection services.	
1077	Azwood Ltd	Processing of greenwaste collected at RRCs and delivered to the facility.	Commenced 1 February 2017, expires 30 January 2022.
652	Fulton Hogan Ltd	Operation and maintenance of Murchison RRC.	Commenced 15 May 2005, expires 30 September 2018
1092	Fulton Hogan Ltd	Haulage of waste, greenwaste and other materials from RRCs to landfill and processing facilities	Commenced 1 September 2017, expires 30 June 2023.

In October 2014 the Council entered into an eight year contract with Smart Environmental Ltd for kerbside collection services and operation of four of the Council's five RRCs.

The key components of the contract are:

- operation and maintenance of Richmond, Mariri, Takaka and Collingwood RRCs
- fortnightly collection of mixed recyclable materials in 240 litre wheelie bins and glass in 55 litre recycling crates from around 18,600 properties
- weekly Council rubbish bag collections, with Smart Environmental responsible for the sale, supply, distribution and marketing of rubbish bags
- operation of a materials recovery facility ("MRF") at the Richmond RRC for sorting recyclable materials
- management and sale of all recyclable material collected at the kerbside and RRCs
- capital funding for MRB's and the MRF by Smart Environmental

In conjunction with the contract, the Council provided a 1000m³ serviced building at the Richmond RRC to house the MRF.

The recycling services by Smart Environmental Ltd and the regional landfill agreement with Nelson City Council will increase the focus on waste minimisation over time. The new recycling collections have increased recycling tonnages and the withdrawal from landfill activities will reduce the imperative to maximise waste revenue.

8.2.3 Maintenance Strategies

8.2.3.1 Resource Recovery Centres

The resource recovery centres contractors have historically focused on operations rather than maintenance, although this will be changing over time with an additional focus on asset maintenance and monitoring.

The essence of the RRC operational contracts is that, as well as providing essential waste disposal and transfer services, the contractor's main focus should be on reducing the quantity of waste disposed of to landfill by diverting recoverable resources from the waste stream. Materials are to be handled in a manner that maximises their sale ability and that additional recoverable materials are to be added progressively.

Specifically, the contractors provide the following services:

- receipt of solid waste, recoverable materials (greenwaste and recyclables) and (in some instances) reusable materials
- collection, accounting for and delivery of disposal fees to the Council
- direction of customers to appropriate recovery and disposal areas
- loading of solid waste into open top and compactor bins, operation of a solid waste compactor or loading plant (where applicable) and communication to the haulage contractor regarding collection of these bins
- separation, stockpiling and sale of recoverable resources. Car bodies, whiteware, steel scrap, waste oil, car batteries, plastics, tin cans, aluminium cans, paper, cardboard and glass are the minimum range of diverted materials. It is expected that more materials will be recovered by the contractor over time
- regular inspections of the site and equipment to satisfy the requirements of the specified maintenance schedules
- programming, execution and reporting of routine maintenance tasks
- provision of quotations for completion of larger maintenance items, as required
- collection, accumulation and reporting of statistical data as required
- hosting and facilitation of site visits by schools and other interested groups
- staffing of the sites, as required, to carry out the specified operations to a high level of customer service

8.2.3.2 Waste Minimisation

Over the next 30 years the Council plans to maintain kerbside recycling services, to continue to provide for commercial recycling collections, to improve centralised recycling -use facilities and to encourage diversion of residual waste from landfill through waste education initiatives.

These waste minimisation initiatives are largely based around presenting convenient alternatives to the public that encourage the separation of waste material into the various recyclable, reusable and residual fractions prior to collection at the kerbside or RRC.

8.2.4 Forecast Operations & Maintenance Expenditure

The 30-year forecast for operations and maintenance expenditure is shown in Figure 30. These costs are based on current contract rates and do not include inflation. The summaries include both direct and indirect costs, which are necessary to balance expenditure and income (fees and charges from commercial customers).

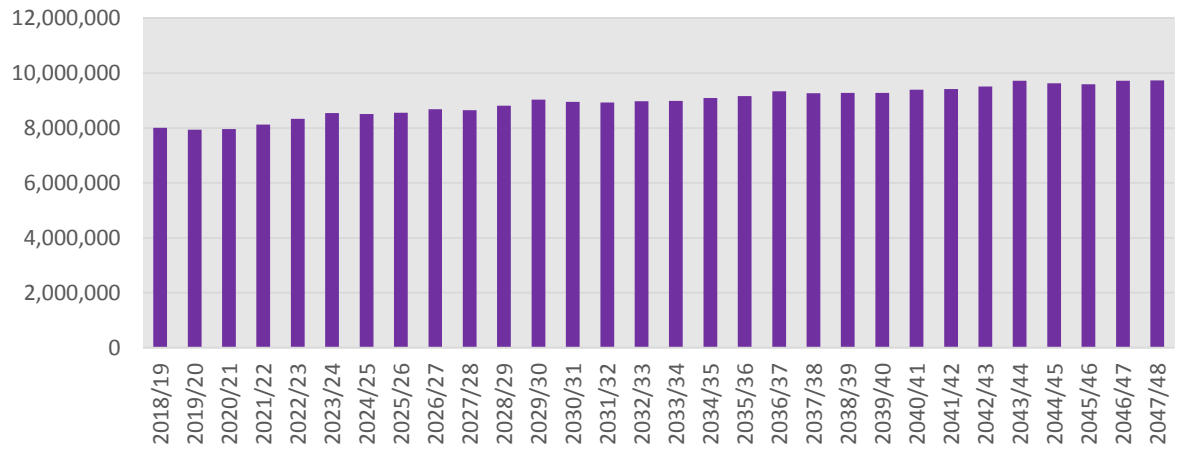


Figure 30: 2018-2048 Waste Management and Minimisation O&M Expenditure Excluding Inflation

More detailed breakdown of waste management and minimisation operations and maintenance expenditure is included in Appendix A.

8.3 Asset Renewal/Replacement

Renewal expenditure is major work that does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original capacity. Funding of work over and above restoring an asset to its original capacity is considered to be new capital works expenditure.

8.3.1 Key Renewal Themes

The majority of assets in this activity are above ground or mobile assets, with the majority of mobile assets are provided by contractors. The majority of assets in this activity are reasonable new (<30 years old), but the assets are often subject to high wear and tear with actual asset lives often shorter than expected. For example, pavements and buildings often suffer damage due to the unloading and loading activity and the use of heavy equipment and high payloads of waste and recycled materials.

Council takes a relatively reactive approach to renewals. This is due to a lack of long term maintenance data and correlation of this to waste movements and the uncertainty of long term waste movements. This risk of this approach is relatively low as the majority of the assets are visible and able to be maintained before renewal is required. For high risk items (such as waste compactors) we are looking to improve our forecasting of renewals to reduce the cost of maintenance at the end of asset lives.

8.3.2 Renewal Strategies

Assets are considered for renewal when:

- they near the end of their effective useful life;
- the cost of maintenance becomes uneconomical and the whole-of-life costs are less to renew the asset than keep up maintenance;
- the risk of failure of critical assets is unacceptable.

The renewal programme has generally been developed by the following:

- Taking asset age and remaining life predictions, calculating when the remaining life expires and converting that into a programme of replacements based on valuation replacement costs.
- Reviewing and justifying the renewals forecasts using the accumulated knowledge and experience of asset operations and asset management staff. This incorporates the knowledge gained from tracking asset failures and performance through the asset management system.
- The renewal programme is reviewed in detail every three years, by planning advisors, asset engineers and engineering management; and crossed referenced with other activities to determine if other projects are occurring in the same location. Timings may be tweaked to optimise overall programme to minimise disruptions to the public and realise potential costs saving in the reinstatement and preliminary and general works where possible.
- Every year the annual renewal programme is reviewed and planned with the input of the maintenance contractor.

8.3.3 Delivery of Renewals

Procurement of renewals for this activity is considered on a case-by-case basis. Renewal of utility assets are normally delivered by the RRC operations contractor or Council's utility contractor. Renewal of small plant items or buildings are normally delivered by the RRC operations contractor. Small pavement renewals are normally delivered by Council's road maintenance contractor.

Renewal of larger plant items (e.g. waste compactors or waste bins), extensive pavement renewals, extensive utility assets or buildings are normally delivered by a competitive procurement process – using Council's panel of contractors or by open tender. Renewals are also often included in capital upgrade works.

8.3.4 Deferred Renewals

Deferred renewal is the shortfall in renewals required to maintain the service potential of the assets. This can include:

- renewal work that is scheduled but not performed when it should have been, and which has been put off for a later date (this can often be due to cost and affordability reasons);
- an overall lack of investment in renewals that allows the asset to be consumed or run-down, causing increasing maintenance and replacement expenditure for future communities.

Figure 31 compares Council's cumulative renewal expenditure and cumulative depreciation for this activity. While 50% of regional landfill asset depreciation is included in the financial reporting for this activity it has been excluded from Figure 31.

If the renewals expenditure starts falling behind the accumulative depreciation it can indicate that the assets may not be being replaced or renewed at the rate at which they are being consumed. If this continues unchecked for too long, future communities will inherit a run-down asset, high maintenance costs and high capital costs to renew failing infrastructure.

For the first 8 years, Council's investment in renewals generally matches depreciation, but lags depreciation after this date. This reflects the difficult in predicting renewals in later years, and this will require development of longer term renewals.

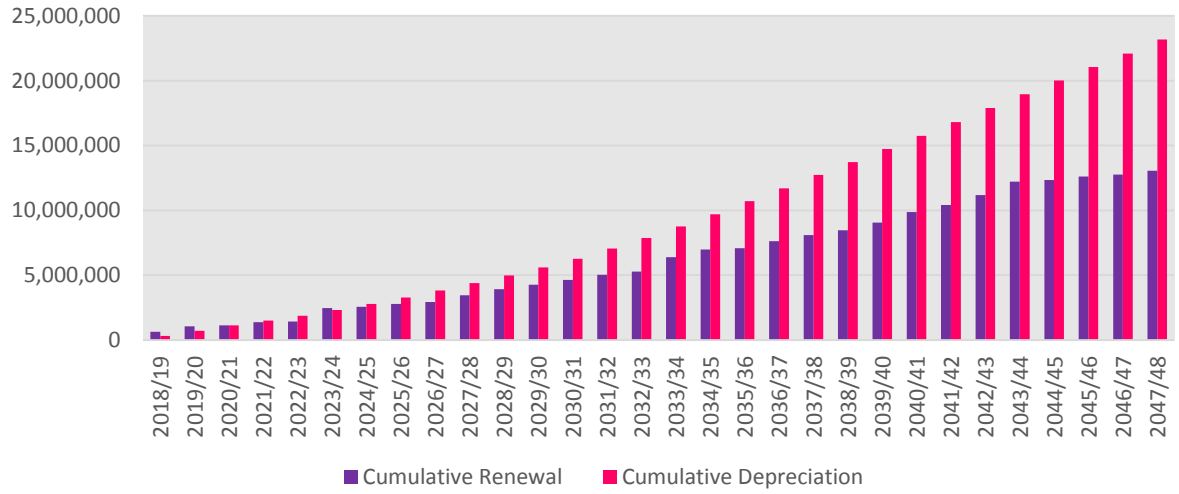


Figure 31: Comparison of Cumulative Renewal Expenditure and Cumulative Depreciation Including Inflation

8.3.5 Forecast Renewal Expenditure

Figure 32 summaries renewal expenditure for the next 30 year period. Larger renewal items include replacement of waste compactors, waste transport bins and supporting infrastructure. Other significant renewal items in early years are renewal of pavement at resource recovery centres. Pavement life for these is difficult to estimate and has not been provided for in the outer years.

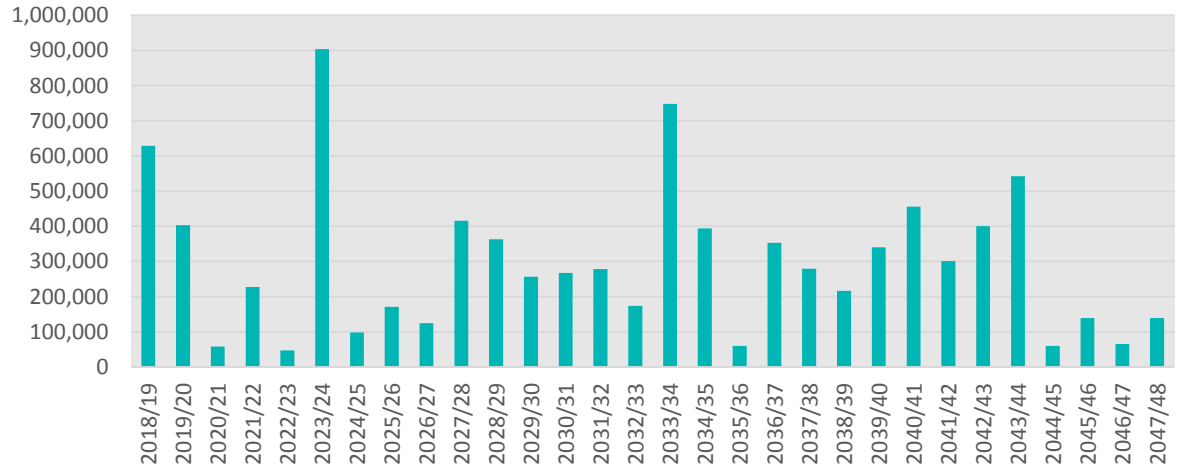


Figure 32: 2018-2048 Waste Management and Minimisation Renewal Expenditure Excluding Inflation

8.4 Asset Development

New capital expenditure is used to create new assets, expand or upgrade existing assets, or increase the capacity of existing assets beyond their original design capacity or service potential. This section summarises future new capital work requirements for this activity.

8.4.1 Key Asset Development Themes

Over the next 10 years we plan to invest approximately $5.3m in new assets to respond to the key issues for this activity. The works will focus on improving safety and serviceability, improve site access and provide small environmental and customer service improvements. We have not planned any capital works to significantly change the direction or focus of the activity.

8.4.2 Assessment of New Capital Works

Council plans to focus on safety and serviceability for the resource recovery centres. A minor capital provision has been made for waste minimisation infrastructure, using funding from the waste levy income from Central Government. Some provision has also been made for growth in the Richmond MRF in the outer years.

A review of the waste management and minimisation plan may identify future capital needs for the region, which will be incorporated into the next AMP.

8.4.3 Projects to Support Increasing Levels of Service

The following projects have been included to support increases in Council's levels of service:

- Public place recycling and other waste minimisation infrastructure (Years 1-10) – this should increase waste diverted and increase the effectiveness of Council services
- Takaka Resource Recovery Centre - Replacement of the waste compactor and tipping pit, installation of a weighbridge and improvements to the recycling area (Years 1-2) – this should increase customer satisfaction through fairer pricing and more convenient recycling
- All Resource Recovery Centres – Minor improvements – we have allowed for additional minor improvements to improve customer satisfaction

8.4.4 Projects to Support Growth

There are no projects to support growth in this activity.

8.4.5 Forecast New Capital Expenditure

Council's new capital expenditure forecast for this activity is shown in Figure 33. Note that there are no growth-driven projects.

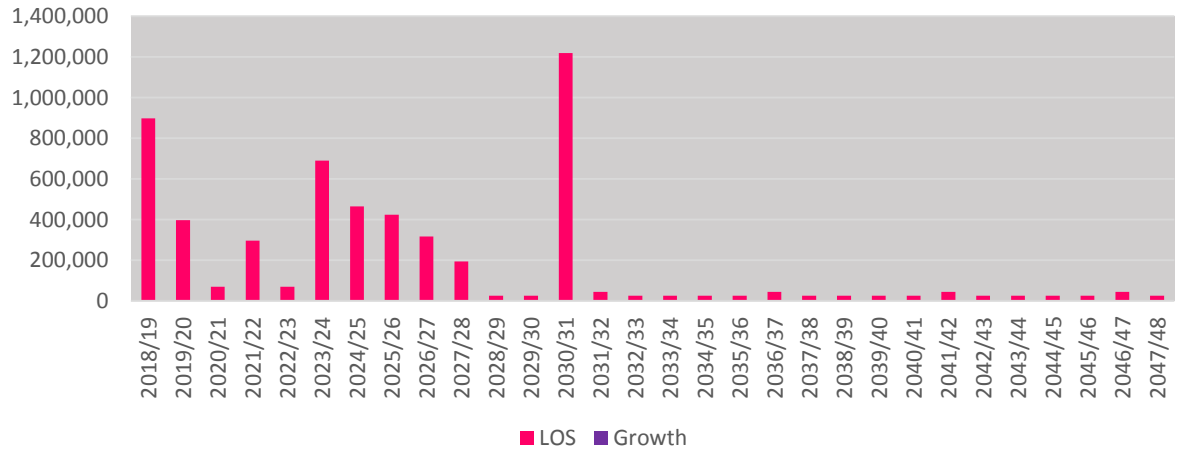


Figure 33: 2018-2048 Waste Management and Minimisation New Capital Expenditure Excluding Inflation

Figure 33 shows a moderate level of new capital expenditure in the first ten years, which decreases substantially from 2028/29. This reflects a "pause" on new capital development following improvements which have lifted levels of service. The capital expenditure in 2030/31 is for part purchase of a new MRF and extension of the MRF building in Richmond.

The key projects for the first 10 years are (excluding inflation):

• Richmond RRC - hazardous goods store and upgrade to the waste tipping pit	Year 2	$169,000
• Richmond Resource Recovery Centre - new waste bin storage area	Year 7	$439,000
• Richmond Resource Recovery Centre - second weighbridge	Year 9	$272,000
• Mariri Resource Recovery Centre - roof over the waste tipping pit	Year 4	$191,000
• Mariri Resource Recovery Centre - relocation of the weighbridge and access to pit	Year 6	$621,000
• Mariri Resource Recovery Centre - improvements to the access road	Year 10	$169,000
• Takaka Resource Recovery Centre - Replacement of the waste compactor and tipping pit, installation of a weighbridge and improvements to the recycling area	Years 1-2	$1,169,000
• Murchison Resource Recovery Centre - Replacement of the waste tipping pit	Years 8-9	$498,000
• Minor improvements at resource recovery centres and closed landfills	Years 1-10	$484,000
• Public place recycling and other waste minimisation infrastructure (funded by the waste levy)	Years 1-10	$532,000

8.5 Asset Disposal

The Council does not have a formal strategy on asset disposals. When any such assets reach a state where disposal needs to be considered, the Council will treat each case individually.

Council follows a practice of obtaining best available return from the disposal or sale of assets within an infrastructural activity and any net income is credited to that activity. Council has no significant assets that it intends to dispose of in the foreseeable future.

It is not unusual for councils to dispose of closed landfills. Most of these in the Tasman district are located within flood plains, close to rivers and marine environments. The Council is proposing to retain them so that they can be managed appropriately. Where appropriate they will be developed as parks or reserves for public access or re-vegetated with native plants.

9 Financials

Council has planned a prudent financial approach to managing its assets and services. This section provides a summary of the total value of the activity and the investment that Council has planned to make over the next 30 years.

9.1 Funding Sources

The Waste Management and Minimisation activity is currently funded through a mixture of sources, as shown in Figure 34 below:

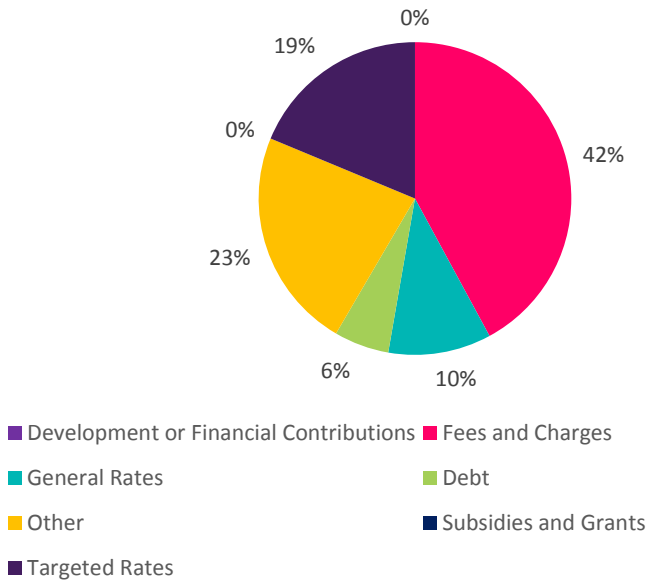


Figure 34: Funding Sources for this Activity

As shown in Figure 34, the majority of funding for this activity comes from fees and charges. The bulk of the revenue is from waste disposal charges.

"Other income" includes:

- regional landfill revenue distributions from the regional landfill business unit (just over 78% of other revenue)
- waste levy distributions for territorial authorities from central government (8%)
- revenue for sale of commercial recyclables (2%), and
- other sundry income distribution from other Council activities

Targeted rate income is used to fund the kerbside recycling and service (although the majority of revenue for rubbish bag sales goes directly to the collection contractor).

9.1.1 Fees and Charges

Under the Revenue and Financing Policy, Council has the ability to set a Schedule of Charges to recover some costs associated with Council's services. Some of these fees and charges are set by statute and others by Council.

All fees and charges are reviewed each year to determine whether they need to change or not. Council engages with the community on the proposed charges through the Special Consultative Procedure set out in Section 83 of the LGA. This typically occurs in parallel with the Annual Plan or Long Term Plan consultation, but the Chief Executive has delegated authority to amend solid waste fees and charges throughout the year if required.

Revenue from waste disposal is a very significant income source for this activity. Almost all revenue from fees and charges is for the disposal of waste to RRC or landfill. Of this revenue, approximately 85% is from weight-based charges. This weight-based refuse revenue is the most significant variable income for the activity and is affected by commercial activities outside of the Council's control.

The Council's pricing of refuse disposal at RRCs is highly affected by pricing of landfill disposal at the regional landfill business unit, as the Council pays the published gate rate for disposal of RRC waste. The business unit typically proposes disposal charges in October each year (effective 1 July of the following year), as part of the annual business plan submitted to Council. Council then considers proposed disposal fees at resource recovery centres (and other waste management and minimisation charges) for consultation in parallel with the Annual Plan or Long Term Plan consultation process.

Council has historically charged for waste by weight for large vehicles and commercial customers and by volume for domestic customers. Charges by weight have also varied by site – with charges higher in more remote, smaller sites to reflect (in part) the higher cost to handle and transport waste from these locations.

Council has adopted from 1 July 2018 a single charge across all resource recovery centres. This resulted in an increase in disposal charges at the Richmond resource recovery centre and a decrease at other locations. This may decrease disposal volumes at Richmond and increase volumes at Mariri and Takaka.

Waste disposal prices are affected by factors generally outside the control of Council and the business unit. These costs include emission liabilities through the Emissions Trading Scheme and a change in the national waste disposal levy (were it to change).

9.1.2 Waste Levy Distributions from Central Government

Fifty percent of all national landfill levy income is distributed to territorial authorities by the Secretary of the Ministry for the Environment. Distribution of funding is on a population basis. Levy funds are required to be spent on waste minimisation measures that have been provided for in the Council's JWMMP. We have assumed that we will receive just under $200,000 in 2018/19 and that this will grow with population over time.

9.1.3 Revenue from Regional Landfill Business Unit

The Nelson Tasman Regional Landfill Business Unit passes to Nelson City Council and Tasman District Council a "Local Disposal Levy" to fund waste management and minimisation. The business unit typically proposes the disposal levy in consultation with the Councils when developing the business unit asset management plan. For this activity management plan, we have assumed local levy income of $2.2m per annum.

9.1.4 Development Contributions

There are no development contributions for this activity.

9.2 Asset Valuation and Depreciation

The Local Government Act 1974 and subsequent amendments contain a general requirement for local authorities to comply with Generally Accepted Accounting Practice ("GAAP").

The Council requires its infrastructure asset register and valuation to be updated in accordance with Financial Reporting Standards and the AMP improvement plan.

The valuations summarised below have been completed in accordance with the following standards and are suitable for inclusion in the financial statements for the year ending June 2017.

- NAMS Group Infrastructure Asset Valuation Guidelines – Edition 2.0
- New Zealand International Public Sector Accounting Standard 17; Property, Plant and Equipment (PBE IPSAS 17) and PBE IPSAS 21 (Impairment of Non Cash Generating Assets)

9.2.1 Latest Asset Valuation

Assets are valued every three years. The waste management and minimisation assets were last re-valued as at 1 April 2017 and is reported under separate cover. Key assumptions in assessing the asset valuations are described in detail in the valuation report.

The majority of information for valuing the assets was obtained from Council's Confirm database. This is the only the second time the database has been used to revalue Council's assets and some refinement of the valuation is still required. In the past, asset registers based on excel spreadsheets have been used. The data confidence is detailed in Table 14 below:

Table 14: Data Confidence

Asset Description	Confidence	Comments
Waste Management and Minimisation Assets	B – Reliable	The asset registers provide all the physical assets that make up each transfer station and landfill. The valuation has been based on actual contract costs, some of which date back to 2001 and have since been subject to adjustment factors. For a more accurate valuation, attribute information needs to be collated for each asset i.e. size of building, length of fence etc

*Based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system.

The Base Useful Lives for each asset type as published in the NZIAVDG Manual were used as a guideline for the lives of the assets in the valuation. Generally, lives are taken as from the mid-range of the typical lives indicated in the Valuation Manual where no better information is available. Lives used in the valuation relating to waste management and minimisation assets are presented in Table 15 below.

Table 15: Asset Lives

Feature Type	Useful Life (years)	Minimum Remaining Useful Life (years)
Buildings	50	5
Waste Compactor	25	2
Electrical equipment	5-50	2
Fencing	50	2
Humeceptor sediment treatment device	50	2
Landfill	No Depreciation-100	5
Miscellaneous items	No Depreciation -80	5
Streetside recycling / rubbish bin	10	2
Roading / carpark	No Depreciation -50	5
Stormwater other assets	80	5
Wastewater other assets	20-80	5
Wastewater pipe	80	5
Water supply assets	80	5
Weighbridge	60	5
Stormwater chamber, cleaning eye, inlet structure, outlet structure, Soakpit, sump	80	5
Stormwater channel	No Depreciation	
Stormwater collection pond	No Depreciation	

Feature Type	Useful Life (years)	Minimum Remaining Useful Life (years)
Stormwater culvert, manhole	120	5
Stormwater flapgate	50	5
Stormwater Pipe	See SW table	5
Water supply Miscellaneous items	15	2
Water supply Pipe	varies	5
Water supply Pump	20	2
Water supply Reservoir / dam	80	5
Water supply tanks, valves, air valves,	50	5
Wastewater Building structure	50	5
Wastewater Chamber, Monitoring point, Cleaning eye, Pump station, Structure, Valve chamber	80	5
Wastewater Control cabinet & Electrical equipment	15	2
Wastewater Flowmeter / meter	20	2
Wastewater Manhole	100	5
Wastewater Miscellaneous items	15	2
Wastewater Oxidation pond	No Depreciation	
Wastewater Pipe	See WW table	5
Wastewater Pump	20	2
Wastewater Telemetry	15	2
Wastewater Valve, Vent	50	5
Wastewater pipe or wastewater assets at Eves Valley Landfill		13

9.2.2 Depreciation

Depreciation of assets must be charged over their useful life. Council calculates depreciation on a straight line basis on most infrastructural assets at rates which will write off the cost (or valuation) of the assets to their estimated residual values, over their useful lives.

The optimised replacement value, optimised depreciated replacement value, total depreciation to date, and the annual depreciation of the waste management and minimisation assets are summarised in Table 16 below. On 1 July 2017 the assets associated with the Eves Valley landfill were transferred to the Nelson Tasman Regional Landfill Business Unit. The value of these are also shown in Table 16.

Table 16: Waste Management and Minimisation Asset Valuation

Optimised Replacement Value ($ 000)		Optimised Depreciated Replacement Value ($ 000)	Annual Depreciation ($/yr 000)
Solid waste 2015	12,898	9,494	321
Solid waste 1 April 2017	13,628	9,613	342
% Increase	5.70%	1.30%	6.50%
Eves Valley assets at 1 April 2017	3,862	1,952	98
Solid waste 1 April 2017 less Eves Valley	9,766	7,661	244

9.3 Financial Summary

9.3.1 Funding Impact Statement

Council's Funding Impact Statement (FIS) for this activity is included in the table below. It summarises in one place how this activity will be funded and how those funds will be applied over the next 10 years.

Table 17: Funding Impact Statement

	2017/18 AP $000	2018/19 Budget $000	2019/20 Budget $000	2020/21 Budget $000	2021/22 Budget $000	2022/23 Budget $000	2023/24 Budget $000	2024/25 Budget $000	2025/26 Budget $000	2026/27 Budget $000	2027/28 Budget $000
SOURCES OF OPERATING FUNDING											
General rates, uniform annual general charges, rates penalties	902	1,392	1,349	1,342	1,292	1,313	1,354	1,458	1,292	1,321	1,255
Targeted rates	2,392	2,015	2,065	2,137	2,270	2,331	2,539	2,394	2,495	2,602	2,652
Subsidies and grants for operating purposes	0	0	0	0	0	0	0	0	0	0	0
Fees and charges	3,715	4,457	4,644	4,808	4,978	5,158	5,343	5,537	5,743	5,956	6,183
Internal charges and overheads recovered	0	0	0	0	0	0	0	0	0	0	0
Local authorities fuel tax, fines, infringement fees, and other receipts	4,186	4,698	4,888	4,958	5,036	5,107	5,215	5,315	5,425	5,533	5,632
TOTAL OPERATING FUNDING	**11,195**	**12,562**	**12,946**	**13,245**	**13,576**	**13,909**	**14,451**	**14,704**	**14,955**	**15,412**	**15,722**
APPLICATIONS OF OPERATING FUNDING											
Payments to staff and suppliers	8,605	10,120	10,447	10,691	11,081	11,539	12,011	12,230	12,564	13,008	13,274
Finance costs	389	412	380	378	358	357	367	385	366	359	351
Internal charges and overheads applied	790	800	843	866	891	924	965	984	1,028	1,079	1,089
Other operating funding applications	0	0	0	0	0	0	0	0	0	0	0
TOTAL APPLICATIONS OF OPERATING FUNDING	**9,784**	**11,332**	**11,670**	**11,935**	**12,330**	**12,820**	**13,343**	**13,599**	**13,958**	**14,446**	**14,714**
SURPLUS (DEFICIT) OF OPERATING FUNDING	**1,411**	**1,230**	**1,276**	**1,310**	**1,246**	**1,089**	**1,108**	**1,105**	**997**	**966**	**1,008**
SOURCES OF CAPITAL FUNDING											
Subsidies and grants for capital expenditure	0	0	0	0	0	0	0	0	0	0	0
Development and financial contributions	0	0	0	0	0	0	0	0	0	0	0
Increase (decrease) in debt	3,349	406	(381)	(1,048)	(550)	(835)	834	(324)	(161)	(297)	(111)
Gross proceeds from sale of assets	0	0	0	0	0	0	0	0	0	0	0
Lump sum contributions	0	0	0	0	0	0	0	0	0	0	0
Other dedicated capital funding	0	0	0	0	0	0	0	0	0	0	0

TOTAL SOURCES OF CAPITAL FUNDING	**3,349**	**406**	**(381)**	**(1,048)**	**(550)**	**(835)**	**834**	**(324)**	**(161)**	**(297)**	**(111)**
APPLICATIONS OF CAPITAL FUNDING											
Capital expenditure											
- to meet additional demand	0	0	0	0	0	0	0	0	0	0	0
- to improve the level of service	0	1,191	414	74	323	77	787	542	626	389	244
- to replace existing assets	755	445	451	129	272	173	1,055	222	192	260	631
Increase (decrease) in reserves	(231)	(17)	6	37	62	(34)	63	(19)	(19)	(18)	(17)
Increase (decrease) in investments	4,236	17	24	22	39	38	37	36	37	38	39
TOTAL APPLICATIONS OF CAPITAL FUNDING	**4,760**	**1,636**	**895**	**262**	**696**	**254**	**1,942**	**781**	**836**	**669**	**897**
SURPLUS (DEFICIT) OF CAPITAL FUNDING	**(1,411)**	**(1,230)**	**(1,276)**	**(1,310)**	**(1,246)**	**(1,089)**	**(1,108)**	**(1,105)**	**(997)**	**(966)**	**(1,008)**
FUNDING BALANCE	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

9.3.2 Project Drivers

All expenditure must be allocated against at least one of the following project drivers.

- Operation and Maintenance: operational activities that do not involve the renewal or upgrade of assets, or work that is necessary in order to provide on-going services at the agreed levels.
- Renewals: significant work that restores or replaces an existing asset towards its original size, condition or capacity.
- Increase Level of Service: works to create a new asset, or to upgrade or improve an existing asset, beyond its original capacity or performance.
- Growth: works to create a new asset, or to upgrade or improve an existing asset, beyond its original capacity or performance to provide for the anticipated demands of future growth.

This is necessary for two reasons as follows.

- Schedule 13(1) (a) and section 106 of the Local Government Act require Council to identify the total costs it expects to have to meet relating to increased demand resulting from growth when intending to introduce a Development Contributions Policy.
- Schedule 10(2)(1)(d)(I)-(iv) of the Local Government Act requires Council to identify the estimated costs of the provision of additional capacity and the division of these costs between changes to demand for, or consumption of, the service, and changes to service provision levels and standards.

All new works have been assessed against these project drivers. Some projects may be driven by a combination of these factors and an assessment has been made of the proportion attributed to each driver.

9.3.3 Total Expenditure

Figure 35 and Figure 36 show the total expenditure for the waste management and minimisation activity for the first 10 and 30 years respectively.

Growth in operating expenditure is generally due to population growth leading to growth in kerbside recycling activity, higher waste volumes and greater transport and disposal costs.

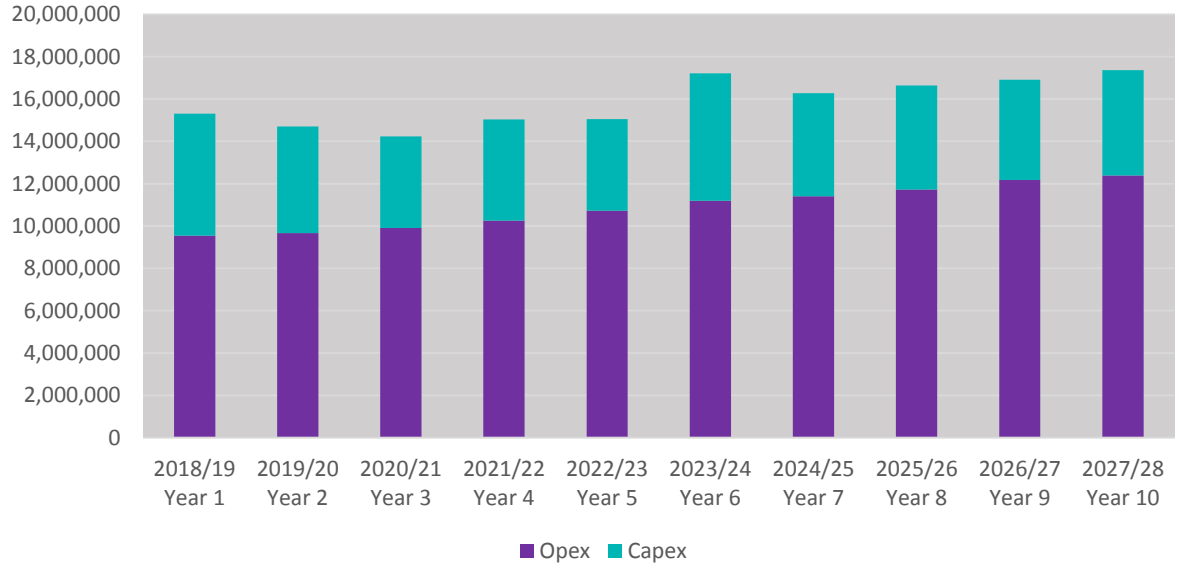


Figure 35: Total Annual Expenditure Years 1 to 10 Including Inflation

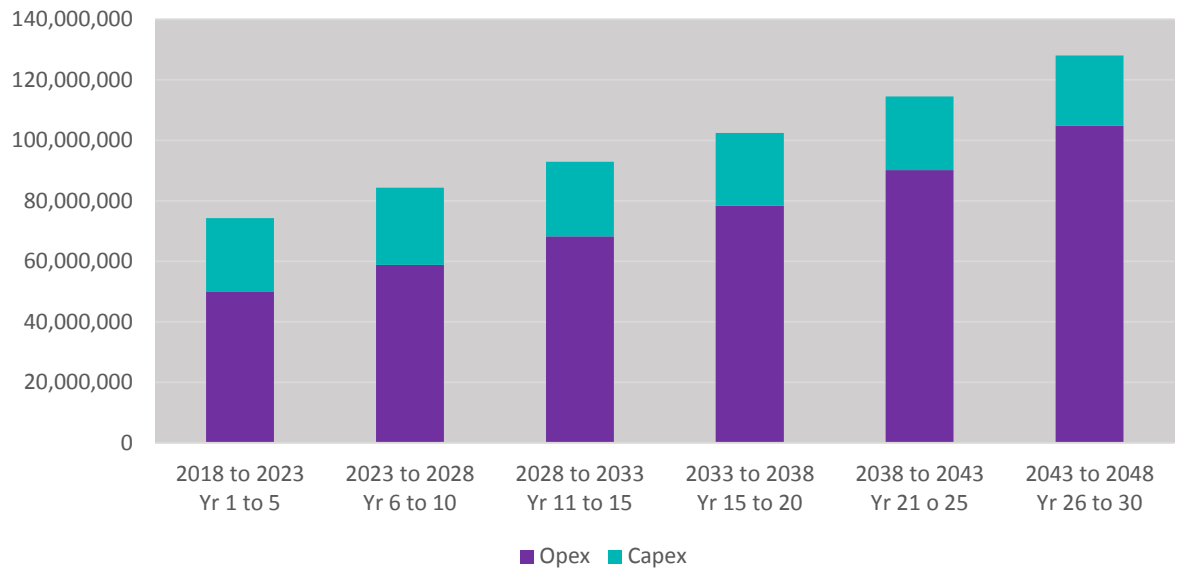


Figure 36: Five Yearly Total Expenditure Years 1 to 30 Including Inflation

9.3.4 Total Income

Figure 37 and Figure 38 show the total income for the waste management and minimisation activity for the first 10 and 30 years respectively.

Income throughout the period is dominated by fees and charges, which increase with inflation and waste volumes. Growth in rates income is driven by growth in targeted rates for kerbside collection services, while general rate decreases modestly. Income from the regional landfill business unit and waste levy income from central government is included in "other" income and follows inflation (and population growth for the waste levy).

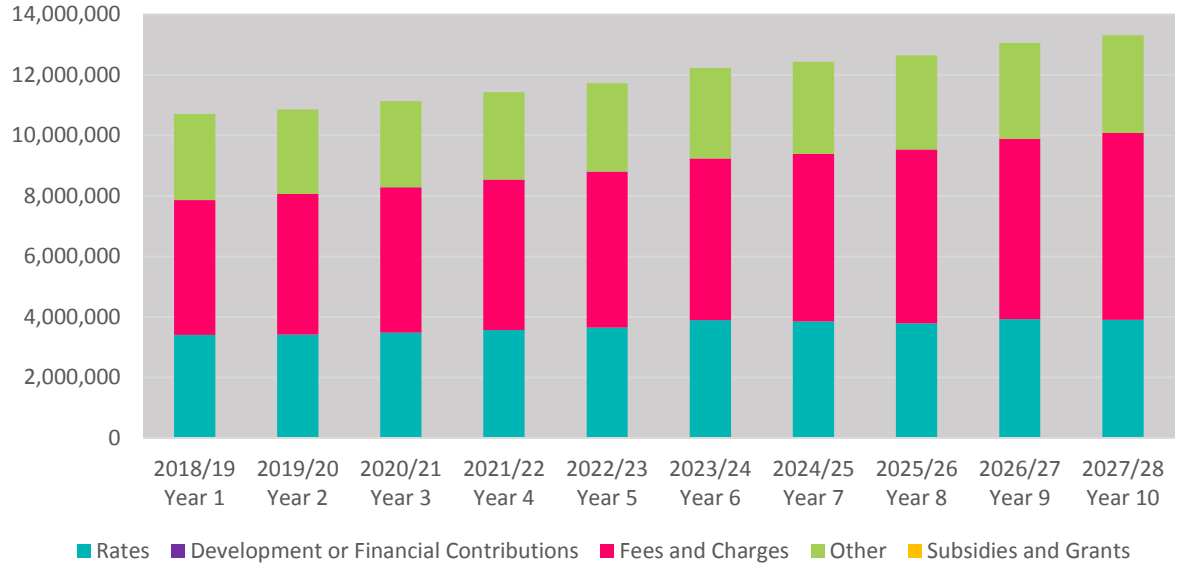


Figure 37: Total Annual Income Years 1 to 10 Including Inflation

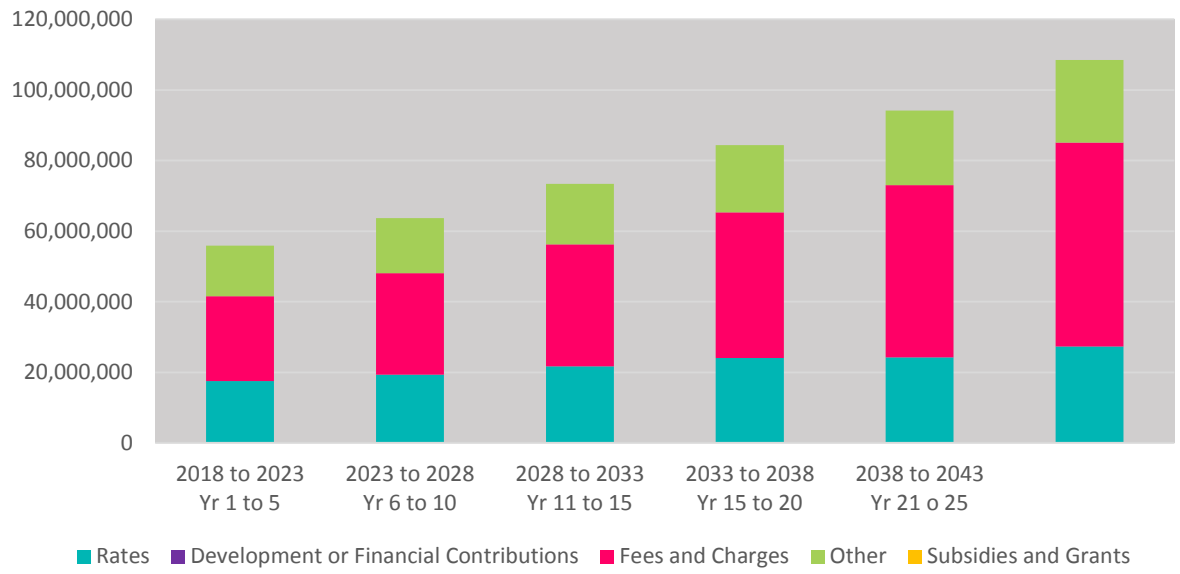


Figure 38: Five Yearly Total Income Years 1 to 30 Including Inflation

9.3.5 Operational Costs

Figure 39 and Figure 40 show the total operating expenditure for this activity for the first 10 and 30 years respectively.

Operating costs are dominated by "direct costs", which include payments to operations contractors and payments for landfill disposal. The increase over time are due to inflation, increases in population and waste, leading to higher operational costs.

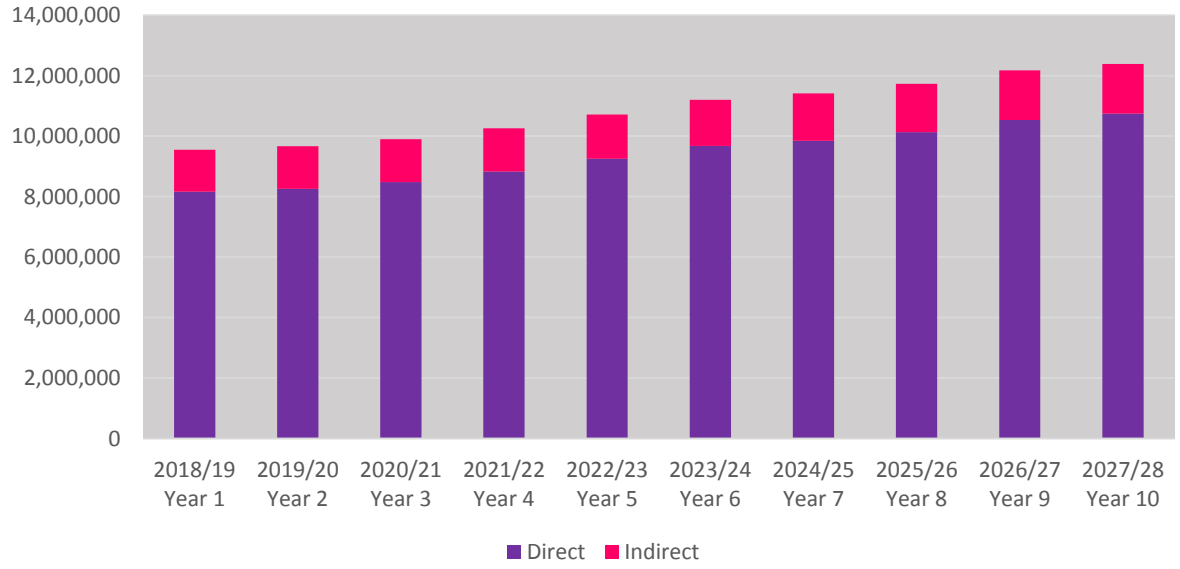


Figure 39: Annual Operating Costs Years 1 to 10 Including Inflation

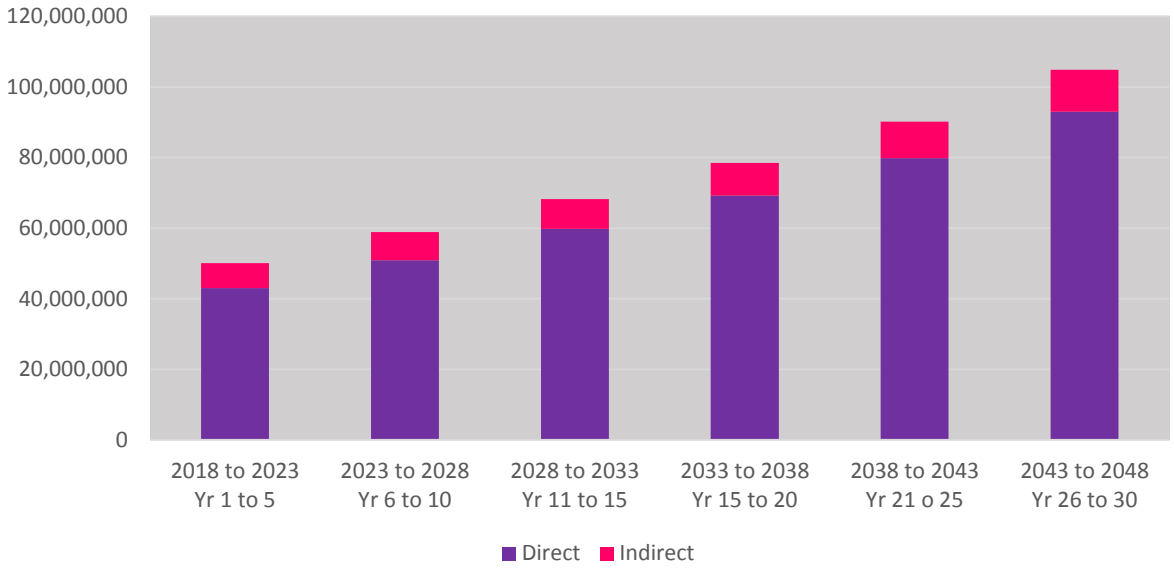


Figure 40: Five Yearly Operating Cost Years 1 to 30 Including Inflation

9.3.6 Capital Expenditure

Figure 41 and Figure 42 show the total capital expenditure for this activity for the first 10 and 30 years respectively. The capital expenditure excludes Council's 50% share of regional landfill capital expenditure in the first 10 years of this plan.

The capital expenditure for the activity is relatively modest, following improvements which have lifted levels of service in recent years. In later years capital expenditure is dominated by renewals. A review of the waste management plan in 2018 may identify future capital needs for the region, which will be incorporated into the next AMP.

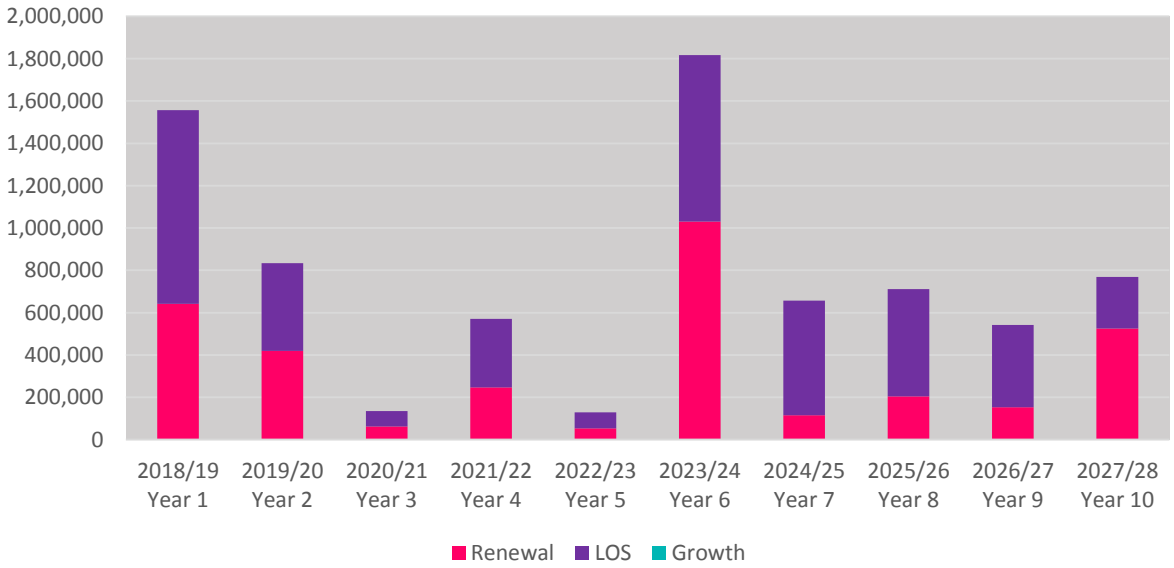


Figure 41: Annual Capital Expenditure Years 1 to 10 Including Inflation

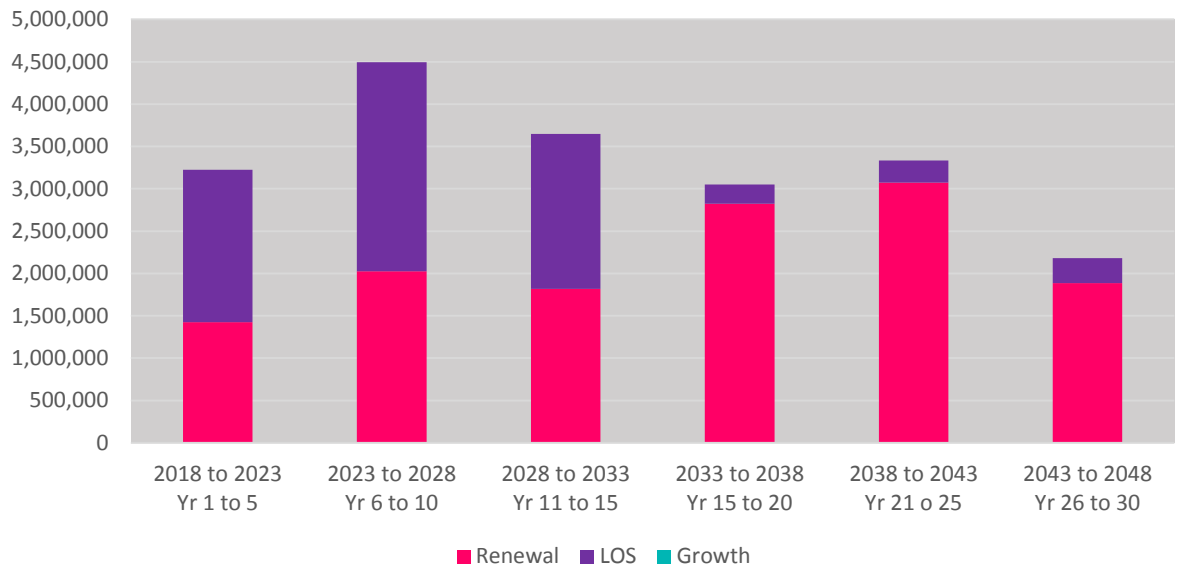


Figure 42: Five Yearly Capital Expenditure Years 1 to 30 Including Inflation

10 Sustainability

Sustainability means that we effectively balance the needs of present and future communities. From an asset management perspective, sustainability is critical, as many assets have a long lifespan and must be 'future-proofed'. Council has a responsibility to manage this activity in way that supports the environmental, social, cultural and economic well-being of current and future generations.

The Local Government Act 2002 requires local authorities to take a sustainable development approach while conducting their business, taking into account the current and future needs of communities for good-quality local infrastructure, and the efficient and effective delivery of services.

Sustainable development is a fundamental philosophy that is embraced in the Council's Vision, Mission and Objectives, and is reflected in the Council's community outcomes. The levels of service and the performance measures that flow from these inherently incorporate the achievement of sustainable outcomes.

We measure sustainability against the triple bottom line framework that aims to create a balance between the three dimensions of performance, often referred to as people, planet and profit (3P's).

People

The effects of the activity on the social and cultural wellbeing of our community

Council is guided by the Community Outcomes to assist in determining how our decisions affect the social wellbeing of our community. We undertake the activity to meet the level of service that is required to enhance community well-being by providing waste disposal, recycling and other waste minimisation services for the community.

Planet

The effects of the activity on the environment

Our receiving environments are affected by stormwater discharges and occasional dust and litter discharges from our resource recovery centres and from our closed landfills. We control our discharges through discharge consents site management plans that are required under the Tasman Resource Management Plan.

Profit

The financial and overall long-term economic viability of the activity

Council operates, maintains and improves the waste management and minimisation infrastructure assets on behalf of its ratepayers. Council uses its Financial Strategy to guide the development of an affordable work programme. Council's finances are managed within the set debt limits and rates income rises to ensure economic viability for current and future generations.

At the activity level, a sustainable development approach is demonstrated by the following:

- a strategy of working towards a joint approach with Nelson City Council for regional waste management and minimisation. This approach is expected to result in more sustainable long term management of activities;
- a strategy of diversion of material from landfill to improve resource efficiency and prolong asset life of the Council's landfill assets;
- reduced emissions from landfill activities by moving waste to York Valley, which has beneficial landfill gas collection systems

10.1 Negative Effects

Potential significant negative effects and the proposed mitigation measures are listed below in Table 18.

Table 18: Negative Effects

Effect	Description	Council's Mitigation Measure
Dust, odour and windblown litter (Social and environmental effects)	Kerbside collections: Loose kerbside recycling materials and broken solid waste bags may become windblown litter and odorous if not collected promptly	This is managed through the contract specification. Short to medium term options include moving to collections in MRBs
	Recyclables Processing: Excessive recyclable materials may become windblown litter	This is managed through the contract specification and regular inspection of the site. Short to medium term options include improved handling facilities
	Resource Recovery Centres (RRCs): These can become odorous, dusty and give rise to windblown litter if incorrect operating procedures are not applied	RRCs are also operated in accordance with Site Management Plans. RRC contracts allow for monthly KPI inspections which penalise contractors if the site is untidy or not operated correctly
	Operational Landfills: These can become odorous, dusty and give rise to windblown litter if incorrect operating procedures are not applied	This is managed by the contractor as detailed in the contract specifications and landfill management plan and checked through regular inspections
Discharges of pollutants to water and land (Environmental effects)	Resource Recovery Centres: There is the possibility of stormwater contamination on site if materials are not managed well	The development and operation of RRCs must meet certain resource consent conditions. This is managed through the contract specification and regular inspection of the site
	Operational Landfills: Landfills produce leachate – this may cause contamination of groundwater or surface water if not collected and treated appropriately. There is also the possibility of stormwater contamination on site	The operation of the landfill must meet resource consent conditions. The landfill is also operated in accordance with a Landfill Management Plan. This is managed through the contract specification and regular inspection of the site
	Closed Landfills: If closed landfills are not capped off and vegetated correctly, they may release additional solid waste or leachate to the environment	Closed landfills are consented under a 'Global Consent' which requires remediation of certain identified landfills and inspections of all closed landfills every two years to determine if further remediation is required
Disruptions to service (Social and economic effects)	Kerbside collections: Disruption to kerbside solid waste services can cause a public health effect if wastes are not collected in a timely manner	This is managed by the contractor through the provision of back-up plant and the use of subcontractor services
	Resource Recovery Centres: Failure to open these centres can prevent businesses operating and create public health risks with the storage of waste on properties	Waste can be stored at residences or businesses for short periods of time. In the event of longer closure waste can be transported to another RRC or direct to landfill

Effect	Description	Council's Mitigation Measure
	Operational Landfills: Failure to operate the landfill can prevent restrict the operation of RRCs and create public health risks with the storage of waste on properties	RRCs have some storage capacity on site. In the event of closure of the York Valley Landfill the Eves Valley landfill is able to re-open at short notice
Discharge of methane and carbon dioxide (Environmental and economic effects)	Operational Landfills: Landfills produce gas, including methane. Methane contributes 15 times the effect that carbon dioxide does to the "greenhouse effect"	Mothballing of the Eves Valley Landfill will reduce methane emissions and ETS liabilities. Gas capture at the York Valley Landfill reduces potential liabilities at this site
Unaffordable or uneconomic cost of services (Social and economic effects)	The loss of viable markets for recovered materials can have a negative effect on the economic viability of recycling	Procurement of recycling services requires contractors to provide evidence of experience and track record in recycling markets. Council and the contractor share the revenue risk for recyclable materials and are then both motivated to maximise quality
	The costs of providing the services	Council is entering a shared services arrangement with Nelson City Council to reduce projected debt and overall operating costs Council uses competitive tendering processes to achieve best value for money for works it undertakes

10.2 Positive Effects

Potential significant positive effects are listed below in Table 19.

Table 19: Positive Effects

Effect	Description
Public health benefits	Council offers kerbside collection services to 80% of properties and resource recovery centres in five locations across the district. This provides safe and sanitary waste disposal to all residents of the district.
Economic benefits	Access to waste disposal and recycling services at reasonable cost supports economic activity Council is able to offer kerbside collections to 80% of properties at reasonable cost due to Council's factor of scale. Council also supports waste disposal and recycling in more remote locations by part funding from general rate.
Environmental benefits	Provision of recycling services, greenwaste processing and other waste minimisation activities reduces the need for landfill space and reduces potential negative effect of these activities

10.3 Resource Management

10.3.1 Overview

The statutory framework defining what activities require resource consent is the Resource Management Act (RMA) 1991. The RMA is administered locally by Tasman District Council, as a unitary authority, through the Tasman Resource Management Plan (TRMP). The following section discusses key consents that Council holds in order to undertake this activity.

An important aspect of the waste management and minimisation activity is to ensure that any discharge of contaminants to the district's land, air or water is managed responsibly.

The Council's waste management and minimisation facilities have an essential role in ensuring that waste produced within the district is properly collected and disposed of in ways that meet community expectations and avoid causing significant adverse effects in the environment.

Under the RMA and TRMP, resource consents are required for disposal of wastes and any associated odours and discharges. Other resource consents may also be required for installation and operation of waste management and minimisation facilities, such as Resource Recovery Centres (RRCs).

The Council has designated most of the waste management and minimisation sites, which is an alternative way provided for in the RMA of authorising the land use aspects of public works.

The Council holds resource consents or designations for all of its waste management and minimisation activities to the extent required by the RMA and current rules in the TRMP.

10.3.2 Resource Consents

A summary of resource consents held for the Council's waste management and minimisation activities is provided in Table 20 below. Please note that this list may not be exhaustive, is only accurate at the time of compilation (January 2018), and is subject to change. Short-term consents are required from time to time for construction activities including the installation of bores for monitoring wells or fresh water sources at waste management and minimisation facilities and are not included in Table 20.

Table 20: Schedule of Current Resource Consents Relating to the Waste Management and Minimisation Activity

Location	Consent No.	Consent Type	Effective Date	Expiry Date
RRCs				
Richmond RRC	RM050981V2	Discharge to water	6/11/2012	2/06/2041
	RM100281	Land use – recycling centre	31/5/2010	N/A
	RM051064	Land use – outline plan	3/2/2006	N/A
	RM031343	Land use – outline plan	4/2/2004	N/A
	NN925482	Coastal – repair seawall	14/3/1993	30/6/2020
Mariri RRC	RM090392V1	Discharge to land	31/08/2009	31/08/2044
	RM060748	Land use – outline plan	11/10/2006	N/A
Collingwood RCC	NN990433V1	Land Use	20/10/2013	N/A
Takaka RRC	RM940041	Land Use	23/6/1994	N/A
	RM140174	Discharge to land & water	24/6/2014	24/6/2049
Murchison RRC	RM071027	Discharge to Air	8/5/2008	15/04/2028
	RM071231	Discharge to land & water	8/5/2008	15/04/2028

Location	Consent No.	Consent Type	Effective Date	Expiry Date
Closed Landfills				
Tasman District Council Closed Landfills	RM090694V2	Global consent – discharge to air, land, and water	13/11/13	21/12/2044
	RM090695	Land use	21/12/2009	21/12/2044
Rototai Closed Landfill	RM090203	Coastal disturbance	20/8/2009	29/07/2044
	RM090379	Land use	31/8/2009	29/7/2019
	RM130779	Land use – operate cleanfill site	29/11/2013	29/11/2048
	RM130780	Coastal disturbance	29/11/2013	29/11/2048

10.3.3 Resource Consent Monitoring and Reporting

The Council aims to achieve minimum compliance with all consents and / or operating conditions. A detailed register of waste management and minimisation resource consents is held in Council's consents database "BraveGen".

Where permits for discharges, water takes or coastal activities, or consents for river beds are required, the RMA restricts those consents to a maximum term of 35 years only. Hence there needs to be an ongoing programme of consent renewals for those components of Council's waste management and minimisation activities, as well as a monitoring programme for compliance with the conditions of permitted activities or resource consents. Consent renewals have been programmed in the Capital programme.

Regular site audits are completed by the Council's maintenance contractor to ensure sites are operating in accordance with a number of key performance indicators aligned to any conditions or other legislative requirements.

In addition to audit assessments, environmental monitoring conditions are reported on annually (or as determined by the consent conditions). Any non-compliance incidents are recorded, notified to the Council's Compliance Monitoring team, and mitigation measures put in place to minimise any potential impacts.

The Council has invested in a programme, Samplyzer, which is used by Council staff and their consultant to produce chain of custody forms for all monitoring. This allows the Council, the operation and maintenance contractor and testing laboratories to all use the same sample identifiers. Samplyzer also allows the automated input of monitoring data direct from laboratory reports into Hilltop, the Council's database for storing monitoring data.

Where required by consent conditions an annual report is also prepared for each site. Annual reports are prepared for the following sites:

- Richmond RRC
- Mariri RRC,
- Takaka RRC,
- Murchison RRC and closed landfill,
- Closed landfill (monitoring report every two years).

The reports summarise operational activities, any physical works undertaken on site, details any monitoring results, identifies trends, discusses current performance, highlights any non-compliances and recommends any changes to the monitoring programme.

10.3.4 Designations

Once given effect, a designation remains valid for the life of the TRMP or until the requiring authority removes of alters the designation. All of the designations for waste management and minimisation activities have been given effect. Alterations to some designations (e.g., boundaries) and outline plans for proposed work may be required from time to time. Designations do not negate the ongoing need for regional resource consents (e.g., water permits) required for the designated site or purpose (refer to section 10.3.2 above).

Table 21: Property Designations

ID	Location of Site	Site Name/ Purpose	Duration of Designation
D160	Beach Road, Richmond	Waste management facility	Indefinite – given effect
D161	Robinsons Road, Mariri	Tip	Indefinite – given effect
D162	State Highway 63, St Arnaud	Tip	Indefinite – given effect
D163	Eves Valley	Sanitary landfill solid waste disposal	Indefinite – given effect
D164	Murchison, Matakitaki West Bank Road	Sanitary landfill solid waste disposal	Indefinite – given effect
D166	Collingwood West	Solid waste tip	Indefinite – given effect

11 Risk Management and Assumptions

This AMP and the financial forecasts within it have been developed from information that has varying degrees of completeness and accuracy. In order to make decisions in the face of these uncertainties, assumptions have to be made. This section documents the uncertainties and assumptions that the Council considers could have a significant effect on the financial forecasts, and discusses the potential risks that this creates.

11.1 Our Approach to Risk Management

A risk is any event that has the potential to impact on the achievement of Council's objectives. The potential impact of a risk is measured by a combination of the likelihood it could occur, and the magnitude of its consequences on objectives.

Council adopted a Risk Management Policy in November 2017 and is in the process of improving our risk management processes. The main purpose of these improvements is to support better planning and decision-making, and to increase the chance of achieving Council's objectives.

Council's Risk Management Framework is still being developed but key components will be:

a) Risk Categories:

- Service delivery
- Financial
- Governance and Leadership
- Strategic
- Reputation
- Legal
- Regulatory
- Health & Safety
- Security
- Business Continuity

b) Table of Consequences which help set the Risk Appetite

c) Enterprise Risk Register

- identifying risks
- measuring likelihood, consequence and severity
- documenting controls, actions and escalation

d) Monitoring and Reporting, including to Senior Management and Audit and Risk Committee as appropriate

Council has adopted an approach to risk management following the Australian/New Zealand Standard ISO 31000:2009 Risk Management – Principles and guidelines.

Refer to Council's Risk Management Policy for further information.

11.2 Activity Risks and Mitigation

In order to identify the key activity risks the asset management team have applied a secondary filter to the outcomes of the risk management framework. This is necessary to overcome the limitations of the framework. To apply this secondary filter the asset management team have used their network knowledge and engineering judgement to identify the key activity risks. The key risks relevant to the waste management and minimisation activity are summarised in Table 22.

Table 22: Key Risks

Risk Event	Mitigation Measures
Changes in recyclable products markets make recycling less affordable or not possible for some products	Current • monitor commodity markets with operations contractor • risk share with operations contractor Proposed scope to support recycling operations from local or national waste levy revenue
Serious harm or fatal accident	Current • safety management actively monitored in operations contracts • safety audits scheduled regularly • recent safety improvements to mitigate key risks at resource recovery centres Proposed • additional capital and operations budgets to further reduce risks
Hazardous goods incident or fire at resource recovery centre	Current • actively engage with key customers on risky products • safe operating practice documents and drills by operations contractor Proposed • budget for assessment of risk profiles of each site • budget for capital and operational improvements
Premature deterioration or obsolescence of a key asset	Current • maintenance performance measures included in the operations contracts. • routine inspections. Proposed increased monitoring forecasting life of key waste assets (waste compactors and bins)
Catastrophic failure of a key asset	Current • routine maintenance and inspections are included in the operations contracts. • reactive inspection following extreme weather events. building warrant of fitness for MRF buildings
Failure of contractor to deliver levels of service	Current • include performance monitoring and penalty provisions in operations contracts

11.3 Assumptions and Uncertainties

Table 23 documents the uncertainties and assumptions that the Council consider could have a significant effect on the financial forecasts, and discusses the potential risks that this creates.

Table 23: Generic Assumptions and Uncertainties

Type	Uncertainties	Assumption	Discussion
Financial	Unless stated it can be unclear whether financial figures include inflation or not, as well as whether GST has been included or not.	That all expenditure has been stated in 1 July 2017 dollar values and no allowance has been made for inflation and all financial projections exclude GST unless specifically stated.	The LTP will incorporate inflation factors. This could have a significant impact on the affordability of each activity if inflation is higher than allowed for. The Council is using the best information practically available from Business and Economic Research Limited (BERL) to reduce this risk.
Asset Data Knowledge	The Council has inspection and data collection regimes in place for assets. These regimes do not allow for entire network coverage at all times. The Council's aim is to strike the right balance between adequate knowledge and what is practical.	That the Council has adequate knowledge of the assets and their condition so that planned renewal works will allow the Council to meet the proposed levels of service.	There are several areas where the Council needs to improve its knowledge and assessments, but there is a low risk that the improved knowledge will cause a significant change to the level of expenditure required.
Growth Forecasts	Growth forecasts are inherently uncertain and involve many assumptions. The Council uses Stats NZ projections as the basis for its growth planning, but these will vary depending on actual birth and death rates as well as net migration.	That the district will grow or decline as forecast in its Growth Model.	Growth forecasts are used to determine infrastructure capacity and when that capacity will be required. If actual growth varies significantly from what was projected, it could have a moderate impact on the Council's plans. If higher, new or additional infrastructure may be required quicker than anticipated. If lower, Council may be able to defer the delivery of new or additional infrastructure.
Project Timing	Multiple factors affect the actual timing of projects e.g.: • Consents • Access to land • Population growth • Timing of private developments	That projects will be undertaken when planned.	The risk of the timing of projects changing is high due to factors like resource consents, third party funding, and land acquisition and access. The Council tries to mitigate these issues by undertaking the investigation, consultation and design phases sufficiently in advance of when construction is planned. If delays occur, it could have an impact on the levels of service and the Council's financing arrangements.

Type	Uncertainties	Assumption	Discussion
Project Funding	The Council cannot be certain that it will receive the full amount of anticipated subsidy or contribution. It depends on the funder's decision making criteria and their own ability to raise funds.	That projects will receive subsidy or third party contributions at the anticipated levels.	The risk of not securing funding varies and depends on the third party involved. If the anticipated funding is not received it is likely that the project will be deferred which may impact levels of service.
Accuracy of Cost Estimates	Project scope is often uncertain until investigation and design work has been completed, even then the scope can change due to unforeseen circumstances. Even if the scope has certainty there can be changes in the actual cost of work due to market competition or resource availability.	That project cost estimates are sufficiently accurate enough to determine the required funding level.	The risk of large underestimation is low; however, the importance is moderate as the Council may not be able to afford the true cost of the project. The Council tries to reduce this risk by undertaking reviews of all estimates and including an allowance for scope risk based on the complexity of the project.
Land Access and Acquisition	Land access and acquisition is inherently uncertain. Until negotiations commence, it is difficult to predict how an owner will respond to the request for access or transfer.	That the Council will be able to secure land and/or access to enable completion of projects.	The risk of delays to projects or changes in scope is high due to the possibility of delays in obtaining access. Where possible, the Council undertakes land negotiations well in advance of construction to minimise delays and scope change. If delays do occur, they may affect the level of service that the Council provides.
Legislation Changes	Often Central Government changes legislation in response to events where the need for change is identified. It is difficult to predict what events may occur and the associated response. Election of a new Government also introduces uncertainty as to what policies they will implement.	That there will be no major changes in legislation or policy.	The risk of major change is high due to the changing nature of the Government and its policies. If major changes occur, it is likely to have an impact on the required expenditure. The Council has not planned expenditure to specifically mitigate this risk.
Emergency Reserves	It is impossible to accurately predict when and where a natural hazard event will occur. Using historic trends to predict the future provides an indication but is not comprehensive.	That the level of funding reserves combined with insurance cover will be adequate to cover reinstatement following emergency events.	Funding levels are based on historic requirements. The risk of requiring additional funding is moderate and may have a moderate effect on planned works due to reprioritization of funds.

Type	Uncertainties	Assumption	Discussion
Climate change	Continued emissions of greenhouse gases will cause further warming and changes in all parts of the climate system. The International Panel on Climate Change (IPCC) has developed four scenarios named RCPs (Representative Concentration Pathways). They represent different climate change mitigation scenarios with varying levels of CO2 emission (low – medium – high). The likelihood of any of the scenarios occurring as predicted is uncertain and depends on many different factors.	Council uses the latest climate predictions that have been prepared by NIWA for New Zealand and more specifically for the Tasman District. The anticipated effects from climate change in Tasman District include: • An increase in seasonal mean temperature and high temperature extremes • An increase in rainfall in winter for the entire district and varying increases of rainfall in other seasons in different areas. • Rising sea levels, increased wave height and storm surges. • Floods, landslides, droughts and storm surges are likely to become more frequent and intense	It is likely that risk of low lying land being inundated from the sea, and damage to Council property and infrastructure from severe weather events, will increase. Council will need to monitor the level of sea level rise and other impacts of climate change over time and review its budgets, programme or work and levels of service accordingly.

11.3.1 Activity Specific Assumptions

In addition to the general assumptions above the Council needs to make assumptions that are specific to the Waste Management and Minimisation activity. These are discussed further below.

Table 24: Waste Management and Minimisation Specific Assumptions and Uncertainties

Type	Uncertainties	Assumption	Discussion
Waste disposal costs	A large proportion of the Council's expenditure for the activity is affected by landfill charges at York Valley.	The Council has based income and expenditure using information on gate rates provided by the Nelson Tasman Regional Landfill Business Unit in September 2017.	If these change then the Council will need to change RRC fees and charges and projected income and expenditure.

Type	Uncertainties	Assumption	Discussion
Income from Nelson Tasman Regional Landfill Business Unit	Local disposal levy received from the Nelson Tasman Regional Landfill Business Unit	Local disposal levy income of $2,200,000 per annum (inflated).	The Local disposal levy is set by the Nelson Tasman Regional Landfill Business Unit in consultation with the Councils through the approval of the business plan of the business unit by the Councils. The Councils may request additional income for waste management and minimisation purposes. Any increase in the local disposal levy would allow further activities to be funded by the Council or require less revenue from general rate, targeted rate or disposal charges. A decrease in the local disposal levy would require Council to reduce services or require more revenue from general rate, targeted rate or disposal charges.
Waste Generation Trends	Total waste per head of population through resource recovery centres Waste disposal patterns for resource recovery centres	562 kg per capita per annum Waste distribution will be as follows: Richmond 65.5% Mariri 27.0% Takaka 6.0% Collingwood 0.3% Murchison 1.2%	A significant proportion of revenue for the activity is directly related to the quantity of waste received. If waste volumes increase above budget then revenue will increase, but this will be matched by an increase in disposal costs (with no net difference). If more waste is presented at outlying resource recovery centres (e.g. at Mariri rather than Richmond) then Council's transport costs will increase. If more waste diverts direct to landfill then revenue will reduce, but so also will disposal and transport costs. If total waste to landfill for the region reduces then revenue for the Nelson Regional Landfill Business Unit will reduce. This may affect gate rates and/or revenue to the Council from the business unit.

Type	Uncertainties	Assumption	Discussion
Contract Rates	Cost of existing and future operations contracts	No change in activity costs when a new operations contract is awarded. Costs are based on contract rates applied over the 2016/17 year. That the contracts will run full term and that future contract terms will be similar duration as currently. That kerbside recycling bins have a 15 year life with 0.2% lost per annum.	We have assumed that there will be no real change in activity costs when a new operations contract is awarded and that any industry cost increases will be reflected in cost fluctuation provisions. We have also assumed that the new contracts will have similar capital requirements for contractors as the current contracts. In particular we have assumed that in the recycling contract the material recycling facility will be owned by the contractor, as will be the new recycling bins required in 2030.
Income from the central government landfill levy	The amount of funding from central government from the national waste disposal levy	Local share of waste disposal levy of $3.68 per capita per annum. ($192,934 in 2018/19, increasing with population and inflated)	Local government receives a 50% share of the nation waste disposal levy, based on each district's share of the national population. The levy is currently set at $10 per tonne (excluding GST). We have assumed that the district will receive $3.68 per head, and inflated this value over time. If Tasman District grows faster than the national population, if national waste volumes increase or a wider range of landfills are included in the waste disposal levy then Council's income would increase, and there would be greater opportunity to fund waste minimisation activities. Conversely, if Tasman grows slower than the national population or national waste volumes decrease then Council will receive less income.
Central government policy change	Change in central government policy requiring higher waste minimisation performance	The change will not be significant and existing and proposed programmes will be sufficient to addresses any changes	If government policy changes it is likely to be well signaled in advance, giving Council time to respond.

Type	Uncertainties	Assumption	Discussion
Properties with kerbside recycling	Growth of ratable properties on the kerbside collection route	Growth in properties on the kerbside collection route will match total district population growth in the Council's growth model, and that 20% of these will be in rural or semi-rural areas	Additional properties results in increased targeted rate funding and additional cost of providing services. Growth in properties requires additional payment to our contractor for supply and delivery of bins and payment for on-going servicing of these properties. The long term cost of this is expected to be slightly less than the current targeted rate so additional properties are unlikely to increase the targeted rate per property.
Waste Diversion Rates	Growth in quantity and range of recycled and diverted materials.	Increase of 2% per annum of diverted materials. That existing and planned services and infrastructure will be adequate to manage increases in diverted materials.	If there is demand for additional diversion of materials or demand to divert a new range of materials there may be a requirement for additional services or infrastructure. The cost of these may require additional funding: this could be from local or national disposal levy income, fees and charges or general or targeted rates.

12 Asset Management Processes and Practices

Good quality data and asset management processes are the heart of effective planning. This section outlines our approach to asset management, our processes, and provides an overview of our data management systems and strategies that underpins this activity.

12.1 Appropriate Practice Levels

The Office of the Auditor General (OAG) has chosen to use the International Infrastructure Management Manual (IIMM) as the benchmark against which New Zealand councils measure their activity management practices. There are five maturity levels in the IIMM; Aware, Basic, Core, Intermediate and Advanced. The IIMM sets out what the requirements are for each level against each area of the activity management system.

In 2017, the Council reviewed its Activity Management Policy and adopted an updated version. The Policy sets out the Council's activity management objectives and appropriate levels of practice. For this activity the Council has determined that the appropriate level of practice is "Core" with "Intermediate practice" identified for Asset Management Policy and Asset Register Data.

12.2 Service Delivery

12.2.1 Activity and Asset Management Teams

The Council has an organisational structure and capability that supports effective asset management planning. Multiple teams across Council are responsibility for the different aspects of activity and asset management. The focus of the teams ranges from a strategic focus at the Long Term Plan/Infrastructure Strategy level which involves a cross-Council team, through to detail/operational focus at the Operational team level.

Within the Engineering Services department, the asset management planning function is managed by the Activity Planning team. Operations are the responsibility of the Utilities and Transportation teams, while Projects and Contracts are managed by the Programme Delivery team.

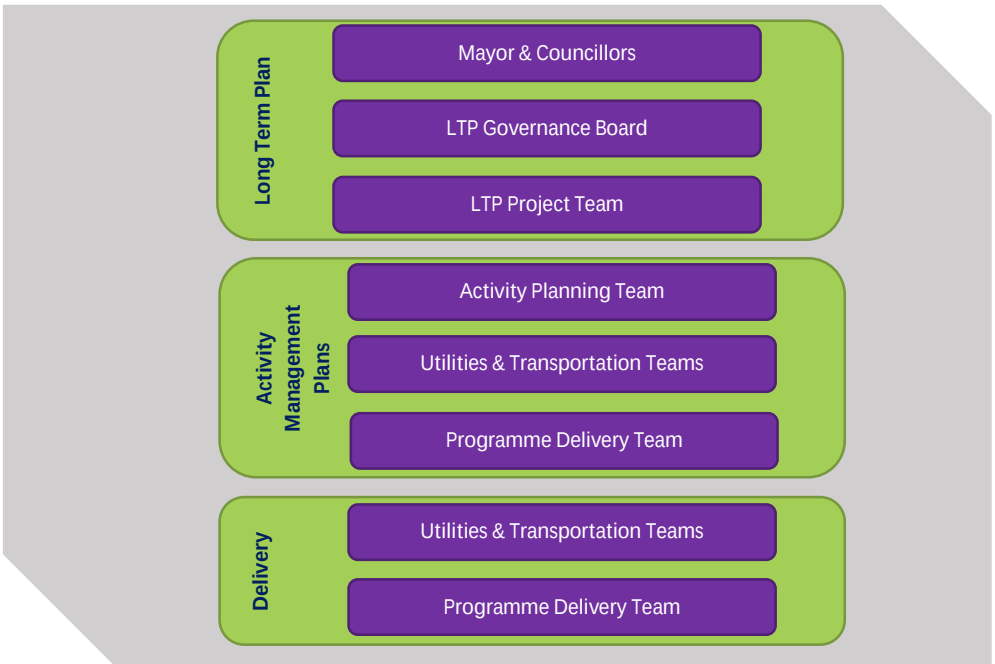


Figure 43: Teams Involved in Activity and Asset Management

The Activity Planning Team is responsible for the update of the activity management plans every three years, as well as implementation of the improvement plan. Each plan is assigned to the respective Activity Planning Advisor who is responsible for updating it. The Activity Planning Advisor works in with the activity's Asset Engineer to ensure that the current and future operating and maintenance aspects of the activities are adequately incorporated into the document. All activity management plans are reviewed by the Activity Planning Programme Leader who holds a National Diploma in Infrastructure Asset Management. The quality assurance process for the Engineering Services activity management plans is provided below.

- Preparation Activity Planning Advisor
- Check Utilities or Transportation Manager, and relevant Asset Engineer
- Review Activity Planning Programme Leader
- Approve Engineering Services Manager
- Adopt Full Council

12.2.2 Staff Training

Council maintains an annual budget for staff training that is managed by the Engineering Services Manager for the Engineering Services department. This budgets allows for continued development of staff to ensure that best practice is maintained and that Council retains the skills needed to make improvements in asset management practices. This includes on-going technical and professional training as well as specific asset management training.

12.2.3 Professional Support

The Engineering Services Department has a need to access a broad range of professional service capabilities to undertake investigation, design and procurement management in support of its significant transport, utilities, coastal management, flood protection and waste management and minimisation capital works programme, as well as support with activity management practice. There is also a need to access specialist skills for design, planning and policy to support the in-house management of the Council's networks, operations and maintenance.

To achieve this the Council went to the open market in late 2013 for a primary professional services provider as a single preferred consultant to undertake a minimum of 60% in value of the Council's infrastructure professional services programmes. The contract was awarded to MWH New Zealand Ltd (now Stantec NZ), beginning on 1 July 2014 with an initial three-year term and two three-year extensions to be awarded at the Council's sole discretion. In 2017, the first of these discretionary three-year extensions was granted, with the proportion of Council's professional services programmes reduced to 50%. In addition to this, a secondary professional service panel was also appointed through an open market tender process for a period of three years, to provide professional services that will not be supplied by Stantec.

12.2.4 Procurement Strategy

The Council has a formal Procurement Strategy that it follows in order to engage contractors and consultants to assist the Engineering Services department. This strategy has been prepared to meet NZ Transport Agency's requirements for expenditure from the National Land Transport Fund, and it describes the procurement environment that exists within the Tasman District. It was developed following a three-year review of the strategy and was approved in November 2013. It principally focuses on Engineering Services activities but is framed in the NZ Transport Agency procurement plan format, which is consistent with whole-of-government procurement initiatives. A review of the strategy was commenced in 2017/18.

12.2.5 Service Delivery Reviews

In 2014, Section 17A was inserted into the Local Government Act which requires the Council to review the cost effectiveness of its current arrangements for providing local infrastructure, services, and regulatory functions at regular intervals. Reviews must be undertaken when service levels are significantly changed, before current contracts expire, and in any case not more than six years after the last review. In addition to the regular reviews, the Act requires the Council to complete an initial review of all functions by August 2017.

The table below summarises the reviews that have been completed to date and when the next review is required for this activity.

Table 25: Summary of Reviews

Scope of Review	Summary of Review	Review Date	Next Review
Waste transport, greenwaste processing and Murchison Resource Recovery Centre operations	The review identified that the majority of services (kerbside recycling and operation of 4 of 5 resource recovery centres) are contracted until June 2023 and so the best time for changes in governance, funding and delivery would be prior to 2023. The review identified that the status quo (governance and funding by Tasman District Council and delivery by another party) was the most cost effective in the short term. There will be opportunity for a joint review of governance, funding and delivery with Nelson City Council in 2020.	August 2016	2020
Landfill services	The Council resolved in considering the proposal for joint landfill governance that "given the extensive work undertaken on the governance, funding and delivery of the waste management and minimisation services by the two Councils over recent years, the potential benefits of undertaking a S.17A Delivery of Services review under the Local Government Act 2002 do not justify the costs of undertaking the review". The next review of services is most likely to be in 2020 in conjunction with other waste services.	March 2016	2020

In addition to the Section 17A reviews, the Engineering Services department reviewed its current capability and capacity against the requirements of the future programmes of work set out in its activity management plans. To enhance the department's ability to deliver the capital works programme the following actions have been taken:

- undertaken a detailed review of the capital programme for the next five years to better understand project complexities and delivery requirements;
- implemented Planview a new project management system to track and report project delivery progress;
- increased the number of Project Managers from 4 to 5.5 full time equivalent staff resources;
- introduced enhanced performance requirements for our lead technical consultant for delivery of technical advice and engineering design;
- tendered for a new supporting professional services paned with enhanced performance requirements.

12.3 Asset Management Systems and Data

12.3.1 Information Systems and Tools

The Council has a variety of systems and tools that support effective operation and maintenance, record asset data, and enable that data to be analysed to support optimised life-cycle management. These are detailed below in Figure 44. There is a continual push to incorporate all asset data into the core asset management systems where possible; where not possible, attempts are made to integrate or link systems so that they can be easily accessed.

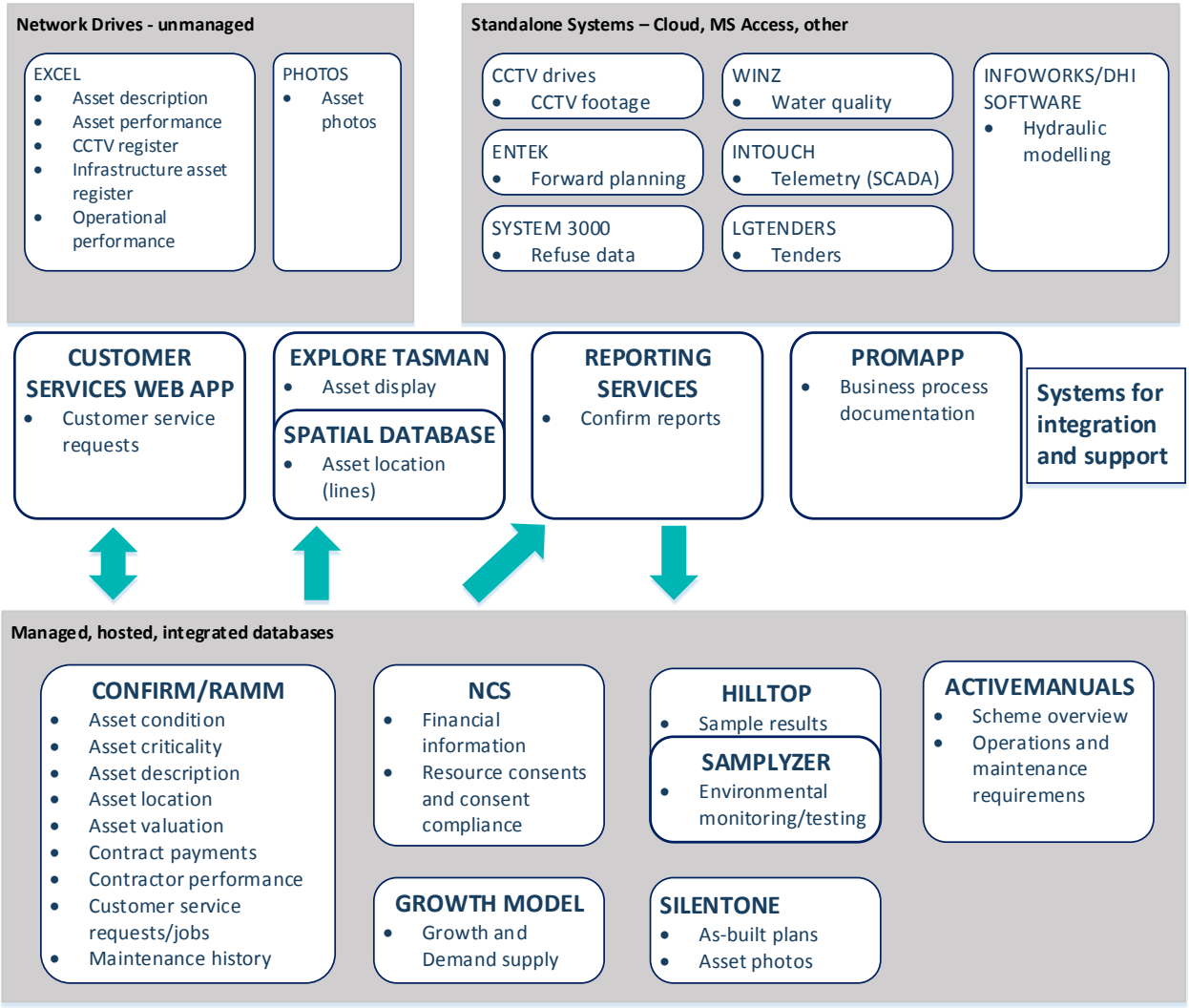


Figure 44: Systems Used for Asset Management

12.3.2 Asset Data

Table 26 summarises the various data types, data source and how they are managed within the Council. It also provides a grading on data accuracy and completeness where appropriate.

Table 26: Data Types and Information Systems

Data Type	Information System	Management strategy	Data Accuracy	Data Completeness
As-built plans	SilentOne	As-built plans are uploaded to SilentOne, allowing digital retrieval. Each plan is audited on receipt to ensure a consistent standard and quality.	2	3
Asset condition	Confirm / spreadsheets / reports	Assets are inspected by a consultant, staff or contractor. Asset condition recorded in either spreadsheets or in Confirm.	3	3

Data Type	Information System	Management strategy	Data Accuracy	Data Completeness
Asset criticality	Confirm	When a new asset is created, the activity planner and engineer will make an assessment on criticality. Criticality of asset can be modified by authorized users should circumstances change.	N/A	N/A
Asset description	Confirm / spreadsheets	All assets are captured in Confirm's Site and Asset modules, from as-built plans and maintenance notes. Hierarchy is defined by Site and three levels of Asset ID (whole site, whole asset or asset). Assets are not broken down to component level except where required for valuation purposes. It is also possible to set up asset connectivity, but this hasn't been prioritised for the future yet. Detail on some datasets held in spreadsheets relating to Utilities Maintenance Contract 688; work is in progress to transfer this detail to Confirm as resourcing allows.	2	3
Asset location	Confirm (point data) / GIS (line data)	Co-ordinates for point data completely (NZTM) describe spatial location. Line data links to GIS layers that describe the shape.	2	2
Asset valuation	Confirm	Valuation of assets done based on data in Confirm and valuation figures stored in Confirm.	3	3
Contract payments	Confirm	All maintenance and capital works contract payments are done through Confirm. Data on expenditure is extracted and uploaded to NCS.	N/A	N/A
Contractor performance	Confirm and spreadsheets	Time to complete enquiries is measured against contract KPIs through Confirms enquiry module and other performance is measured through a spreadsheet of KPI performance.	N/A	N/A
Corporate GIS browser	Explore Tasman	Selected datasets are made available to all the Council staff through this internal GIS browser via individual layers and associated reports.	N/A	N/A
Customer service requests	Customer Services Application / Confirm	Customer calls relating to asset maintenance are captured in the custom-made Customer Services Application and passed to Confirm's Enquiry module.	N/A	N/A

Data Type	Information System	Management strategy	Data Accuracy	Data Completeness
Environmental monitoring / testing	Hilltop / spreadsheet	Laboratory test results performed on monitoring and testing samples (from treatment plants and RRCs) are logged direct into Hilltop via an electronic upload from the laboratories. Due to historical difficulties in working with Hilltop data, it is duplicated in spreadsheets.	2	2
Financial information	NCS	The Council's corporate financial system is NCS, a specialist supplier of integrated financial, regulatory and administration systems for Local Government. Contract payment summaries are reported from Confirm and imported into NCS for financial tracking of budgets. NCS also holds Water billing information, while asset details and spatial component are recorded in Confirm and cross-referenced.	N/A	N/A
Infrastructure Asset Register	Spreadsheet	High level financial tracking spreadsheet for monitoring asset addition, disposals and depreciation. High level data is checked against detail data in the AM system and reconciled when a valuation is performed.	2	2
Forward planning	Spreadsheets, GIS Mapping	Forward programmes for the Council's activities are compiled in excel, These are loaded onto GIS based maps for information and in order to identify clashes and opportunities.	N/A	N/A
Growth and Demand Supply	Growth Model	A series of linked processes that underpin the Council's long term planning, by predicting expected development areas, revenues and costs, and estimating income for the long term.	2	2
Maintenance history	Confirm / spreadsheets and reports	Contractor work is issued by variation or instruction by staff. Maintenance history is recorded at a site level rather than at an asset level.	3	3
Photos	Network drives / SilentOne	Electronic photos of assets are mainly stored on the Council's network drives. Coastal Structures and Streetlight photos have been uploaded to SilentOne and linked to the assets displayed via Explore Tasman.	N/A	N/A

Data Type	Information System	Management strategy	Data Accuracy	Data Completeness
Processes and documentation	Promapp	Promapp is process management software that provides a central online repository where Council's process diagrams and documentation is stored. It was implemented in 2014 and there is a phased uptake by business units.	2	5
Resource consents and consent compliance	NCS	Detail on Resource Consents and their compliance of conditions (e.g. sample testing) are recorded in the NCS Resource Consents module.	2	2
Reports	Confirm Reports	Many SQL based reports from Confirm and a few from RAMM are delivered through Confirm Reports. Explore Tasman also links to this reported information to show asset information and links (to data in SilentOne and NCS).	N/A	N/A
Tenders	LGTenders	Almost all New Zealand councils use this system to advertise their tenders and to conduct the complete tendering process electronically.	N/A	N/A

Table 27: Data Accuracy and Completeness Grades

Grade	Description	% Accurate
1	Accurate	100
2	Minor Inaccuracies	+/- 5
3	50 % Estimated	+/- 20
4	Significant Data Estimated	+/- 30
5	All Data Estimated	+/- 40

Grade	Description	% Complete
1	Complete	100
2	Minor Gaps	90 – 99
3	Major Gaps	60 – 90
4	Significant Gaps	20 – 60
5	Limited Data Available	0 – 20

12.4 Critical Assets

Knowing what's most important is fundamental to managing risk well. By knowing this, Council can invest where it is needed most, and it can tailor this investment at the right level. This will avoid over investing in assets that have little consequence of failure, and will ensure assets that have a high consequence of failure are well managed and maintained. For infrastructure, this is knowing Tasman's critical assets and lifelines. These typically include:

- Arterial road links including bridges
- Water and wastewater treatment plants
- Trunk mains
- Main pump stations
- Key water reservoirs
- Stopbanks
- Detention dams

There are no assets in this activity that are considered critical assets.

During 2016, Council in partnership with Nelson City Council, the Regional Civil Defence Emergency Management Group and other utility providers, prepared the Nelson Tasman Lifelines Report. This report summarises all lifelines within Nelson and Tasman. Within the report there was a number of actions identified to improve the Region's infrastructure resilience.

Over the next three years, as part of Council's risk, resilience and recovery planning work, it will focus on the identification, planning and management of its critical assets and lifelines. This will help to ensure that the appropriate level of effort is being made to manage, maintain and renew them, and will extend to ensuring that Council has adequate asset data to enable robust decisions to be made regarding the management of those assets.

12.5 Quality Management

Table 28 outlines quality management approaches that support the Council's asset management processes and systems.

Table 28: Quality Management Approaches

Activity	Description
Process documentation	Council uses Promapp software to document and store process descriptions. Over time, staff are capturing organisational knowledge in an area accessible to all, to ensure business continuity and consistency. Detailed documentation, forms and templates can be linked to each activity in a process. Processes are shown in flowchart or swim lane format, and can be shared with external parties.
Planning	The Long Term Plan and associated planning process are formalised across Council. There is a LTP project team, LTP governance team, and AMP project team that undertakes internal reviews prior to Council approval stages. Following completion of the AMPs, a peer review is done, and the outcomes used to update the AMP improvement plans.
Programme Delivery	This strictly follows a gateway system with inbuilt checks and balances at every stage. Projects cannot proceed until all criteria of a certain stage have been completely met and formally signed off.
Subdivision Works	Water Supply infrastructure is inspected throughout its installation and pressure tested before Council sign-off and acceptance. Defects and poor workmanship will not be accepted. All work is bonded for a 2-year maintenance period.
Asset Creation	As-built plans are reviewed on receipt for completeness and adherence to the Engineering Standards and Policies. If anomalies are discovered during data entry, these are investigated and corrected. As-built information and accompanying documentation is required to accompany maintenance contract claims.
Asset Data Integrity	Monthly reports are run to ensure data accuracy and completeness. Stormwater, water, wastewater, coastal structures, solid waste and streetlight assets are shown on the corporate GIS browser, Explore Tasman, and viewers are encouraged to report anomalies to the Activity Planning Data Management team.
Operations	Audits of a percentage of contract maintenance works are done every month to ensure that performance standards are maintained. Failure to comply with standards is often linked to financial penalties for the contractor.
Levels of Service	Key performance indicators are reported annually via the Council's Annual Report. This is audited by the Office of the Auditor General.
Reports to Council	All reports that are presented to Council by staff are reviewed and approved by the Senior Management Team prior to release.

13 Improvement Planning

The activity management plans have been developed as a tool to help Council manage their assets, deliver on the agreed levels of service and identify the expenditure and funding requirements of the activity. Continuous improvements are necessary to ensure Council continues to achieve the appropriate level of activity management practice along with delivering services in the most appropriate way while meeting the community's needs.

13.1 Assessment of our Activity Management Practices

In 2017, Council undertook an assessment of its current asset management practices for this activity. This was a self-assessment with the targets developed in consultation with Waugh Infrastructure Management Ltd to ensure there were appropriate for the activity given:

- Criticality of the Assets;
- Value of the Assets;
- Value spent on maintaining the assets.

The maturity levels were based on the International Infrastructure Management Manual descriptions to maturity.

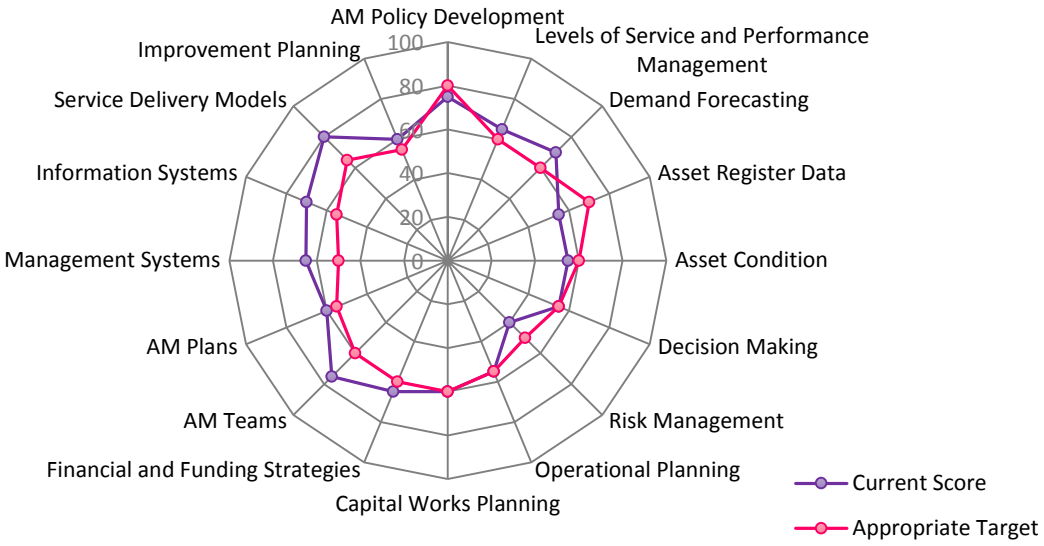


Figure 45: Waste Management and Minimisation Assets Maturity Levels

Figure 45 shows that there are some gaps between where Council's current practice is and where it is desired to be. Focus areas for improvements are Asset Register Data and Risk Management. The actions required to close these gaps have been included in the Improvement Plan.

13.2 Peer Reviews

13.2.1 Waugh Peer Review

13.2.2 In early 2018, Council engaged Waugh Infrastructure Management Ltd to undertake a peer review on the consultation version of this activity management plan. The peer review considered all Engineering Services activities and included the following analysis:

- Overview analysis and consideration of AMP progress completed since the Waugh Infrastructure detailed 2011 AMP Compliance Report (in summary not detail)
- Review of AMPs against general industry practice as observed by Waugh Infrastructure in the past 12 months
- Review and commentary on the adequacy of the AMP structure against current industry practice and requirements, as set out in IIMM 2015, ISO 55000
- Analysis of AMP individual section strengths and emphasis, including analysis of overall AMP 'message' verses issues identified

- Overview analysis of AMP status against appropriate asset management practice levels adopted in Council's Activity Management Policy (summary not detail)
- Analysis of the AMPs against Local Government Act 2002 amendment requirements, both 2012, and 2014 – identification of any issues or 'misses'
- Provide review comments of AMP strengths and weaknesses identified, with commentary on any suggested priority changes to be completed before LTP 2018

It is important to note that the peer review only considered what was included in the consultation version of this activity management plan. There are aspects of the Council's asset management processes that are not discussed in this activity management plan and are therefore not incorporated into the scoring.

The overall findings of the Peer Review were that the Council's AMPs are well developed to support the Council's Long Term Plan. Some of the AMPs had sections that required completion, but overall missing elements noted were relatively minor.

The AMP template has been updated to incorporate recent Local Government Act changes. The AMP template developed and used by Council has allowed clear, concise presentation of information in a logical manner.

The overall compliance status is shown below in Figure 46.

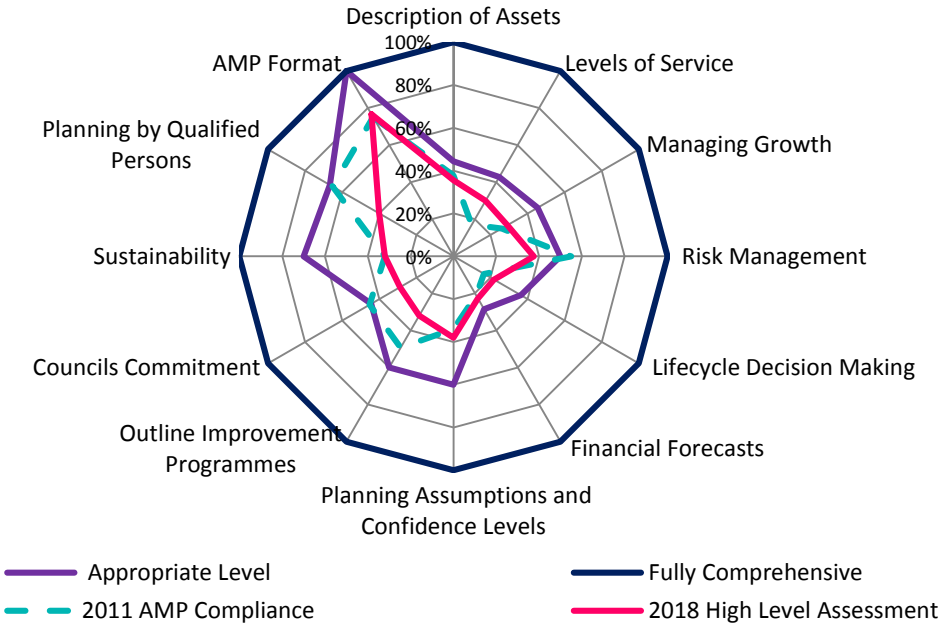


Figure 46: 2018 Peer Review Compliance Status Summary

Council staff have reviewed and prioritised the feedback received in the peer review report. Improvements that could be made immediately have been incorporated into the final version of this activity management plan. Other improvements have been ranked and included in the Improvement Plan.

There has been a noticeable decrease in scores for Outline Improvement Programmes, Council's Commitment, and Planning by Qualified Persons. This is not due to a change in Council's practice or performance, but due to a change in the activity management plan template. After receiving the peer review feedback, additional discussion has been included in Section 12 and Section 13 to address these issues.

13.3 Improvement Plan

Establishment of a robust, continuous improvement process ensures that Council is making the most effective use of resources to achieve the appropriate level of asset management practice. The continuous improvement process includes:

- Identification of improvements
- Prioritisation of improvements
- Establishment of an improvement programme
- Delivery of improvements
- On-going review and monitoring of the programme

All improvements identified are included in a single improvement programme encompassing all Engineering Services activities and is managed by the Activity Planning Programme Leader. In this way opportunities to identify and deliver cross-activity or generic improvements can be managed more efficiently, and overall delivery of the improvement programme can be monitored easily.

13.3.1 Summary of Recent Improvements

Since development of the 2015 Activity Management Plan, the Council has made the following improvements:

- completed a waste assessment and substantially completed a review of the Nelson Tasman joint waste management and minimisation plan (item SW1 in the 2015 AMP)
- started improving the completeness of the asset data in Confirm (SW2 in the 2015 AMP)
- improved asset condition assessments and remaining life estimates of key assets (SW3 in the 2015 AMP)
- improved estimates of landfill assets in the 2017 valuation (SW4 in the 2015 AMP)
  – these assets have now been transferred to the regional landfill business unit
- improved renewals planning, based on asset valuations (SW5 in the 2015 AMP)
- reviewed the capital programme for the Eves Valley landfill (SW6 in the 2015 AMP)
  – these assets have now been transferred to the regional landfill business unit
- improved the maintenance regime and reporting of key assets (primarily compactors and waste transport bins)
- improved recording and reporting of contractor performance

13.3.2 Summary of Planned Improvements

A list of the planned improvement items for this activity is provided in Table 29 below.

Table 29: Waste Management and Minimisation Specific Improvement Items as at June 2018

Improvement Item	Further Information	Priority	Status	Expected Completion Date	Team Responsible	Cost / Resource Type
Review Waste Management and Minimisation Plan	Council is required to review the WMMP at least every 6 years.	High	In progress	June 2018	Utilities	$20,000 Staff time, NCC staff and consultant
Asset Data: Improve level of asset data in Confirm.	Visit RRCs, confirm asset register, review as-built data, detail all new assets and update database	High	In progress	June 2019	Utilities and Activity Planning	Staff time and contractor supplied data
Asset Data: Conduct condition assessment for key assets	Remaining life estimates drive renewal programme for key assets.	High	In progress	June 2018	Utilities and Activity Planning	Staff time and contractor reports
Renewal strategy: review and improve renewal cycle for key assets	The assets for the activity are relatively new, but subject to high wear. An improved renewal strategy is required for these assets	High	In progress	June 2019	Utilities and Activity Planning	Staff time and contractor reports
Review need for a Water and Sanitary Services Assessment	Council is not planning to conduct any further Water and Sanitary Services Assessments in the period of the AMP.	Low	Not started	June 2019	Utilities and Activity Planning	Staff time
Review requirement of Hazardous Substances and New Organisms Act 1996	The Act places restrictions and controls the receipt and handling of some materials accepted at Resource Recovery Centres.	High	Not started	June 2019	Utilities	Staff time, contractor and consultant.
Update description of assets to include smaller assets and components.	The AMP does not describe all the assets found in Table 15.	Low	Not started	June 2020	Utilities and Activity Planning	Staff time
Sensitivity analysis of operations estimates.	Consider sensitivity analysis for waste streams, costs and income in next AMP.	Medium	Not started	June 2020	Utilities and Activity Planning	Staff time

Improvement Item	Further Information	Priority	Status	Expected Completion Date	Team Responsible	Cost / Resource Type
Review level of service at Resource Recovery Centres	Consider the level of service offered at each Resource Recovery Centre, including opening hours and services offered.	Medium	Not started	June 2020	Utilities and Activity Planning	Staff time

A list of general across activity improvement items is given in Table 30 below.

Table 30: General Activity Management Improvement Items

Improvement Item	Further Information	Priority	Status	Expected Completion Date	Team Responsible	Cost/Resource Type
Create Critical Asset Framework	Only the initial assessment has been undertaken, the framework was never re-tested.	High	In Progress	June 2020	Activity Planning	Staff Time
Provide data confidence ratings for groups of assets within the valuation for each activity.	In the valuation reports data confidence is only assessed across the activity and not for the different types of asset groups. It is likely that data confidence varies considerably between buried assets and above ground assets and this is not reflected in the reports.	Medium	Not started	Jun-20	Data Analyst – Utilities	Consultants and staff time Budget $33,500 in 2019/20

Appendix A: Detailed Operating Budgets

ID	Name	Description	Total Budget	Financial Year Budget ($)										Total Budget	
			2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
72001	Waste Minimisation Projects	Projects to be defined through JWMMP & AP	3,450,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	1,150,000	1,150,000
72002	Recycling Processing Costs		16,121,748	193,797	191,538	133,525	207,780	291,954	382,169	483,895	493,573	503,444	513,513	5,735,282	6,991,278
72003	Waste Minimisation Grants		150,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000
72011	Public Place Recycling	Large format containers and recycling bins	1,653,780	58,686	74,582	54,304	54,304	54,304	54,304	54,304	54,304	54,304	54,304	543,040	543,040
72017	Kerbside safety investigation and audit	Investigation and audit of kerbside safety	150,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000
72018	Kerbside safety remediation	Improvements to increase kerbside safety	300,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000	100,000
72023	Professional Services	Professional advice on waste management	300,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000	100,000
72024	WA and WMMP	External advice for preparation of waste assessment and waste plan	470,000	0	0	20,000	50,000	0	0	0	20,000	50,000	0	140,000	190,000
72025	AMP Professional Services	Assistance for preparation of AMP	188,000	2,000	11,500	5,300	2,000	11,500	5,300	2,000	11,500	5,300	2,000	67,900	61,700
72026	Refuse Insurance	Cost of insurance for all of waste activities	999,690	33,323	33,323	33,323	33,323	33,323	33,323	33,323	33,323	33,323	33,323	333,230	333,230
72027	RRC Health & Safety investigations	Investigation of health and safety needs	150,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000
72028	RRC Health & Safety remediation	Health and safety operational improvements	600,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000	200,000
72030	RRC legal advice	Legal advice for RRC sites	40,000	0	0	0	0	5,000	5,000	0	0	0	0	20,000	10,000
72031	RRC consultants	Specialist advice for RRC sites	1,125,000	45,000	45,000	45,000	45,000	45,000	36,000	36,000	36,000	36,000	36,000	360,000	360,000
72032	Retender RRC contract	Cost of RRC component of solid waste tender	200,000	0	0	0	0	25,000	25,000	0	0	0	0	100,000	50,000
72033	RRC EFTPOS	Cost of Murchison terminal	24,900	830	830	830	830	830	830	830	830	830	830	8,300	8,300
72034	RRC programmed site maintenance	Routine maintenance excluding pavement, bin and compactors	240,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	80,000	80,000
72035	RRC bin and compactor programmed maintenance	Routine bin and compactor maintenance	843,050	61,935	26,935	26,935	26,935	26,935	26,935	26,935	26,935	26,935	26,935	269,350	269,350
72036	RRC programmed pavement maintenance	Proactive pavement maintenance	1,440,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	480,000	480,000
72037	RRC reactive site maintenance	Reactive maintenance excluding pavement, bin and compactors	720,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	240,000	240,000

ID	Name	Description	Total Budget	Financial Year Budget ($)										Total Budget	
			2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
72038	RRC bin and compactor reactive maintenance	Reactive bin and compactor maintenance	900,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	300,000	300,000
72039	RRC reactive pavement maintenance	Reactive pavement maintenance	600,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000	200,000
72040	RRC electricity	Cost of electricity not included in ops contracts	10,200	340	340	340	340	340	340	340	340	340	340	3,400	3,400
72041	RRC rates	Cost of rates and water	660,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	220,000	220,000
72045	Richmond RRC operations	Richmond RRC operations contractor	10,641,240	354,708	354,708	354,708	354,708	354,708	354,708	354,708	354,708	354,708	354,708	3,547,080	3,547,080
72047	Waste Transport Costs	Transport of waste to landfill	12,403,966	377,070	379,996	382,922	385,848	388,773	391,699	394,423	397,147	399,871	402,595	4,157,111	4,346,511
72048	Landfill Disposal Costs	Cost of landfill disposal	121,730,466	3,535,172	3,607,040	3,646,528	3,686,017	3,725,505	3,764,993	3,801,758	3,838,523	3,875,288	3,912,052	40,890,684	43,446,906
72049	Greenwaste Transport Costs	Cost of greenwaste transport	1,596,055	50,825	51,016	51,207	51,398	51,589	51,780	51,958	52,136	52,314	52,492	533,485	545,855
72050	Greenwaste Processing Costs	Cost of greenwaste processing	1,442,858	42,275	42,743	43,210	43,678	44,146	44,614	45,050	45,486	45,921	46,357	484,543	514,835
72051	Hardfill Transport Costs	Cost of hardfill transport	319,440	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	106,480	106,480
72053	Recycling Transport Costs	Transport from RRCs	1,449,120	48,304	48,304	48,304	48,304	48,304	48,304	48,304	48,304	48,304	48,304	483,040	483,040
72055	RRC consent sampling and reporting	Cost of sampling and reporting	1,800,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	600,000	600,000
72056	RRC consent monitoring lab fees	Cost of lab analysis	345,000	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	115,000	115,000
72057	RRC consent updates	Cost of updating Site Management Plans	150,000	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	50,000	50,000
72058	Closed Landfill Maintenance	Proactive and reactive maintenance	150,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000
72059	Eves Valley Maintenance	Maintenance of Stage 5 site area	107,000	10,000	10,000	6,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	30,000	30,000
72060	Closed landfill rates	Rates for closed landfill sites	58,380	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	19,460	19,460
72061	Closed Landfill Monitoring	Cost of inspection and reporting	390,000	26,000	0	26,000	0	26,000	0	26,000	0	26,000	0	130,000	130,000
72062	Closed landfill monitoring lab fees	Cost of lab analysis	15,000	1,000	0	1,000	0	1,000	0	1,000	0	1,000	0	5,000	5,000
72063	Murchison closed landfill monitoring	Cost of inspection and reporting	90,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	0	5,000	0	25,000	25,000
72064	Murchison closed landfill monitoring lab fees	Cost of lab analysis	23,400	1,300	1,300	1,300	1,300	1,300	1,300	1,300	0	1,300	0	6,500	6,500
72065	General district illegal dumping	Cost of clearance of illegal dumping	225,000	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	75,000	75,000

ID	Name	Description	Total Budget	Financial Year Budget ($)										Total Budget	
			2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
72066	Kerbside illegal dumping	Cost of clearance of illegal dumping	15,000	500	500	500	500	500	500	500	500	500	500	5,000	5,000
72067	Riverside illegal dumping	Cost of clearance of illegal dumping	420,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	140,000	140,000
72068	Abandoned vehicle collection	Cost of collecting dumped vehicles not on road reserve	30,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000	10,000
72069	Illegal Dumping Disposal Fees	Cost of disposal of illegal dumping	100,173	3,313	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	33,400	33,400
72070	Redundant Agchem Disposal	Council share of Agchem disposal	600,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000	200,000
72071	Household hazardous waste	Cost of disposal of household hazardous waste	600,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000	200,000
72072	Kerbside Professional Services	Specialist advice for kerbside	230,000	5,000	5,000	5,000	5,000	15,000	15,000	5,000	5,000	5,000	5,000	90,000	70,000
72073	Mariri RRC operations	Mariri RRC operations contractor	8,464,950	282,165	282,165	282,165	282,165	282,165	282,165	282,165	282,165	282,165	282,165	2,821,650	2,821,650
72074	Takaka RRC operations	Takaka RRC operations contractor	4,280,430	142,681	142,681	142,681	142,681	142,681	142,681	142,681	142,681	142,681	142,681	1,426,810	1,426,810
72075	Collingwood RRC operations	Collingwood RRC operations contractor	713,850	23,795	23,795	23,795	23,795	23,795	23,795	23,795	23,795	23,795	23,795	237,950	237,950
72076	Murchison RRC operations	Murchison RRC operations contractor	1,808,520	60,284	60,284	60,284	60,284	60,284	60,284	60,284	60,284	60,284	60,284	602,840	602,840
72077	External Weighbridge Charges	Cost of external weighbridges for RRC customers	105,000	18,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	30,000	30,000
72078	Kerbside legal fees	Provision for legal fees	80,000	0	0	0	0	10,000	10,000	0	0	0	0	40,000	20,000
72079	Retender contract (all kerbside activities)	Cost of retendering collections contract	400,000	0	0	0	50,000	50,000	0	0	0	0	0	200,000	100,000
72080	Kerbside Advertising	Publishing of calendars and public information	444,000	12,000	12,000	12,000	12,000	15,000	30,000	12,000	12,000	12,000	12,000	162,000	141,000
72081	Kerbside recycling bins	Provision for purchase of depreciated MRB from contractor	151,202	0	0	0	0	0	151,202	0	0	0	0	0	0
72082	Bag collection landfill fees	Allowance paid for disposal of Council bags	3,750,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	1,250,000	1,250,000
72083	TDC bag purchases for counter sale	Cost of purchasing bags for sale	900,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	300,000	300,000
72084	Kerbside bags and recycling	Lump sum cost of kerbside collections	35,796,992	1,082,365	1,091,277	1,100,190	1,109,103	1,118,015	1,126,928	1,135,226	1,143,524	1,151,822	1,160,120	12,000,733	12,577,689
72085	Kerbside property growth and route extensions	Payment for servicing additional properties	2,806,514	22,879	28,565	34,251	39,938	45,624	51,310	56,608	61,906	67,204	72,502	979,237	1,346,490
72086	Kaiteriteri peak collections	Payment for additional summer collections	609,540	20,318	20,318	20,318	20,318	20,318	20,318	20,318	20,318	20,318	20,318	203,180	203,180
72089	New and replacement	Supply of new and replacement MRBs	1,001,464	49,058	27,803	27,918	27,918	28,033	28,033	26,425	26,540	26,540	26,540	363,751	342,905

ID	Name	Description	Total Budget	Financial Year Budget ($)										Total Budget	
			2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
	MRBs														
72090	New and replacement crates	Supply of new and replacement crates	220,877	12,778	8,135	8,159	8,159	8,183	8,183	7,851	7,875	7,875	7,875	71,321	64,483
72091	MRF operations	Operation of Richmond MRF	19,626,000	654,200	654,200	654,200	654,200	654,200	654,200	654,200	654,200	654,200	654,200	6,542,000	6,542,000
72095	Waste minimisation publicity	Publicity of waste minimisation initiatives	130,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	30,000	0
72096	Compost Bin Incentive Scheme	Compost bin subsidy	171,000	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	5,700	57,000	57,000
72097	In-house programme	Council recycling and minimisation	30,600	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	10,200	10,200
72100	Paintwise expenses	Paint recycling at RRCs	105,000	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	35,000	35,000
72108	Annual satisfaction survey	Provision for funding satisfaction survey	135,000	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	45,000	45,000
72110	MRF waste disposal	Allowance for disposal of contamination	960,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	320,000	320,000
	Feasibility Studies	Feasibility Studies	149,600	75,295	0	6,546	0	16,044	9,067	9,953	5,431	3,373	0	23,891	0

Appendix B: Detailed Capital Budgets

ID	Name	Description	Project Driver %			Total Budget	Financial Year Budget ($)										Total Budget	
			Growth	IncLOS	Renewals	2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
76001	Public place recycling centres	New bulk recycling units (16 units)	0	100	0	352,000	88,000	88,000	44,000	44,000	44,000	44,000	0	0	0	0	0	0
76002	Waste minimisation infrastructure	Renewal of existing recycling bins	0	0	100	1,080,000	0	0	0	0	0	0	45,000	45,000	45,000	45,000	450,000	450,000
76003	Expand existing MRF building	600 sq.m building extension	0	100	0	677,957	0	0	0	0	0	0	0	0	0	0	677,957	0
76004	MRF plant purchase	Purchase plant from Smart Environmental	0	100	0	516,591	0	0	0	0	0	0	0	0	0	0	516,591	0
76005	RRC consent renewals	Rototai 2019, Richmond seawall 2020, Murchison 2028, Richmond stormwater 2041, Mariri 2044, Takaka 2049	0	0	100	150,000	30,000	30,000	0	0	0	0	0	0	0	30,000	0	60,000
76006	RRC site renewals	Renewal of miscellaneous site features	0	0	100	695,567	4,175	40,137	40,137	40,137	4,175	0	0	0	4,175	7,705	396,641	158,285
76007	RRC compactor renewals	Renewal of waste compactors and related civil works	0	0	100	1,179,508	0	0	0	0	0	469,588	0	0	0	0	236,640	473,280
76008	RRC bin renewals	Renewal of bulk transport bins	0	0	100	1,933,949	113,684	113,684	0	0	0	0	0	0	0	317,071	913,903	475,607
76009	RRC weighbridge renewals	Renewal of vehicle weighbridges	0	0	100	332,960	0	0	0	0	0	0	0	0	0	0	178,640	154,320
76010	RRC building renewals	Renewal of offices and buildings	0	0	100	363,015	0	0	0	0	0	254,765	0	0	54,125	0	0	54,125
76011	RRC pavement renewals	Renewal of pavements and surfacing	0	0	100	1,976,472	156,250	157,206	0	165,886	23,232	156,250	0	0	0	0	658,824	658,824
76012	RRC computer renewals	Renewal of POS computers and systems	0	0	100	50,000	0	5,000	0	0	5,000	0	0	5,000	0	0	20,000	15,000
76013	RRC drainage renewals	Renewal of drainage and pumps	0	0	100	301,976	40,131	41,864	3,257	6,245	0	7,804	10,398	5,980	6,604	1,184	168,111	10,398
76014	RRC safety improvements	Site safety minor improvements	0	100	0	750,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	250,000	250,000
76015	Richmond RRC hazardous store	Hazardous good store and civil works	0	100	0	75,000	0	75,000	0	0	0	0	0	0	0	0	0	0
76016	Richmond RRC bin storage area	Area to store full bins in Richmond RRC	0	100	0	439,309	0	0	0	0	0	0	439,309	0	0	0	0	0
76018	Richmond RRC pit upgrade	Lift roof and improve drainage	0	100	0	94,028	0	94,028	0	0	0	0	0	0	0	0	0	0
76019	Richmond RRC second weighbridge	Second weighbridge for all transactions	0	100	0	271,573	0	0	0	0	0	0	0	0	271,573	0	0	0
76020	Mariri RRC access road improvements	Armco barrier and drainage improvements	0	100	0	168,645	0	0	0	0	0	0	0	0	0	168,645	0	0
76021	Mariri RRC weighbridge and roading	Move weighbridge to upper level and improve traffic	0	100	0	620,694	0	0	0	0	0	620,694	0	0	0	0	0	0
76022	Mariri Firefighting tanks	Provide firefighting tanks	0	100	0	16,293	0	0	0	16,293	0	0	0	0	0	0	0	0
76023	Mariri RRC roof over pit	Provide roof over pit to reduce leachate	0	100	0	191,000	0	0	0	191,000	0	0	0	0	0	0	0	0
76024	Takaka RRC recycling improvements	Improve layout on upper area for recycling	0	100	0	114,759	0	114,759	0	0	0	0	0	0	0	0	0	0
76025	Takaka RRC weighbridge and access	Add weighbridge to weigh incoming waste	0	100	0	284,467	284,467	0	0	0	0	0	0	0	0	0	0	0

ID	Name	Description	Project Driver %			Total Budget	Financial Year Budget ($)										Total Budget	
			Growth	IncLOS	Renewals	2018-48	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028-38	2038-48
76026	Takaka RRC compactor and new pit	Renew compactor insitu or at new location	0	65	35	770,000	770,000	0	0	0	0	0	0	0	0	0	0	0
76027	Collingwood RRC improvements	Minor improvements at Collingwood RRC	0	100	0	60,000	0	0	0	10,000	0	0	0	0	10,000	0	20,000	20,000
76028	Murchison RRC pit improvements	Renew pit or provide compactor	0	80	20	497,644	0	0	0	0	0	0	0	497,644	0	0	0	0
76029	Murchison RRC improvements	Minor improvements at Murchison RRC	0	100	0	60,000	0	0	0	10,000	0	0	0	0	10,000	0	20,000	20,000
76032	Closed landfill improvements	Vegetation on Mariri closed landfill	0	0	100	28,125	0	0	0	0	0	0	28,125	0	0	0	0	0
76033	RRC environmental controls	Improvements to reduce discharges or contain materials	0	0	100	450,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000	150,000