Tasman District Council

Solid Waste
Activity Management Plan

2015 - 2045

July 2015

Quality Assurance Statement		
Tasman District Council 189 Queen Street Private Bag 4 Richmond 7050 Telephone: (03) 543 8400 Fax: (03) 543 9524	**Version:**	Draft – January 2015
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For full Quality Assurance Statement, Refer Appendix Z

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1 ACTIVITY DESCRIPTION

1.1 What We Do

Council provides comprehensive waste management and minimisation services. It achieves this through providing 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 in Nelson and recyclable material is processed and on-sold by Council's contractor.

Landfill operations are provided in cooperation with Nelson City Council. For the next 15 years all regional waste will be disposed at the York Valley landfill, with the Eves Valley landfill reserved for emergency use. From 2030 the Eves Valley landfill will reopen to accept regional waste.

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

The Council also maintains 22 closed landfills around the district.

A complete description of the assets is in Appendix B.

1.2 Why We Do It

The efficient and effective collection and disposal of waste protects both public health and the environment. Waste minimisation activities promote efficient use of resources and extend the life of the region's landfill assets.

The Waste Minimisation Act 2008 has increased the requirement for consideration of 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 the Council for solid waste management. Council has elected to do this jointly with Nelson City Council. The next review of the joint WMMP is scheduled for 2016/17.

2 COMMUNITY OUTCOMES AND OUR GOAL

The community outcomes that the solid waste activity contributes to most are shown in Table 2-1.

Table 2-1: Community Outcomes

Community Outcomes	How Our Activity Contributes to the Community Outcome
Our unique natural environment is healthy and protected.	All material that is collected by the Council's operators or delivered to Council-owned facilities is processed or disposed of in an appropriate and sustainable manner. These activities will be managed to minimise the impact on the receiving environment.
Our urban and rural environments are people-friendly, well-planned and sustainably managed.	Our kerbside collections ensure our built urban and rural environments are functional, pleasant and safe by receiving materials from the community and recycling, reusing or disposing of them with a minimum of nuisance and public complaint. Our services promote the sustainable use of resources.
Our infrastructure is efficient, cost effective and meets current and future needs.	Solid waste activities are operated in a safe and efficient manner. We plan for future growth and to provide waste and recycling services that the community is satisfied with.

2.1 Our Goals

Council's long-term goals for solid waste 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.

3 KEY ISSUES FOR THE SOLID WASTE ACTIVITY

The most important issues relating to the solid waste activity are shown below in Table 3-1.

Table 3-1: Key Issues for the Solid Waste Activity

Key Issue	Discussion
Joint solid waste management with Nelson City Council	The Councils have agreed to mothball the Eves Valley landfill and use the York Valley landfill in Nelson as a regional facility from July 2015. This agreement will be more efficient, reduce duplication of capital and provide opportunity for improved waste minimisation.
Eves Valley landfill	Transition to regional landfill activities will require early closure and mothballing of the Eves Valley landfill. Council also needs to provide funding for reopening of the landfill in 2030.
New recycling services	Implementation of a new kerbside recycling service using 240 litre mobile bins is expected to increase diversion of waste from landfill. The new materials recovery facility (MRF) provides opportunity for commercial recycling and regional cooperation.
Review of services	The Councils have agreed to a review of services and a joint waste assessment in 2015/16. This will provide opportunity to review services and facilities over the wider region in the context of a joint landfill. The outcome of this review of services will influence the next AMP.
Renewals and maintenance strategy	With a transition to funding depreciation, a greater focus on asset valuation and condition assessment and asset life will be required.

4 OPERATIONS, MAINTENANCE AND RENEWALS STRATEGY

4.1 Operations and Maintenance

Council currently contracts out the day-to-day operation and maintenance of solid waste assets and services with the aim of maintaining required levels of service in a cost-effective manner.

The contracts are let on a combination of prescriptive and performance basis with a view to:

- achieving maintenance efficiencies and cost effectiveness by allowing the contractor to be innovative in managing the operation and maintenance activities;
- encouraging pro-active maintenance practices rather than reactive practices;
- ensuring compliance with legislative, monitoring and resource consent requirements;
- ensuring that Council's waste minimisation strategy is adhered to.

Council has recently brought contract management and asset planning functions back under the direct control of Council staff. This is expected to achieve more effective asset management and to reduce costs.

Operation and maintenance is discussed in detail in Appendix E.

4.2 Renewals

Assets are considered for renewal as they near the end of their effective working life, or where the cost of maintenance becomes uneconomical and when the risk of failure of the assets is sufficiently high.

Renewal decisions are supported by reports from the operations contractor's work based on their knowledge of the systems. In addition, the theoretical life expectances of asset components have been used for the purpose of some financial projections.

To improve the information base for the renewals strategy and replacement programme, the Council will focus on the following improvements:

- determining critical assets for the activity, in the light of recent changes to operations;
- better defining heavy maintenance cycles for mechanical equipment (waste compactors and bins);
- updating the solid waste valuation, using the more up-to-date and complete database in Confirm and more critically assessing remaining life of critical or high value assets;
- better defining which assets will require renewal and which may be abandoned;
- reviewing the life and renewal cycle for critical wastewater assets that are managed by the activity;
- better defining the maintenance and renewal strategy for sealed pavements on sites.

Some of the particular areas where the Council needs to improve their knowledge include:

- expected life of waste compactors and bins (in respect of time and number of cycles / tonnages of waste);
- assessing condition and remaining life of paved surfaces on RRC sites;
- renew / replacement strategy for below ground infrastructure at Eves Valley landfill (mainly wastewater and leachate lines).

Renewals are discussed in detail in Appendix I.

5 EFFECTS OF GROWTH, DEMAND AND SUSTAINABILITY

5.1 Population Growth

A comprehensive Growth Demand and Supply Model (GDSM or growth model) has been developed for the Tasman District. The growth model is a long term planning tool, providing population and economic projections district wide.

The population projections in the growth model have been taken from Statistics New Zealand population projections derived from the 2013 census data, using a "medium" growth rate projection for all settlement areas (see Figure 5-1).

In the model the supply potential is assessed (as well as demand), and a development rollout for each settlement is then examined. The ultimate outputs of the GDSM include a projection of the district's population, a forecast of where and when new dwellings and business buildings will be built and a forecast of new utility connections.

The development rollout from the Growth Model informs asset management, which feed into the capital budgets, and in turn underpin the Long Term Plan and supporting policies.

The Growth Demand and Supply Model is described in brief in Appendix F and in more detail in a separate model description report.

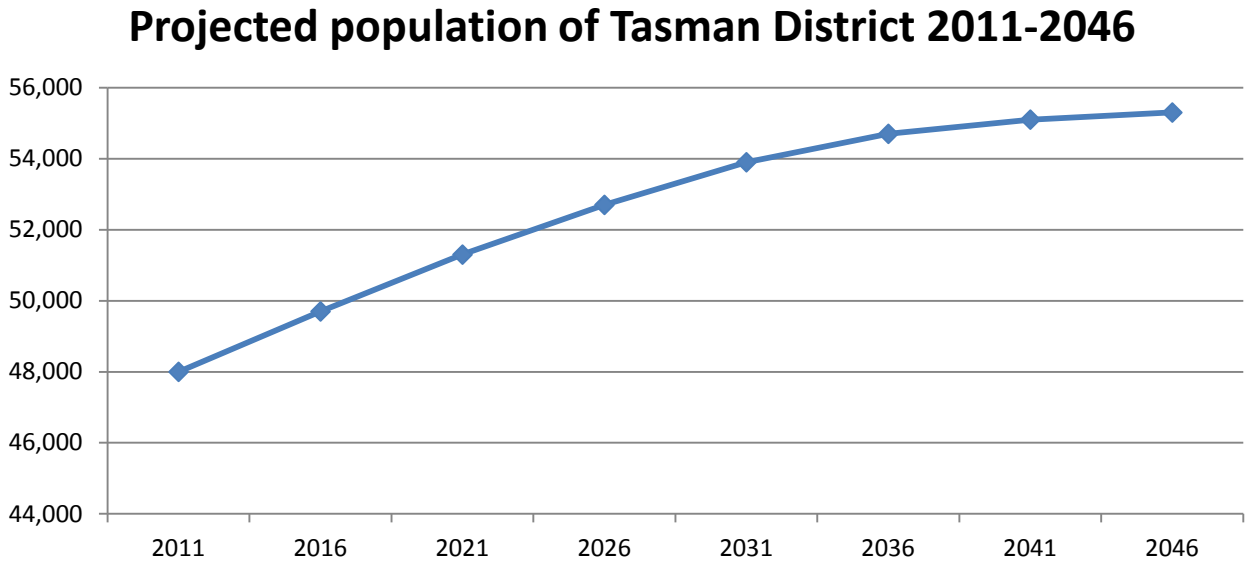


Figure 5-1: Projected Population Growth for Tasman District

As shown in Figure 5-1, Tasman's population is expected to be about 53,900 by 2031. Like the rest of New Zealand, the median age in Tasman's population is also increasing. By 2031, the number of people aged over 65 in Tasman is projected to comprise 29.1 percent of the population, compared to 17.9 percent in 2013. Twenty years ago the figure was less than 10 percent. These demographic changes raise a number of challenges for Council.

Tasman District is a popular destination for older age group or "retirees". A high proportion of population growth results from people moving to the Tasman District from elsewhere, rather than from current residents having children. The growth modelling shows that older people moving to the Tasman district are choosing to live in larger centres with easier access to services, hence the larger settlements are growing and the smaller ones are not. Richmond, Brightwater and Wakefield are predicted to grow by 500 people or more over the next 25 years.

As Tasman's population increases, Council needs to provide more services. However, many of the retired population will be on fixed incomes and unable to pay for increases in services.

Council has taken these factors into account in the development of this AMP and the LTP.

5.2 Sustainability

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

Many of the Council's cross-organisational initiatives are shaped around the community well-being (economic, social, cultural and environmental) and take into consideration the well-being of future generations. This is demonstrated in:

- Council's Integrated Risk Management approach which analyses risks and particularly risk consequences in terms of community well-being;
- Council's Growth Demand and Supply Model which seeks to forecast how and where urban growth should occur, taking into account opportunities and risks associated with community well-being;
- Council adopting a 30 year forecast in the Activity Management Plans and the 30 year plus Infrastructure Strategy, to ensure the long term financial implications of decisions made now are considered;

- the adoption of a Strategic Challenges framework and work programme that includes consideration of natural hazards, financial sustainability and growth in the District.

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

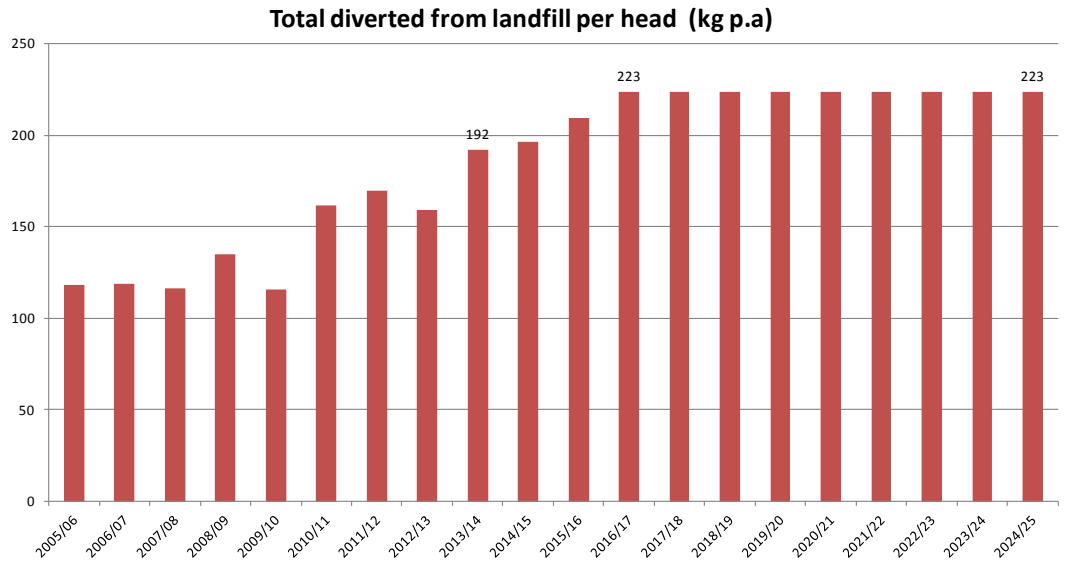
- a strategy of working towards a joint approach with Nelson City Council for regional waste management and minimisation. This approach is expected to result in more sustainable long term management of activities;
- a strategy of diversion of material from landfill to improve resource efficiency and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

6 LEVEL OF SERVICE AND PERFORMANCE MEASURES

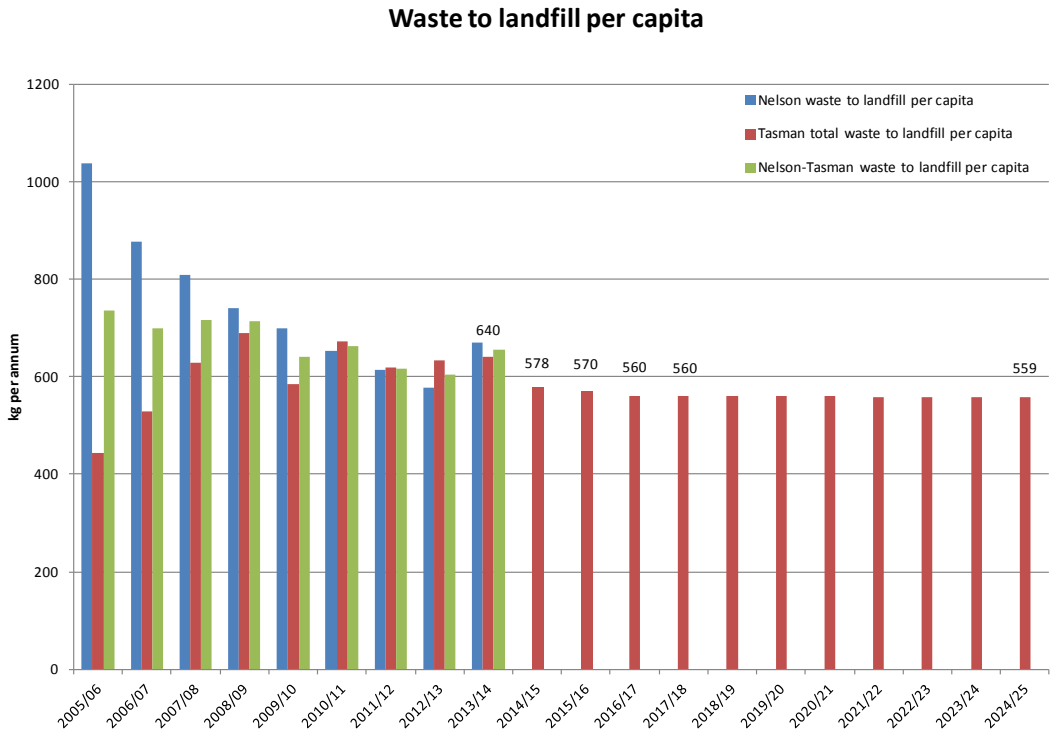
Table 6-1 summarises the levels of service and performance measures for the solid waste activity. Development of the levels of service is discussed in detail in Appendix R. The shaded rows indicate those levels of service and performance measures which are included in the Long Term Plan. The current performance is based on the 2013/14 financial year.

Table 6-1: Levels of Service

ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at year end 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
Community Outcome: Our unique natural environment is healthy and protected.							
1	**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.*	**Actual = 192 kg per person**	197 kg	206 kg	206 kg	*206 kg*



ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at end Year 2 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
2		*There is a reduction in waste per capita going to landfill.* *As measured by tonnage recorded at landfill.*	**Actual = 640 kg per person**	*570 kg*	*560 kg*	*560 kg*	*559 kg*



ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at end Year 2 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
Community Outcome: Our urban and rural environments are pleasant, safe and sustainably managed.							
5	**Our kerbside recycling and bag collection services are reliable, easy to use.**	*% of enquiries resolved within 24 hours.* *As measured through Confirm.*	**Actual = 95%**	*95%*	*95%*	*95%*	*95%*
6		*% customer satisfaction with kerbside recycling services.* *As measured through annual resident survey of those provided with Council's kerbside recycling collection services.*	Actual = 89% satisfied or very satisfied	*90%*	*90%*	*90%*	*90%*
7		*% customer satisfaction with kerbside bag collection services.* *As measured through annual resident survey of those provided with Council's kerbside bag collection services.*	Actual = 69% satisfied or very satisfied	*70%*	*70%*	*70%*	*70%*
Community Outcome: Our infrastructure is safe, efficient and sustainably managed.							
8	**Our resource recovery centres are easy to use and operated in a reliable manner.**	*% customer satisfaction based on-site surveys.* *As measured by annual customer surveys at RRCs.*	**Actual = 96% satisfied or very satisfied**	*95%*	*95%*	*95%*	*95%*
9	**All Council solid waste activities, facilities and services comply with the TRMP, site management plans and other appropriate legislative requirements.**	*All necessary resource consents are held. Resource consents information is held in Council's NCS database.*	**Actual = 100%** **A current resource consent is in place for each site as required.**	100%	100%	100%	100%
		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.*	**Nil**	Nil	Nil	Nil	Nil

7 CHANGES MADE TO ACTIVITY OR SERVICE

Table 7-1 summaries the key changes for the management of the solid waste activity since the 2012 Activity Management Plan.

Table 7-1: Key Changes

Key Change	Reason for Change
Decision to mothball Eves Valley landfill and transfer waste to York Valley landfill in Nelson.	Anticipated in Joint WWMP. Increased efficiency, better use of capital and improved opportunity for waste minimisation to maximise asset life.
Move to new kerbside recycling service and materials recovery facility.	Improved collections at no greater cost. Opportunity to reduce waste to landfill.
Transfer of contract management and asset planning into direct Council control.	Improved asset management and decision making. Cost savings.

8 KEY PROJECTS

Table 8-1 details the key capital and renewal work programmed for years 2015 to 2035.

Table 8-1: Significant Projects

Project ID	Activity	Projects	Year 1 ($)	Year 2 (S)	Year 3 ($)	Years 4 to 10 ($)	Years 11 to 20 ($)	Project Driver[1]
4,5,7,8	Eves Valley landfill	Stage 3 design and construction, resource consent, transportation renewals					$12,400,000	LoS / R
28, 29	Richmond Resource Recovery Centre	Replacement waste compactor and bins					$845,000	R
13,14	Mariri Resource Recovery Centre	Improve traffic flow and layout	$353,600		$282,100			LoS / R
42	Takaka Resource Recovery Centre	New weighbridge	$150,000					LoS
40,41		Improve traffic flow and layout				$210,000		LoS / R
38		Replacement waste compactor and bins				$500,200		R
2	Closed landfills	Rock protection work and cap renewals			$244,000			LoS / R

Note:
1. See Appendix F for a full detailed list of new capital works projects driven by growth and or an increase in level of service.
2. See Appendix I for a full detailed list of renewal projects
3. These capital estimates are rounded, in 2014 values and exclude inflation

[1] Project Drivers – LoS = increasing Levels of Service, G = Growth, R = Renewals

9 MANAGEMENT OF THE ACTIVITY

9.1 Management

The strategic approach to management of the solid waste activity is diagrammatically represented below in **Figure 9-1** below.

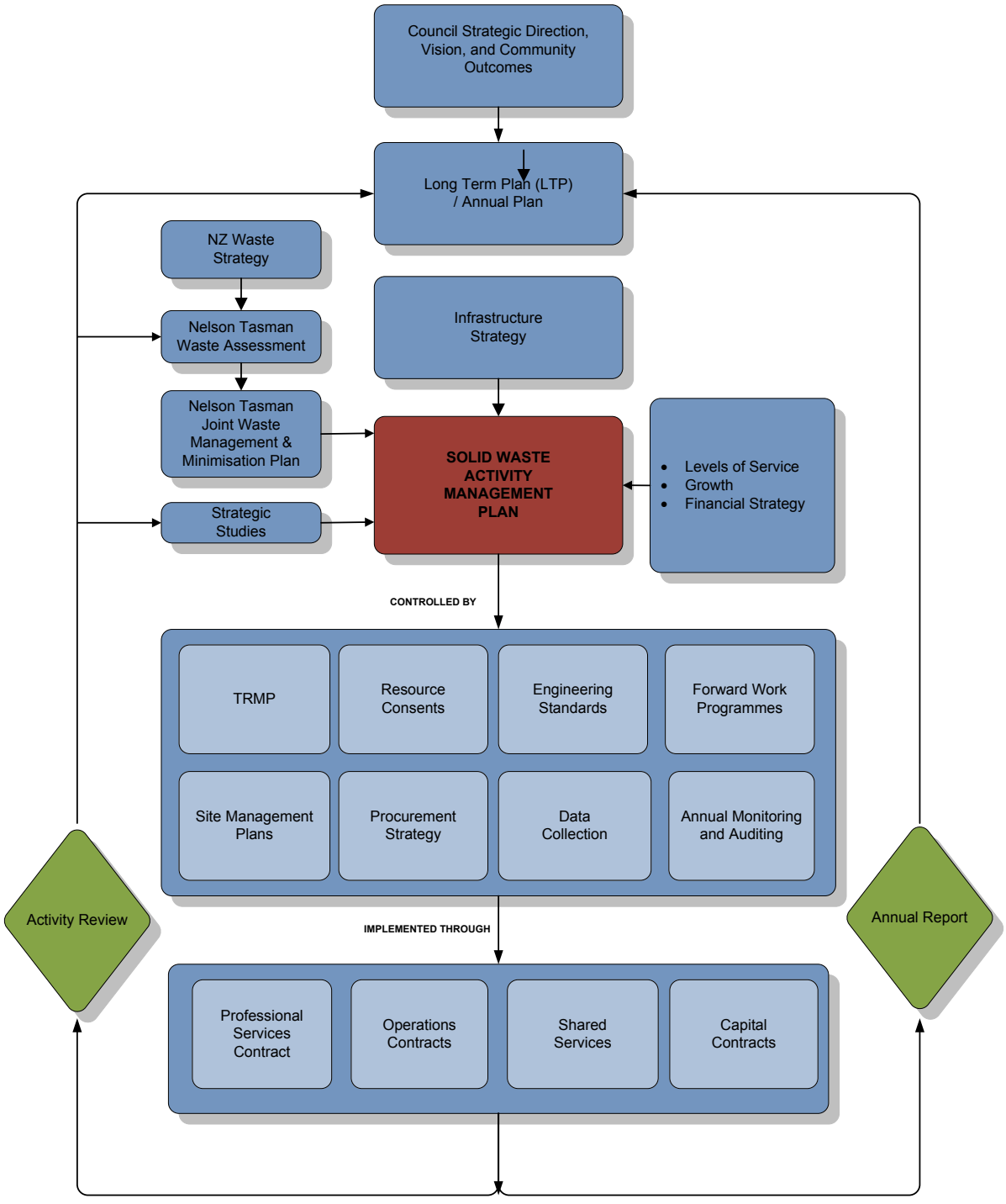


Figure 9-1: Hierarchy of Council Policy, Strategy and Planning

9.2 Service Delivery Review

Section 17A of the Local Government Act 2002 requires all local authorities to review the cost-effectiveness of its current arrangements for delivering good quality local infrastructure, local public services, and performance of regulatory functions at least every six years.

In addition to this, Council is required by Section 50 of the Waste Minimisation Act 2008 to undertake an assessment of waste management services and infrastructure within the District (a "Waste Assessment"). This review is required at least every six years.

The Council undertook a joint Waste Assessment with Nelson City Council in 2010, which led to a Joint Waste Management and Minimisation Plan in 2012.

The Council engaged Morrison Low to review its delivery of services provided by its Engineering Department in 2012. The review recommended a re-organisation of the department to reduce the proportion of asset management services that were provided by external consultants. The re-organisation was implemented during 2013 and has provided cost savings to the Council, an increase in asset knowledge, and greater interaction with customers.

The Council is planning to undertake a review of services that meets the requirements of Section 17A of the Local Government Act 2002and Section 50 of the Waste Minimisation Act 2008 in 2015/16.

9.3 Significant Effects

The potential significant negative and significant positive effects of the activity and mitigation measures used are detailed in Appendix P. The significant negative effects relating to the solid waste activity include:

- noise;
- dust, odour and windblown litter;
- discharges of pollutants to water and land;
- disruptions to service;
- discharge of methane and carbon dioxide;
- unaffordable or uneconomic cost of services.

The potential significant positive effects relating to the solid waste activity include:

- public health benefits;
- economic benefits;
- environmental benefits.

9.4 Demand Management

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

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

These are discussed separately in Appendix M (fees and charges) and Appendix B (waste minimisation and promotion).

9.5 Assumptions

Council has made a number of assumptions in preparing the Activity Management Plan. These are discussed in detail in Appendix Q. Table 9-1 lists the most significant assumptions and briefly outlines the impact of the assumption.

Table 9-1: Significant Assumptions

Assumption Type	Assumption	Discussion
Financial assumptions	That all expenditure has been stated in 1 July 2014 dollar values and no allowance has been made for inflation, and all financial projections are GST exclusive.	The LTP will incorporate inflation factors. This could have a significant impact on the affordability of the plans if inflation is higher than allowed for, but Council is using the best information practically available from Business and Economic Research Limited (BERL).
Asset data knowledge	That Council has sufficient knowledge of its assets and their condition so that the planned renewal work will allow Council to meet its levels of service.	There are several areas where 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. Council is looking to improve asset knowledge over time.
Growth forecasts and waste projections	That the district will grow as forecast in the Growth Demand and Supply Model (refer to Appendix F).	The forecast figures have been used to determine the anticipated waste volumes and priorities. If the growth is significantly different it may have a significant impact as waste volumes have been assumed as directly proportional to population growth. If higher, Council may need to advance capital projects. If it is lower, Council may have to defer planned works. Periods of growth provide additional waste volumes (and revenue) while slow or negative growth reduces volumes and revenue.
Timing of capital projects	That capital projects will be undertaken when planned.	The risk of the timing of projects changing is high due to factors like, resource consents, funding and land purchase. Council tries to mitigate this issue by undertaking the consultation, investigation and design phases sufficiently in advance of the construction phase. Risks are lower in this activity due to the limited need for growth outside existing facilities.
Accuracy of capital project cost estimates	That the capital project cost estimates are sufficiently accurate enough to determine the required funding level.	The risk of large under estimation is low; however the significance is moderate as Council may not be able to afford the true cost of the projects. Council tries to reduce the risk by including a standard contingency based on the projects lifecycle.
Changes in legislation and policy	That there will be no significant changes in legislation or policy.	The risk of significant change is high, due to the changing nature of the government and politics. If significant changes occur it is likely to have a significant impact on the required expenditure. Council does not have mitigation plans for the effect of this as the nature of the change is unknown.
Council's disaster fund reserves	That the level of funding held in Council's disaster fund reserves and available from insurance cover will be adequate to cover reinstatement following emergency events.	The risk of inadequate reserves and recovery from insurance claims would mean deferral of future capital projects to provide any financial shortfall required to cover reinstatement costs.

Assumption Type	Assumption	Discussion
Resource consents	That Council will be granted resource consent for key capital projects and renewal of existing resource consents for existing assets.	In the event a consent is not granted, then this can significantly affect the future of the project, cost and timing. If a consent is not renewed, then a new capital project may be required to replace the existing asset.
Waste projections	That waste and recycling volumes processed will meet forecast levels.	A significant proportion of revenue for the activity is directly related to the quantity of waste received. In the event of inaccurate forecasts or unexpected changes to waste volumes Council may exceed or fail to meet revenue forecasts.
Regional landfill activities	That gate rates for landfill disposal at York Valley landfill will be as anticipated	A large proportion of 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 Nelson City Council. If these change then Council will need to change RRC fees and charges and projected income and expenditure.
Regional landfill activities	That the York Valley landfill will generate expected surpluses.	Council relies on a substantial distribution of landfill revenue from Nelson City Council in to balance the activity budget. In the event that surpluses from York Valley do not meet expected levels the Council will receive less revenue than budgeted.

The most significant capital projects and their significant uncertainties are listed in Appendix Q.

9.6 Risk Management

The Council's risk management approach is described in detail in Appendix Q.

The risk assessment framework was developed in 2011 to be consistent with *AS/NZS IS 4360:2004 Risk Management*. It assesses risk exposure by considering the consequence and likelihood of each risk event. Risk exposure is managed at three levels within the Council organisation:

- Level 1 – Corporate Risks
- Level 2 – Activity Risks
- Level 3 – Operational Risks.

At the time of writing this AMP, the solid waste activity is making changes in two significant areas of the activity:

- entering into an agreement with Nelson City Council to close the Eves Valley landfill and use the York Valley landfill (in Nelson) as a regional facility; and
- entering into a new contract for the collection of recycling and rubbish at the kerbside and operation of four of the five RRCs. This change will include semi-automated collection techniques and new semi-automated sorting facilities.

Both of these changes affect Council's risk profile in the solid waste activity and the criticality of some assets. These have not been updated at the time of writing. Particular risk areas that are likely to change will include:

- revenue risks (likely to reduce);
- landfill risks (some will transfer to Nelson City Council);
- health and safety risks (may require additional works, but improved collections methodology may reduce some risks).

9.7 Improvement Plan

This Activity Management Plan document was subject to a peer review in its draft format by Waugh Infrastructure Management Ltd in February 2015. The document was reviewed for compliance with the requirements of the LGA 2002. The findings and suggestions will be assessed and prioritised by the asset management team and either implemented in the final version of this document or added to the Improvement Plan.

The Improvement Plan is currently under development and will be included in Appendix V in the final version of this document.

10 SUMMARY OF COST FOR ACTIVITY

The following figures have been generated from the Funding Impact Statement held in Appendix L and the Public Debt and Loan Servicing Cost information held in Appendix K. Further detail is held in Appendix E, F and I for operating and maintenance, new capital and renewal costs respectively. All of the following graphs include inflation.

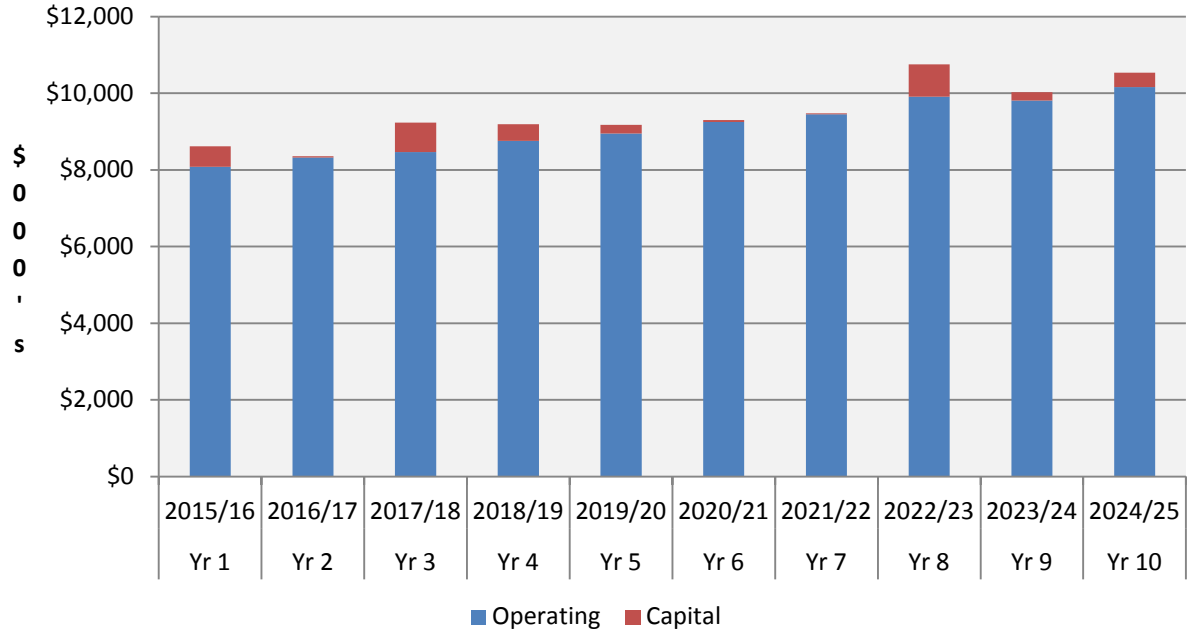


Figure 10-1: Total Expenditure

As shown in Figure 10-1, operating expenditure increases from $8.0 to $10.1 million over the first ten year period. This is due to inflation, network growth and waste growth.

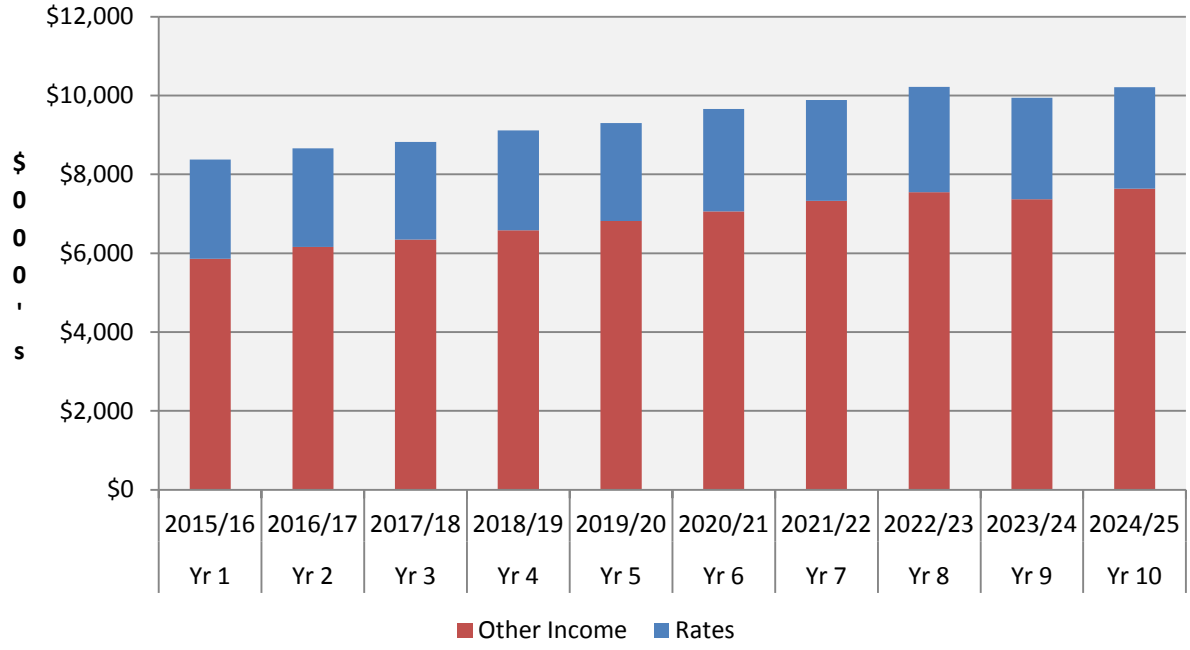


Figure 10-2: Total Income

Figure 10-2 shows income is dominated by “other income”, which includes fees and charges for disposal, agreed distributions Nelson City Council and waste levy payments from central government. Gate charge income is expected to rise for most of the period due to increased charges and increased volumes of waste.

Rating income for the activity is largely from the targeted rate for kerbside services. The general rate requirement starts at 15% of rating income in 2015/16 and diminishes over time. From 2021/22 the general rate funded portion of the activity is expected to generate a surplus to rates.

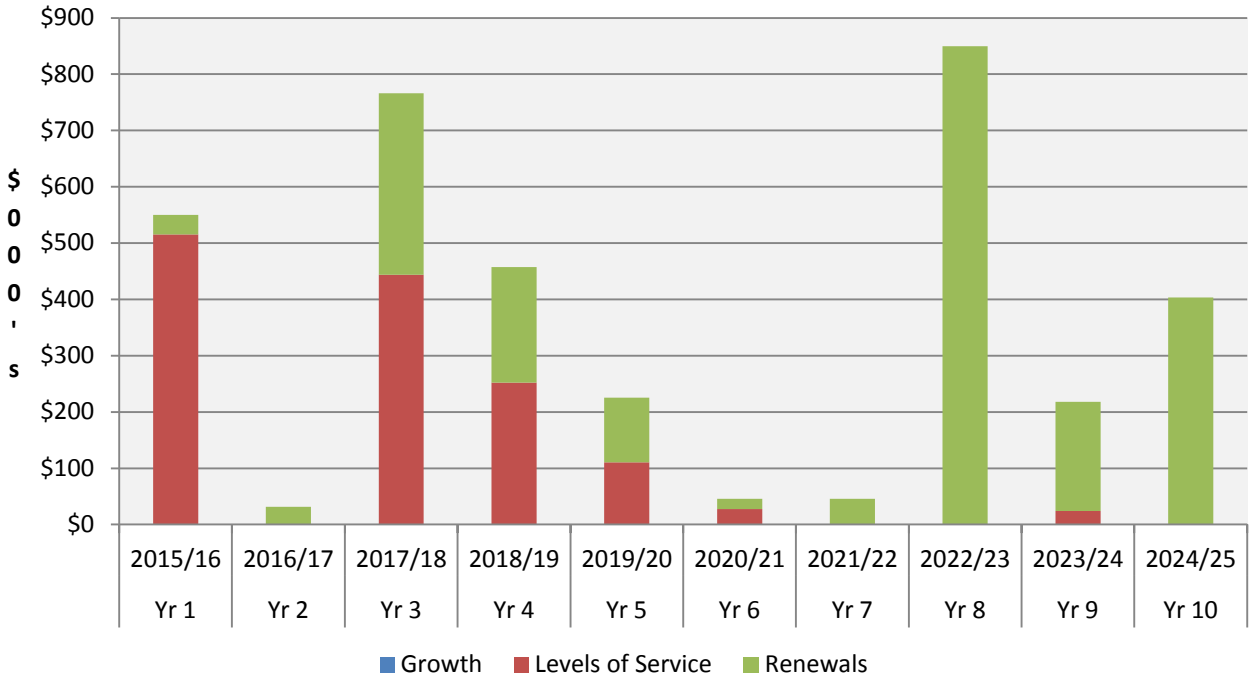


Figure 10-3: Capital Expenditure [this graph appears incorrect]

Figure 10-3 shows a relatively low level of new capital expenditure in the first ten years, which decreases substantially in the last five years. Expenditure on renewals increases over the first ten years.

This trend reflects a "pause" on new capital development following improvements which have lifted levels of service in recent years. It also reflects a transition to regional landfill activities and new recycling services from 2015/16.

Approximately 40% of capital expenditure over the next ten years will be for increased levels of service, while 60% will be for renewals. The majority of new capital in the first ten years of this AMP is for layout improvements and improved infrastructure at Resource Recovery Centres. The majority of renewal expenditure in the activity is for refurbishment and replacement of waste compactors and waste transport bins, pavement renewals and signage.

A review of services and a waste assessment in 2015/16 will identify future capital needs for the region, which will be incorporated into the next AMP.

Significant projects in this ten year period are detailed in Table 8-1.

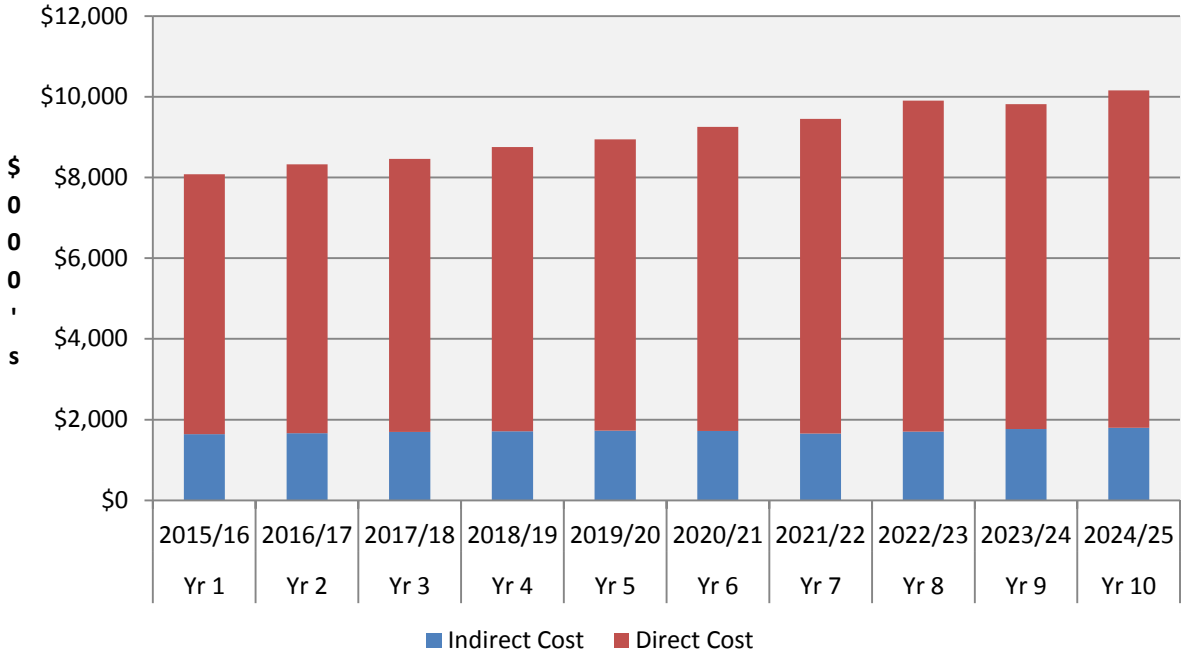


Figure 10-4: Operating Expenditure

Figure 10-4 shows that operating expenditure is dominated by direct costs. These costs include payments to suppliers, contractors and staff. Indirect costs include financing and overhead costs.

The majority of direct costs made up of payments to operations contractors and to the Nelson City Council for landfill disposal. In 2015/16 disposal fees will be approximately 38% of payments and contractor payments approximately 40%.

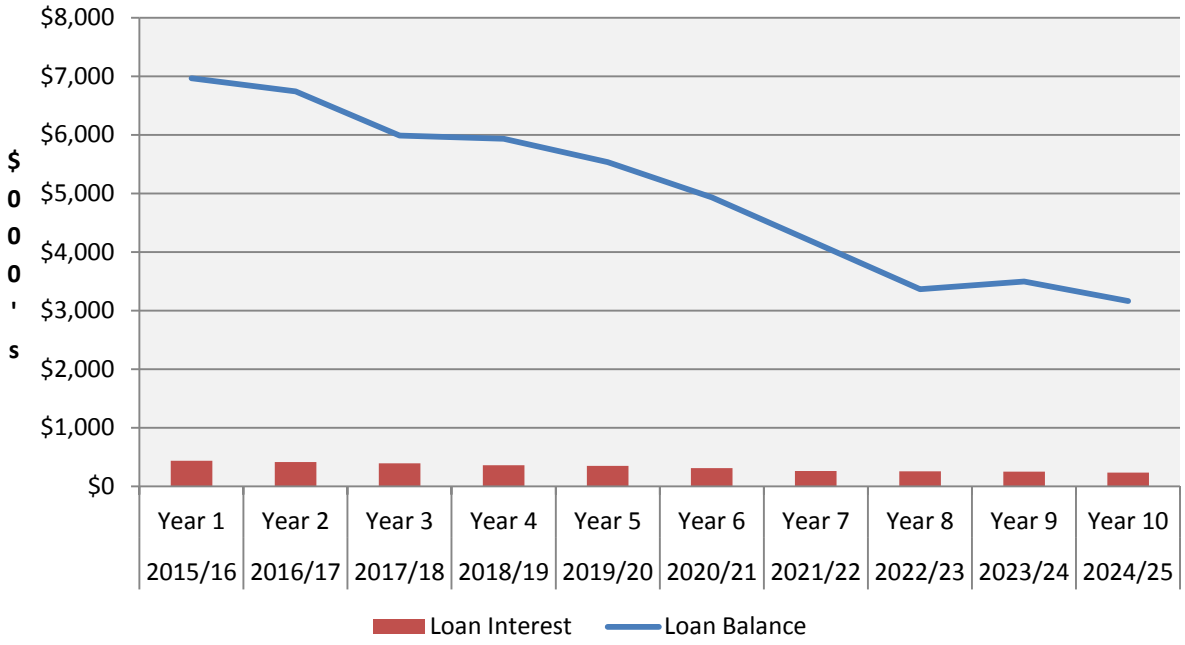


Figure 10-5: Debt

Figure 10-5 shows Council's debt associated with the solid waste activity is forecast to decrease from $7.0 to $3.1 million over the next 10 years. This will also decrease the debt servicing costs, as shown.

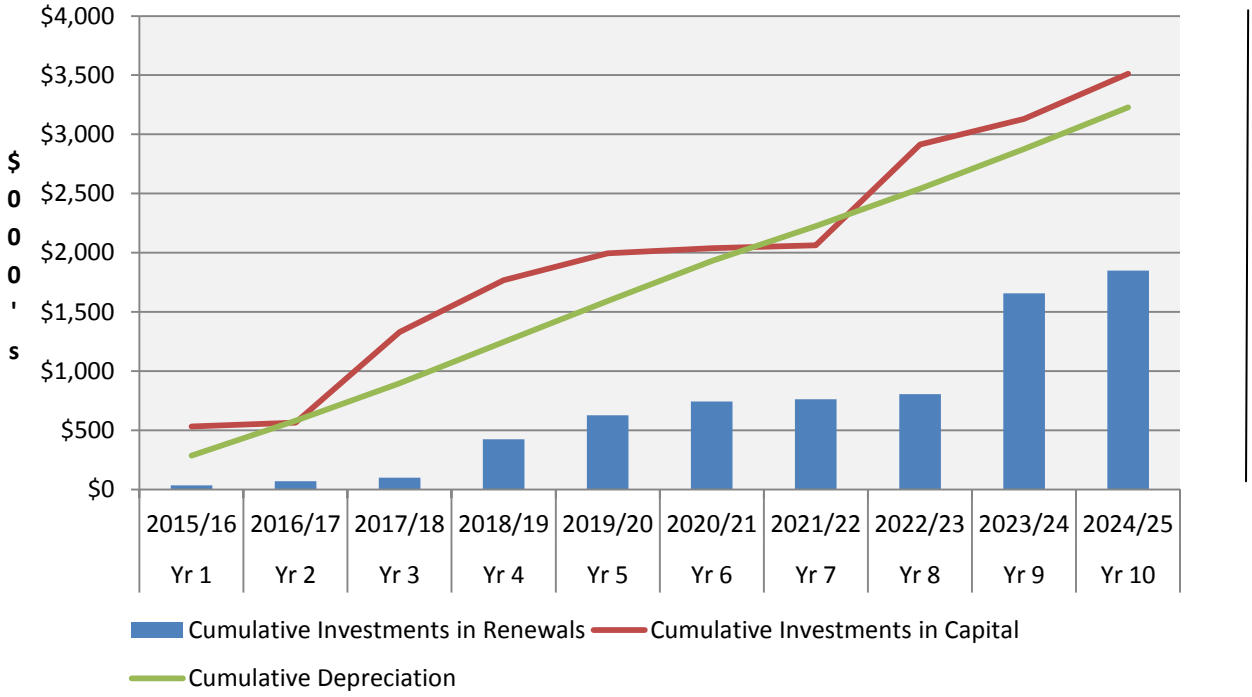


Figure 10-6: Investment in Renewals

As shown above in Figure 10-6, investment in renewals lags depreciation over the first ten years, but total capital spend almost matches depreciation. The relatively low level of renewals is a reflection of the fact that significant capital work has been completed in recent years, and these assets are moderately young.

Further work is programmed to improve the asset valuation and remaining life for key assets, which may change Council's accumulated depreciation profile.

APPENDIX A LEGISLATIVE AND OTHER REQUIREMENTS AND RELATIONSHIPS WITH OTHER PLANNING DOCUMENTS AND ORGANISATIONS

A.1 Introduction

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

The AMP demonstrates responsible management of the district's assets on behalf of customers and stakeholders and assists with the achievement of strategic goals and statutory compliance. The AMP combines management, financial, engineering and technical practices to ensure that the levels of service are provided at the lowest long term cost to the community and delivered in a sustainable manner.

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

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

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

The target audience of this AMP is the Tasman District community, Tasman District Councillors and Council staff. The appendices provide more in depth information for the management of the activity and are therefore targeted at the Activity Managers. The document is publicly available on the Council's website.

In preparing this AMP the authors have taken account of:

- **National Drivers** – for example, the legislative drivers for improving Asset Management through the LGA 2002, and strategic drivers for improved waste management through the WMA and the New Zealand Waste Strategy 2010.
- **Regional and Local Drivers** – for example, the Community Outcomes determined through consultation with the public, the Joint Waste Assessment, the Joint Waste Management and Minimisation Plan and the Memorandum of Understanding for Regional Landfill Operations.
- **Industry Guidelines and Standards**.
- **Linkages** – the need to ensure this AMP is consistent will 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.

A.2 Key Legislation, Industry Standards, and Statutory Planning Documents

A.2.1. Acts of Parliament

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.

- Waste Minimisation Act 2008
- Local Government Act 2002
- Building Act 2004
- Climate Change Response Act 2002
- Hazardous Substances and New Organisms Act 1996
- Health Act 1956
- Health and Safety in Employment Act 1992
- Litter Act 1979

- Local Government (Rating) Act 2002
- Resource Management Act 1991

For the latest Act information refer to http://www.legislation.govt.nz/.

A number of these key legislative drivers have been summarised in more detail below.

A.2.1.1 Waste Minimisation Act 2008

The Waste Minimisation Act 2008 (WMA) is the key legislative driver for the Council's solid waste 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.

The WMMP is a key strategic document for Council and sets out the Council's objectives, policies and methods for waste management and minimisation. The Council consults with the community through the Special Consultative Procedure of the LGA 2002 before adopting the WMMP.

The Council completed a joint Waste Assessment with Nelson City Council in 2010. The councils then prepared, consulted with their communities and adopted a joint WMMP in 2011 and 2012. Copies of these documents are available at:

http://www.tasman.govt.nz/policy/plans/joint-waste-management-and-minimisation-plan/

Other key sections of the WMA include:

- sections 43, 44 and 50 (waste management and minimisation plans);
- section 51 (waste assessments);
- section 52 (services, facilities and activities);
- sections 46 and 53 (funding and proceeds of sales).

A.2.1.2 Local Government Act 2002

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.

A.2.1.3 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 is part of the government's response to climate change and 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 and report emissions.

The Council has faced NZ ETS obligations from 1 January 2013 due to its ownership and operation of the Eves Valley landfill. The Council surrenders emission units equal to half of the assessed emissions from the landfill. 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 to date have been modest, due to soft international prices for carbon units, and the government's 2:1 surrender requirement for carbon units. In the future carbon prices may rise and this could materially impact on the Council's landfill operations at Eves Valley from 2030, when the site reopens.

The agreement for Tasman District Council to work jointly with Nelson City Council to make the most effective and efficient use of landfill space also allows the councils to minimise obligations under the NZ ETS, by using the York Valley landfill (which has landfill gas capture) in the short to medium term.

A.2.1.4 Resource Management Act 1991

The Resource Management Act (RMA) provides the framework for all resource utilisation in New Zealand. Its overriding purpose *"is to promote the sustainable management of natural and physical resources".*

In order to achieve this purpose the Act details duties, functions and processes for the agencies responsible for implementation. As a unitary authority, the Tasman District Council has responsibilities, under the RMA, for both a Regional Council and Territorial Authority (s30 and 31).

Given RMA responsibilities, Council is responsible for ensuring that all resource utilisation, including waste management practices, ultimately meet the purpose of the RMA (s5), which is the promotion of sustainable management of natural and physical resources. To achieve this end Council has established a range of planning instruments under the RMA, which outline policy direction and establish rules with regards to resource use. The key focus of these documents is the control of activities through the establishment of mechanisms, which should avoid, remedy or mitigate actual and potential effects on the environment resulting from resource use.

It should be noted that this AMP is not a planning instrument under the RMA, rather it is a Management Plan, as required by the LGA. However, many of the outcomes of this Plan should assist in meeting not only the purpose of the LGA (sustainable development) but also the purpose of the RMA (sustainable management).

A.2.2. National Policies, Regulations and Strategies

In addition to the legislation provided above, the Ministry for the Environment has also released the following documents:

- New Zealand Waste Strategy 2010;
- National Environmental Standards for Air Quality.

A.2.2.1 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 NZWS recognises the responsibility of regional councils to regulate the environmental effects of waste facilities through the implementation of the RMA and also, the important role regional councils can play in facilitating a collaborative approach amongst Territorial Authorities (TAs) towards waste planning.

The WMA requires Territorial Authorities (TAs) to promote effective and efficient waste management and minimisation within their district through the preparation of WMMPs and the implementation of the WMA. The WMMPs 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.

The waste industry has a role under the NZWS to increase the range of services available and implement good practices and codes of practice. Businesses and communities also have a responsibility to improve resource efficiency in the production and consumption of goods and services and by changing behaviours at home and work through education programmes.

A.2.3. Regional and Local Policies, Regulations and Strategies

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 Council's solid waste activity are:

- Nelson – Tasman Joint Waste Assessment 2010 (refer to Appendix C for summary)
- Nelson – Tasman Joint Waste Management and Minimisation Plan 2012 http://www.tasman.govt.nz/policy/plans/joint-waste-management-and-minimisation-plan/
- Council's District Plan – Tasman Resource Management Plan (TRMP) http://www.tasman.govt.nz
- Tasman Regional Policy Statement (TRPS) http://www.tasman.govt.nz
- Tasman District Council's Long Term Plan / Annual Plans/Annual Reports
- Solid Waste Activity Management Plan (previous versions)
- Tasman District Council Engineering Standards and Policies 2012 http://www.tasman.govt.nz
- Tasman District Council's Procurement Strategy Tasman District Council's Wastewater Bylaw 2015;
- any existing established strategies and policies of the Council (outside those contained in this Activity Management Plan itself) regarding this activity.

Studies and plans relating to specific sites are listed as Strategic Studies in the relevant section of Appendix B. Proposed new Strategic Studies are detailed in Appendix E.

These documents are reviewed in accordance with legislative time frames.

A.2.4. Industry Guidelines and Standards

The Ministry for the Environment has produced the following best practice guides relating to the management of solid waste activities. Refer to http://www.mfe.govt.nz/publications/waste/ for more details. The following additional guidelines / standards also influence waste management practices:

- Centre for Advanced Engineering (CAE), Landfill Guidelines, 2000
- Centre for Advanced Engineering (CAE), Management of Hazardous Waste, 2000
- A Guide to Implementing Recycling Systems in Multi-Tenanted Office Buildings
- A Guide to Product Stewardship for Non-priority Products in the Waste Minimisation Act 2008
- A Guide to Sustainable Office Fit-outs
- A Guide to the Management of Cleanfills
- A Guide to the Management of Closing and Closed Landfills in New Zealand
- Assessors' Specification Guidelines for Accreditation of a Product Stewardship Scheme
- Calculation and Payment of the Waste Disposal Levy: Guidance for Waste Disposal Facility Operators
- Guidance Principles: Best Practice for Recycling and Waste Management Contracts: Working Draft
- Guidance to Completing the Application Form for Accreditation of a Product Stewardship Scheme
- Guide to Landfill Consent Conditions
- Guidelines for the Management and Handling of Used Oil
- Hazards of Burning at Landfills
- Landfill Full Cost Accounting Guide for New Zealand
- Module 1 - Hazardous Waste Guidelines: Identification and Record-keeping

- Module 2 - Hazardous Waste Guidelines: Landfill Waste Acceptance Criteria and Landfill Classification
- Online Waste Levy System: User Guide for Waste Disposal Facility Operators
- Solid Waste Analysis Protocol and Summary Procedures
- Supplementary Guidance to Disposal Facility Operators: Diverted Tonnage and Cover Material
- Updated Users Guide to Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics) Regulations 2004 (including Amendments 2005) (second draft)
- Waste Assessment Checklist: for territorial authorities completing a waste assessment before reviewing their waste management and minimisation plans
- Waste Management and Minimisation – a good practice guide for territorial authorities
- Waste Management and Minimisation Planning: Guidance for Territorial Authorities
- Waste Minimisation Fund Guide for Applicants
- Waste Minimisation Fund: Guidance for Applicants for Projects Commencing 1 July 2010
- Waste Minimisation Fund: Project Planning Guide for Projects Commencing 1 July 2010
- What's in your Waste? – A resource for trade businesses.

The following Standards also apply to this activity:

- NZS 7603:1979 Specification for refuse bags for local authority collection (low density polyethylene).
- SNZ HB 4360:2000 Risk management for Local Government.
- AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines;
- AS/NZS ISO 9001:2008 Quality Management Systems;
- AS/NZS 4801:2001 Occupational Health and Safety Management Systems.

A.3 Links with Other Documents

This AMP is a key component in Council's strategic planning function. Among other things, this Plan supports and justifies the financial forecasts and the objectives laid out in the Long Term Plan (LTP). It also provides a guide for the preparation of each Annual Plan and other forward work programmes.

Figure A-1 depicts the links between Council's asset management plans to other corporate plans and documents.

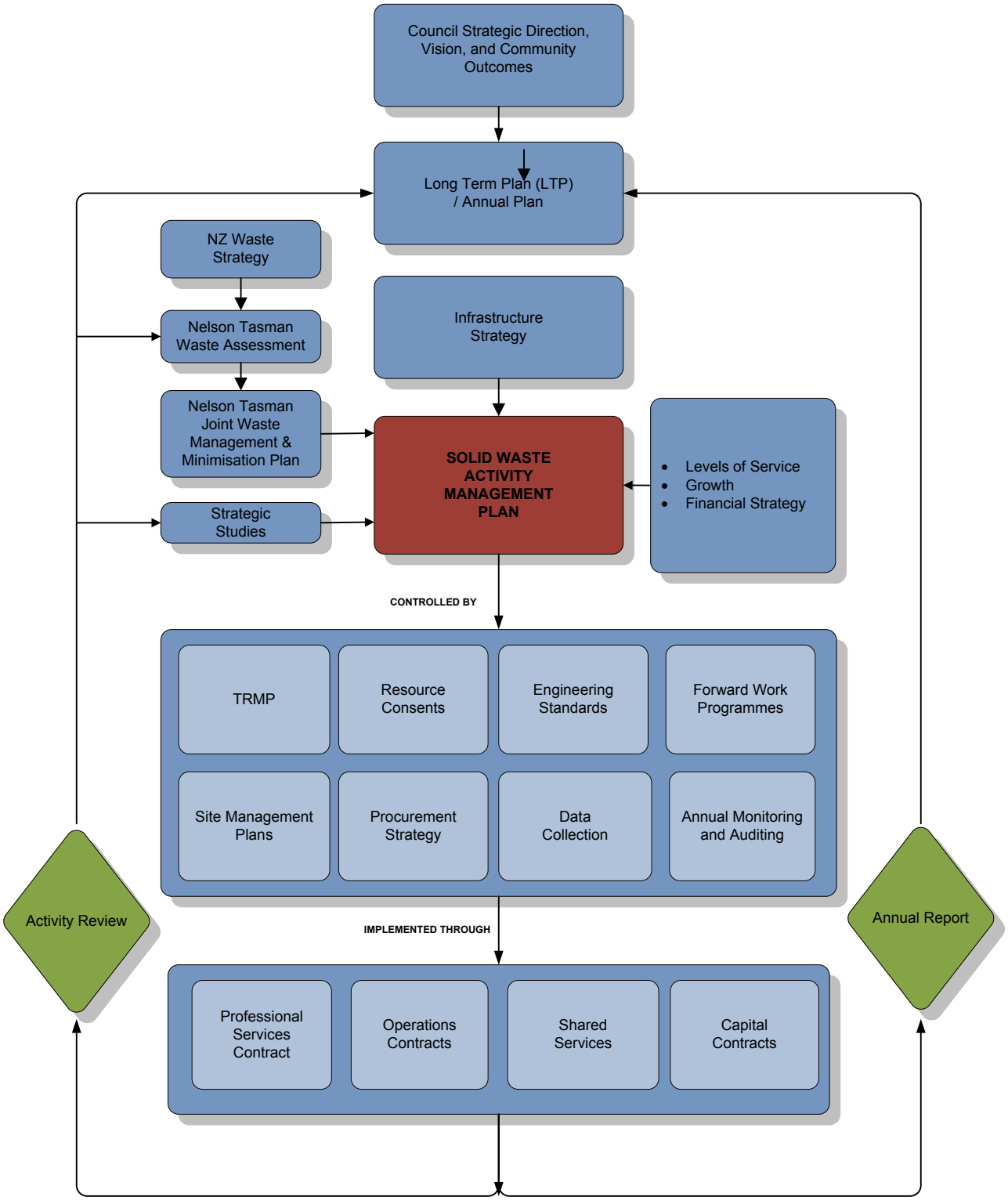


Figure A-1: Hierarchy of Council Policy, Strategy and Planning

A.4 Strategic Direction

Council's strategic direction is outlined in the Vision, Mission and Community Outcomes.

Vision: Thriving communities enjoying the Tasman lifestyle.

Mission: To enhance community well-being and quality of life.

Community Outcomes:

Table A-1 shows the community outcomes and how the wastewater activity relates to them.

Table A-1: How Solid Waste Activities Contribute to Community Outcomes

Community Outcomes	How Our Activity Contributes to the Community Outcome
Our unique natural environment is healthy and protected.	All material that is collected by the Council's operators or delivered to Council-owned facilities is processed or disposed of in an appropriate and sustainable manner. These activities will be managed to minimise the impact on the receiving environment.
Our urban and rural environments are people-friendly, well-planned and sustainably managed.	Our kerbside collections ensure our built urban and rural environments are functional, pleasant and safe by receiving materials from the community and recycling, reusing or disposing of them with a minimum of nuisance and public complaint. Our services promote the sustainable use of resources.
Our infrastructure is efficient, cost effective and meets current and future needs.	Solid waste activities are operated in a safe and efficient manner. We plan for future growth and to provide waste and recycling services that the community is satisfied with.

Table A-2 outlines the strategic documents utilised by the Council as part of the planning process.

Table A-2: Strategic Documents Used in the Planning Process

Long Term Plan (LTP)	The LTP is the Council's 10-year planning document. It sets out the broad strategic direction and priorities for the long term development of the District; identifies the desired community outcomes; describes the activities the Council will undertake to support those outcomes; and outlines the means of measuring progress.
Activity Management Plan (AMP)	AMPs describe the infrastructural assets and the activities undertaken by the Council and outline the financial, management and technical practices to ensure the assets are maintained and developed to meet the requirements of the community over the long term. AMPs focus on the service that is delivered as well as the planned maintenance and replacement of physical assets.
Annual Plan	A detailed action plan on the Council's projects and finances for each financial year. The works identified in the AMP form the basis on which annual plans are prepared. With the adoption of the LTP, the Annual Plan mainly updates the budget and sources of funding for the year.
Financial and Business Plans	The financial and business plans requirement by the Local Government Amendment Act. The expenditure projections will be taken directly from the financial forecasts in the AMP.

Contracts and agreements	The service levels, strategies and information requirements contained in the AMP are the basis for performance standards in the current Maintenance and Professional Service Contracts for commercial arrangements and in less formal "agreements" for community or voluntary groups.
Operational Plans	Operating and maintenance guidelines to ensure that the asset operates reliably and is maintained in a condition that will maximise useful service life of assets within the network.
Corporate Information	Quality asset management is dependent on suitable information and data and the availability of sophisticated asset management systems which are fully integrated with the wider corporate information systems (eg. financial, property, GIS, customer service, etc). The Council's goal is to work towards such a fully integrated system.
Other Plans and Policies	As a Territorial Authority, each Council is required under the WMA to adopt a Waste Management and Minimisation Plan (WMMP). A WMMP is a strategic policy document of Council which sets out Council's objectives, policies and methods for promoting effective and efficient waste management and minimisation in the district. Section 45 of the WMA provides for the development of a joint WMMP by two or more territorial authorities. Tasman District and Nelson City Councils elected to develop a joint WMMP, which was adopted by the councils on 26 April 2012.

A.4.1. Our Goals

A.4.2. The Nelson – Tasman Joint Waste Management and Minimisation Plan 2012 is the key strategic document relating to this activity and the goals outlined in the joint WMMP are the goals for this AMP.

The Vision of the Council in relation to waste management and minimisation is: *"Valuing resources and eliminating waste".*

The goals of the joint WMMP are:

Goal 1: Avoiding the creation of waste

Goal 2: Improving the efficiency of resource use

Goal 3: Reducing the harmful effects of waste.

The following core principles have been adopted to guide the Council in their implementation of the WMMP.

1. *Global Citizenship*
2. *Kaitiakitanga/ Stewardship*
3. *Product Stewardship*
4. *Full-cost Pricing*
5. *Life cycle Principle.*

APPENDIX B OVERVIEW OF THE ASSETS

This section of the AMP describes the solid waste services provided on behalf of Council and the assets owned by Council. As the assets in some aspects of the activity are not owned by Council this AMP also focuses on the services provided under contract for the Council.

For the purposes of this plan the Solid Waste Activity has been separated into the following service categories.

B.1 Collection Services

B.2 Resource Recovery Centres

B.3 Hazardous Waste

B.4 Operational Landfills

B.5 Closed Landfills

B.6 Waste Minimisation Activities

B.1 Collection Services

B.1.1. Overview

Council provides various public rubbish and recyclables collection and disposal services within the district including:

- kerbside collections for recyclables and waste;
- recycling and waste disposal facilities at all Resource Recovery Centres (RRCs);
- litter bins in parks, reserves and street side locations (address in other AMPs).

In October 2014 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 new contract (Contract 1020) will commence on 29 June 2015 and conclude on 30 June 2023. It will replace an existing contract with Smart Environmental (Contract 613) which was due to expire in September 2016.

The key components of the new contract are

- continued operation and maintenance of Richmond, Mariri, Takaka and Collingwood RRCs;
- continued kerbside collection of rubbish and recyclable materials from around 17,000 properties;
- the introduction of 240 litre wheelie bins (Mobile Recyling Bins "MRBs") for the fortnightly collection of mixed recyclable materials;
- retention of existing 55 litre recycling crates for fortnightly collection of glass;
- continued weekly Council rubbish bag collections, but with Smart Environmental responsible for the sale, supply, distribution and marketing of rubbish bags;
- a new fleet of collection vehicles and other mobile plant;
- supply, installation and operation of a new materials recovery facility ("MRF") at the Richmond RRC for sorting recyclable materials;
- processing 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, Council agreed to provide a 1000m³ serviced building at the Richmond RRC to house the MRF and this is due for completion in April 2015.

A description of the collection services the Council will provide through Contracts 1020 is discussed in more detail below.

B.1.2. Services and Assets

B.1.2.1 Kerbside Rubbish Bag Collection

Assets

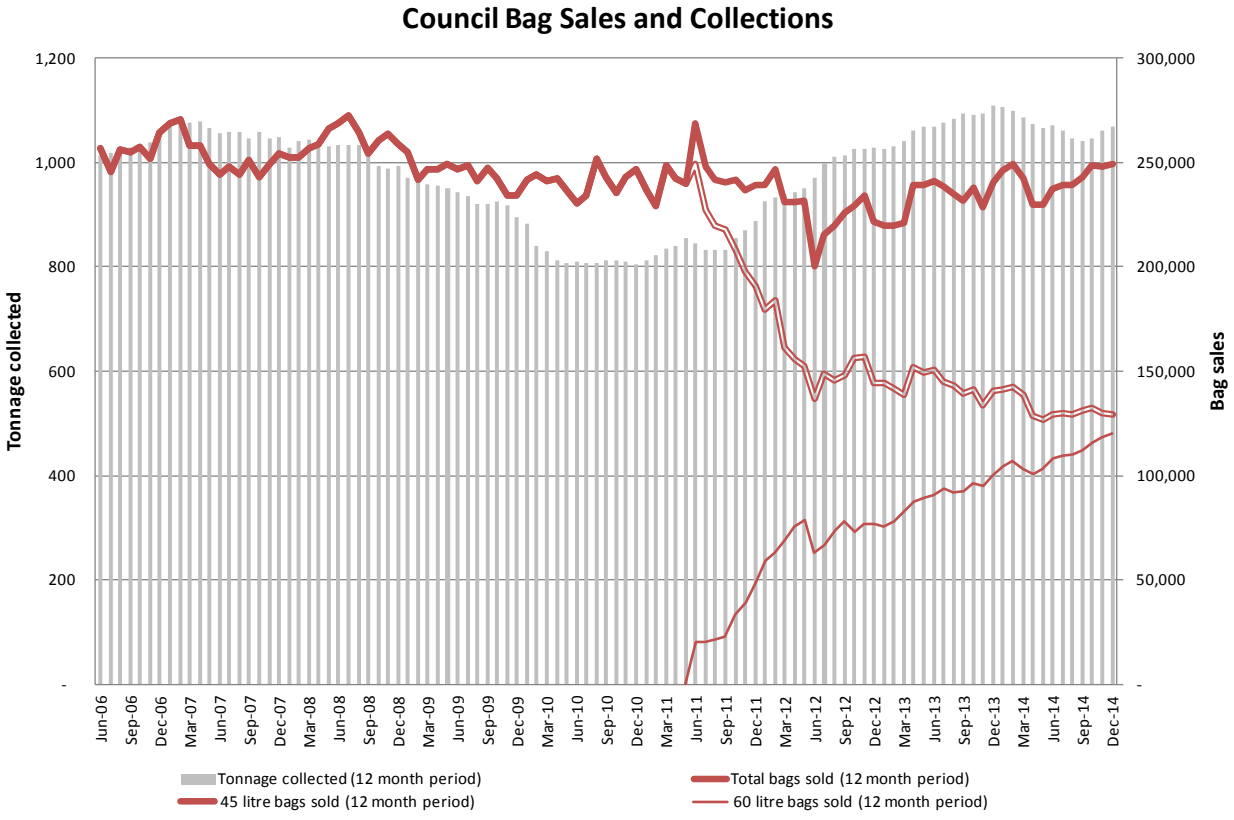
Council has contracted out responsibility for rubbish bag collection and so does not own any significant assets associated with this service. This AMP considers just the services provided under contract for the Council.

Services

Council provides a rubbish bag collection to approximately 17,000 of 26,000 urban and properties in the district. The coverage of the district is reasonably widespread, with the exception of the Murchison area, Motueka Valley, Dovedale and parts of the Moutere Valley. Maps showing each of the solid waste bag collection routes are in Appendix Y.

The Council contracted service includes 45 and (since June 2011) 60 litre pre-paid rubbish bags. These bags are available from Council offices and supermarkets and other stores throughout the district. Until 2015, the revenue from bag sales and disposal costs for rubbish collected have remained with Council, but these will transfer to Smart Environmental under Contract 1020.

Figure B-1 shows historical trends in bag sales and collections over the past eight years.



Source: Waste tracking spreadsheet 2014/15

Figure B-1: Total number of bag sold and tonnages collected

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 tend to discourage sorting and recycling in favour of convenience.

B.1.2.2 Kerbside Recyclable Collection

Assets

The assets associated with the kerbside recycling service include the household recycling crates and wheelie bins (MRBs), public place recycling bins, collection vehicles and buildings and equipment for processing of recyclable materials at the Richmond RRC.

Existing collection crates have been supplied by Council, but are not regarded as fixed assets, as they are of low value and difficult to secure.

The new MRBs and processing facility (Figure B-2) will be owned by Smart Environmental until the end of the contract term (June 2023) when they will transfer to 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.

Council will be providing a new 1000 m² at the Richmond RRC, in which the MRF will be housed. The estimated value of this asset will be $1.1m.

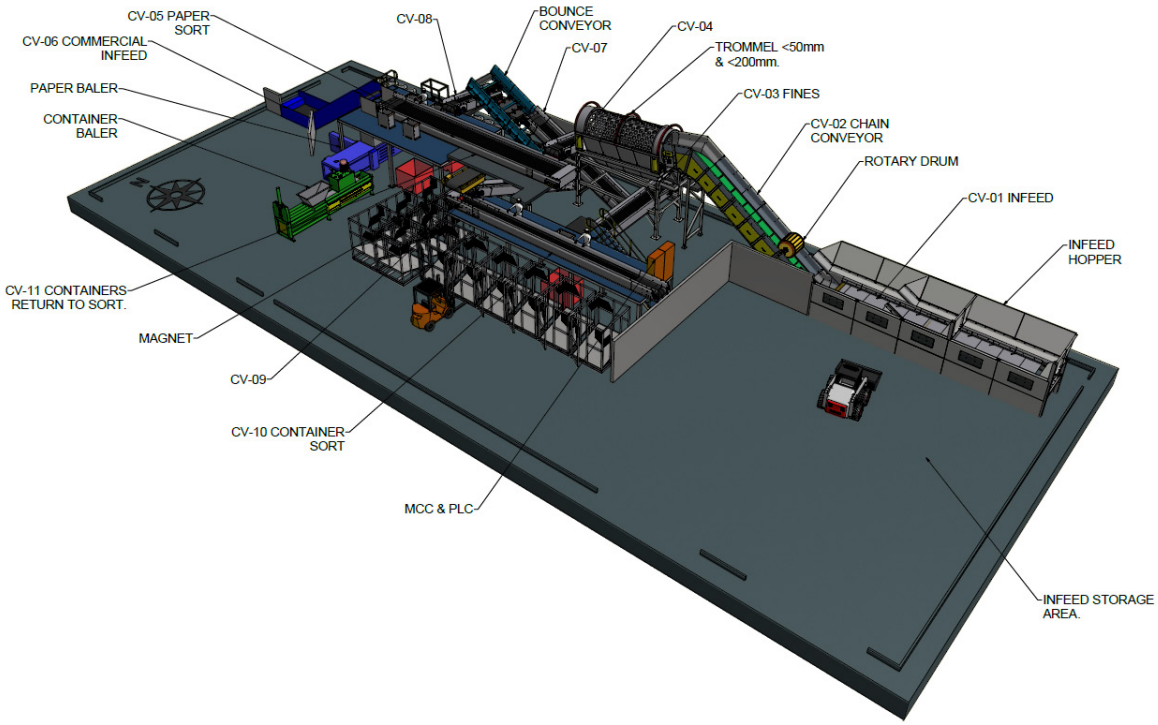


Figure B-2: New materials recovery facility (MRF) at Richmond

Collections vehicles (Figure B-3) for the services under Contract 1020 will be owned by the contractor.

Figure B-3: Proposed vehicles for new recycling services

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

Services

Council provides a recycling collection to approximately 17,000 of 26,000 urban and properties in the district. The coverage of the district is reasonably widespread, with the exception of the Murchison area, Motueka Valley, Dovedale and parts of the Moutere Valley. Maps showing each of the collection routes are in Appendix Y.

To maximise the amount of recyclables collected and maintain quality of materials, the Council has elected to change to mixed recycling collection in MRBs, with glass collected separately.

Figure B-4: Kerbside recycling and rubbish collection arrangements

From July 2015 the service will consist of fortnightly collection of recyclables – glass bottles and jars in the existing 55 litre crates and plastic, tins, paper and cardboard in 240 litre MRBs. Figure B-2 shows the set out arrangement for this new service.

The contractor is required under Contract 1020 to supply all plant, labour and materials in order to:

- supply MRBs and recycling crates to each household, if required;
- collect recyclables from the kerbside;
- deliver the materials to the recyclables processing centre;

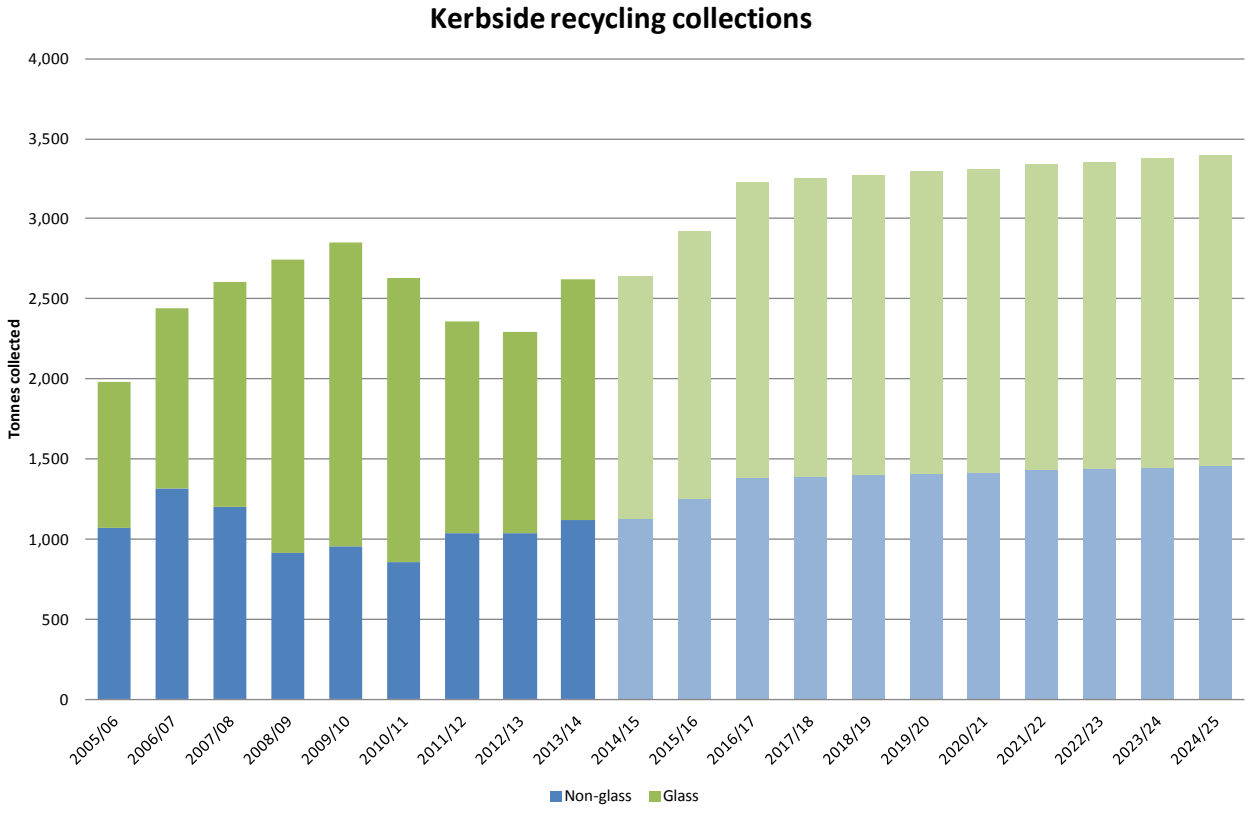
- process and sell the recovered recyclable material.

Materials collected through this service include:

- plastics - types 1 – 7;
- paper - all types (glossy, non-glossy, newspaper, office, coloured, plain etc.);
- cardboard – all types including paper card and corrugated cardboard;
- aluminium cans;
- tin (steel) cans;
- glass – bottles and jars in all colours;
- any other materials that the contractor can establish a sustainable market for.

Where non-complying recyclable materials are presented a notice is left in the letterbox or affixed to the materials and left uncollected. Any material that is dropped on the streets while loading or travelling must be picked up immediately by the contractor.

Figure B-5 shows the total amount of recyclable material that has been collected at the kerbside in the past nine years. These volumes are expected to increase by 10-20% in the first two years of the new services.



Source: AMP Income and Expenditure Model

Figure B-5: Tonnage of Recyclables Collected Through Kerbside Collection Services (and Estimates)

B.1.3. Asset Capacity and Performance

All existing assets relating to the collection services are currently owned and maintained by the contractor. The new MRF has been designed to accommodate regional recycling volumes for the medium term. It will have a capacity of two tonnes per hour, upgradable to four tonnes per hour.

B.1.4. Asset Age and Condition

All assets relating to this category are currently owned and maintained by the contractor. The MRF (which will pass to Council ownership in 2023) and MRF building will be new in July 2015.

B.1.5. Growth and Demand

Tasman's population is expected to be about 55,200 by 2039, an increase of 7,700 people. The majority of growth is likely to occur in Richmond, Brightwater and Wakefield, which are predicted to grow by 500 people or more over the next 25 years. Refer to Appendix F for more information.

These growth projections were used when Council's new recycling services were designed, and sufficient capacity will be available in the short to medium term.

Further demand for extended or different types of collection services is difficult to determine as the feasibility of recycling various materials will change over time. Factors that will influence this feasibility will include technological change in materials and processing technologies, consumer demand and commodity prices.

Council will continue to monitor trends and technology when considering future services.

B.1.6. Operations and Maintenance

Operation and maintenance is solely the responsibility of the contractor. Council is not aware of any issues.

B.1.7. Strategic Studies

The following key strategic studies have been completed to date for the Collection Service:

- Joint Waste Assessment (2010);
- this assessment is due to be repeated in 2015/16 and thereafter at six year intervals.

B.1.8. Key Issues

The key issues for the Collection Service are:

- monitoring the performance of the new kerbside service (contractor performance, tonnages collected, contamination, customer satisfaction);
- considering closer integration with Nelson City Council.

B.1.9. Capital Works

The full upgrade and development programme is included in Appendix F.

B.2 Resource Recovery Centres

B.2.1. Overview

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

Waste from each of these RRCs is transported to the Eves Valley Landfill for disposal and recyclable materials are dispatched direct to market or via the Richmond RRC. From July 2015 this waste will be transported to the York Valley landfill in Nelson.

Council currently contracts out the day-to-day operation and maintenance of its RRCs, with the aim of maintaining a high level of service.

The operation and maintenance of the Richmond, Mariri, Takaka, and Collingwood RRCs is managed under Contract No. 613 by Smart Environmental Ltd and this will transition to Contract 1020 in July 2015. Waste from these four RRCs is transported to the Eves Valley Landfill by Fulton Hogan, though Contract 781.

The Murchison RRC and waste haulage operation is managed by Fulton Hogan under Contracts 652. Under this contract Fulton Hogan Ltd are 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.

See Appendix E for further details on Council contracts.

Each RRC varies in size and capacity and provides varying degrees of services. The service provided at each of the RRCs, except Murchison and Collingwood, includes loading waste into the hopper of compactor

units or into open bins provided by the haulage contractor, removing full bins from the compactor or loading point, and positioning them for collection by the haulage contractor. It also includes movement of empty bins into position at the compactor or loading point.

In Murchison waste is emptied into a short-term storage pit and transferred to truck and trailer units for haulage and disposal at landfill.

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

The following sections provide an overview of each site and detail the different levels of service provided at each RRC. The service provided, the types of materials accepted and the operational hours at each site is also summarised in Table B-1 below.

Table B-1: Overview of Resource Recovery Centres

RRC Site	Opening Hours	Services				Transport	Waste Accepted								
		Waste disposal	Weighbridge	Recycling drop off	Re-use shop		General waste	Car bodies	Light gauge steel	Heavy gauge steel	Tyres	Waste oil	Green waste	Hardfill	Hazardous wastes
Richmond	8.00 am to 5.00 pm seven days a week.	✓	✓	✓	×	Compactor bins	✓	✓	✓	✓	✓	✓	×	✓	×
Mariri	9.00 am to 4.00 pm Monday to Saturday. 1.00 pm to 4.00pm Sunday.	✓	✓	✓	×	Open top bins	✓	✓	✓	✓	✓	✓	✓	✓	×
Collingwood	1.00 pm to 4.00 pm Wednesday, Friday, Sunday.	✓	×	✓	×	Skip bins to Takaka RRC for compaction	✓	✓	✓	✓	✓	✓	✓	✓	×
Takaka	10.00 am to 4.00 pm Monday, Wednesday, Friday. 9.00 am to 4.00 pm Saturday, Sunday.	✓	×	✓	✓	Compactor bins	✓	✓	✓	✓	✓	✓	✓	✓	×
Murchison	2.00 pm to 6.00 pm Monday, Wednesday, Saturday during daylight saving time. Closes at 5.00 pm during the rest of the year.	✓	×	✓	×	Truck and trailer units	✓	✓	✓	✓	✓	✓	✓	✓	×

Notes:

- To cater for additional summer activity, Takaka and Collingwood sites open daily and for extended hours over the period mid-December to early February.
- RRC sites do not accept hazardous wastes but have an arrangement with Nelson City Council whereby persons wishing to dispose of hazardous waste are directed to the Pascoe Street Transfer Station. Hardfill is accepted at Tasman district sites in limited quantities only. Commercial quantities are referred to local gravel extraction sites to be used as cleanfill.
- All sites are closed on Christmas Day, New Year's Day and Good Friday.

B.2.2. Richmond RRC

B.2.2.1 Service and Assets

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 B-6: 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 Council;
- handling, compaction and loading of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to disposal at Eves Valley Landfill (to York Valley Landfill from July 2015);
- 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 Eves Valley 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 nation-wide scheme;
- acceptance of car batteries which are recycled for lead content;
- acceptance of LPG cylinders which are recycled for scrap metal content.

The loading method for disposal is by pushing waste from a pit into a waste compactor and then to compactor bins for transport. The compactor and bins are owned by the Council. Site operating machinery and transport equipment are owned by the contractor. The Huka bin lifting units and truck and trailer units at the Richmond RRC are owned by the haulage contractor.

In 2012 Council completed a substantial upgrade of the site. The work included a new sealed access road, parking areas for the reuse shop and adjacent boardwalk, household recyclables drop-off loop, new weighbridge kiosk for the relocated weighbridge, improvements to the tipping pit, transfer station structure and bin change out area, new waste compactor, four new compactor bins and modifications to existing bins, refurbishment of areas of site pavement, glass bunkers, stormwater drainage, site signage and minor landscaping. The total cost of the upgrade was $1.9 million.

The Council has maintained records of the volume of separated greenwaste received at the RRC and the volume of mixed solid waste transported to Eves Valley Landfill on a monthly basis, since November 1996.

The volume and number of recyclables collected, received at the RRC and processed at the facility have been recorded, since July 2005.

The list below summarises the assets at the Richmond RRC as described in the Asset Valuations 2012:

- building – compactor;
- fencing;
- flexrail;
- formation;
- solid waste chute;
- retaining walls;
- transportation;
- sewer;
- stormwater services;
- water;
- four-bay shed;
- kiosk;
- recycling building;
- ablution block;
- office building;
- oil storage bunker;
- Skyline garage;
- fencing;
- weighbridge, ramps, foundation and barrier arm;
- landscaping.

The Richmond Resource Recovery Centre Management Plan 2015 gives a full description of the site.

The 2012 Asset Valuation rates the confidence of the asset data used as **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system).

Some attribute data has been collected for these assets, which are they stored in the Council's asset management system Confirm Enterprise. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

Appendix H details the resource consents held and designations that affect the Richmond RRC.

B.2.2.2 Asset Capacity and Performance

The station is operating close to capacity for solid waste on the busiest days. Information from the operations contractor indicates a maximum comfortable capacity of 100 tonnes per day. In some instances (selected Thursdays in October-February) this capacity is exceeded and the waste is not able to be completely loaded and transported off site.

Council will be monitoring performance of the site as landfill operations transition to York Valley. If waste patterns continue, options to address peak capacity could include:

- amending opening hours;
- working with customer to reduce peaks or send large loads (over 9 tonnes) direct to landfill;
- reviewing staffing levels on specific days;
- increasing bin supply to increase storage capacity on site.

B.2.2.3 Asset Age and Condition

The assets in the Richmond RRC are a mixture of nearly new and moderately young (around 25 years) assets. Overall the site is moderately young in terms of infrastructure.

Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract.

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.

Asset renewals are planned over the next 20 years are detailed in Appendix I, and include the following projects:

- refurbishment and replacement of waste compactors and compactor bins;
- renewal of on-site and off-site signage;
- computer software and hardware renewals;
- resealing and pavement renewals.

B.2.2.4 Growth and Demand

The Richmond site is the busiest site within the District, processing 63% of all waste and almost all recyclable materials for the District (light and heavy gauge steel are dispatched direct from other RRCs).

The growth and demand model (Appendix F) indicates that most new demand will be within the Richmond RRC catchment.

A key factor affecting demand at this site will be the effect of upcoming changes to landfill operations and recycling services. Council will monitor the effect of these changes and review the demand projections for this site.

B.2.2.5 Operations and Maintenance

The Richmond RRC is operated and maintained for Council by Smart Environmental Ltd under Contract 613 and this will transition to Contract 1020 in July 2015. Waste is transported to landfill by Fulton Hogan, though Contract 781. Details of the operation and maintenance regime are included in Appendix E.

B.2.2.6 Strategic Studies

The following key strategic studies have been completed to date for Richmond RRC:

- Richmond Resource Recovery Centre Strategic Development Plan (July 2010, MWH New Zealand Ltd);
- Richmond Resource Recovery Centre Management Plan (February 2008, MWH New Zealand Ltd).

B.2.2.7 Key Issues

The key issues for Richmond RRC are:

- potential changes to layout, traffic movements and demand due to regional landfill and new recycling services;
- developing a better knowledge of critical asset condition and life;
- developing a maintenance / renewal strategy for paved surfaces.

B.2.2.8 Capital Works

The full upgrade and development programme is included in Appendix F.

B.2.3. Mariri RRC

B.2.3.1 Services and Assets

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 B-7: 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 and loading of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to disposal at Eves Valley Landfill (to York Valley Landfill from July 2015);
- 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 Eves Valley 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.

The current method for disposal is by loading from a disposal pit to open top bins by a 12 tonne tracked excavator, supplied by the contractor. In 2015 the site is scheduled to be upgraded, with supply and installation of a waste compactor and upgrade of the waste pit.

Site operating machinery and transport equipment are owned by the contractors.

The Council has collected data on the volume of separated greenwaste received and mixed solid waste transported to landfill on a monthly basis, since July 1997.

The Mariri Resource Recovery Centre Management Plan 2015 gives a full description of the site.

The list below summarises the assets at the Mariri RRC as described in the Asset Valuations 2012:

- barrier rails;
- fencing;
- formation;
- concrete tipping pit;
- weighbridge;
- transportation;
- sewer;
- stormwater;
- water supply;
- retaining walls;
- shed – recycling;
- new kiosk;
- storage shed;
- electrical cabinet;
- water supply.

The 2012 Asset Valuation rates the confidence of the asset data used as **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system).

Some attribute data has been collected for these assets, which are they stored in the Council's asset management system Confirm Enterprise. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

Appendix H details the resource consents held and designations that affect the Mariri RRC.

B.2.3.2 Asset Capacity and Performance

There are no reported problems with the capacity of the existing system. The waste pit has at least one full day's capacity. As the pit is not currently covered there are associated performance issues involving the increased weight of wet solid waste and disposal of resulting leachate.

B.2.3.3 Asset Age and Condition

This RRC is in good condition with staff facilities having been recently upgraded. In 2012 Council upgraded the site by providing a new drop-off loop on the lower level, to separate recycling from solid waste operations.

A compaction equipment was replaced in 2005 by an open top bin transfer system loaded by an excavator. There have been some disadvantages to this system - primarily related to increased litter and lower bin weights. Change to a compactor system in 2015 will bring the site into line systems at Richmond and Takaka, which will increase performance and improve waste transport operations by improving flexibility and utilisation.

Generally the assets in the Mariri RRC are relatively young in their asset life expectancy.

Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract. 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.

Asset renewals are planned over the next 20 years are detailed in Appendix I, and include the following projects:

- refurbishment and replacement of waste compactors and compactor bins;
- renewal of on-site and off-site signage;
- computer software and hardware renewals;
- resealing and pavement renewals.

B.2.3.4 Growth and Demand

The Mariri site is the second busiest site within the District, processing 23% of all waste for the District.

The growth and demand model (Appendix F) indicates relatively modest growth for the area, with most new demand from the Coastal Tasman and Mapua/Ruby Bay area. These areas are on the boundary of the Richmond / Mariri catchment and may or may not generate demand for Mariri.

The Mariri site is challenging in that it is not necessarily large enough to provide a bulking and consolidation point for recycling in the catchment, but does provide this service for solid waste. In the absence of interventions this may tend to favour waste disposal over recycling for the local area.

A key factor affecting demand at this site will be the effect of upcoming changes to landfill operations and recycling services. Council will monitor the effect of these changes and review the demand projections for this site.

B.2.3.5 Operations and Maintenance

The Mariri RRC is operated and maintained for Council by Smart Environmental Ltd under Contract 613 and this will transition to Contract 1020 in July 2015. Waste is transported to landfill by Fulton Hogan, though Contract 781. Details of the operation and maintenance regime are included in Appendix E.

B.2.3.6 Strategic Studies

The following key strategic studies have been completed to date for Mariri RRC:

- Mariri Resource Recovery Centre Strategic Development Plan (June 2010, MWH New Zealand Ltd).

B.2.3.7 Key Issues

The key issues for Mariri RRC are:

- monitoring demand for recycling facilities and establishing cost effective options to provide commercial recycling opportunities.

B.2.3.8 Capital Works

The full upgrade and development programme is included in Appendix F. Key projects include:

- amending the traffic layout on site, to direct all vehicles across the weighbridge;
- improved access to the recycling drop-off areas and making improvements to the greenwaste and cleanfill drop-off areas

B.2.4. Collingwood RRC

B.2.4.1 Services and Assets

The Collingwood RRC is located 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 B-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 Council;
- handling and loading of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to the Takaka RRC and then to Eves Valley Landfill (to York Valley Landfill from July 2015);
- 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 to markets at their discretion
- management and disposal of tyres (currently quartered and disposed of at Eves Valley Landfill)
- acceptance of items for product stewardship schemes (currently paint)
- acceptance of waste oil
- 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 container on site.

At Collingwood RRC the contractor has provided a number of skip bins for direct loading by the public. These are hauled to Takaka by the operations contractor and emptied into the hopper for compaction prior to being transported to landfill. Operating machinery and transport equipment are based off site owned by the contractor.

The Council has collected data on the volume of separated greenwaste received and mixed solid waste transported to landfill on a monthly basis, since July 1997.

The Collingwood Resource Recovery Centre Management Plan 2015 gives a full description of the site.

The list below summarises the assets at the Collingwood RRC as described in the Asset Valuations 2012:

- fences/ barriers;
- formation;
- leachate;
- retaining walls;
- transportation;
- fencing;
- kiosk;
- sewer;
- recycling facilities;
- stormwater assets.

The 2012 Asset Valuation rates the confidence of the asset data used as **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system).

Some attribute data has been collected for these assets, which are they stored in the Council's asset management system Confirm Enterprise. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

Appendix H details the resource consents held and designations that affect the Collingwood RRC.

B.2.4.2 Asset Capacity and Performance

This site has facilities to receive most materials received at other RRC sites, with sufficient space and capacity. The RRC has been provided with a modern kiosk and covered recycling drop off facilities. The existing skip bins used for haulage have more than adequate capacity, although it can be difficult for some customers to load into these skips.

The Collingwood RRC has more than sufficient capacity to meet demand for services from the catchment, but has seen falling volumes of solid waste and recycled materials in recent years (Figure B-9). A key issue for this site is whether there is sufficient demand to keep the site open.

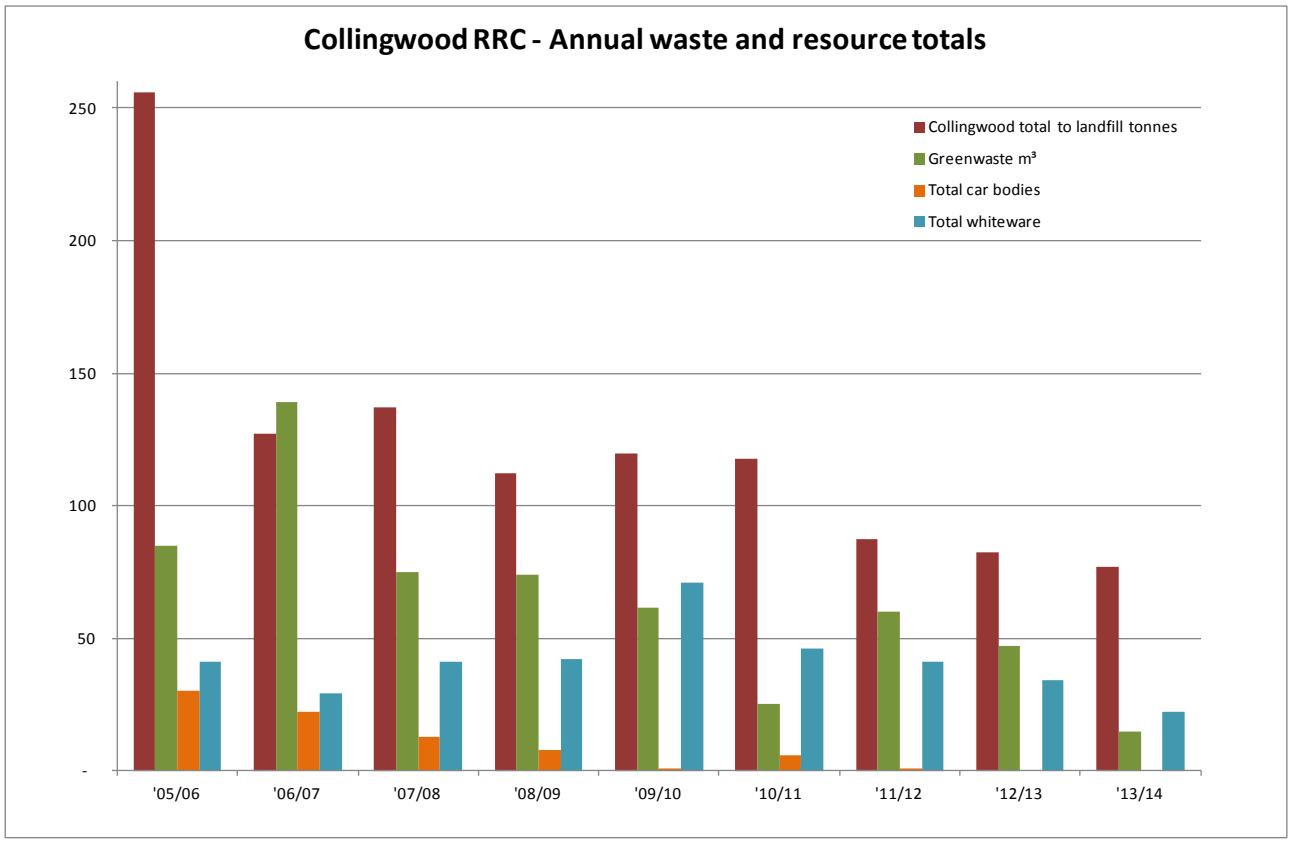


Figure B-9: Collingwood RRC – demand trends

B.2.4.3 Asset Age and Condition

Generally the assets in the Collingwood RRC are relatively young in their asset life expectancy. Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract.

Due to the uncertain future of this site, no renewals are scheduled in this AMP.

B.2.4.4 Growth and Demand

The Collingwood site is the quietest site within the District, processing 0.25% of all waste for the District.

The growth and demand model (Appendix F) indicates little growth for the area, with new demand from the Collingwood only growing by 18 people over the next 25 years.

While the site has approximately seven regular commercial customers (contributing 45% of revenue from just 10% of all transactions), all skip waste, commercial collections and Council bag collections are transported directly to Takaka for disposal.

B.2.4.5 Operations and Maintenance

The Collingwood RRC is operated and maintained for Council by Smart Environmental Ltd under Contract 613 and this will transition to Contract 1020 in July 2015. Waste is transported to Takaka RRC under the same contract. Details of the operation and maintenance regime are included in Appendix E.

B.2.4.6 Strategic Studies

The following key strategic studies have been completed to date for Collingwood RRC:

- Collingwood Resource Recovery Centre Strategic Development Plan (2012).

B.2.4.7 Key Issues

The key issues for Collingwood RRC are:

- whether the current range of services and opening hours are required;
- whether the site will remain open.

Council is proposing to monitor demand and the performance of the site as the new recycling services are rolled out in 2015.

B.2.4.8 Capital Works

B.2.5. No new capital works are proposed for this site.

B.2.6. Takaka RRC

B.2.6.1 Services and Assets

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 B-10: Takaka RRC – from rear of site, with solid waste compactor and bins in background

The site provides solid waste disposal and recycling facilities for Takaka and the eastern part of Golden Bay, and commercial solid waste contractors across Golden Bay.

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 to 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.

At the Takaka RRC waste is loaded directly by the public and contractors to a chute leading to a waste compactor and then to compactor bins. Bins are removed by the haulage contractor using truck and trailer units.

Site operating machinery, transport equipment are owned by the contractors. The Huka lifting units and truck and trailer units at the Takaka RRC are owned by the haulage contractor. The compactor and compactor bins are owned by Council.

The Council has collected data on the volume of separated greenwaste received and mixed solid waste transported to landfill on a monthly basis, since July 1997.

The Takaka Resource Recovery Centre Management Plan 2015 gives a full description of the site.

The list below summarises the assets at the Takaka RRC as described in the Asset Valuations 2012:

- attendant's kiosk;
- building – compactor;
- fencing;
- flexrail;
- formation;
- solid waste chute;
- retaining walls;
- transportation;
- sewer;
- shed – recycling;
- stormwater assets;
- water assets;
- all weather surfacing;
- safety access ladder;
- kiosk water supply;
- power supply to car dismantling shed;
- recycling shed;
- pavement re-seal (AC);
- glass bunkers;
- portable pump - 50mm trash pump with petrol engine and 50m of heavy duty hose;
- car dismantling shed;
- hopper safety rails;
- reuse shop extension.

The 2012 Asset Valuation rates the confidence of the asset data used as **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system).

Some attribute data has been collected for these assets, which are they stored in the Council's asset management system Confirm Enterprise. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

Appendix H details the resource consents held and designations that affect the Takaka RRC.

B.2.6.2 Asset Capacity and Performance

The pit has little storage capacity and problems arise if a power cut occurs or the compactor breaks down. The sloping access apron into compactor poses problems with removing compactor bins when they are heavily loaded. Work is scheduled for 2015, which will partly address this problem.

B.2.6.3 Asset Age and Condition

Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract.

Some assets at the RRC (waste pit, compactor, sealed pavements) are showing signs of wear and tear and may require additional maintenance over the next 20 years. There may also be a need to re-evaluate normal life for some of these high wear assets.

Asset renewals are planned over the next 20 years are detailed in Appendix I, and include the following projects:

- refurbishment and replacement of waste compactors and compactor bins;
- renewal of on-site and off-site signage;

- computer software and hardware renewals;
- resealing and pavement renewals.

B.2.6.4 Growth and Demand

The Takaka site is the third busiest site within the District, but with much less tonnage than Richmond or Mariri. The site generates 6% of all waste for the District.

The growth and demand model (Appendix F) indicates an increase of 82 people for the Takaka RRC catchment by 2039. This growth is less than the district average and made up a reduction of 183 people in Takaka and an increase 265 people in the Pohara/Ligar/Tata area and remaining Golden Bay area.

The site serves as a consolidation site for refuse and recycling in the Golden Bay. All commercial waste collections in the bay are delivered to Takaka and almost all other commercial waste is delivered to the Takaka site. The site also receives commercial and residential recyclable materials and the operations contractor also consolidates recyclables from Collingwood and peak "overflows" from summer recycling collections here.

Waste volumes have been falling at this site over recent years and this modest growth is unlikely to see increased demand for solid waste disposal. There has been increased demand for recyclable materials capacity in recent years, and this can be difficult to manage cost-effectively given the volumes from Golden Bay are relatively small.

A key factor affecting demand at this site will be the effect of upcoming changes to recycling services. It is possible that Council's new service and new commercial collection services will reduce demand for recycling capacity at this site by transporting more materials directly to the Richmond RRC.

Council will monitor the effect of these changes and review the demand projections for this site.

B.2.6.5 Operations and Maintenance

The Takaka RRC is operated and maintained for Council by Smart Environmental Ltd under Contract 613 and this will transition to Contract 1020 in July 2015. Waste is transported to landfill by Fulton Hogan, though Contract 781. Details of the operation and maintenance regime are included in Appendix E.

B.2.6.6 Strategic Studies

The following key strategic studies have been completed to date for Takaka RRC:

- Takaka Resource Recovery Centre Strategic Development Plan (2012).

B.2.6.7 Key Issues

The key issues for Takaka RRC are:

- lack of weighbridge facilities on-site, leading to potential loss of income;
- the need to separate traffic and manage health and safety issues on the upper level;
- the need to improve waste handling on the lower level.

B.2.6.8 Capital Works

The full upgrade and development programme is included in Appendix F. Key projects include:

- amending the traffic layout on site, to direct all vehicles across the weighbridge;
- improved access to the recycling drop-off areas and making improvements to the lower level.

B.2.7. Murchison RRC

B.2.7.1 Services and Assets

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 B-11: Murchison RRC – recycling shed on left background and closed landfill to 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 Council;
- handling, loading and transport of solid waste (excluding greenwaste, car bodies, whiteware and scrap metal), for transportation to the Eves Valley Landfill for disposal (to York Valley Landfill from July 2015);
- 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;
- tyres are stockpiled and reused by local farmers;
- 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.

At the Murchison RRC waste is loaded by site users into a short term holding pit which has a removable cover. From here the contractor loads residual waste from the receiving pit onto available truck and trailer units for transport. There are no transport units solely dedicated to this transport operation. Site operating machinery, transport equipment, and compactors, where applicable, are owned by the contractors.

The Murchison site is operated by Fulton Hogan under a contract that was let in 2005 (Contract 652) and remains current until September 2016.

The Murchison Resource Recovery Centre Management Plan 2015 gives a full description of the site.

The list below summarises the assets at the Murchison RRC as described in the Asset Valuations 2012:

- compound (including transportation, fencing, water supply, etc.);
- leachate disposal system;
- operator's shed;
- new cell 2001 (cell full);
- landscaping northern boundary;
- new cell 2004 (cell full);
- recycling shed;
- leachate drainage system;
- receiving pit;
- site earthworks;
- capping closed landfill;
- leachate pumpstation;
- power supply;
- receiving pit and cover;
- toilet facilities to kiosk;
- water supply.

The 2012 Asset Valuation rates the confidence of the asset data used as **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system).

Some attribute data has been collected for these assets, which are they stored in the Council's asset management system Confirm Enterprise. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

Appendix H details the resource consents held and designations that affect the Murchison RRC.

B.2.7.2 Asset Capacity and Performance

The site is large with more than enough land area to manage incoming materials. The covered pit has the capacity to hold approximately two weeks waste at current volumes, if necessary. Receptacles for other materials are supplied by the contractor or a relatively new and generally fit for purpose.

B.2.7.3 Asset Age and Condition

Basic infrastructure at this RRC is in good condition having only been completed in 2008/09. Further development work including buildings, paved areas, and provision of improved facilities for the handling of recyclable materials are planned for the term of the current AMP.

Generally the assets in the Murchison RRC are relatively young in their asset life expectancy. However, some assets at the RRC are showing definite signs of wear and tear and will require considerable maintenance over the next 20 years. Asset condition is not monitored formally. Assets are generally inspected as part of the management of the Operations contract.

Asset renewals and improvements are planned over the next 20 years are detailed in Appendix I, and include the following projects:

- renewal of on-site and off-site signage;
- computer software and hardware renewals;
- resealing, fencing and pavement renewals.

B.2.7.4 Growth and Demand

The Murchison site is the second quietest site in the District, processing 0.75% of all waste for the District.

The growth and demand model (Appendix F) indicates no growth for the area, with the population of Murchison expected to reduce by around 50 people over the next 25 years.

B.2.7.5 Operations and Maintenance

The Murchison RRC is operated and maintained for Council by Fulton Hogan Ltd under Contract 652. The waste haulage operation is managed by Fulton Hogan under Contract 781. Details of the operation and maintenance regime are included in Appendix E.

B.2.7.6 Strategic Studies

The following key strategic studies have been completed to date for Murchison RRC:

- Murchison Resource Recovery Centre Strategic Development Plan (2015).

B.2.7.7 Key Issues

The key issues for Murchison RRC are:

- identifying opportunities to reduce transport costs for waste and other materials;
- considering the long term future of the site, and whether alternative services or facilities would be more efficient.

B.2.7.8 Capital Works

The full upgrade and development programme is included in Appendix F. Projects include:

- improved fencing and landscaping;
- additional storage facilities for materials.

B.3 Hazardous Waste

B.3.1. Types of Hazardous Waste

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

It is important to be sure what is hazardous and what is not. 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.

For the safe disposal of other household hazardous wastes 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.

B.3.1.1 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 wastes need 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 Ag-recovery Rural Recycling Programme coordinates this disposal service. Refer to their website for more details, http://www.agrecovery.co.nz/.

B.3.1.2 Commercial Hazardous Waste

Commercial premises are responsible for the correct disposal of hazardous wastes that they produce. There are a number of companies that specialise in the disposal of commercial hazardous wastes.

B.4 Operational Landfill – Eves Valley

B.4.1. Overview

Tasman and Nelson councils currently run two different landfills within close proximity to each other. The Eves Valley Landfill is approximately 5 km north-west of Brightwater, while Nelson City Council also operates the York Valley landfill in Bishopdale, near the city.

The Councils are proposing to rationalise the operation of these two landfills in July 2015. The Eves Valley landfill will be "mothballed" from this date and the York Valley landfill will operate as a regional facility until 2030. This proposal is outlined in a Memorandum of Understanding between the Councils.

The plan to mothball Eves Valley before Stage 2 is full means that it will have unused airspace which would be available in an emergency, at short notice. In the event of an earthquake, fire or other event closing the York Valley Landfill there will be two years capacity available at Eves Valley.

As part of the agreement between the Councils, Tasman District Council has agreed fund capital development and to re-open Eves Valley from 2030 (or whenever date it may be needed).

This agreement between the Councils marks a significant change in the asset management of the Eves Valley landfill in the short term. At the time of writing the Council is working through closure planning and amendment of contractual arrangements.

B.4.2. Site Description

The Eves Valley Landfill is located on a 42 hectare freehold title approximately 5 km north-west of Brightwater. Access to the landfill is gained via a sealed road from an intersection with Eves Valley Road, 2km west of Waimea West Road.

Figure B-12: Eves Valley Landfill

The Eves Valley Landfill opened in 1989 and was originally designed to receive solid waste from the Richmond township and surrounding Waimea rural area. Landfill operations commenced on site in 1989 (Stage 1) and 2001 (Stage 2).

During the first five years of operation, Tasman District Council closed many small community landfills that had not been subject to engineering design or through the process of applying for resource consent. As a result of these closures, by June 1995 all Tasman district solid waste, with the exception of that from the Murchison area, was being transported to Eves Valley Landfill. From May 2009 solid waste from Murchison has also been transported directly to Eves Valley.

In 2014 Council agreed with Smart Environmental (the waste contractor for the Buller District Council) to receive waste from the Reefton and Westport Resource Recovery Centres. This will cease in July 2015.

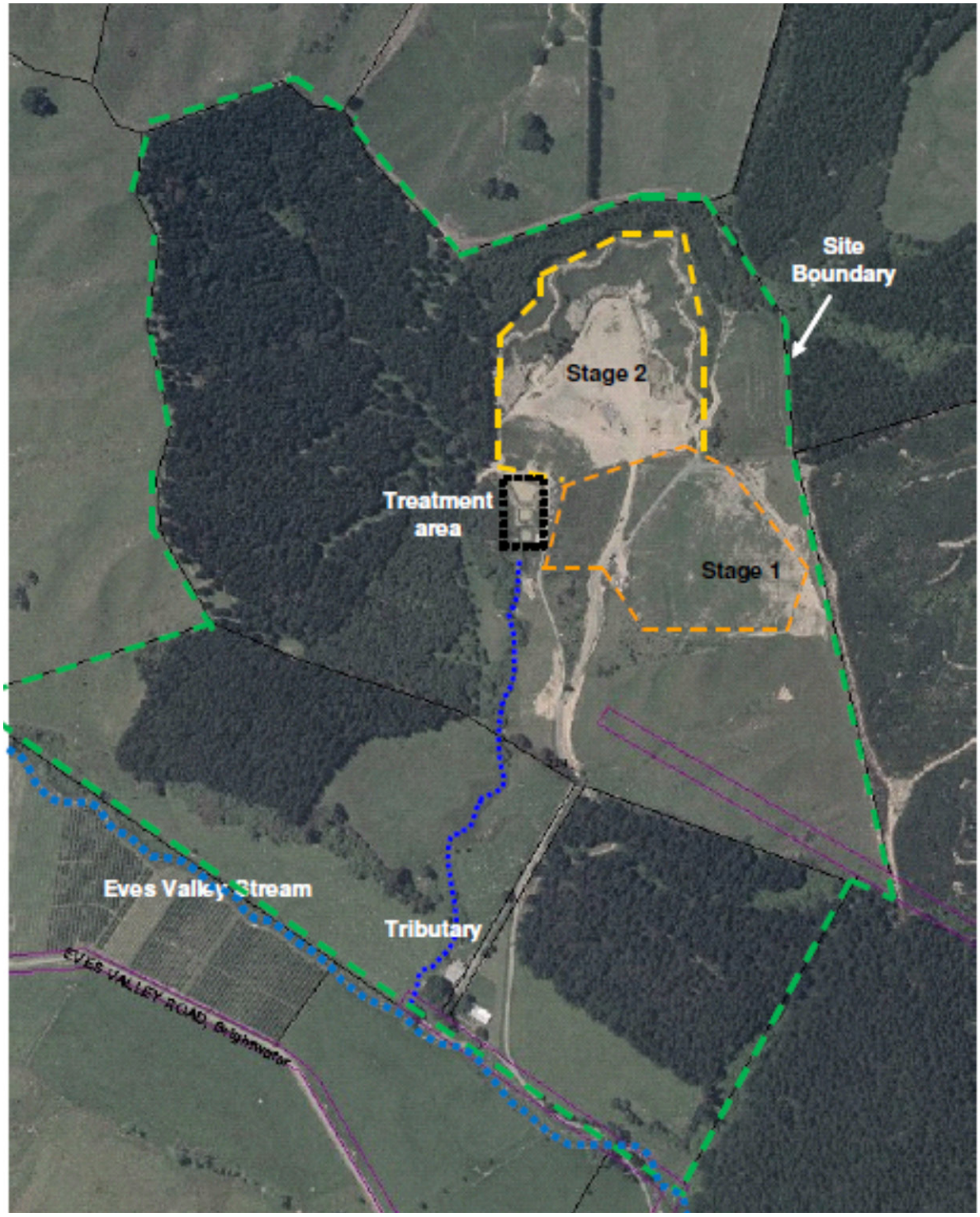


Figure B-13: Stages of development at Eves Valley Landfill

Stage 1 of the landfill was filled in July 2002 having received an estimated 184,500 tonnes (217,000m^3) of solid waste. This volume has been estimated using a compaction figure of 850kg solid waste per cubic metre. The final capping was completed in March 2005. Stage 1 of the landfill is unlined with leachate collection systems installed on reworked in-situ clay material with low permeability.

Stage 2 construction was completed in August 2000 and filling commenced in July 2002 with a design capacity of 435,000m^3. At 31 December 2014, 336,900 tonnes of solid waste had been placed in Stage 2.

During the construction of Stage 2 there were some uncertainties about underlying base material permeability and a decision was made to install an HDPE liner in the base of the landfill. As there were no concerns regarding the permeability of material above the base footprint, the lining was terminated at the existing ground level at the front of the site and re-worked in-situ material used for lining above this level.

The landfill operates as a Class B landfill as described in the Guidelines for the Management of Hazardous Waste: Module 2 (2002, MfE).

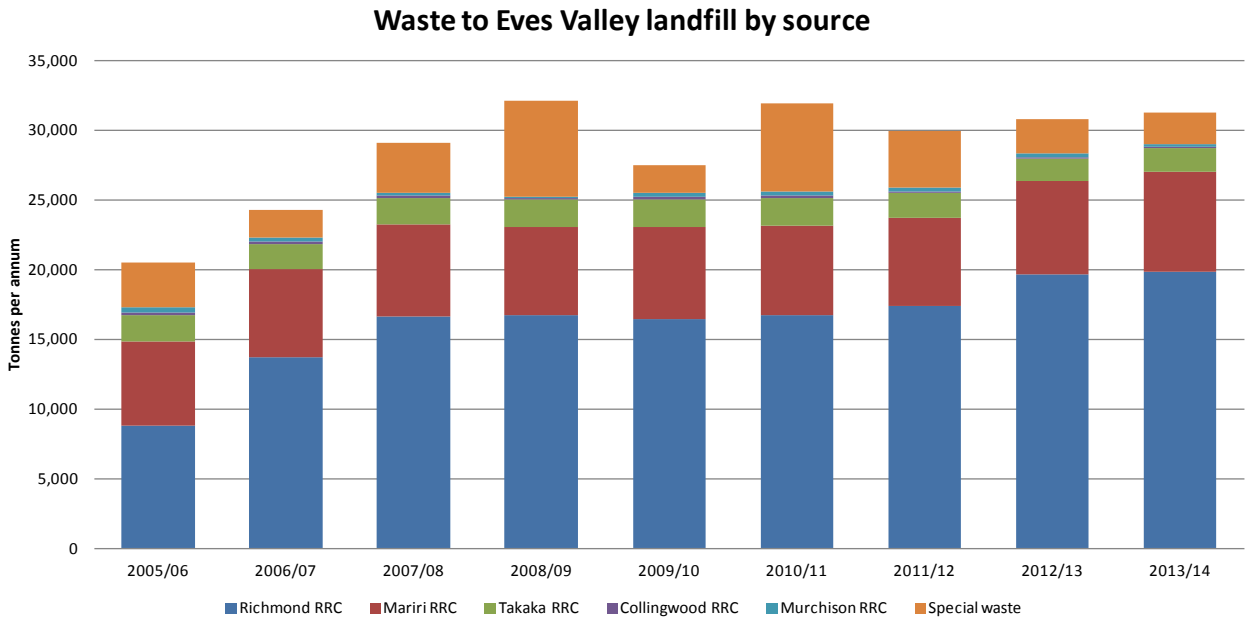
The Eves Valley Management Plan 2010 gives a full description of the site in the Design and Construction Manual section.

The landfill generally accepts waste from RRC sites only, where waste can be controlled and consolidated. There is no direct access for the public or commercial contractors except for special waste or in special circumstances (e.g. waste that needs special treatment, or is difficult to handle by RRC equipment).

Eves Valley Landfill serves all of Tasman district and provides the following services:

- disposal of all residual waste from within Tasman district;
- treatment and disposal of special wastes;
- short-term storage of hazardous waste.

Data on the quantity of solid waste transported from the district's RRCs to Eves Valley Landfill has been recorded since July 1992. Historical records show the following trend (Figure B-14) in waste received over the past nine years.



Source: Income Expenditure Model

Figure B-14: Tonnage of Waste Received at Eves Valley Landfill

B.4.3. Landfill Assets

The Council owns the following asset components at Eves Valley Landfill:

- land, resource consents, and designation;
- 20m^3 water tank and supply lines (connected to the Redwood Valley Rural Water Supply);
- hazardous waste store;
- leachate collection system, including stone drains, pump station and rising main (to Brightwater);
- stormwater collection and settling pond, including cut-off drains;
- gas venting system, including stone chimney vents;
- pavements including sealed and unsealed roadways;
- signs, fencing, and landscaping.

Council does not own vehicles or other mechanical plant at the landfill; these are not covered in this AMP.

Attribute data has been collected for these assets and they are they stored in the Council's asset management system Confirm. A data capture project has been programmed to improve asset knowledge, refer to Appendix E for further details.

The confidence of this data is **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system). Anecdotal evidence suggests that attribute information has very poor accuracy. Further data capture is programmed as the landfill is mothballed in 2015/16.

Eves Valley Landfill currently has resource consents for discharge and a designation for landfill activities (see Appendix H for detail).

These consents expire on 1 October 2015 and Council is currently finalising an application to renew these consents. The new consents will seek authorisation to continue to operate Stage 2 of the landfill.

Council expects to apply for resource consents in 2028 to operate Stage 3 of the landfill from 2030.

B.4.3.1 Landfill Gas

Landfill gas production and composition is a function of the age size and depth of the landfill, moisture conditions within the landfill, the compaction of solid waste and many other factors.

Landfill gas is currently discharged to air via stone chimney vents installed in the solid waste during the landfilling process. This complies with current legislative requirements, which are based on landfill capacity and only require gas collection and flaring (or other treatment) when the total capacity landfilled exceeds 1,000,000m^3. Monitoring is carried out annually at any structures that are built on the fill or immediately adjacent to the site.

The introduction of the NZ Emissions Trading Scheme (NZ ETS) regulations under the Climate Change and Control Act resulted in Council being liable for New Zealand Emission Units (NZU's) from 2013. Each year Council reports landfill activities and is required to surrender NZU's equivalent to the emissions assessed for the landfill activity.

Liability for NZU's is based on waste entering the landfill and Council's liability will cease when the landfill is mothballed in 2015.

B.4.3.2 Leachate Management

Leachate is the name given to the liquid generated in landfills. Leachate is derived from rainfall (and groundwater at some sites) which soaks through a site and from liquids released during decay of organic matter in the solid waste. The organic content makes the leachate mildly acidic and allows it to leach metals from the solid waste.

If leachate enters a surrounding water body this results in the deterioration of the water quality. The extent of the impact is a function of the amount of dilution and attenuation which occurs between the landfill and the water usage point.

The most obvious impact is aesthetic where dark, often odorous liquids seep from the landfill margins leaving deposits of orange, predominantly iron, oxides. This discolouration is most pronounced near the discharge point where anoxic leachate meets an oxygenated environment resulting in formation and precipitation of insoluble oxides.

Organic contaminants such as partial degradation products or organic matter can deteriorate water clarity. More importantly these intermediate decay products create a demand for oxygen needed to complete the decay process. This can result in reduced levels of dissolved oxygen in the impacted water body which can, in turn, impair its life supporting capacity. Ammonia, a decay product derived from the nitrogen content of organic matter, is toxic to aquatic life and is often present at high concentrations in raw leachate.

Inorganic constituents include toxic metals such as lead, boron and chromium. At low concentrations, these metals can be harmful to the health of long term consumers of the contaminated water and reduce the life-supporting capacity of affected surface waters.

Leachate is currently collected from the base of Stages 1 and 2 of the landfill and from collectors placed at the interface of succeeding layers of solid waste. Leachate is collected in a storage pond on site and pumped to Brightwater where it joins the Council sewerage network and is ultimately disposed of at the Nelson Regional Sewerage Business Unit (NRSBU) treatment plant at Bell Island.

Surface water, ground water and leachate quality are all tested throughout the year to ensure compliance with any resource consent conditions and/or trade waste by-laws.

B.4.4. Asset Capacity and Performance

In order to assess the long term options at the Eves Valley Landfill site Council has estimated potential landfill volumes available for each development stage. The stages are shown in Figure B-13.

B.4.4.1 Stage 1 (Closed)

Stage 1 of the landfill was filled in July 2002 having received an estimated 184,500 tonnes of solid waste. The final capping was completed in March 2005. Stage 1 of the landfill is unlined with leachate collection systems installed on reworked in-situ clay material with low permeability.

B.4.4.2 Stage 2 (Operational)

Stage 2 construction was completed in August 2000 and filling commenced in July 2002 with a design capacity of 435,000m^3.

By the end of December 2014 a total of 336,900 tonnes[1] of waste have been landfilled in Stage 2. By the time it is mothballed in July 2015 it is expected that it will contain a total of 352,700 tonnes.

Survey and design work undertaken by MWH NZ Ltd in December 2014 has determined two closure final profiles for the landfill: one for mothballing in 2015 and a final profile for when the landfill is filled to final capacity (Figure B-15).

Capacity estimates indicate that there will be 144,000 m³ of airspace available, which will accommodate 122,000 tonnes of solid waste. At 61,000 tonnes per annum, this will provide two years capacity for the Nelson-Tasman region.

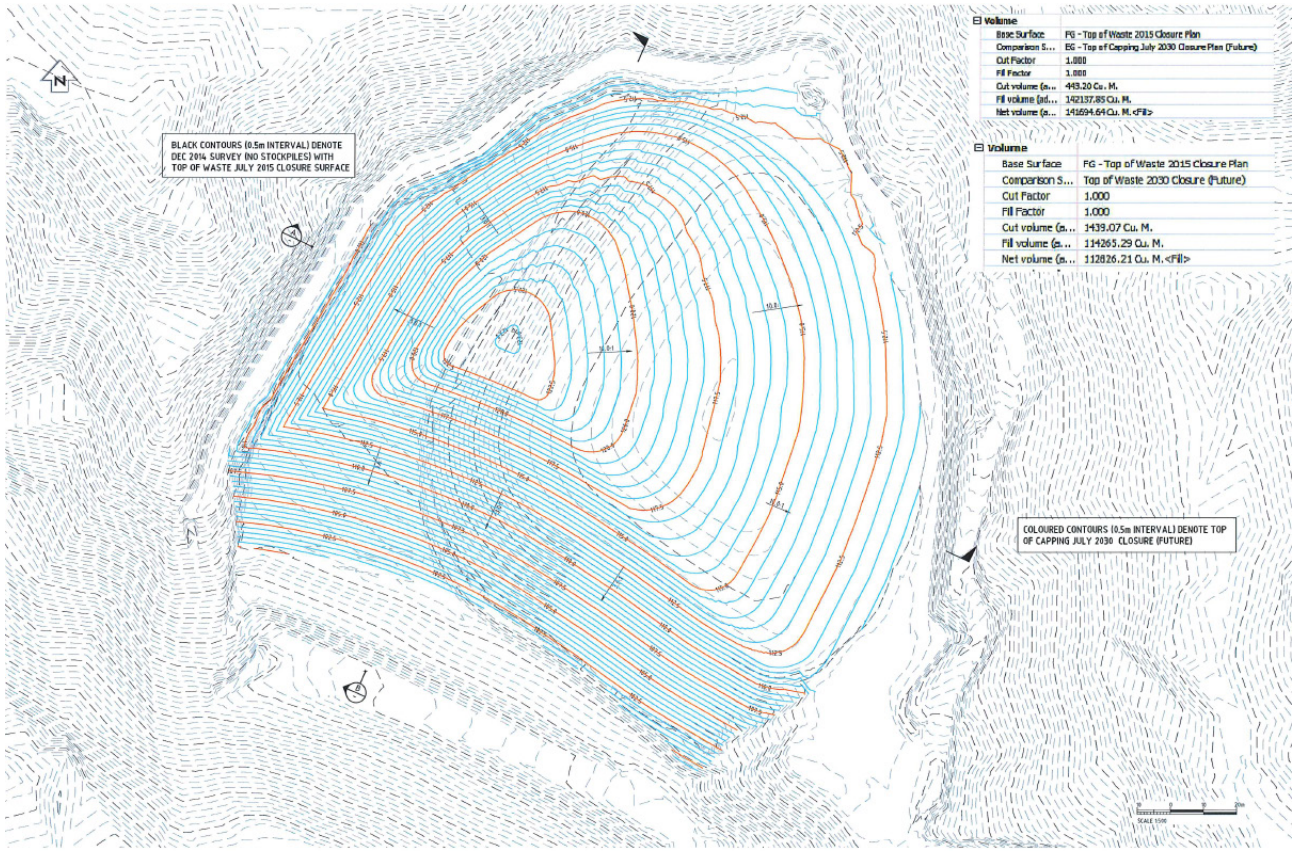


Figure B-15: Eves Valley Landfill (Stage 2) – July 2015 mothball profile and final finished profile

[1] Source: Waste tracking 2014-15.xlsm

B.4.4.3 Future Stages

Future stages will likely include filling the third and largest of the three gullies on the site (Figure B-12, left hand side of photo). This gully is estimated to have a capacity of approximately 740,000 m³ if filled to the current final level of Stage 2, which is considered a conservative lower bound. Initial estimates indicate this would have a regional capacity of 11 years (or 13 years when including Stage 2). Upper bound estimates for this stage indicate 1,600,000 m³.

Future stages of the landfill may also involve filling of the main valley into which the three side gullies feed. Estimates of the capacity of this stage vary between 800,000 and 1,930,000 m³ depending on the total area utilised. Services such as the leachate ponds and stormwater ponds would need to be relocated prior to this part of the site being developed.

B.4.5. Asset Performance

The Eves Valley Landfill normally operates within consented requirements, however in recent years excessive leachate flows have occurred in heavy rainfall and resulted in some non-compliance.

Table B-2 summaries the programme of sampling carried and the parameters that are tested in accordance with current consent conditions. The number of parameters tested each time varies depending on the time of year the samples are taken.

There are three month, six month, and annual frequencies on depending on the parameter and on the site. The results are reported in the Annual report which is prepared in July of each year.

Refer to the Eves Valley Landfill Management Plan 2015 for further details.

Table B-2: Monitoring Programme

Water Source	Sampling Sites	Parameter Tested For:
Stream monitoring	SW 2, 3, 4, 5, new point, DS, US	Temperature, pH, conductivity, suite of metals, COD, TSS BOD, hydrocarbons, and organics.
Stream sediment monitoring	SW 3, 4	Suite of metals.
Groundwater monitoring	BH 1a, 1b, 2, 4a, 4b, 5 BH9a, 9b,10	Water level, temperature, pH, conductivity, metals, hydrocarbons, VOC, SVOC, phenols, COD, BOD.
Leachate monitoring	Leachate pond	Temperature, pH, conductivity, metals, TSS, COD, BOD. hydrocarbons, VOC, SVOC, phenols.
Landfill gas	Gas vents and manholes	Methane, oxygen, carbon dioxide.

B.4.5.1 Asset Age and Condition

The life of the landfill asset is effectively governed by the airspace available in the landfill and the duration of discharge consents to operate the landfill.

Stage 2 is expected to have two years regional capacity in July 2015 and Stage 3 between 11 and 15 years capacity.

The fixed assets within the landfill site are relatively young in their asset life expectancy. However, some assets are showing definite signs of wear and tear and may require considerable maintenance over the next 20 years. The condition of assets is monitored during regular site inspections undertaken as part of the Maintenance Contract management.

Further work is required to better define the remaining life of some these assets – some may be rendered redundant on development of Stage 3.

Renewals for this asset are outlined in Appendix I, and include:

- pavement renewals on the access road;

- resource consents for Stage 3 of the landfill.

B.4.5.2 Growth and Demand

With landfill activities rationalised to the York Valley Landfill from 2015, it is estimated that new capacity at Eves Valley will not be needed until 2030[2]. This estimate is based on existing waste trends and diversion rates.

The waste minimisation strategies of the two Councils over the next 10 years will be key to determining the life of the York Valley landfill, and subsequently when Eves Valley will be required. In the event that greater waste diversion or minimisation is achieved, the commencement date for Eves Valley reopening will be pushed further out.

B.4.5.3 Operations and Maintenance

The Eves Valley Landfill is operated by Fulton Hogan Ltd as part of contract 781. This contract was let in 2010 and ends in September 2016.

With the transition to York Valley Landfill in July 2015, Fulton Hogan are capping and preparing the landfill for closure. Following closure Fulton Hogan will continue hauling waste (to York Valley) and will be retained for landfill maintence.

B.4.5.4 Strategic Studies

The following key strategic studies have been completed to date for the Eves Valley Landfill:

- Eves Valley Landfill Management Plan (February 2010, MWH New Zealand Ltd)
- Eves Valley Landfill Work Plan – Issue 1 (May 2011, MWH New Zealand Ltd)
- Regional Landfill Disposal Study (MWH New Zealand Ltd, May 2013)
- Non-Financial Elements Review of the Joint Venture Strategy (Tonkin & Taylor, September 2013)
- Eves Valley Landfill Development and Management Plan (in preparation).

B.4.5.5 Key Issues

The key issues for Eves Valley Landfill are:

- achieving successful capping and closure of Stage 2;
- establishing a maintenance and monitoring programme for the mothballed landfill;
- review of asset condition and valuation;
- design, consenting and construction of Stage 3 for 2030 opening.

B.4.5.6 Capital Works

The full upgrade and development programme is included in Appendix F, and includes the following key works:

- Stage 3 construction, commencing in 2027.

B.5 Closed Landfills (excluding Eves Valley)

B.5.1. Services and Assets

The Eves Valley Landfill is being mothballed in 2015, but all landfill assets on this site will be managed in the interim as an “operational landfill”.

[2] Insert reference to NCC AMP

Within the Tasman District Council area there are 19 other known locations which have historically been used to dispose 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.

In a continued effort to effectively manage the successful closure of these closed landfills, MWH New Zealand Ltd in conjunction with Council has conducted biennial inspections of each of the sites over the past 10 years. These inspections are based upon 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.

The confidence of this data is **reliable** (based on NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2, Table 4.3.1: Data confidence grading system). This statement was taken from the 2012 Asset Revaluations. However, anecdotal evidence suggests that attribute information has very poor accuracy. A strategic study has been programmed to improve asset knowledge.

Appendix H 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 B-3 below.

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

Site	Landfill Characteristics						Vegetation				Nearby Environment			Management[4]		Ownership		
	Years closed[1]	Size[2]	Capped	Lined	Waste burned	Contains hazardous waste	No vegetation	Grassed	Overgrown	Re-vegetated	Downstream drinking water bore[3]	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	•	✓		✓	?		✓			✗				✓	✓		
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

B.5.2. Asset Capacity and Performance

As these landfills are no longer in use their capacity has not been assessed.

The monitoring programme is outlined below.

B.5.3. Asset Age and Condition

Most of the closed landfills operated in the 1950's to the 1970's and burning of waste was common place. Low to negligible levels of gas generation is expected for landfills pre 1960, due to a lower proportion of domestic solid waste (as recycling and composting was more common) and extensive degradation of the domestic solid waste that was deposited. Gas generation is expected to increase to moderate levels for landfills operating in the 1970's with less burning and increased domestic waste. Organochlorines appeared in the 1960's and surplus redundant or unwanted pesticides may have been dumped in the landfills. Increased disposal of wastes containing heavy metals (e.g. electronic goods) may have resulted in greater potential for leaching of trace metals.

A review of Council files was undertaken to establish the age, types and sources of waste disposed of at each closed landfill site. This review was not exhaustive as it was not easy to locate specific files and often information on a certain landfill was spread across several files. The Environment and Planning Department has established a closed landfill file which contains information from reviews of historic files, a site visit and interviews completed in 1996. However this too is not exhaustive.

Generally the assets are relatively young in their asset life expectancy. However, some assets are showing signs of wear and tear and will require further maintenance over the next 20 years.

Asset renewals are planned over the next 20 years are detailed in Appendix I, and include the following projects:

- closed landfill consent renewals;
- cap renewals.

B.5.4. Compliance with Level of Service

Closed landfills operate under a global resource consent, with management plan and a biennial inspection programme. Adherence to this programme ensures Council meets its levels of service for closed landfills.

B.5.5. Growth and Demand

There is no growth in demand for closed landfills.

B.5.6. Operations and Maintenance

Post-closure care includes the on-going maintenance and monitoring of the landfills. Maintenance ensures that the various landfill components function appropriately, and that monitoring keeps any potential impacts to the land and water under check. A minimum 30-year post-closure care period is recommended for a municipal solid waste landfill.

MfE Guide for the Management of Closing and Closed Landfills recommends the following monitoring programmes (Table B-4) be established at each closed landfill site. The level of monitoring required is subject to the size and age of the site.

The recommended monitoring assumes that there has been at least one screening investigation to establish whether there is a possible problem, and if so, that there has been monitoring to establish a baseline. Landfills in sensitive locations or with waste composition likely to have less than 85% municipal solid waste should be monitored at the level recommended for the next larger size of landfill.

Table B-4: Monitoring Programme for Closing and Closed Landfills

Recommended water monitoring for closed landfills
Recommended landfill gas monitoring for closed landfills

Years since closure	Size of landfill		
	<15,000 m³	**15,000-100,000 m³**	**>100,000 m³**
0-5	**Comprehensive** Leachate - once only Groundwater - once only Surface water- once only **Indicator** Groundwater - yearly Surface water – yearly	**Comprehensive** Leachate - yearly Groundwater - yearly Surface water - yearly **Indicator** Groundwater - bi-annually Surface water - bi-annually	**Comprehensive** Leachate - yearly Groundwater - bi-annually Surface water - bi-annually **Indicator** Groundwater - quarterly Surface water - quarterly
	Annual -visual inspection -building monitoring	**Six-monthly** - visual inspection -building monitoring -subsurface monitoring	**Three-monthly** -visual inspection -surface monitoring -building monitoring -subsurface monitoring
5-15	NR	**Indicator** Groundwater- bi-annually Surface water- bi-annually	**Comprehensive** Groundwater- yearly Surface water- yearly **Indicator** Groundwater - bi-annually Surface water - bi-annually
		Annual -visual inspection -building monitoring	**Six-monthly** -visual inspection -building monitoring -subsurface monitoring
15-40	NR	NR	**Indicator** Groundwater- yearly Surface water- yearly
			Six-monthly -visual inspection -building monitoring
>40	NR	NR	NR

As most of the closed landfill sites within the Tasman district have been closed for more than 15 years and are less than 15,000m³, no on-going monitoring will be required at these sites, unless adverse effects are noted during site inspections.

Suitable land use options for these closed landfills, depending on location and surrounding land use, include:

- pasture for grazing;
- picnic areas or parks;
- re-vegetation with native plants.

It is noted in the MfE Guide for the Management of Closing and Closed Landfills in New Zealand that there has been a trend away from closed landfills becoming sports fields or parks with more restoration by planting of native vegetation.

Cattle can rapidly destroy cover on slopes and even sheep may compromise the slope cover integrity. This is typically a problem where the slopes are steep. Capped landfill areas should not be cropped.

Native planting is especially suitable along estuaries or rivers. Simply seeding with cut manuka brush (in seed) is effective. The manuka creates a microclimate and the seed pods dry out and the manuka take hold.

As a colonising species it doesn't need good soil, a shallow ripping of the surface to loosen the top few inches of soil should suffice. If specimen trees are planted then topsoil and contouring and ripping of the cap will be required.

As a matter of best practice the surface of closed landfills should as a minimum be reshaped so that water sheds from the surface.

The only significant maintenance items identified for the Closed Landfill asset is consent monitoring. However, an annual allowance has been made in the financial forecast for any site remediation that may be required and for biennial inspections. The nature of the landfills is such that it is not possible to predict what and when remediation works may be needed.

The projected Operations and Maintenance Expenditure is shown in Appendix E.

B.5.7. Strategic Studies

No strategic studies have been completed to date for Closed Landfills.

B.5.8. Key Issues

The key issues for Closed Landfills are:

- continuing to monitor and maintain sites to minimise adverse effects.

B.5.9. Capital Works

The full upgrade and development programme is included in Appendix F.

B.6 Waste Minimisation

B.6.1. Existing Waste Minimisation Initiatives

One of the three goals of Council in the solid waste activity is "to avoid the creation of waste".

Method 1.2.1.1 of the JWMMP 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.

The most significant drivers for waste minimisation in the Tasman district are the New Zealand Waste Strategy, the Joint Waste Assessment, the Waste Management and Minimisation Plan (JWMMP).

Initiatives to achieve this goal can take one of three forms:

- providing services and facilities;
- managing or creating demand;
- promoting voluntary behaviour change.

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

Council's other waste minimisation activities largely aim to voluntarily change people's behaviour. Council seeks to do this by:

- collecting and disseminating information and advice;
- part funding or supporting waste minimisation activities;
- working with business and communities to identify and remove barriers to waste minimisation;
- promoting and recognising successful initiatives.

Council's waste minimisation activities are mainly delivered by:

- promoting waste minimisation through the Enviroschools programme and initiatives led by Community Development staff;
- a three year contract with the Nelson Environment Centre (Contract 897), that works to identify opportunities to minimise waste and achieve voluntary behaviour change;
- a range of small initiatives that fund or promote waste minimisation.

These smaller waste minimisation initiatives include the following activities:

- waste minimisation publicity;
- Zero Waste grants;
- compost bin incentive scheme and other composting initiatives;
- promoting and supporting event recycling;
- support of the Paintwise and Agrecovery programmes;
- support product stewardship initiatives as they arise.

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

B.6.2. Growth and Demand

Over the next 20 years Council plans to maintain improved kerbside recycling services, and to encourage diversion of residual waste from landfill through other supply-side measures and demand management (Appendix N).

Council also proposes to continue with promotion of voluntary behaviour change through a range of initiatives. The demand and supply model (Appendix F) indicates that the district population will continue to age and Council will need to continually adjust initiatives to meet changing needs of the community.

B.6.3. Operations and Maintenance

The operational costs for waste minimisation initiatives and included in Appendix E.

B.6.4. Strategic Studies

The following key strategic studies have been completed to date for Waste Minimisation:

- Community Engagement for Waste Minimisation in the Nelson and Tasman Regions (SKM, 2012)

B.6.5. Key Issues

Key issues for the Council over the AMP will be:

- Reviewing the objectives of the waste minimisation programme in the light of regional landfill activities and new recycling services
- Assessing whether waste minimisation income should be used to fund assets or services
- Reassessing whether initiatives should be delivered by staff or contracted out to other parties.

B.6.6. Capital Works

The full upgrade and development programme for Waste Minimisation initiatives at RRCs are included in Appendix F.

APPENDIX C. WASTE ASSESSMENTS

C.1 Overview

Tasman District Council and Nelson City Council completed a joint Waste Assessment in 2010 (Morrison Low, March 2010[1]). This document was used as the basis of the Nelson – Tasman Joint Waste Management and Minimisation Plan (2012).

The prescribed scope of a Waste Assessment is given in section 51 of the Waste Minimisation Act 2008 (WMA). The following Figure C-1 summarises the steps of the Waste Assessment.

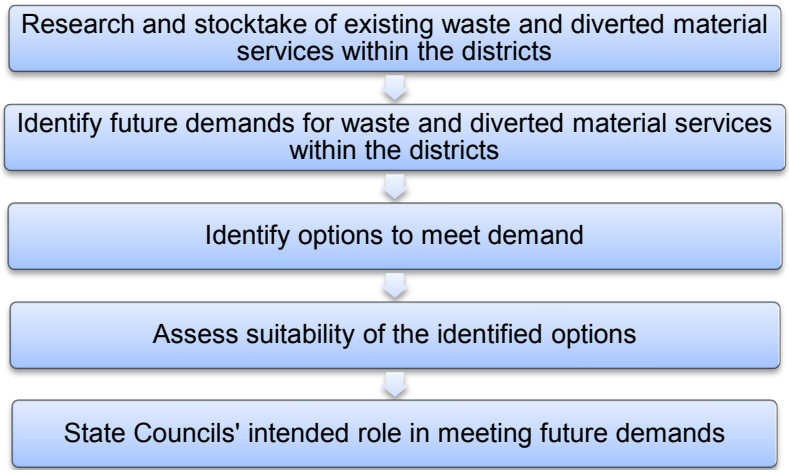


Figure C-1: Steps of Waste Assessment

The four approaches for the Councils' to achieve waste minimisation objective were identified as:

- social marketing / behaviour change;
- regulation;
- direct action / partnering with industry;
- pricing incentives.

Since completion of the joint Waste Assessment, the Council has undertaken further data collection and analysis, and this section has been updated to reflect this work.

C.2 Summary of Joint Waste Assessment 2010

The WA reported data collected on the amount of waste and diverted materials in the districts, based on weighbridge records and is considered an accurate account of waste disposed of at the Councils' landfills in the Nelson Tasman area.

Figure C-2 shows the estimated composition of waste going to the Councils' landfills from the Waste Assessment. In 2012 Nelson City Council and Tasman District Council conducted a combined waste composition survey at the York Valley Landfill and Richmond and Mariri Resource Recovery Centres[2]. The composition reported from this survey is shown in Figure C-2.

[1] http://www.tasman.govt.nz/services/rubbish-recycling/waste-assessment/

[2] Nelson - Tasman SWAP Studies 2012, MWH New Zealand Ltd, February 2013, available at: http://www.tasman.govt.nz/services/rubbish-recycling/waste-assessment/

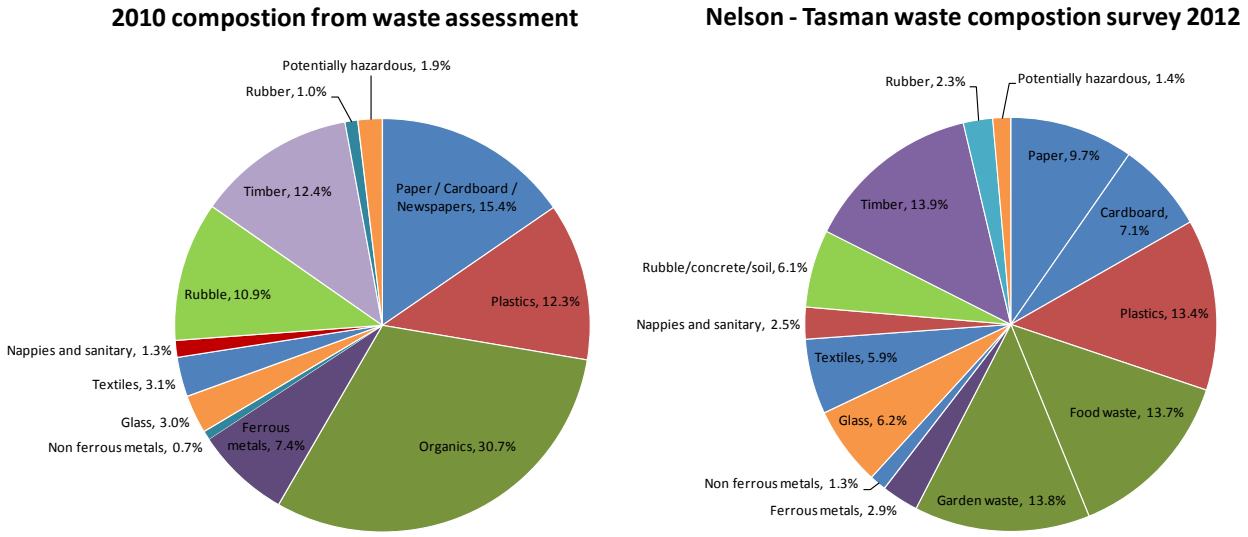


Figure C-2: Waste to Landfill – Estimated Waste Composition Nelson – Tasman

The waste assessment provided a comparison of the waste composition and composition studies undertaken at a number of National Indicator Sites (NIS) by the Ministry for the Environment. This comparison has been updated with 2012 data in Figure C-3.

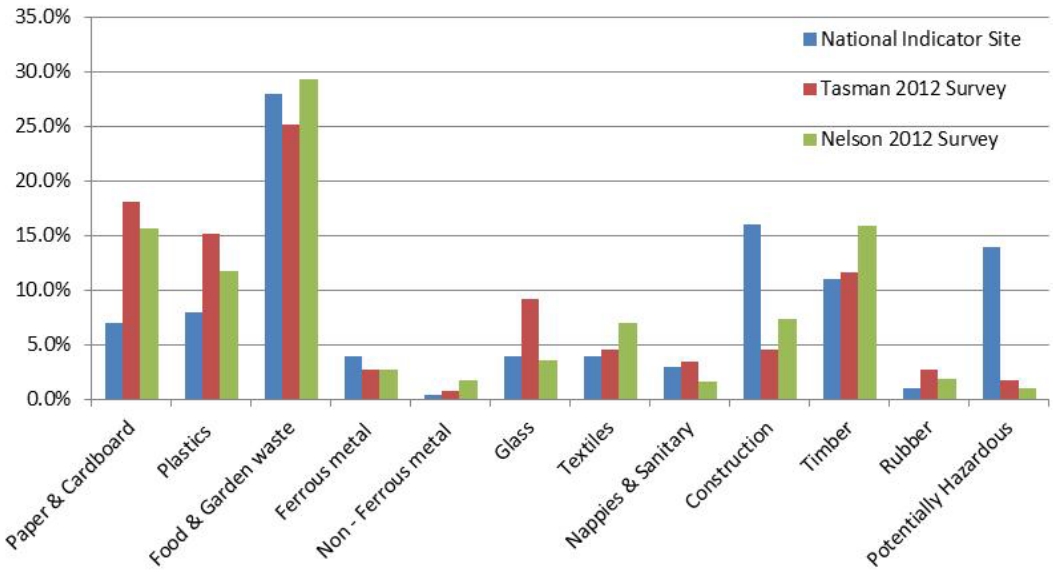


Figure C-3: Waste Composition – Comparison with National Indicator Sites

In general:

- Both Tasman and Nelson currently have a much higher percentage of paper going to landfill than the NIS. This is generally attributed to commercial properties and private wheelie bin users who display much higher paper waste than residential bag users.
- Tasman exhibits a high plastic content in its waste to landfill which is nearly double that recorded at the NIS. Nelson shows similar levels of plastic waste to the NIS.
- Tasman has a much larger amount of organic waste than the NIS and Nelson exhibits similar levels to the NIS. Organics make up the highest proportion of the waste stream.
- Nelson shows much higher levels of steel and ferrous metal than the NIS. Tasman has significantly lower levels.

- Nelson shows slightly higher levels of timber and rubble than for the NIS, however this contrasts with Tasman which recorded much lower amounts of construction and demolition material.

The other minor recorded areas are on par with the NIS.

Since the introduction of kerbside recycling, the tonnages diverted each year steadily increased in the Tasman and Nelson districts until 2010, as shown in Figure C-4. Since that date collection totals have dropped, particularly in Tasman District. Totals have been largely driven by reduced glass tonnages, although these have recovered recently.

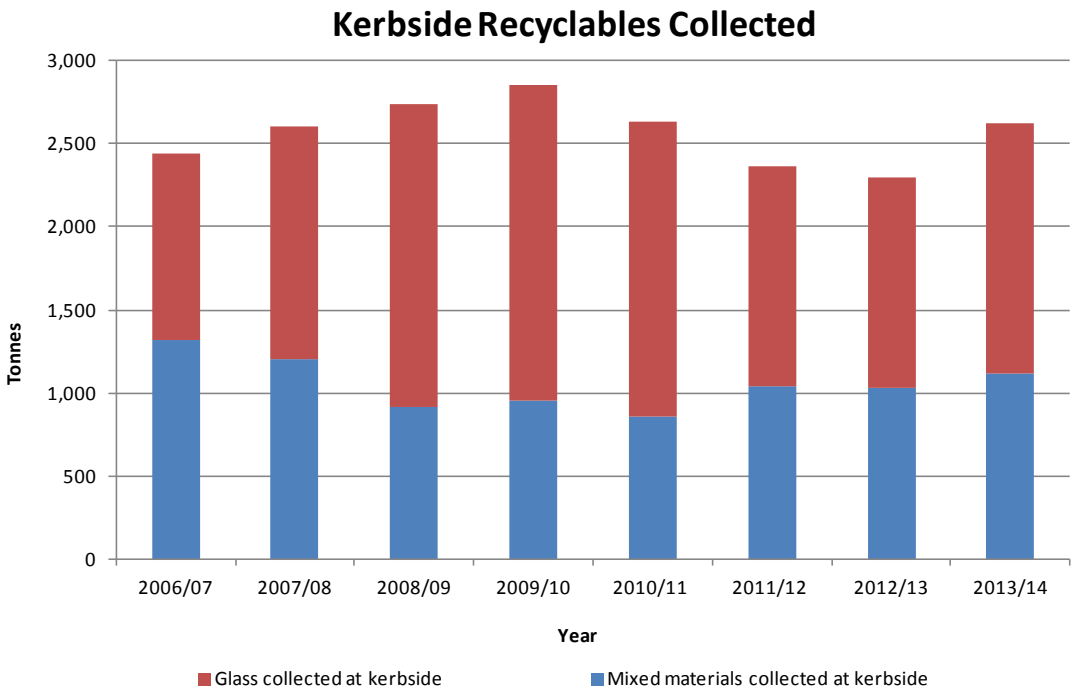


Figure C-4: Tonnage for Recyclables Collected at Kerbside

Greenwaste diversion has also continued to increase steadily as shown in Figure C-5.

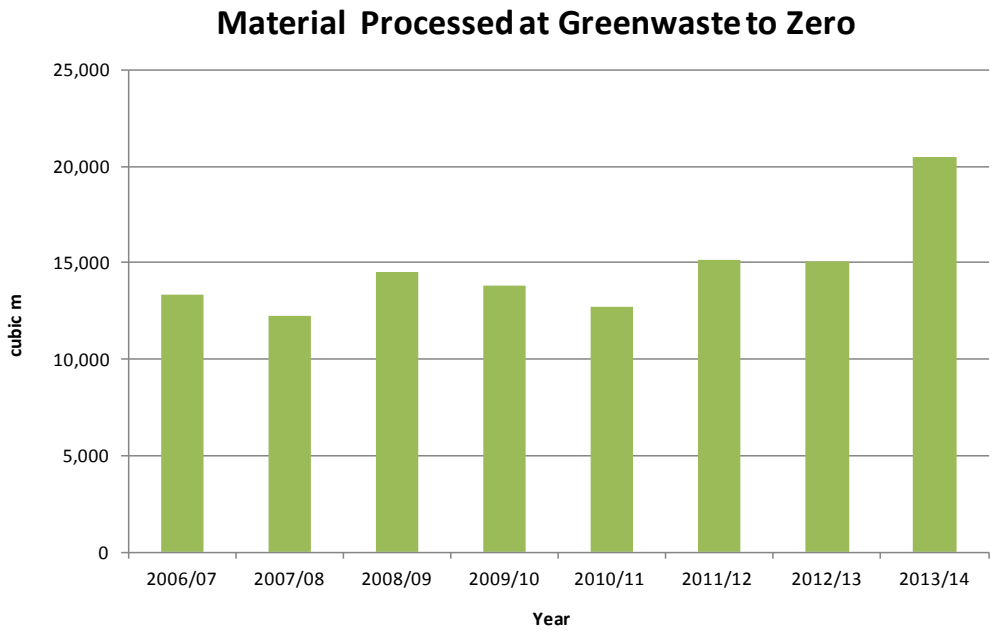


Figure C-5: Greenwaste Diversion

During the 2013/14 financial year, approximately 63,878 tonnes of waste was disposed of in the York Valley Landfill (Nelson City) and the Eves Valley Landfill (Tasman District). Each landfill receives approximately 50 percent of the waste.

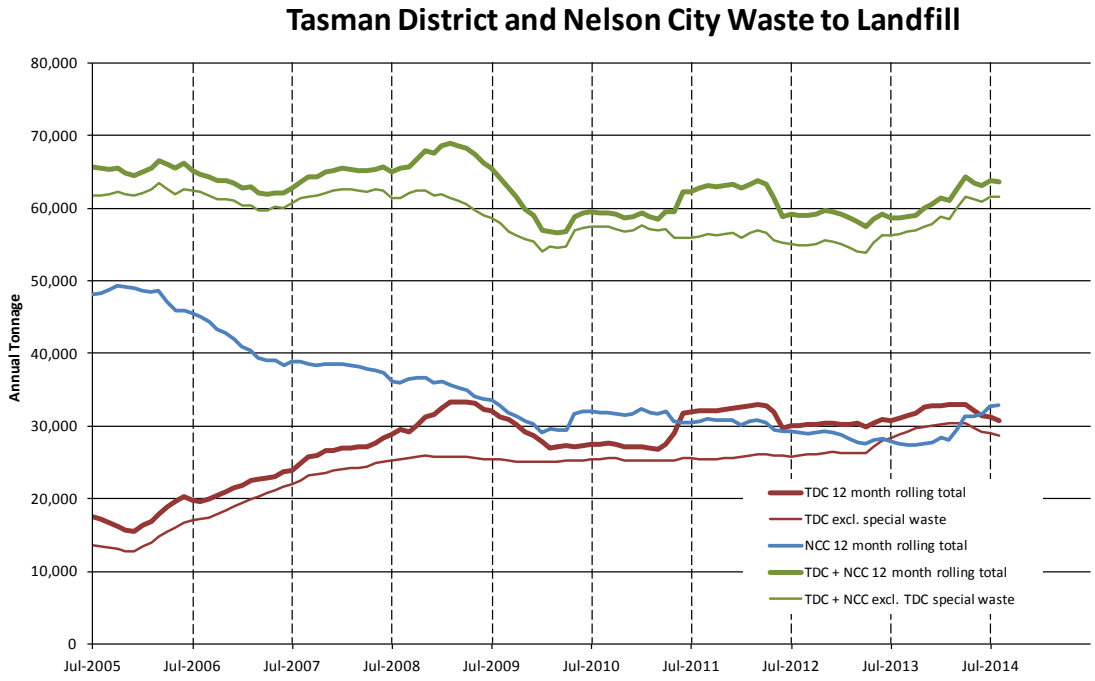


Figure C-6: Nelson – Tasman waste to Landfill

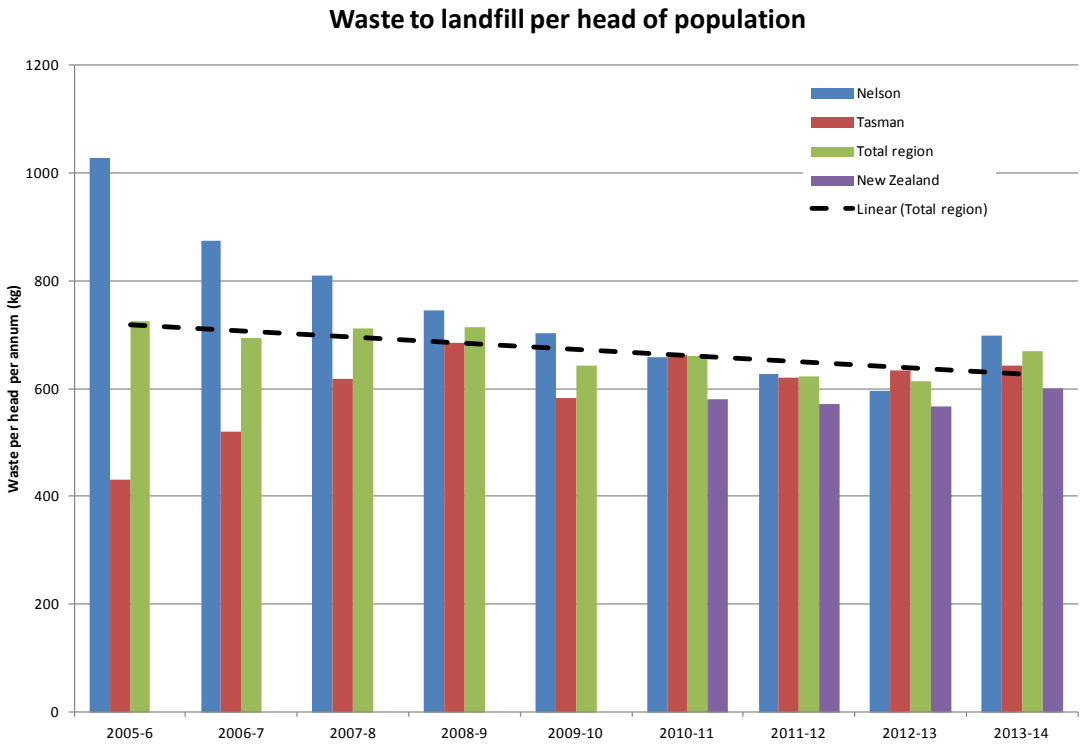


Figure C-7: Nelson – Tasman waste to landfill per head of population

Overall, waste to landfill in the districts per capita has decreased from 724 kg per person in 2005-06 to 614 kg per person in 2012-13. In 2013-14 waste per head of population increased to 670 kg. This is higher that the reported national average of 600 kg per person to levied landfills[3], although national data excludes some non-levied landfills.

For each tonne of waste disposed of at the Eves Valley and York Valley Landfills, the Councils (as the landfill operators) are required to pay a waste disposal levy to the central government. Part of this levy is returned to each Council to fund waste minimisation initiatives. The amount of levy returned to each Council is calculated on a per resident basis.

The WA also outlined existing services and assessed future demand.

[3] MfE, Review of the effectiveness of the waste disposal levy, July 2014

APPENDIX D. ASSET VALUATIONS

D.1 Background

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

The Financial Reporting Act 1993 sets out a process by which GAAP is established for all reporting entities and groups, the Crown and all departments, Offices of Parliament and Crown entities and all local authorities. Compliance with the 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) is the one of the current requirements of meeting GAAP.

The purpose of the valuations is for reporting asset values in the financial statements of Tasman District Council.

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 2012.

- 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).

D.1.1. Depreciation

Depreciation of assets must be charged over their useful life.

- *Depreciated Replacement Cost* is the current replacement cost less allowance for physical deterioration and optimisation for obsolescence and relevant surplus capacity. The *Depreciated Replacement Cost* has been calculated as:

$$\frac{\text{Remaining useful life}}{\text{Total useful life}} \times \text{Replacement cost}$$

- *Depreciation* is a measure of the consumption of the economic benefits embodied in an asset. It distributes the cost or value of an asset over its estimated useful life. Straight-line depreciation is used in this valuation.
- *Total Depreciation to Date* is the total amount of the asset's economic benefits consumed since the asset was constructed or installed.
- The *Annual Depreciation* is the amount the asset depreciates in a year. It is defined as the replacement cost minus the residual value divided by the estimated total useful life for the asset.
- The *Minimum Remaining Useful Life* is applied to assets which are older than their useful life. It recognises that although an asset is older than its useful life it may still be in service and therefore have some value. Where an asset is older than its standard useful life, the minimum remaining useful life is added to the standard useful life and used in the calculation of the depreciated replacement value.

D.1.2. Revaluation

The revaluations are based on accurate and substantially complete asset registers and appropriate replacement costs and effective lives.

- The lives are generally based upon NZ Infrastructure Asset Valuation and Depreciation Guidelines – Edition 2. In specific cases these have been modified where in our, and Council's opinion a different life is appropriate. The changes are justified in the valuation report.

- The component level of the data used for the valuation is sufficient to calculate depreciation separately for those assets that have different useful lives.

D.2 2012 Valuation – Solid Waste

Assets are valued every three years. The solid waste assets were last re-valued as at 30 June 2012 and is reported under separate cover[1]. Key assumptions in assessing the asset valuations are described in detail in the valuation report.

D.2.1. Asset Data

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 D-1 below.

Table D-1: Data Confidence

Asset Description	Confidence	Comments
Solid Waste 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 ie. 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.

D.2.2. Asset Lives

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 solid waste assets are presented in Table D-2 below.

Table D-2: Asset Lives

Item	Life (years)	Minimum Remaining Life (years)
Non Pipeline Civil Assets		
Civil concrete structures	80	5
Civil buildings (all materials)	50	5
Tanks (concrete, plastic, fibreglass)	50	5
Landscaping/fencing	20	5
Solid Waste Assets		
Compactor, compound	50	5
Retaining walls	80	5
Solid waste chute	80	5
Attendant's kiosk	50	5
Mechanical Assets		
Small plant – pumps, blowers, chlorinating/UV equipment, aerators, screens	20	2

[1] Infrastructural Asset Revaluation, – MWH New Zealand Ltd report for Tasman District Council, August 2012

Item	Life (years)	Minimum Remaining Life (years)
Electrical and Telemetry Assets		
Electrical/Controls	20	2
Telemetry/SCADA	20	2

D.2.3. 2012 Valuation

The optimised replacement value, optimised depreciated replacement value, total depreciation to date, and the annual depreciation of the solid waste assets are summarised in Table D-3.

Table D-3: Solid waste Asset Valuation

	Optimised Replacement Value ($)	Optimised Depreciated Replacement Value ($)	Total Depreciation to Date ($)	Annual Depreciation ($/yr)
Solid waste 2009	4,858,001	3,524,567	1,333,433	126,846
Solid waste 2012	9,140,148	7,278,601	1,861,547	282,545
% Increase	88.15%	106.51%	39.61%	122.75%

Overall, the solid waste assets have increased in optimised replacement value by 88.15% since the valuation.

Increases in replacement value are due to:

- Major upgrade work of approximately $2.0m value (in 2012 dollars) has been carried out at the Richmond Recovery Centre since the 2009 valuation. A further $1.0m was used to acquire and improve the building on Fittal Street.
- Significant works have also been carried out at Eves Valley Landfill and Mariri Resource Recovery Centre.
- The remaining increase in replacement cost is due to the methodology of updating the 2009 unit rates with CAF to obtain a 2012 value.

Resource consents have not been valued whereas they were previously assigned a nominal replacement value. This is because it was very difficult to value these accurately because:

- in some cases there are no details stored regarding whether the consent was notified or non-notified;
- it was not clear if a consultant was used, to obtain the consent;
- it was not clear if the consent application was prepared in house;
- it was not obvious if there were submissions against some of the discharge consents.

The 2009 valuation included an optimised replacement value of $319,000 which is not included in this 2012 valuation. The Annual Depreciation has increased by 122.75% due to the major new capital works but also in part due to the average useful life reducing from 58 to 55 years since the 2009 valuation.

APPENDIX E MAINTENANCE AND OPERATING ISSUES

E.1 Maintenance Contracts

Council currently contracts out the day-to-day operation and maintenance of solid waste assets and services with the aim of maintaining required levels of service in a cost-effective manner. Council has recently brought contract management and asset planning functions back under the direct control of Council staff. This is expected to achieve more effective asset management and to reduce costs.

Operations and maintenance contracts are let on a combination of prescriptive and performance basis with a view to:

- achieving maintenance efficiencies and cost effectiveness by allowing the contractor to be innovative in managing the operation and maintenance activities;
- encouraging pro-active maintenance practices rather than reactive practices;
- ensure compliance with legislative, monitoring and resource consent requirements;
- ensure that Council's waste minimisation strategy is adhered to.

Performance based contracts move away from prescribing what the contractor must do. Instead the contracts state what the contractor must achieve. It is then up to the contractor to determine what must be done to achieve these outcomes. This empowers the contractor to be innovative in waste minimisation, disposal and collection activities.

The prescriptive component of the contracts identifies those requirements where the contractor has to conform to standards and strategies as determined by Council.

A list of each of the current solid waste contracts and the contractor responsible for delivering the service are detailed in Table E-1 below. Further descriptions of the services provided under each of these contracts are provided in Appendix B.

Table E-1: Current Solid Waste Contracts

Contract No.	Operations Responsibility	Description	Comment
781	Fulton Hogan Ltd	Operation and maintenance of Eves Valley Landfill.	Commenced 1 October 2010, expires 30 September 2016
		Operation of solid waste haulage services from RRCs.	
613	Smart Environmental Ltd	Operation and maintenance of Richmond, Mariri, Takaka, and Collingwood RRCs.	Commenced 14 Nov 2004, expires 28 June 2015
		Provision of kerbside solid waste and recyclables collection services.	
1020	Smart Environmental Ltd	Operation and maintenance of Richmond, Mariri, Takaka, and Collingwood RRCs.	Commences 29 June 2015, expires 30 June 2023.
		Provision of kerbside solid waste and recyclables collection services.	
n/a	Greenwaste to Zero	Processing of greenwaste collected at RRCs and delivered to the facility.	Commenced 1 December 2014, expires 30 June 2015.
652	Fulton Hogan Ltd	Operation and maintenance of Murchison RRC.	Commenced 15 May 2005, expires 30 September 2016
897	Nelson Environment Centre	Provision of community engagement and waste minimisation programme on behalf of Tasman District and Nelson City Councils.	Commenced 1 February 2013, expires 30 June 2016.

The recent eight year extension of work to Smart Environmental Ltd and regional landfill agreement with Nelson City Council will increase the focus on waste minimisation. The new recycling collections will increase recycling tonnages and the withdrawal from landfill activities will reduce the imperative to maximise waste revenue.

In the longer-term, maintenance activities and contracts will be determined and modified as necessary to reflect:

- changing quantities of waste to landfill and resources diverted from landfill;
- the age of assets relative to expected economic life cycle;
- the risk of failure of critical assets;
- changes in the desired level of service;
- the nature and timing of asset upgrading and development works.

E.1.1. Resource Recovery Centres (RRCs)

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 saleability and that additional recoverable materials are to be added progressively.

The contractor acknowledges that it will not solely "pick the lowest fruit" and will bundle high and low value materials in order to maximise diversion volumes.

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 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.

E.1.2. Waste Minimisation

Over the next 20 years Council plans to improve existing kerbside recycling services, to improve commercial recycling collections, to continue to improve centralised recycling and re-use facilities and to encourage diversion of residual waste from landfill through waste education initiatives.

The construction of a materials recovery facility (MRF) at Richmond and roll-out of kerbside recycling in mobile recycling bins (MRB's) in 2015 is expected to significantly increase diversion from landfill. The new kerbside collections will increase kerbside collection volumes and the MRF will provide for increased processing capacity for commercial recycling collections.

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. These waste minimisation initiatives are planned to achieve a maximum diversion of residual waste from landfill of 29% (refer to Appendix F).

Additional initiatives led by industry or central government may be implemented in the medium term, particularly using the product stewardship provisions of the Waste Minimisation Act 2008. Because of the difficulty of estimating these effects, no allowance for these has been made.

The targets are relatively ambitious and the percentage diversion that may be achieved by Council will depend on many factors, including the response of regional businesses and waste collection contractors.

E.2 Maintenance Standards

The work to be performed, and materials to be used, will generally comply with the latest edition of the following standards:

- this Activity Management Plan;
- operations and maintenance manuals at RRCs;
- defined processes and procedures;
- Tasman District Council's Engineering Standards.

E.2.1. Deferred Maintenance

Deferred maintenance is:

- the shortfall in rehabilitation or refurbishment work required to maintain the service potential of the asset.
- maintenance and renewal work that was not performed when it should have been, or when it was scheduled to be and which has therefore been put off or delayed for a future period.

The current budget levels are believed to be sufficient to provide the intended level of service and therefore no maintenance work has been deferred. However this is subject to the changes in levels of service and expectations of customers.

E.2.2. Increase in Network Size through Development

When new developments such as subdivisions are constructed collection routes for solid waste and recycling may need to be extended. The maintenance budgets have some allowance for network growth.

E.2.3. Database

There are currently no databases used to track operation and maintenance of Solid Waste Assets. Works and variation orders and payment claims are managed through the Council's Confirm database.

E.3 Engineering Studies

A number of studies requiring engineering consultancy professional services or internal resources have been allocated to the Operations and Maintenance Budget. These are summarised in the Table E-2 below. A detailed financial forecast is shown in Table E-3.

Table E-2: Summary of Engineering Studies included in this AMP

Study Name	Brief Description
WA and WMMP	Waste Assessment and review of the Joint Waste Management and Minimisation Plan, scheduled every six years.
District AMP Professional Services	AMP Review and Update on a three yearly cycle.
Solid Waste Bylaw	Develop Solid Waste Bylaw (resourced internally)

Study Name	Brief Description
RRC Site Management Plan	Review site management plans every two years
Re-tender kerbside contract	Re-tender contract (all kerbside activities) on an eight year cycle.
Re-tender RRC operations and waste haulage	Re-tender contract (all RRC and waste haulage activities) on an eight year cycle.
Re-tender greenwaste contract	Re-tender Green Waste Contract on a five yearly cycle.
Closed Landfill Audits	Closed Landfill Audit every two years.
Asset Capture	Visit every site and confirm asset register, detail all new assets and details, update Confirm database.
Valuations	Three yearly reviews.
Further Waste Management System Investigations	Investigating multiple bin recyclables collection, investigating alternative solid waste collection, investigating organic waste collection and treatment.

E.4 Forecast Operations and Maintenance Expenditure

Many of the operational costs associated with solid waste activities are linked to the amount of waste being collected, transported or disposed of per annum. Projections of future waste quantities are very sensitive to growth rates and the effectiveness of waste minimisation, recycling and composting schemes, therefore the projected operation and maintenance costs have limited accuracy.

The kerbside collection, greenwaste and solid waste haulage operational costs also vary depending on increases in property numbers within the collection routes and the total amount of material collected at each site.

The 20-year forecasts for operations and maintenance expenditure are shown in Figure E-1 and Table E-3. These costs are based on current contract rates and do not take into consideration inflation. The summaries include both direct and indirect costs, which are necessary to balance expenditure and income (fees and charges from commercial customers).

The projected costs assume that there will be no real change in activity costs when a new contract is awarded and that any industry cost increases will be reflected in cost fluctuation provisions. The financial model also assumes no net change in direct operating expenditure with the change from York Valley to Eves Valley landfill in 2030.

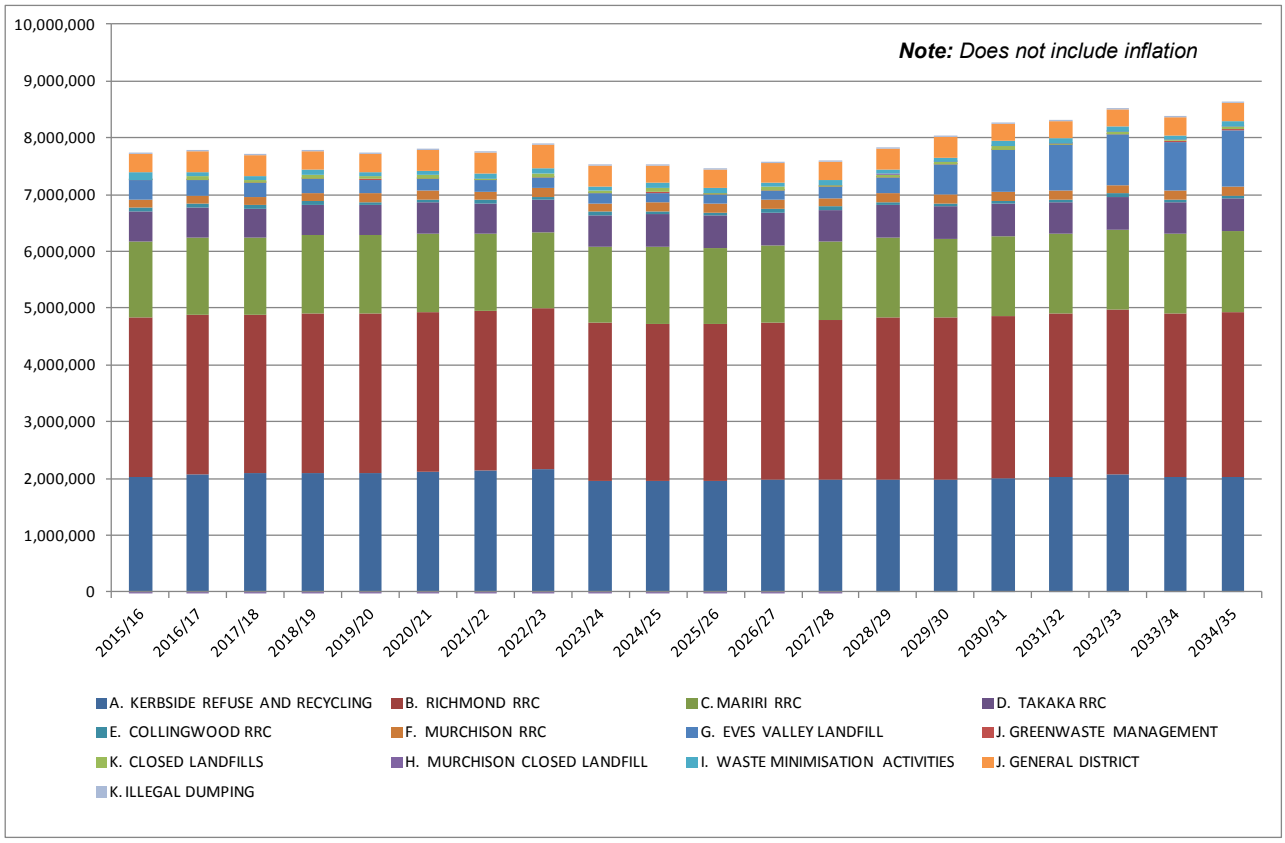


Figure E-1: 2015 – 2035 Solid Waste Operations and Maintenance Expenditure

Table E-3: 2012 – 2032 Solid Waste Operations and Maintenance Expenditure

GL Code	Description	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35
	OPERATIONS & MAINTENANCE																				
	A. KERBSIDE REFUSE AND RECYCLING																				
07192602	Kerbside bags and recycling	934,526	986,039	988,617	991,138	993,601	996,009	998,363	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664	1,000,664
0719260201	Kerbside growth and extensions	4,454	10,330	16,207	22,084	27,960	33,837	39,714	45,591	51,467	57,344	63,221	69,098	74,974	80,851	86,728	92,604	98,481	104,358	110,235	116,111
0719260202	Kaiteriteri peak collections	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791	19,791
0719260203	Golden Bay peak collections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0719260204	Streetside recycling bins	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064	28,064
0719260205	Replacement MRBs	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704	27,704
0719260206	Replacement crates	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647	6,647
0719260207	MRF operations	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238	637,238
07192601	Bag collection landfill fees	122,190	122,190	122,190	122,190	122,190	122,190	122,190	122,190	0	0	0	0	0	0	0	0	0	0	0	0
0719260102	TDC bag purchases for counter sale	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	0	0	0	0	0	0	0	0	0	0	0	0
07192513	Kerbside Advertising	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0719220301	Retender contract (all kerbside activities)	0	0	0	0	0	0	25,000	50,000	0	0	0	0	0	0	0	0	25,000	50,000	0	0
07192203	Professional Services	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	20,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	20,000	10,000
07191300	General rate																				
07192001	Kerbside recyc wages and salaries																				
07192522	Overhead Allocation - FCSC	181,823	184,900	185,559	181,348	182,768	184,061	183,790	186,508	170,839	167,462	168,587	168,406	170,263	167,721	168,123	171,810	175,242	180,110	176,948	177,733
07195501	Loan Interest	6,998	5,972	4,884	3,796	2,826	1,690	561	0	0	0	0	0	0	0	0	0	0	0	0	0
0719599801	Depreciation																				
	Cost Subtotal	**2,019,435**	**2,078,875**	**2,086,901**	**2,089,999**	**2,098,789**	**2,107,232**	**2,139,061**	**2,174,396**	**1,967,415**	**1,959,913**	**1,966,916**	**1,972,611**	**1,980,346**	**1,983,680**	**1,989,959**	**1,999,522**	**2,033,831**	**2,069,576**	**2,032,290**	**2,028,952**
	B. RICHMOND RRC																				
0702260202	Operational Contract Costs	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512	345,512
07022602	Refuse Haulage	170,518	168,975	169,712	170,448	171,185	171,921	172,658	173,395	174,131	174,868	175,605	176,341	177,078	177,814	178,551	179,288	180,024	180,761	181,497	182,234
07022401	Asset Maintenance	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000
0702240102	Bin maintenance	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
07022203	Professional Services	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0702220301	Retender contract (all RRC activities)	0	0	0	0	0	0	20,000	30,000	0	0	0	0	0	0	0	0	20,000	30,000	0	0
0702220302	Annual surveys (for all RRC activities)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0702220303	SMP update	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000
07022605	Richmond RRC Monitoring - PS	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000
0702260501	Richmond RRC Monitoring - Lab fees	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
07022508	Rates	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842	10,842
0702260101	Richmond landfill disposal cost	1,761,292	1,753,348	1,764,515	1,791,123	1,802,387	1,813,650	1,824,914	1,804,520	1,799,664	1,794,613	1,797,428	1,800,146	1,810,925	1,821,703	1,832,482	1,843,260	1,854,038	1,864,817	1,875,595	1,886,374
0702260102	Richmond hardfill disposal	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
0702599801	DEPRECIATION	111	221	1,645	3,494	6,398	8,876	8,929	10,351	13,457	15,246	15,300	15,300	26,006	36,713	36,713	36,774	36,834	37,434	38,034	38,659
07022522	Overhead Allocation - FCSC	262,056	259,655	260,242	255,059	255,698	259,105	254,129	252,661	252,365	247,136	246,968	246,715	250,684	249,957	249,031	254,650	256,764	262,195	259,197	262,555
07025501	Loan Interest	166,707	150,465	135,692	121,711	114,659	100,969	81,309	69,497	64,932	61,919	57,419	52,640	73,837	93,589	83,710	73,991	65,947	61,776	58,302	54,813
	Cost Subtotal	**2,821,638**	**2,803,618**	**2,792,759**	**2,812,788**	**2,811,280**	**2,825,476**	**2,822,893**	**2,811,378**	**2,765,502**	**2,764,735**	**2,753,673**	**2,762,095**	**2,799,483**	**2,850,729**	**2,841,439**	**2,858,915**	**2,874,562**	**2,907,936**	**2,873,580**	**2,895,588**
	C. MARIRI RRC																				
0703260205	Operational Contract Costs	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966	229,966
0703260204	Diversion and recycling transport	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076	23,076
07032602	Refuse Haulage	110,564	109,359	109,934	110,509	111,085	111,660	112,235	112,811	113,386	113,961	114,537	115,112	115,687	116,263	116,838	117,414	117,989	118,564	119,140	119,715
0703260202	Greenwaste Transport	22,972	24,044	24,197	24,351	24,504	24,657	24,810	24,963	25,116	25,269	25,422	25,576	25,729	25,882	26,035	26,188	26,341	26,494	26,648	26,801
0703260203	Greenwaste Reprocessing	54,159	56,686	57,047	57,408	57,769	58,130	58,491	58,852	59,213	59,574	59,935	60,297	60,658	61,019	61,380	61,741	62,102	62,463	62,824	63,185
07032401	Asset Maintenance	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
07032203	Professional Services	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0703220301	SMP update	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000
07032605	Mariri RRC Monitoring - PS	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500
0703260501	Mariri RRC Monitoring - Lab fees	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
07032508	Rates	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935
07032601	Mariri landfill disposal cost	628,284	625,451	629,434	638,926	642,944	646,962	650,980	643,705	641,972	640,171	641,175	642,145	645,989	649,834	653,679	657,524	661,369	665,214	669,059	672,903
0703599801	DEPRECIATION	4,461	8,922	12,852	17,209	17,635	17,635	17,688	18,145	18,549	21,102	23,656	29,167	36,642	38,605	38,605	38,666	38,727	38,922	39,178	46,739
07032522	Overhead Allocation - FCSC	124,077	124,479	125,123	123,422	122,994	124,951	120,981	120,612	121,160	119,088	118,892	120,314	121,885	120,954	119,898	122,906	122,356	124,630	123,683	127,207
07035501	Loan Interest	83,955	86,717	87,039	87,865	82,827	72,921	63,389	58,143	50,873	49,507	50,902	60,133	72,444	71,000	65,275	59,709	54,189	49,107	44,240	58,731
	Cost Subtotal	**1,336,950**	**1,354,136**	**1,354,105**	**1,378,167**	**1,368,235**	**1,375,393**	**1,357,051**	**1,355,708**	**1,338,748**	**1,347,151**	**1,342,997**	**1,371,221**	**1,387,512**	**1,402,034**	**1,390,187**	**1,402,625**	**1,391,550**	**1,403,872**	**1,393,248**	**1,433,759**
	D. TAKAKA RRC																				
0711260201	Operational Contract Costs	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631	129,631
0711260204	Diversion and recycling transport	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297	15,297
07112602	Refuse Haulage	76,229	75,287	75,737	76,186	76,636	77,085	77,535	77,985	78,434	78,884	79,333	79,783	80,232	80,682	81,131	81,581	82,030	82,480	82,929	83,379
0711260202	Greenwaste Transport	12,083	12,647	12,728	12,808	12,889	12,969	13,050	13,130	13,211	13,291	13,372	13,453	13,533	13,614	13,694	13,775	13,855	13,936	14,016	14,097
0711260203	Greenwaste Reprocessing	5,783	6,053	6,092	6,130	6,169	6,207	6,246	6,285	6,323	6,362	6,400	6,439	6,477	6,516	6,554	6,593	6,632	6,670	6,709	6,747
07112401	Asset Maintenance	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
07112203	Professional Services	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0711220301	SMP update	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000	0	10,000
07112605	Takaka RRC Monitoring - PS	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700	12,700
0711260501	Takaka RRC Monitoring - Lab Fees	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800
07112508	Rates	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
0711260101	Takaka landfill disposal cost	155,463	154,762	155,748	158,096	159,091	160,085	161,079	159,279	158,850	158,404	158,653	158,893	159,844	160,796	161,747	162,698	163,650	164,601	165,552	166,504
0711599801	DEPRECIATION	1,553	3,106	3,279	6,130	8,809	8,809	8,903	15,422	22,221	23,485	24,377	24,377	24,608	24,838	24,838	24,899	24,960	24,960	24,960	24,960
07112522	Overhead Allocation - FCSC	50,223	50,665	50,006	49,863	49,525	50,775	48,447	50,222	51,369	50,987	50,391	51,030	50,407	50,321	49,231	50,873	49,984	51,301	50,193	51,277
07115501	Loan Interest	35,178	34,690	30,619	32,535	35,203	29,929	25,070	37,015	48,916	47,898	48,572	47,149	44,466	41,751	38,398	35,205	32,003	28,634	25,264	21,895
	Cost Subtotal	**525,441**	**536,140**	**523,136**	**540,677**	**537,249**	**544,787**	**529,257**	**558,266**	**568,253**	**578,240**	**570,027**	**580,051**	**568,495**	**577,446**	**564,522**	**574,551**	**562,042**	**571,510**	**558,552**	**567,787**

GL Code	Description	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35
	E. COLLINGWOOD RRC																				
0710260205	Operational Contract Costs	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178	23,178
0710260204	Diversion and recycling transport	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906	13,906
07102602	Refuse Haulage	3,350	3,309	3,328	3,348	3,368	3,388	3,407	3,427	3,447	3,467	3,486	3,506	3,526	3,546	3,565	3,585	3,605	3,625	3,644	3,664
0710260202	Greenwaste Transport	1,343	1,405	1,414	1,423	1,432	1,441	1,450	1,459	1,468	1,477	1,486	1,495	1,504	1,513	1,522	1,531	1,539	1,548	1,557	1,566
0710260203	Greenwaste Reprocessing	643	673	677	681	685	690	694	698	703	707	711	715	720	724	728	733	737	741	745	750
07102401	Asset Maintenance	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
07102203	Professional Services	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
0710220301	SMP update	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000
07102508	Rates	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344
07102601	Collingwood landfill disposal cost	6,832	6,801	6,844	6,948	6,991	7,035	7,079	7,000	6,981	6,961	6,972	6,983	7,024	7,066	7,108	7,150	7,192	7,233	7,275	7,317
0710599801	DEPRECIATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07102522	Overhead Allocation - FCSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07105501	Loan Interest	3,613	2,968	2,293	1,617	982	385	70	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Subtotal	**57,708**	**62,084**	**56,485**	**60,945**	**55,387**	**59,867**	**54,629**	**59,512**	**54,527**	**59,540**	**54,584**	**59,627**	**54,702**	**59,777**	**54,852**	**59,927**	**55,001**	**60,076**	**55,151**	**60,226**
	F. MURCHISON RRC																				
0727240101	Operational Contract Costs																				
0727260201	Operational Contract Costs	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820	45,820
0727240102	Recycling operations	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151	5,151
07272602	Waste Transport	35,569	35,109	35,329	35,548	35,768	35,987	36,207	36,427	36,646	36,866	37,085	37,305	37,524	37,744	37,963	38,183	38,402	38,622	38,841	39,061
07272401	Asset Maintenance	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000				
0727240103	Murchison RRC Weighbridge charges	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
07272203	Professional Services	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
0727220301	SMP update	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000
07272505	Power	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
07272508	Rates	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
0727260101	Murchison landfill disposal cost	21,174	21,078	21,212	21,532	21,668	21,803	21,938	21,693	21,635	21,574	21,608	21,641	21,770	21,900	22,029	22,159	22,289	22,418	22,548	22,677
0727599801	Depreciation	53	106	424	1,793	2,844	3,331	3,872	4,242	4,560	4,613	4,667	4,667	5,420	6,174	6,174	6,234	7,518	8,741	8,741	8,741
07272522	Overhead Allocation - FCSC	12,582	12,844	12,452	12,811	12,584	13,188	12,564	13,054	12,820	12,991	12,593	12,983	12,785	13,146	12,649	13,307	12,429	13,267	12,724	13,198
07275501	Loan Interest	5,104	4,336	4,111	6,207	7,756	7,829	8,305	8,856	9,034	8,592	8,471	8,166	9,520	10,772	9,939	9,265	11,802	14,006	12,826	11,646
	Cost Subtotal	**139,383**	**143,375**	**138,429**	**147,793**	**145,521**	**152,040**	**147,786**	**154,173**	**149,597**	**154,536**	**149,323**	**154,661**	**151,921**	**159,636**	**153,655**	**159,049**	**149,341**	**158,955**	**152,580**	**157,223**
	G. EVES VALLEY LANDFILL																				
0701240104	Stormwater Treatment	12,000	6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07012203	Professional Services	30,000	15,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0701260502	Active landfill monitoring - Lab Fees	21,000	21,000	21,000	21,000	21,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	7,000	7,000	7,000	7,000	7,000
0701260501	Closed landfill monitoring	52,000	40,000	40,000	40,000	40,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	20,000	20,000	20,000	20,000	20,000
0701240102	Closed landfill maintenance	25,000	25,000	25,000	25,000	25,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
0701220302	Landfill survey	10,000																			
07012505	Power	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200
07012508	Rates	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
07012601	Sewerage Charges																				
07012506	Refuse LAPP insurance	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161	4,161
0701202146	Time from Jobs	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699
0701202246	Time OVHD from Jobs	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699	11,699
07012522	Overhead Allocation - FCSC	37,623	30,514	29,640	26,699	25,926	26,470	23,545	22,482	23,952	21,986	21,314	21,350	23,052	26,884	42,887	56,104	61,442	65,694	64,189	70,951
0701252246	HPC Overhead Allocation - Engineering	3,078	3,472	3,544	3,444	4,100	4,165	4,139	4,214	4,112	4,059	4,037	4,018	4,076	3,956	3,925	3,894	3,878	4,064	3,839	3,821
07015501	Loan Interest	120,109	112,483	103,804	95,124	90,203	81,147	72,090	65,660	56,226	46,791	39,376	40,606	58,672	104,605	284,380	428,435	471,955	511,240	495,600	564,490
	Cost Subtotal	**345,569**	**287,228**	**261,746**	**250,026**	**244,989**	**205,540**	**193,533**	**186,115**	**178,049**	**166,596**	**158,486**	**162,233**	**190,809**	**260,240**	**527,628**	**733,615**	**809,146**	**879,142**	**868,333**	**982,577**
	J. GREENWASTE MANAGEMENT																				
0725220301	Retender Green Waste Contract	0	0	0	0	15,000	0	0	0	0	15,000	0	0	0	0	15,000	0	0	0	0	15,000
07252522	Overhead Allocation - FCSC	117	112	136	119	1,495	139	120	116	138	1,471	119	118	118	118	1,457	118	117	118	117	1,514
	Cost Subtotal	**117**	**112**	**136**	**119**	**16,495**	**139**	**120**	**116**	**138**	**16,471**	**119**	**118**	**118**	**118**	**16,457**	**118**	**117**	**118**	**117**	**16,514**
	K. CLOSED LANDFILLS																				
07052401	Asset Maintenance	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
07052203	Professional Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0705220301	Biennial Closed Landfill Audit	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000	0	25,000
07052508	Rates	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
07052605	Monitoring	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000	0	5,000
0705599801	DEPRECIATION	0	373	3,798	7,222	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595	7,595
07052522	Overhead Allocation - FCSC	1,807	4,659	2,596	5,883	3,192	5,918	2,962	5,636	2,878	5,393	2,624	5,250	2,440	4,968	2,185	4,857	2,038	4,738	1,864	4,575
07055501	Loan Interest	3,023	3,656	11,064	18,077	18,630	17,480	16,329	15,811	14,612	13,414	12,704	11,898	10,603	9,336	8,203	7,177	6,152	5,127	4,101	3,076
	Cost Subtotal	**17,129**	**50,988**	**29,757**	**73,482**	**41,717**	**73,292**	**39,186**	**71,342**	**37,385**	**68,702**	**35,223**	**67,043**	**32,938**	**64,199**	**30,283**	**61,930**	**28,085**	**59,759**	**25,860**	**57,546**
	H. MURCHISON CLOSED LANDFILL																				
07082605	Monitoring	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
07081300	REFUSE MURCHISON RATE APPR	-14,331	-13,757	-13,147	-12,493	-12,089	-11,453	-10,772	-10,258	-9,592	-14,092	-10,349	-9,672	-8,303	1,962	1,962	1,964	1,964	1,967	1,966	1,966
07087700	SUNDRY INCOME	-175	-145	-116	-83	-65	-35	-3	19	51	-156	13	46	81	94	94	97	97	100	100	100
07082522	Overhead Allocation - FCSC	447	385	353	274	236	205	125	80	43	410	93	33	-32	-57	-56	-61	-61	-67	-66	-66
07085501	Loan Interest	7,492	6,950	6,343	5,735	5,350	4,716	4,082	3,592	2,931	2,271	1,675	1,026	335	0	0	0	0	0	0	0
	Cost Subtotal	**-567**	**-567**	**-567**	**-567**	**-567**	**-567**	**-567**	**-567**	**-567**	**-5,567**	**-5,567**	**-5,567**	**-4,919**	**5,000**	**5,000**	**5,000**	**5,000**	**5,000**	**5,000**	**5,000**

GL Code	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
		2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
	I. WASTE MINIMISATION ACTIVITIES																				
0718220302	Staff wage and overhead allocation		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
07182203	Waste min community engagment	95,000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07182513	Waste minimisation publicity	5,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
0718252604	Compost Bin Incentive Scheme	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
0718252607	Zero waste grants	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0718252608	Waste data collection	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
0718252615	Paintwise expenses	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
0718252616	Event recycling	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
0718252618	Product Stewardship	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
07182522	Overhead Allocation - FCSC	11,948	7,390	7,431	7,223	7,257	7,318	7,181	7,175	7,285	7,133	7,161	7,129	7,186	7,058	7,053	7,182	7,206	7,289	7,285	7,333
	Cost Subtotal	**133,948**	**82,390**	**82,431**	**82,223**	**82,257**	**82,318**	**82,181**	**82,175**	**82,285**	**82,133**	**82,161**	**82,129**	**82,186**	**82,058**	**82,053**	**82,182**	**82,206**	**82,289**	**82,285**	**82,333**
		72,210	71,358	71,312	71,460	71,423	71,357	71,461	71,468	71,387	71,497	71,490	71,511	71,484	71,560	71,571	71,520	71,515	71,451	71,492	71,476
	J. GENERAL DISTRICT																				
0707220301	WA and WMMP	20,000	40,000	0	0	0	0	20,000	40,000	0	0	0	0	20,000	40,000	0	0	0	0	20,000	40,000
0707220302	District AMP Professional Services	0	17,640	52,920	0	17,640	52,920	0	17,640	52,920	0	17,640	52,920	0	17,640	52,920	0				
0707220308	Landfill options study	0	0	0	0	0	0	50,000	50,000	0	0	0	0	0	0	0	0	0	0	0	0
0707220306	Asset Capture	0	0	0	12,000	0	0	0	0	12,000	0	0	0	0	0	12,000	0				
07072205	Valuations - 3 yearly reviews	4,500	0	0	4,500	0	0	4,500	0	0	4,500	0	0	4,500	0	0	4,500	0	0	4,500	0
0707202146	Time from Jobs	116,272	119,272	119,272	119,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272
0707202246	Time OVHD from Jobs	116,272	119,272	119,272	119,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272	116,272
07072001	District Admin (Staff time)																				
0707252246	HPC Overhead Allocation - Engineering	30,599	35,395	36,129	35,114	40,755	41,394	41,142	41,882	40,871	40,346	40,123	39,932	40,511	39,323	39,013	38,708	38,541	40,396	38,153	37,974
0707200146	DEPT OVERHEAD-ENGINEERING																				
07072522	OVERHEAD ALLOCATION-FCSC	25,372	28,755	28,374	24,311	23,983	27,399	28,891	31,897	28,356	22,381	23,648	26,740	24,357	26,884	27,517	22,525	22,194	22,444	24,709	26,314
	Cost Subtotal	**313,014**	**360,334**	**355,967**	**314,469**	**314,922**	**354,257**	**377,077**	**413,963**	**366,691**	**299,771**	**313,955**	**352,136**	**321,912**	**356,391**	**363,993**	**298,277**	**293,279**	**295,384**	**319,906**	**336,833**
	K. ILLEGAL DUMPING																				
07142603	Gen District Illegal dumping contractor	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
0714260301	Kerbside Illegal dumping contractor	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0714260302	Riverside Illegal dumping contractor	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
0714260303	Abandon Vehicles contractor	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
07142203	Illegal dumping consultants																				
07142522	OVERHEAD ALLOCATION-FCSC	878	862	884	847	848	872	846	842	869	838	841	840	845	831	830	843	846	857	854	857
	Cost Subtotal	**8,878**	**8,862**	**8,884**	**8,847**	**8,848**	**8,872**	**8,846**	**8,842**	**8,869**	**8,838**	**8,841**	**8,840**	**8,845**	**8,831**	**8,830**	**8,843**	**8,846**	**8,857**	**8,854**	**8,857**
	TOTAL OPERATIONS & MAINTENANCE COSTS	**7,753,643**	**7,802,575**	**7,725,168**	**7,793,969**	**7,760,122**	**7,821,476**	**7,786,053**	**7,910,418**	**7,551,891**	**7,536,059**	**7,465,737**	**7,602,200**	**7,609,347**	**7,845,140**	**8,063,856**	**8,279,553**	**8,328,007**	**8,537,473**	**8,410,756**	**8,668,195**

N.B Does not include inflation.

APPENDIX F DEMAND AND FUTURE NEW CAPITAL REQUIREMENTS

F.1 Growth Demand and Supply Model (GDSM)

F.1.1 Model Summary

A comprehensive Growth Demand and Supply Model (GDSM or growth model) has been developed for Tasman District. The growth model is a long term planning tool, providing population and economic projections district wide. The supply potential is assessed as well as demand, and a development rollout for each settlement is then examined. The development rollout from the Growth Model informs capital budgets (new growth causes a demand for network services) which feed into the AMPs and in turn underpin the Long Term Plan and supporting policies e.g. Development Contributions Policy.

The 2014 growth model is a fourth generation growth model with previous versions being completed in 2005, 2008 and 2011. In order to understand how and where growth will occur, the growth model is built up of a series of Settlement Areas which contain Development Areas. A Settlement Area (SA) is defined for each of the main towns and communities in the district. There are 17 Settlement Areas for the present version of the growth model. Each Settlement Area is sub-divided into a number of Development Areas. Each Development Area is defined as one continuous polygon within a Settlement Area that if assessed as developable, is expected to contain a common end-use and density for built development.

The growth model organises and integrates the assessments of demand and supply of built development. The development is categorised as residential or business demand and supply, with business including all industrial, commercial and retail uses.

For residential demand and supply:

- the 'demand' for residential buildings (dwellings) is assessed from population and household growth forecasts based on Statistics New Zealand's latest release;
- the 'supply' of lots for future dwellings is assessed from analysis of the Development Areas in each Settlement Area and how many lots could feasibly be developed for residential end use over a 20 year time period, after accounting for a number of existing characteristics of the Development Area.

For business demand and supply:

- the 'demand' for business premises is assessed from economic and employment growth forecasts, and associated land requirements;
- the 'supply' of lots for future business premises is assessed from analysis of the Development Areas in each Settlement Area over time in a similar way as that for future dwellings.

The Development Areas and Settlement Areas are the building blocks that allow the growth model to spread demand for new dwellings and business premises, and assess where there is capacity to supply that demand.

The growth model is not just an isolated tool that calculates a development forecast. It is a number of linked processes that involve assessment of base data, expert interpretation and assessment, calculation and forecasting. The key input data, assessment and computational processes, and outputs of the growth model are captured in a database called the Growth Model Database.

The outputs of the growth model are located on a shared browser site that all Council staff have access to. The browser contains:

- all the various input data sets and calculated outputs;
- maps defining the Settlement Areas and Development Areas within those;
- an updated model description describing the model working in detail, assumptions and planned improvements.

The review process is also mapped in ProMapp.

F.1.2 Overall Population Growth and Trends

Richmond is the largest and fastest growing town in the District with an estimated 13,606 residents, as at 2014. Motueka is the next largest town, with 6,687 residents. Another five settlements are relatively small, with populations ranging from 1239 in Takaka up to 2,498 in the Coastal Tasman area. Nine have populations of less than 500 people.

Tasman District is a popular destination for older age group or "retirees". A high proportion of population growth results from people moving to the Tasman District from elsewhere, rather than from current residents having children. The growth modelling shows that older people moving to the Tasman district are choosing to live in larger centres with easier access to services, hence the larger settlements are growing and the smaller ones are not. As shown in Table F-1, Richmond, Brightwater and Wakefield are predicted to grow by 500 people or more over the next 25 years. Overall, Tasman's population is expected to increase by 7,700 people by 2039. Council's planning also takes into consideration the decrease in the number of persons per household and provides for an increase in the number of holiday homes. The latter is particularly important for holiday settlements such as Kaiteriteri and Pohara/Ligar Bay.

The population projection in the growth model has been taken from Statistics New Zealand population projections derived from the 2013 census data, using a "medium" growth rate projection for all settlement areas (refer Table F-1). The population projections are used to determine a demand for new dwellings in each settlement area.

Table F-1: Population Projections Used in the Growth Model

Settlement Area	Population in 2014	Population projection for 2039	Increase or decrease in people by 2039
Brightwater	1835	2412	577
Coastal Tasman Area	2498	2903	405
Collingwood	232	250	18
Kaiteriteri	377	382	5
Mapua/Ruby Bay	2028	2506	478
Marahau	119	120	1
Motueka	6687	6810	123
Murchison	413	365	-48
Pohara/Ligar/Tata	543	583	40
Richmond	13606	16396	2790
Riwaka	591	636	45
St Arnaud	101	93	-8
Takaka	1239	1056	-183
Tapawera	284	320	36
Tasman	189	210	21
Upper Moutere	148	177	29
Wakefield	1939	2471	532
Ward Remainder (Area Outside Ward Balance)	282	303	19
Ward Remainder Golden Bay	3023	3248	225
Ward Remainder Lakes Murchison	2418	2722	304
Ward Remainder Motueka	3096	3597	501
Ward Remainder Moutere Waimea	4248	4937	689
Ward Remainder Richmond	1612	2704	1092
Total for District	**47508**	**55201**	**7693**

Projected Population data derived from Statistics NZ 2013 Census Data (adjusted for Growth Model). Base projection series applied = medium

Table F-2 summarises some key statistics for Tasman's population, based on Statistics New Zealand medium growth projections (2006 base, updated in June 2013).

Table F-2: Population change in Tasman District

Key Statistics	2006	2013	2031
Population	45,800	48,800	53,900
Median age (years)	40.3	44.2	47.3
Proportion of population aged over 65	13.6%	17.9%	29.1%
Number of households	17,900	18,261	23,500
Working age population	29,810	30,500	29,170

Additional information from the 2013 census about Tasman District:

- Tasman's population is 1.1% of New Zealand's total population;
- 93.1% of population is European;
- 7.6% of population is Māori;
- 20% of population aged under 15 years;
- 75% of households in occupied private dwellings owned the dwelling or held it in a family trust (this is the highest rate of home ownership in New Zealand).

As shown in Table F-2, Tasman's population is expected to be about 53,900 by 2031. Like the rest of New Zealand, the median age of Tasman's population is also increasing. The first of the baby boomers (those born between 1946 and 1964) commenced retiring in 2011 and fertility rates have also decreased over the last 20 years. The median age is projected to increase from 44.2 in 2013 to 47.3 in 2031. By 2031, the number of people aged over 65 in Tasman is projected to comprise 29.1 percent of the population, compared to 17.9 percent in 2013. Twenty years ago the figure was less than 10 percent. These demographic changes raise a number of challenges for Council.

As Tasman's population increases, Council needs to provide more services. However, many of the retired population will be on fixed incomes and unable to pay for increases in services (rates are a tax on property, not income, and if a property value is high the rates can take a significant portion of this fixed income payment). Council's Growth Strategy considers whether our community can afford to support growth in all 17 settlements and what form this growth will take.

Communities with an older population are likely to have different aspirations to the communities with a younger median age. This may include:

- where they wish to live, possibly closer to main settlement areas where medical and social services are more readily available;
- an increase in the demand for smaller properties and a decrease in the demand for lifestyle or larger properties, particularly given the projected increase in the number of single households;
- the type of facilities and the levels of service requested, including more informal recreation facilities and the increased demand for "free" or low cost services such as libraries;
- their ability and willingness to pay for services and facilities may be lower, given that incomes are expected to be lower.

Council has taken these factors into account in the development of this AMP and the LTP.

F.1.3 Business Forecast

The last major review of business demand was undertaken as part of the 2008 growth model. Three economic demand assessments were used to build a quantitative picture of business growth in terms of employment growth and linked growth in demand for business space. Each study provided different datasets, but an aggregate picture of estimated business land demand in the Tasman district, including, Motueka and Environs, Golden Bay, and Tasman district balance (including Richmond).

For the 2011 and 2014 growth models, a high level consideration of business growth opportunities showed that in the two main demand areas (Richmond as part of the eastern sub regional demand catchment of Nelson-Tasman, and at Motueka as the centre of the western sub regional demand catchment), there is a large business land supply capacity becoming available for business development. This includes the current deferred business zonings in both the Richmond West Development Area, and draft deferred zonings in Motueka West Development Area. It was considered this amount of supply capacity will meet the expected needs of business growth for at least 50 years (well beyond the 20 year projection). On this basis, the 2014 review of the growth model simply adopted the data and assumptions in the 2008 growth model, but updated the datasets by extrapolation for a further three years (2032 to 2035).

Looking ahead, there are three main difficulties with relying on the historical demand assessments as the basis for business growth demand forecasts:

- the economic modelling by the consultants' assessments used two different sets of now-dated census data for economic and employment growth;
- the demand assessment methods have yielded results of limited reliability at the level of individual settlement areas, as the areas assessed yielded aggregate results from an undisclosed simulation economic modelling routine, that have then been apportioned and subject to a number of simplifying assumptions;
- the consultant work done is not in a Council managed information system and does not provide a confident results in a regional (Nelson-Tasman) context especially for future Nelson-Richmond urban area forecasting.

Notwithstanding that the last study is now six years old, the information used for business demand is considered sufficient as for part of this time the Global Financial Crisis also reduced local demand for new business land, and since this time many "new" businesses have been established on current business properties (brown fields development). What is required is the development of a regional (Nelson-Tasman) economic simulation model capable of yielding results at the settlement area level, and suitably populated with current data, to yield more reliable segmented business land demand estimates, for each settlement area. This is a strategic priority for further work after the completion of the 2014 growth model review.

F.1.4 Rollout Assessment

Once the analysis of demand for residential dwellings and buildings in each settlement area has been completed, and when the supply potential for new subdivision and dwelling/building construction has been assessed for each development area, the rollout analysis is done. This seeks to forecast when and if the demand for dwelling and business premises will be met and, if so, where and when. This results in a forecast for each development area of:

- the number of new residential dwellings that will be created through subdivision or building on vacant lots;
- the number of new business buildings that will be created through subdivision or building on vacant lots.

This information is then used to plan how and where network infrastructure needs to be developed and to what capacity.

F.1.5 Waste Assessment

As identified in the waste assessment[1] (WA) the future demands for waste management and minimisation services in the Nelson and Tasman districts will be driven by a number of primary drivers including:

- demographic change (population and/or household changes);
- change in commercial and industrial activity / economic conditions;
- impact of waste flows from other areas;
- consumption patterns / product quality;
- national policy, legislation and regulation;
- impact of waste minimisation programmes, services and future initiatives (demand management strategies);
- community expectations.

Future demands or waste management issues (pg 57-58 of WA) were identified as:

- optimising the use of the two landfills so as to control residual waste stream and ensure income certainty;
- plan waste management and minimisation for long term regional interest;
- continue moving towards diversion of waste from landfill;
- consider economic feasibility of new or improved services, to ensure rates increases are kept at a minimum;
- consider benefits to Council(s) of working on an individual or collective basis;
- work collaboratively and effectively to obtain economies of scale;
- appropriately manage Emissions Trading Scheme costs;
- continue with user-of-service pays principles;
- consider use of waste levy funds for waste minimisation initiatives;
- set realistic and “SMART” targets;
- consider implications of “Product Stewardship” schemes;
- Council’s overall commitment to “towards zero waste” principle.

The options assessment (Appendix G of WA) considered the service components of:

- organics;
- paper and packaging;
- construction and demolition;
- solid waste collection;
- disposal;
- policy development.

The waste assessment identified the waste streams for priority waste minimisation action (pg 67-76 of WA) as:

- organics ;
- recyclable packaging and paper;

[1] Tasman-Nelson Join Waste Assessment Report (Morrison Low, March 2010)

- inorganic and 'special' wastes;
- timber (and other construction and demolition waste);
- hazardous waste.

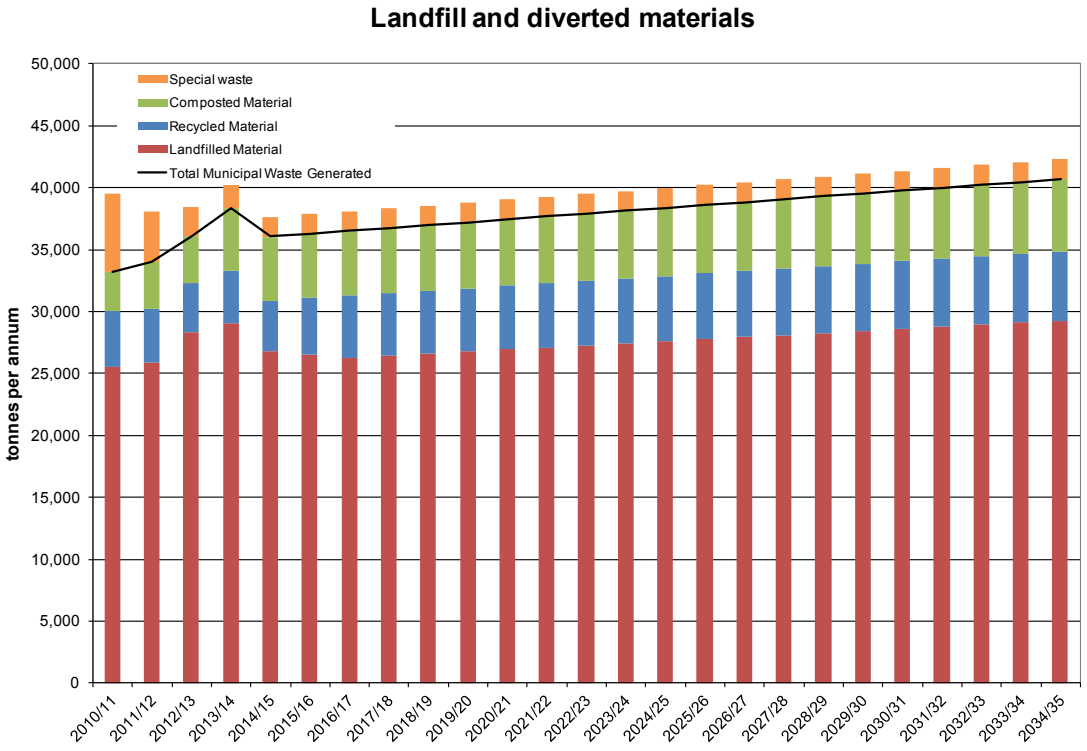
F.2 Projection of Demand for Solid Waste Services

F.2.1 Effect of Population Growth on Future Waste Quantities

It is generally accepted that an increase in solid waste *production* is directly related to population increases, and to 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 F-1 shows the projected future waste quantities for the next 20 years and the impact of current recycling and composting initiatives on the amount of material being landfilled. This is based on an average population growth of 0.61% per annum and a 10% increase in recycling quantities in each 2015/16 and 2016/17. These projected future waste quantities have been used to determine future solid waste asset capacity requirements and additional operation and maintenance costs.

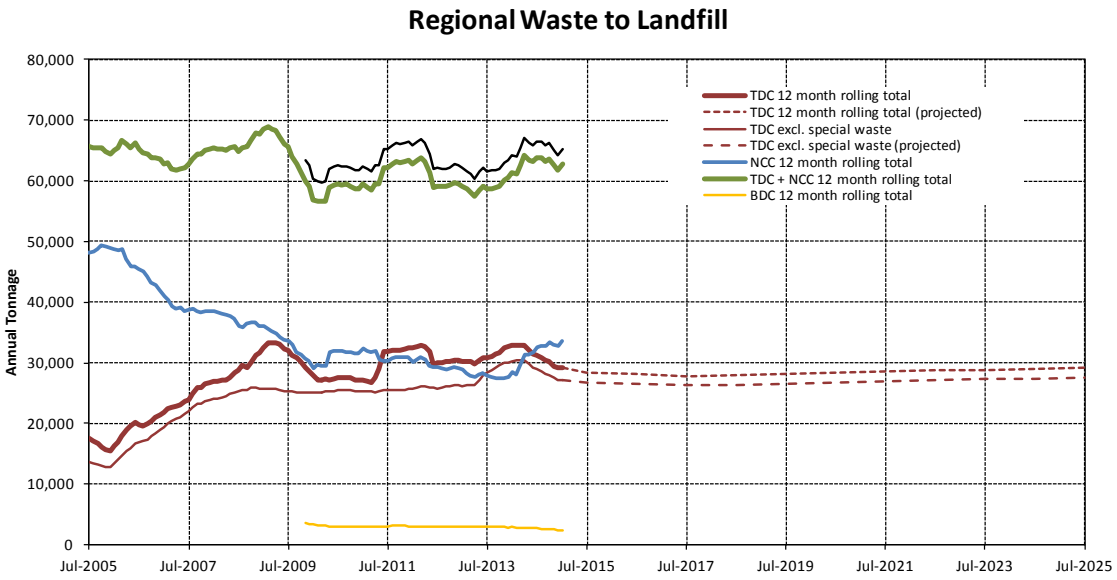
Waste reduction from waste prevention measures (e.g. education and promotion) have not been estimated as the impact of these measures is difficult to measure and predict.



Source: Solid Waste income and expense model.xls

Figure F-1: Recent and Projected Future Waste Quantities and Waste Minimisation Intiatives

Landfill tonnages from Tasman District cannot be considered in isolation, and Figure F-2 puts the first ten years landfill tonnages in a regional and historical context. It shows that the projected tonnages are in line with previous trends and illustrates that waste volatility in Tasman is usually due to special wastes.



Source: Tasman District Council – Nelson City Council Long Term Rolling Average Waste Quantities.xls

Figure F-2: Solid Waste Capital Forecast – by Area

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.

F.2.2 Implications of Changes in Community Expectations

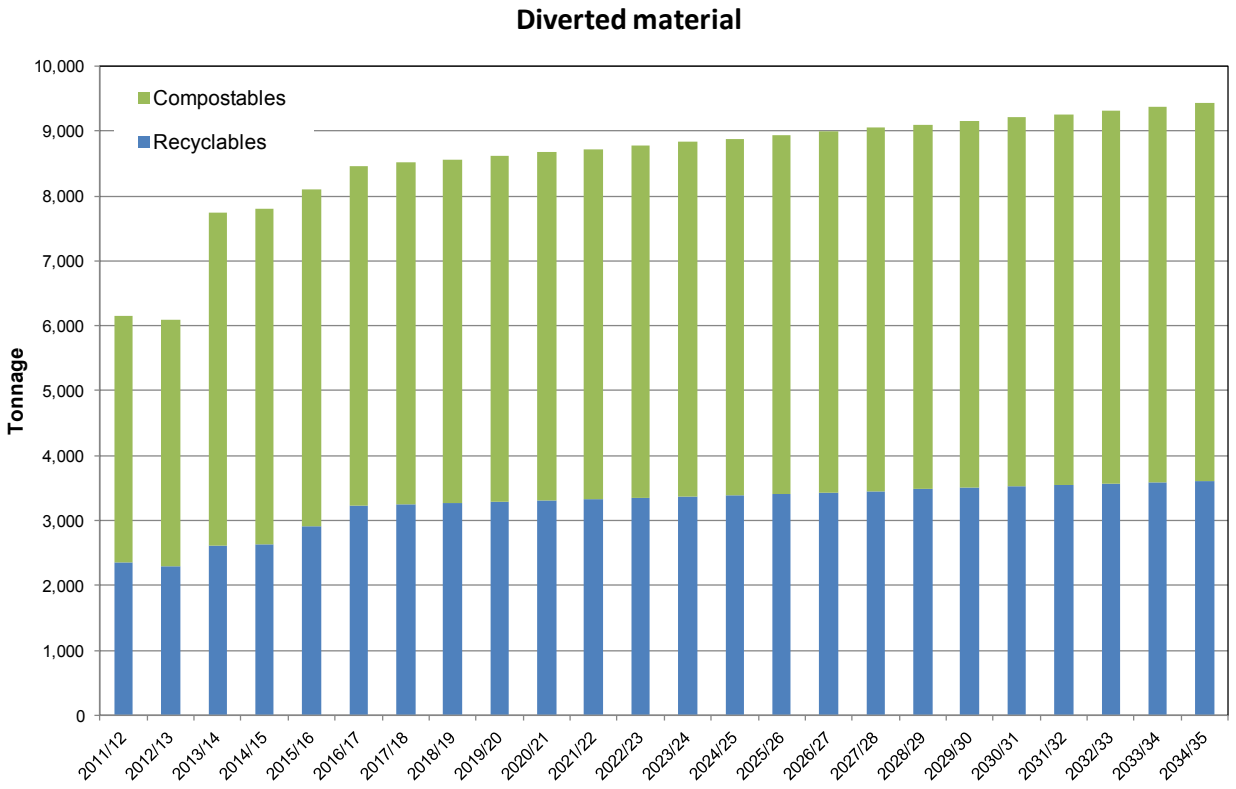
Community expectations vary geographically and over time. Key trends in community expectations that the Council recognises include those listed in Table F-1.

Table F-3: Trends in Community Expectations

Trends in Community Expectations	Implications for Solid Waste Management	How Council Plans to Address the Issues
Environmental awareness is leading to a demand for higher standards at disposal and treatment facilities.	Resource consents for future facilities may be more difficult to obtain and require an increased level of environmental protection.	Council will seek to proactively identify consent compliance or public perception issues at each site.
Increased demand for and higher expectations of kerbside recycling services.	Council's kerbside service may need to be further expanded or improved.	Council will monitor the success of new recycling services.
Increased pressure on Council to reduce services at lower cost	Reduced appetite for new services at greater cost.	The new kerbside recycling service is being provided without additional cost to ratepayer. Council is not proposing any further new services or significant facilities.

Over the next 20 years Council plans to provide and maintain new kerbside recycling and greenwaste processing services, and to encourage diversion of residual waste from landfill through Waste Minimisation initiatives.

Figure F-3 provides an indication of the possible tonnages of material that may be diverted away from landfill assuming recycling and greenwaste services continue to be successfully implemented. The graph does not quantify changes due to other Waste Minimisation initiatives or the effect of new or enhanced services being provided by the private sector.



Activity 20 year Operational Forecast for AMP2012 - Solid Waste.xlsm

Figure F-3: Recent and Projected Future Waste Minimisation Initiatives Contribution to Waste Reduction

Table F-1 shows that Council's approach to new services and facility is to largely monitor the impact of new recycling services and the transition to a regional landfill at York Valley. The Council is proposing to prepare a review of services and a new waste assessment in 2015/16 to identify options to respond to future demand (on a regional basis).

Capital works identified to meet the levels of service are summarised in the Capital Works Programme below. Please refer to Appendix R for further information on levels of service.

F.2.3 Implications of Technological Change

Technological change has the ability to impact on the demand for solid waste services. These changes can reduce or increase the demand for solid waste infrastructure. Relevant examples are:

- industry altering the design of packaging to become more environmentally friendly, reducing packaging or allowing more reuse, recycling or composting of packaging wastes;
- development of more economic recycling or composting technology.

It is important to be aware of continued technological changes to adequately predict demand trends and the effect on infrastructure requirements.

There are no predicted technological changes that are known to have a significant effect on the assets in the medium-term.

F.2.4 Implications of Legislative Change

Legislative change can significantly affect the Council's ability to meet minimum levels of service, and can require improvements to infrastructure assets. Possible future legislative changes may impact on Council's ability to meet required standards and may require improvements to infrastructure assets. Changes most likely to have an impact are in the following area:

- Health and Safety in employment legislation;
- Resource Management Act (and associated environmental standards and regulations);
- the Waste Minimisation Act (and associated regulations and policies).

Legislative impacts are detailed further in Appendix A.

F.2.5 Price Elasticity of Demand

Council is proposing a steady increase in landfill disposal charges in the short to medium term. This increase will result in a closer to full recovery of disposal costs and will in turn improve the feasibility of commercial recycling and waste reduction services.

It is generally accepted that the feasibility of waste reduction measures is directly related to the relative cost of landfill disposal and alternative options. Increased landfill disposal costs will likely lead more businesses to consider alternative options and may lead to recycling and other treatment methods becoming cost competitive.

Council also recognises that this may lead to some increase in illegal dumping and other inappropriate disposal. This may require compliance and other enforcement measures.

In a similar manner, the feasibility of recycling and other alternative disposal options (such as composting or reprocessing) will be related to the value of the end product diverted from landfill. Many of these commodity values are outside of Council's control and may be difficult to manage.

F.3 Assessment of New Capital Works

During the development of this AMP a large focus of work has been towards reaching agreement with Nelson City Council for regional landfill facilities. With this achieved, the value of the capital programme has significantly reduced, with Stage 3 of Eves Valley deferred to 2030.

The remainder of the capital works programme is largely unchanged from the 2012 AMP, other than minor amendments to some projects and additional renewals in the outlying years of the AMP.

A review of services and a waste assessment in 2015/16 will identify future capital needs for the region, which will be incorporated into the next AMP.

Estimates for works in this AMP are documented and filed in an Estimates file held by Council.

The information from the estimates has then been entered into the Capital Forecast spreadsheet/database that enables listing and summarising of the Capital Costs per project, per scheme, per project driver and per year. This has been used as the source data for input into Council's financial system for financial modelling.

F.4 Determination of Project Drivers and Programming

All expenditure has been allocated against at least one of the following project drivers.

Operations:	operational activities which have no effect on asset condition but are necessary to keep the asset utilised appropriately and on-going day-to-day work required to keep assets operating at required service levels[2].
Renewals:	significant work that restores or replaces an existing asset to its original size, condition or capacity[3].
Increase Level of Service:	works to create a new asset to upgrade or improve an existing asset beyond its original capacity or performance to improve the level of service provided to existing customers.
Growth*:	works to create a new asset to upgrade or improve an existing asset beyond its original capacity or performance to provide for the anticipated demands of future growth

*For the solid waste activity no capital works have been attributed to growth

[2] Definition from International Infrastructure Management Manual – Version 3.0, 2006, pg 3.114
[3] Definition from International Infrastructure Management Manual – Version 3.0, 2006, pg 3.114

This is necessary for two reasons, as follows:

- Schedule 13(1) (a) of the Local Government Act requires the local authority 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)(l)-(iv) of the Local Government Act requires the local authority 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. A guideline was prepared to ensure a consistent approach to how each project is apportioned between the drivers.

Some projects may be driven fully or partly by needs for renewal. These aspects are covered in Appendix I.

The projects have been scheduled out across the 30 year period, primarily based on their drivers. They were then loaded into Mapinfo along with projects from all other engineering activities to allow Programme Managers to assess any programme clashes or optimisation opportunities.

F.5 Project Prioritisation

Project prioritisation is built on the "non-discretionary" or "discretionary" system employed in 2012; where: a non-discretionary investment is one that relates to:

- a critical asset, that without investment is likely or almost certain to fail within the next three years, with a medium, major or extreme impact;
- any asset that has a regulatory requirement to make the proposed investment.

A discretionary investment is one that relates to:

- a non-critical asset with no regulatory requirement to make the proposed investment;
- a critical asset where asset failure is possible, unlikely or very unlikely to occur within the next three years with no regulatory requirement to make the proposed investment;
- a critical asset where asset failure has only a negligible or minor impact with no regulatory requirement to make the proposed investment.

Further review of priorities included consideration of:

- growth influences;
- a review of the criticality framework;
- cost-effectiveness reviews.

With transition to new recycling services and regional landfill activities in 2015/16, Council's definition of critical assets will change. Council will be reviewing prioritisation of projects as a result of this.

F.6 Developer Created Assets

It is very unlikely that any private developers will construct solid waste assets to be vested to Council as Council is normally responsible for the upgrading/upsizing of existing assets to provide for increased volumes associated with growth.

F.7 Forecast of New Capital Work Expenditure

The capital programme that has been forecast for this activity where the primary driver is classed as New Works (i.e. growth or levels of service) is shown in Figure F-4 and Table F-5. Note that there are no growth driven projects.

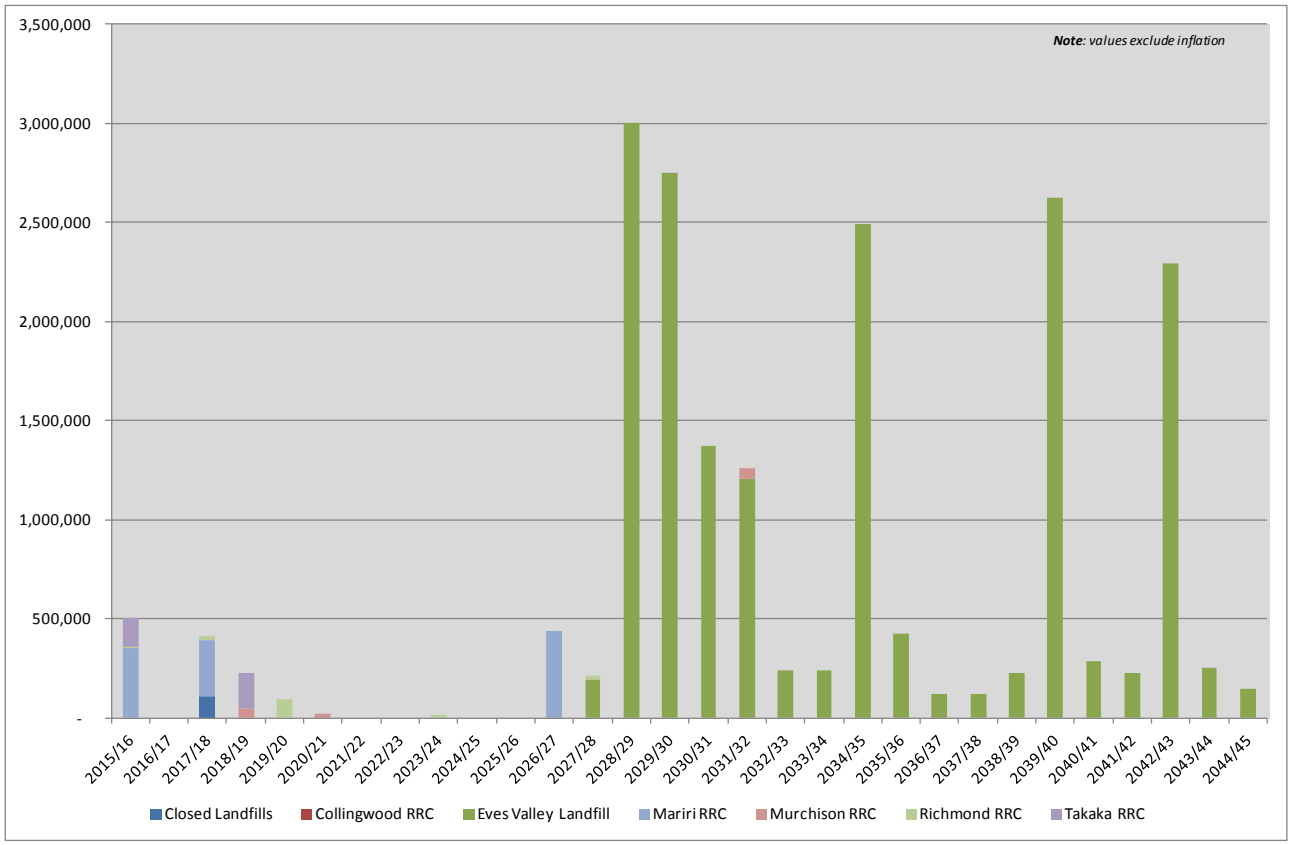


Figure F-4: 2015 – 2045 Solid Waste New Capital Expenditure by Scheme

Figure F-4 shows a low level of new capital expenditure in the first ten years, which increases substantially from 2026/27.

This reflects a “pause” on new capital development following improvements which have lifted levels of service in recent years. It also reflects a transition to regional landfill activities and new recycling services from 2015/16.

The new capital from 2026/27 is dominated by development of Stage 3 at the Eves Valley landfill.

A review of services and a waste assessment in 2015/16 may identify new capital needs for the region, which will be incorporated into the next AMP.

Table F-5: 2015 – 2045 Solid Waste New Capital Expenditure

ID	Project Name	Project Description	Category	GL Code	New Capital Estimate	Total Project Estimate	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35	Year 21 to Year 30
1	Closed Landfill Consent Renewals	Closed Landfill Global Consent ; Rototai Closed Landfill land disturbance consent	Closed Landfills	7056211003	-	59,675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Mariri Old Rock Protection and Resource Consent	Rock protection works as identified in the Closed Landfills Visual Inspection Report 2011	Closed Landfills	7056211004	108,500	108,500	-	-	108,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Cap Renewals	Cap renewal work at Appleby, Lodder Lane, Mariri RRC, Richmond RRC, and Waiwhero	Closed Landfills	7056211005	-	135,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Stage 3 Development	Construction of Stage 3	Eves Valley Landfill	7016211001	16,081,048	16,081,048	-	-	-	-	-	-	-	-	-	-	-	-	192,768	2,249,062	1,675,262	1,262,900	1,097,463	135,491	243,039	2,494,798	6,730,264
5	Pavement Enhancements	Access road sealing and development	Eves Valley Landfill	7016211002	-	290,455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Capping of Stage 2	Use onsite clay to cap Stage 2 as required by Resource Consent	Eves Valley Landfill	7016211003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Eves Valley Resource Consent	Investigations & Consent for Stage 3 as regional site	Eves Valley Landfill	7016211007	-	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Retrofit LFG to Stage 2	Install landfill gas collection system into Stage 2 when Stage developed	Eves Valley Landfill	7016211011	2,151,200	2,151,200	-	-	-	-	-	-	-	-	-	-	-	-	-	752,920	1,075,600	107,560	107,560	107,560	-	-	-
9	Site Signage	Road and on-site signage	Mariri RRC	7036211001	-	92,928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Recycling facilities	Provision of storage shed for processed recyclables	Mariri RRC	7036211007	440,944	440,944	-	-	-	-	-	-	-	-	-	-	-	440,944	-	-	-	-	-	-	-	-	-
11	Mariri Consent Renewals	Consent renewal	Mariri RRC	7036211011	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Renew computers	Replace computers every 3 years	Mariri RRC	7036107	-	45,570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Stage 2 - Site Development	Stage 2 - Improve access to public and commercial recycling drop-off areas, reverse flow direction with ramp construction	Mariri RRC	7036211013	352,625	352,625	352,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Stage 3 - Site Development	Improvements to greenwaste and cleanfill drop off areas	Mariri RRC	7036211014	282,100	282,100	-	-	282,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Renew 4x compactor bins	Refurbish bins every three years, Replace every 10 years	Mariri RRC	7036211015	-	171,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Mariri compactor renewal	Refurbish compactor and pit every 10 years and replace every 20 years	Mariri RRC	7036211016	-	800,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Mariri renewals	Minor renewals	Mariri RRC	7036211017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Site Signage	Road and on-site signage	Murchison RRC	7276211001	-	77,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Murchison Consent Renew	Consent renewal (expires 15/04/2028)	Murchison RRC	7276211009	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Renew computers	Replace computers every 3 years	Murchison RRC	7276107	-	26,127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Stage 2 Site Development	Stage 2 - Enhance/extend landscaping, Provision of storage shed for small quantities of hazardous waste, Sealed and gravelled areas	Murchison RRC	7276211011	47,908	79,846	-	-	-	47,908	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Stage 3 - Site Development	Stage 3 - Pavement renewals, site fencing	Murchison RRC	7276211012	82,066	136,777	-	-	-	-	-	23,377	-	-	-	-	-	-	-	-	-	-	58,690	-	-	-	-
23	Site Signage	Road and on-site signage	Richmond RRC	7026211001	-	34,937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ID	Project Name	Project Description	Category	GL Code	New Capital Estimate	Total Project Estimate	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35	Year 21 to Year 30
24	Upgrade Tipping Pit	Sandblast and repaint steelwork	Richmond RRC	7026211007	-	128,681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Richmond Consent Renewal	Consent renewal	Richmond RRC	7026211014	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Renew computers	Replace computers every 3 years	Richmond RRC	7026107	-	26,127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Site Development - Landscaping	Enhance / extend landscaping	Richmond RRC	7026211016	4,590	4,590	4,590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Richmond Compactor	Refurbish compactor in 2017 & 2022 and replace 2027	Richmond RRC	7026211017	-	542,860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Compactor bins	Refurbish bins in 2017 and 2022 and replace in 2027	Richmond RRC	7026211020	-	984,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Site Development - Pavement Renewals	Reseal existing roads,	Richmond RRC	7026211018	-	113,708	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Site Development large recyclable storage bunkers	Provide storage bunkers for scrap steel, whiteware, cleanfill, C&D waste,	Richmond RRC	7026211023	97,325	97,325	-	-	-	-	97,325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Site Development - second weighbridge	Provision of a second road weighbridge	Richmond RRC	7026211021	59,058	78,744	-	-	21,261	-	-	-	-	-	18,899	-	-	-	18,899	-	-	-	-	-	-	-	-
33	Site Development - roof to compactor	Provide lean to roof over compactor area 8x5m	Richmond RRC	7026211022	-	36,565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Site Signage	Road and on-site signage	Takaka RRC	7116211001	-	41,773	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Repaint RRC and replace hopper cover	Repaint RRC and replace hopper cover	Takaka RRC	7116211007	-	43,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Leachate Pump Renewal	Replace leachate pump	Takaka RRC	7116211011	-	3,255	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Takaka Consent Renewal	Stormwater consent renewal (RM940041/NN940057/NN940058)	Takaka RRC	7116211016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Replace Compactor & Bins	Replace Compactor & Bins	Takaka RRC	7116211017	-	456,894	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Renew computers	Replace computers every 3 years	Takaka RRC	7116107	-	26,127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Takaka renewals	Renewals at Takaka RRC	Takaka RRC	7116211018	-	126,942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Takaka improvements	Improvements to Takaka RRC	Takaka RRC	7116211019	180,000	180,000	-	-	-	180,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Takaka weighbridge	Install weighbridge and re-locate kiosk	Takaka RRC	7116211020	150,000	150,000	150,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTALS				20,037,363	25,197,322	507,215	-	411,861	227,908	97,325	23,377	-	-	18,899	-	-	440,944	211,667	3,001,982	2,750,862	1,370,460	1,263,712	243,051	243,039	2,494,798	6,730,264

Note: Does not include inflation

APPENDIX G DEVELOPMENT CONTRIBUTIONS AND FINANCIAL CONTRIBUTIONS

Tasman District Council's full Development Contribution Policy (The Policy) can be found on our website at http://www.tasman.govt.nz/policy/policies/development-contributions-policy.

The Policy was adopted in conjunction with the Council's Long Term Plan (LTP) and will come into effect on 1 July 2015.

The Policy sets out the development contributions payable by developers, how and when they are to be calculated and paid, and a summary of the methodology and rationale used in calculating the level of contributions.

The key purpose of the Development Contribution Policy is to ensure that growth, and the cost of infrastructure to meet that growth, is funded by those who cause the need for and benefit from the new or additional infrastructure, or infrastructure of increased capacity.

There are no specific development contributions applicable to the solid waste activity. However, development of solid waste assets may require connections and upgrades of the other infrastructure such as transportation, water and wastewater and could then be subject to development contributions. The Development Contribution Policy in the LTP summarises where and how these are applied and how they are calculated.

APPENDIX H RESOURCE CONSENTS AND PROPERTY DESIGNATIONS

H.1 Introduction

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, a Unitary Authority, through the Tasman Resource Management Plan (TRMP).

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

Council's solid waste facilities have an essential role in ensuring that solid 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 solid waste facilities, such as Resource Recovery Centres (RRCs).

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

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

H.2 Schedule of Resource Consents

A summary of resource consents held for the Council's solid waste activities is provided in Table H.1 below. Please note that this list may not be exhaustive, is only accurate at the time of compilation (November 2014), 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 solid waste facilities and are not included in Table H.1.

Table H-1: Schedule of Current Resource Consents Relating to the Solid Waste Activity

Location	Consent No.	Consent Type	Effective Date	Expiry Date
RRCs				
Richmond RRC	RM050981V2 RM100281 RM051064 RM031343 NN925482	Discharge to water Land use – recycling centre Land use – outline plan Land use – outline plan Coastal – repair seawall	6/11/2012 31/5/2010 3/2/2006 4/2/2004 14/3/1993	2/06/2041 N/A N/A N/A 30/6/2020
Mariri RRC	RM090392V1 RM060748	Discharge To Land Land use – outline plan	31/08/2009 11/10/2006	31/08/2044 N/A
Collingwood RCC	NN990433V1	Land Use	20/10/2013	N/A
Takaka RRC	RM940041 RM140174	Land Use Discharge to land & water	23/6/1994 24/6/2014	N/A 24/6/2049
Murchison RRC	RM071027 RM071231	Discharge To Air Discharge to land & water	8/5/2008 8/5/2008	15/04/2028 15/04/202

Location	Consent No.	Consent Type	Effective Date	Expiry Date
RRCs				
				8
Operational Landfill				
Eves Valley Landfill	NN970122V2 NN970123	Discharge to land Discharge to air	22/08/2014 24/2/1998	1/10/2015 1/10/2015
	NN970272V1	Discharge To Air	23/03/1998	1/10/2015
	NN970271V2	Discharge To Water	23/03/1997	1/10/2015
Closed Landfills				
Tasman District Council Closed Landfills	RM090694V2 RM090695	Global consent – discharge to air, land, and water Land use	13/11/13 21/12/2009	21/12/2044 21/12/2044
Cobb Valley (Ernies Flat)	NN970153	Discharge To Water	29/07/1998	1/03/2017
Rototai Closed Landfill	RM090203 RM090379 RM130779 RM130780	Coastal disturbance Land use Land use – operate cleanfill site Coastal disturbance	20/8/2009 31/8/2009 29/11/2013 29/11/2013	29/07/2044 29/7/2019 29/11/2048 29/11/2048

H.3 Resource Consent Reporting and Monitoring

Council aims to achieve minimum compliance with all consents and / or operating conditions. Use of the Council's Napier Computer System (NCS) monitoring database allows the accurate programming of all actions required by the consents including renewal prior to expiry.

H.3.1. Auditing

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

H.3.2. Environmental Reporting and Monitoring

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

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 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, Council's database for storing monitoring data.

While this database has the ability to store data, it has not proven useful for viewing, managing, or manipulating data. Council continues to maintain a duplicate set of all monitoring data and use alternative software for managing the data.

H.3.3. Annual Site Reports

Where required by consent conditions an annual report is also prepared for each site. This report generally summarises 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.

H.3.4. Council's Annual Report

The extent to which the Council has met all of the conditions of each consent is reported in its Annual Report each year.

A summary of how Council is performing against this Level of Service is also provided in Appendix R.

H.4 Property 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 solid waste 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 on-going need for regional resource consents (e.g. water permits) required for the designated site or purpose (refer to section H.2 above).

Table H-2: 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

APPENDIX I. CAPITAL REQUIREMENTS FOR FUTURE RENEWALS

I.1 Introduction

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. Work over and above restoring an asset to original capacity is new works expenditure.

I.2 Renewal Strategy

Assets are considered for renewal as they near the end of their effective working life or where the cost of maintenance becomes uneconomical and when the risk of failure of the assets is sufficiently high.

Renewal decisions are supported by reports from the operations contractors work based on their knowledge of the systems. In addition, the theoretical life expectances of asset components have been used for the purpose of some financial projections.

Non-performing assets are identified by the monitoring of asset reliability, capacity and efficiency during planned maintenance inspections, operational activity and investigation of customer complaints. Indicators of non-performing assets include:

- structural failure;
- repeated asset failure;
- ineffective and/or uneconomic operation.

The renewal programme will be reviewed at least annually, with any deferred work re-prioritised alongside new renewal projects and a revised programme established.

Prior to any assets being renewed, the Council or the operations contractor will inspect these assets to confirm whether renewal is actually necessary. In the event it does not need to be renewed, a recommended date of renewal is then inputted back into Confirm. This new date will then be included in the next AMP update.

I.3 Delivery of Renewals

Minor renewal projects are typically carried out by the relevant operation and maintenance contractor. Contracts for larger value renewal projects are tendered in accordance with the Procurement Strategy.

I.4 Renewal Standards

The work to be performed and materials to be used shall comply with the current Tasman District Council Engineering Standards.

I.5 Deferred Renewals

Deferred renewals 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 is 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.

I.5.1. Assessment of Deferred Renewals

The extent of deferred renewals can be identified by comparing the accumulated investment in renewals with accumulated annual depreciation. This information then forms the basis of a renewals strategy.

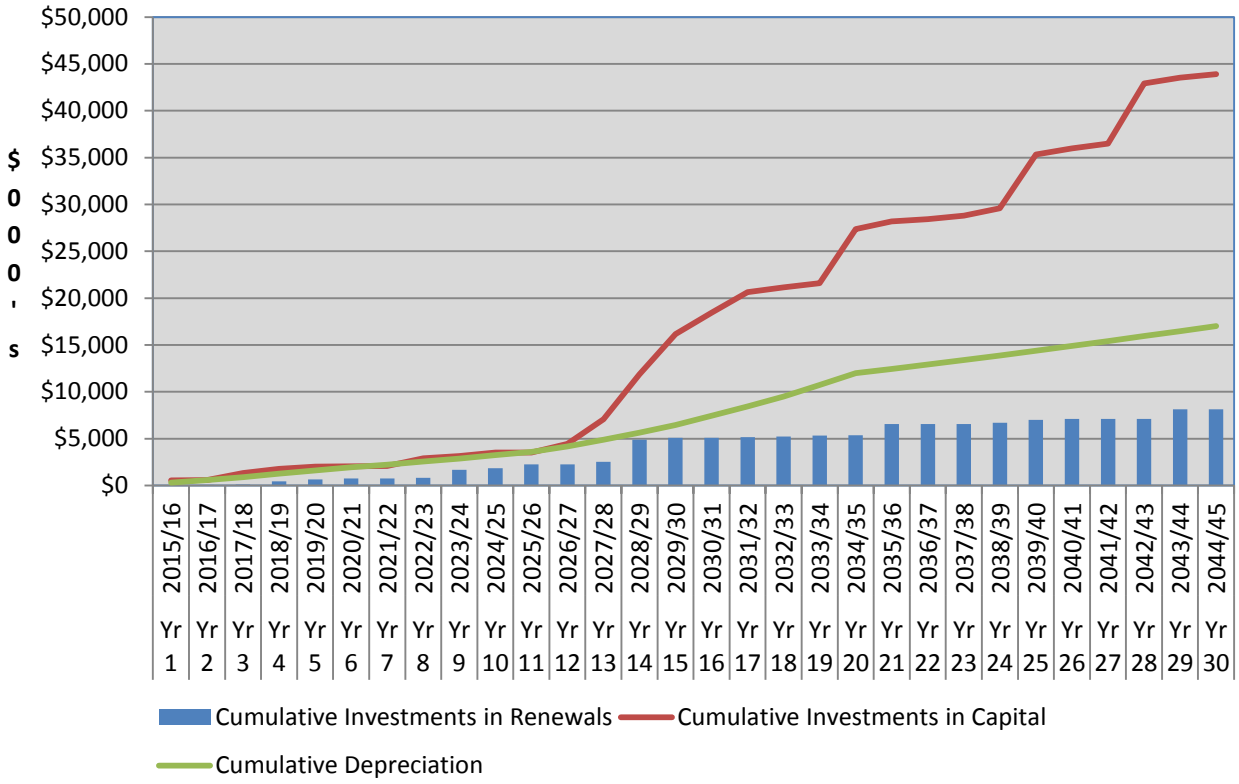


Figure I-1: Accumulated Renewal Expenditure and Depreciation for all Solid Waste Assets

Figure I-1 compares the total cumulative investment in renewals and the total cumulative depreciation for the solid waste activity for the next 30 years.

As shown in Figure I-1, the investment in renewals lags depreciation over the first ten years, but total capital spend almost matches depreciation. The relatively low level of renewals is a reflection of the fact that significant capital work has been completed in recent years, and these assets are moderately young.

In years ten to thirty renewals also lag depreciation, but new capital significantly exceeds depreciation. The new capital in the latter years is construction of Stage 3 of the Eves Valley landfill (as a regional site), which provides new airspace.

Further work is programmed to improve the asset valuation and remaining life for key assets, which may change Council's accumulated depreciation profile.

I.5.2. Management and Mitigation of Deferred Renewals

I.5.3. Management and Mitigation of Renewals

To improve the information base for the renewals strategy and replacement programme, the Council will focus on the following improvements:

- determining critical assets for the activity, in the light of recent changes to operations;
- better defining heavy maintenance cycles for mechanical equipment (waste compactors and bins);
- updating the solid waste valuation, using the more up-to-date and complete database in confirm and more critically assessing remaining life of critical or high value assets;
- better define which assets will require renewal and which may be abandoned;
- review the life and renewal cycle for critical wastewater assets that are managed by the activity;
- better define the maintenance and renewal strategy for sealed pavements on sites

Some of the particular areas where the Council needs to improve their knowledge include:

- expected life of waste compactors and bins (in respect of time and number of cycles / tonnages of waste);
- assess condition and remaining life of paved surfaces on RRC sites;
- renew / replacement strategy for below ground infrastructure at Eves Valley landfill (mainly wastewater and leachate lines).

I.6 Forecast of Renewals Expenditure

Figure I-1 and Table I-1 shows the projected renewal costs for the next 30 years.

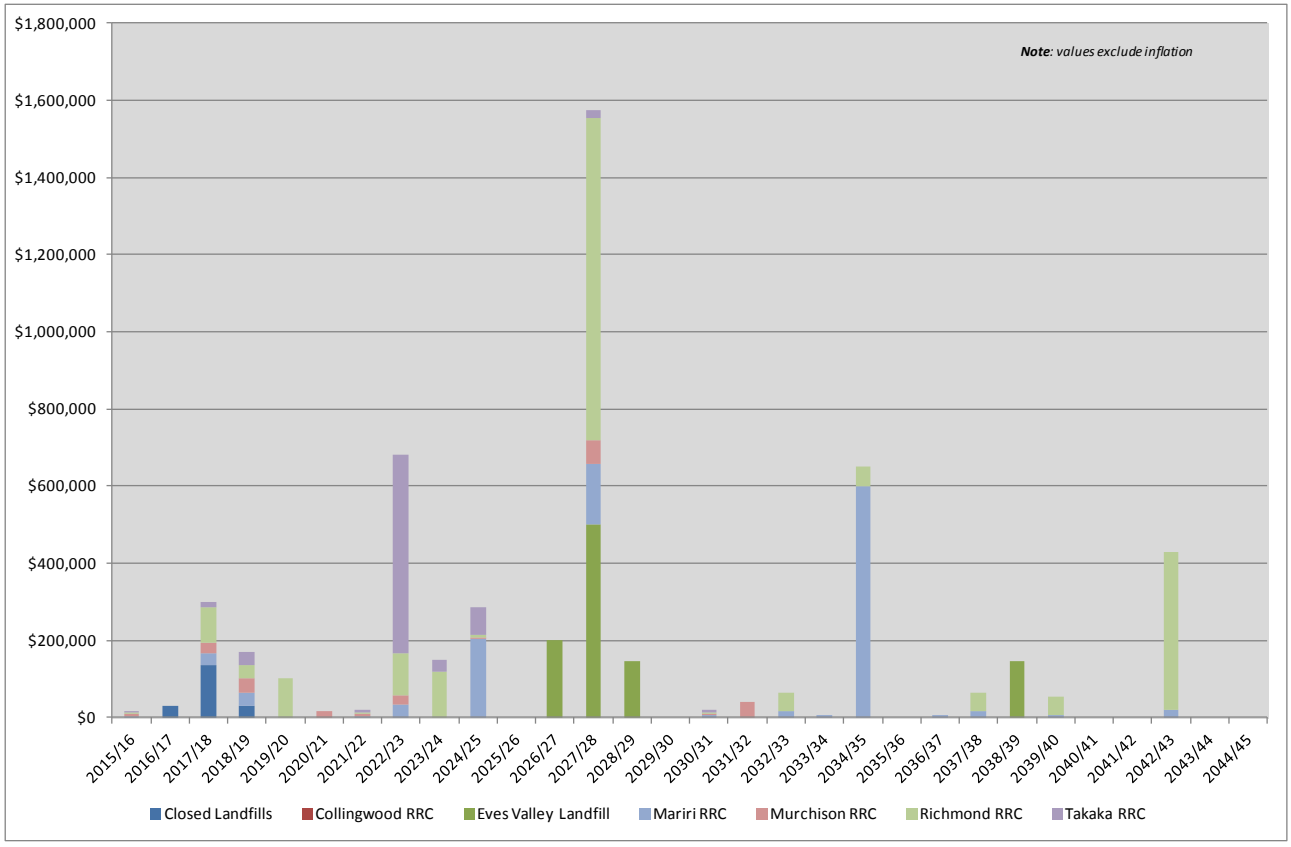


Figure I-1: 2012 – 2032 Solid Waste Renewal Expenditure by Scheme

Table I-1: Breakdown of Expenditure Forecast for Renewals

ID	Project Name	Project Description	Category	GL Code	Renewal Estimate	Total Project Estimate	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35	Year 21 to Year 30
1	Closed Landfill Consent Renewals	Closed Landfill Global Consent ; Rototai Closed Landfill land disturbance consent	Closed Landfills	7056211003	59,675	59,675	-	29,838	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Mariri Old Rock Protection and Resource Consent	Rock protection works as identified in the Closed Landfills Visual Inspection Report 2011	Closed Landfills	7056211004	0	108,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Cap Renewals	Cap renewal work at Appleby, Lodder Lane, Mariri RRC, Richmond RRC, and Waiwhero	Closed Landfills	7056211005	135,625	135,625	-	-	135,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Stage 3 Development	Construction of Stage 3	Eves Valley Landfill	7016211001	0	16,081,048	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Pavement Enhancements	Access road sealing and development	Eves Valley Landfill	7016211002	290,454	290,455	-	-	-	-	-	-	-	-	-	-	-	-	-	145,227	-	-	-	-	-	-	145,227
6	Capping of Stage 2	Use onsite clay to cap Stage 2 as required by Resource Consent	Eves Valley Landfill	7016211003	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Eves Valley Resource Consent	Investigations & Consent for Stage 3 as regional site	Eves Valley Landfill	7016211007	700,000	700,000	-	-	-	-	-	-	-	-	-	-	-	200,000	500,000	-	-	-	-	-	-	-	-
8	Retrofit LFG to Stage 2	Install landfill gas collection system into Stage 2 when Stage developed	Eves Valley Landfill	7016211011	0	2,151,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Site Signage	Road and on-site signage	Mariri RRC	7036211001	92,928	92,928	-	-	15,181	-	-	-	-	15,181	-	-	-	-	15,641	-	-	-	-	15,641	-	-	31,283
10	Recycling facilities	Provision of storage shed for processed recyclables	Mariri RRC	7036211007	0	440,944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Mariri Consent Renewals	Consent renewal	Mariri RRC	7036211011	29,837	29,838	-	-	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Renew computers	Replace computers every 3 years	Mariri RRC	7036107	45,570	45,570	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,861	-	-	4,861	-	14,582
13	Stage 2 - Site Development	Stage 2 - Improve access to public and commercial recycling drop-off areas, reverse flow direction with ramp construction	Mariri RRC	7036211013	0	352,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Stage 3 - Site Development	Improvements to greenwaste and cleanfill drop off areas	Mariri RRC	7036211014	0	282,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Renew 4x compactor bins	Refurbish bins every three years, Replace every 10 years	Mariri RRC	7036211015	171,430	171,430	-	-	17,143	-	-	-	-	17,143	-	-	-	-	137,144	-	-	-	-	-	-	-	-
16	Mariri compactor renewal	Refurbish compactor and pit every 10 years and replace every 20 years	Mariri RRC	7036211016	800,000	800,000	-	-	-	-	-	-	-	-	-	200,000	-	-	-	-	-	-	-	-	-	600,000	-
17	Mariri renewals	Minor renewals	Mariri RRC	7036211017	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Site Signage	Road and on-site signage	Murchison RRC	7276211001	77,035	77,035	-	-	25,422	-	-	-	-	25,422	-	-	-	-	26,192	-	-	-	-	-	-	-	-
19	Murchison Consent Renew	Consent renewal (expires 15/04/2028)	Murchison RRC	7276211009	29,837	29,838	-	-	-	-	-	-	-	-	-	-	-	-	29,838	-	-	-	-	-	-	-	-
20	Renew computers	Replace computers every 3 years	Murchison RRC	7276107	26,126	26,127	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,861	-	-	-	-	-
21	Stage 2 Site Development	Stage 2 - Enhance/extend landscaping, Provision of storage shed for small quantities of hazardous waste, Sealed and gravelled areas	Murchison RRC	7276211011	31,938	79,846	-	-	-	31,938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Stage 3 - Site Development	Stage 3 - Pavement renewals, site fencing	Murchison RRC	7276211012	54,710	136,777	-	-	-	-	-	15,584	-	-	-	-	-	-	-	-	-	-	39,127	-	-	-	-
23	Site Signage	Road and on-site signage	Richmond RRC	7026211001	34,937	34,937	-	-	11,529	-	-	-	-	11,529	-	-	-	-	11,879	-	-	-	-	-	-	-	-

ID	Project Name	Project Description	Category	GL Code	Renewal Estimate	Total Project Estimate	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Year 4 2018/19	Year 5 2019/20	Year 6 2020/21	Year 7 2021/22	Year 8 2022/23	Year 9 2023/24	Year 10 2024/25	Year 11 2025/26	Year 12 2026/27	Year 13 2027/28	Year 14 2028/29	Year 15 2029/30	Year 16 2030/31	Year 17 2031/32	Year 18 2032/33	Year 19 2033/34	Year 20 2034/35	Year 21 to Year 30
24	Upgrade Tipping Pit	Sandblast and repaint steelwork	Richmond RRC	7026211007	128,681	128,681	-	-	-	-	64,341	-	-	-	-	-	-	-	64,341	-	-	-	-	-	-	-	-
25	Richmond Consent Renewal	Consent renewal	Richmond RRC	7026211014	29,837	29,838	-	-	-	29,838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Renew computers	Replace computers every 3 years	Richmond RRC	7026107	26,126	26,127	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,861	-	-	-	-	-
27	Site Development - Landscaping	Enhance / extend landscaping	Richmond RRC	7026211016	0	4,590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Richmond Compactor	Refurbish compactor in 2017 & 2022 and replace 2027	Richmond RRC	7026211017	542,860	542,860	-	-	50,000	-	-	-	-	50,000	-	-	-	-	342,860	-	-	-	-	-	-	50,000	50,000
29	Compactor bins	Refurbish bins in 2017 and 2022 and replace in 2027	Richmond RRC	7026211020	984,000	984,000	-	-	24,000	-	-	-	-	48,000	-	-	-	-	408,000	-	-	-	-	48,000	-	-	456,000
30	Site Development - Pavement Renewals	Reseal existing roads,	Richmond RRC	7026211018	113,708	113,708	-	-	-	-	-	-	-	-	113,708	-	-	-	-	-	-	-	-	-	-	-	-
31	Site Development large recyclable storage bunkers	Provide storage bunkers for scrap steel, whiteware, cleanfill, C&D waste,	Richmond RRC	7026211023	0	97,325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Site Development - second weighbridge	Provision of a second road weighbridge	Richmond RRC	7026211021	19,685	78,744	-	-	7,087	-	-	-	-	-	6,300	-	-	-	6,300	-	-	-	-	-	-	-	-
33	Site Development - roof to compactor	Provide lean to roof over compactor area 8x5m	Richmond RRC	7026211022	36,564	36,565	-	-	-	-	36,565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Site Signage	Road and on-site signage	Takaka RRC	7116211001	41,772	41,773	-	-	13,785	-	-	-	-	13,785	-	-	-	-	14,203	-	-	-	-	-	-	-	-
35	Repaint RRC and replace hopper cover	Repaint RRC and replace hopper cover	Takaka RRC	7116211007	43,400	43,400	-	-	-	-	-	-	-	43,400	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Leachate Pump Renewal	Replace leachate pump	Takaka RRC	7116211011	3,255	3,255	-	-	-	-	-	-	3,255	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Takaka Consent Renewal	Stormwater consent renewal (RM940041/NN940057/NN940058)	Takaka RRC	7116211016	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Replace Compactor & Bins	Replace Compactor & Bins	Takaka RRC	7116211017	456,893	456,894	-	-	-	-	-	-	-	456,894	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Renew computers	Replace computers every 3 years	Takaka RRC	7116107	26,126	26,127	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,253	-	-	4,861	-	-	-	-	-
40	Takaka renewals	Renewals at Takaka RRC	Takaka RRC	7116211018	12,694	126,942	-	-	-	30,055	-	-	-	-	29,811	67,076	-	-	-	-	-	-	-	-	-	-	-
41	Takaka improvements	Improvements to Takaka RRC	Takaka RRC	7116211019	0	180,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Takaka weighbridge	Install weighbridge and re-locate kiosk	Takaka RRC	7116211020	0	150,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX J DEPRECIATION AND DECLINE IN SERVICE POTENTIAL

J.1 Depreciation of Infrastructural Assets

Depreciation is provided on a straight line basis on some 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 remaining useful lives and associated rates for the solid waste infrastructure have been summarised in Appendix D – Asset Valuations.

J.2 Decline in Service Potential

The decline in service potential is a decline in the future economic benefits (service potential) embodied in an asset.

It is Council policy to operate the solid waste activity to meet a desired level of service. Council will monitor and assess the state of the solid waste infrastructure and upgrade or replace components over time to counter the decline in service potential at the optimum times.

J.3 Council's Borrowing Policy

Council's borrowing policy was that it only funds capital and renewal expenditure through borrowing, normally for 20 years, but shorter terms are used for some assets depending on how long they are expected to last before they need to be replaced.

Council has now made a decision to start phasing in the funding of depreciation, effectively this will create a reserve to fund the replacement of assets. This method means that debt will not be raised to fund asset replacement. This is being phased in over ten years and is more fully explained in the Financial Strategy which is part of Supporting Information associated with the 2015 LTP.

APPENDIX K FUTURE DEBT REQUIREMENTS FOR THE ACTIVITY

K.1 General Policy

The Council borrows as it considers prudent and appropriate and exercises its flexible and diversified funding powers pursuant to the Local Government Act 2002. The Council approves, by resolution, the borrowing requirement for each financial year during the annual planning process. The arrangement of precise terms and conditions of borrowing is delegated to the Corporate Services Manager.

The Council has significant infrastructural assets with long economic lives yielding long-term benefits. The Council also has a significant strategic investment holding. The use of debt is seen as an appropriate and efficient mechanism for promoting intergenerational equity between current and future ratepayers in relation to the Council's assets and investments. Debt in the context of this policy refers to the Council's net external public debt, which is derived from the Council's gross external public debt adjusted for reserves as recorded in the Council's general ledger.

Generally, the Council's capital expenditure projects with their long-term benefits are debt funded. The Council's other district responsibilities have policy and social objectives and are generally revenue funded.

The Council raises debt for the following primary purposes:

- capital to fund development of infrastructural assets
- short term debt to manage timing differences between cash inflows and outflows and to maintain the Council's liquidity
- debt associated with specific projects as approved in the Annual Plan or LTP. The specific debt can also result from finance which has been packaged into a particular project.

In approving new debt, the Council considers the impact on its borrowing limits as well as the size and the economic life of the asset that is being funded and its consistency with the Council's long term financial strategy.

The Borrowing Policy is found in Volume 2 of the Council’s LTP.

K.2 Loans

Loans to fund capital projects over the next 10 years add up to the following detailed in Table K-1.

Table K-1: Projected Capital Works Funded by Loan for Next 10 years ($000 excluding inflation)

Solid Waste	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Loans Raised	533	31	766	438	225	46	24	850	218	380
Opening Loan Balance	6,964	6,740	5,988	5,934	5,535	4,932	4,150	3,364	3,498	3,160

K.3 Cost of Loans

The Council funds the principal and interest costs of past loans and these are added to the projected loan costs for the next 10 years as shown in Table K-2.

Table K-2: Projected Annual Loan Repayment Costs for Next 10 Years ($000 excluding inflation)

Solid Waste	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Loans Interest	437	414	392	361	349	309	264	256	249	235
Loan Principal	740	756	783	821	837	828	810	716	556	523

Figure K-1and Figure K-2 show the 10 year and 30 year forecast debt and interest costs respectively. Debt and interest costs associated with solid waste fall from $6.7m to $3.1m by year 10. The longer term forecast is based on a continuation of the 10 year debt level for the foreseeable future.

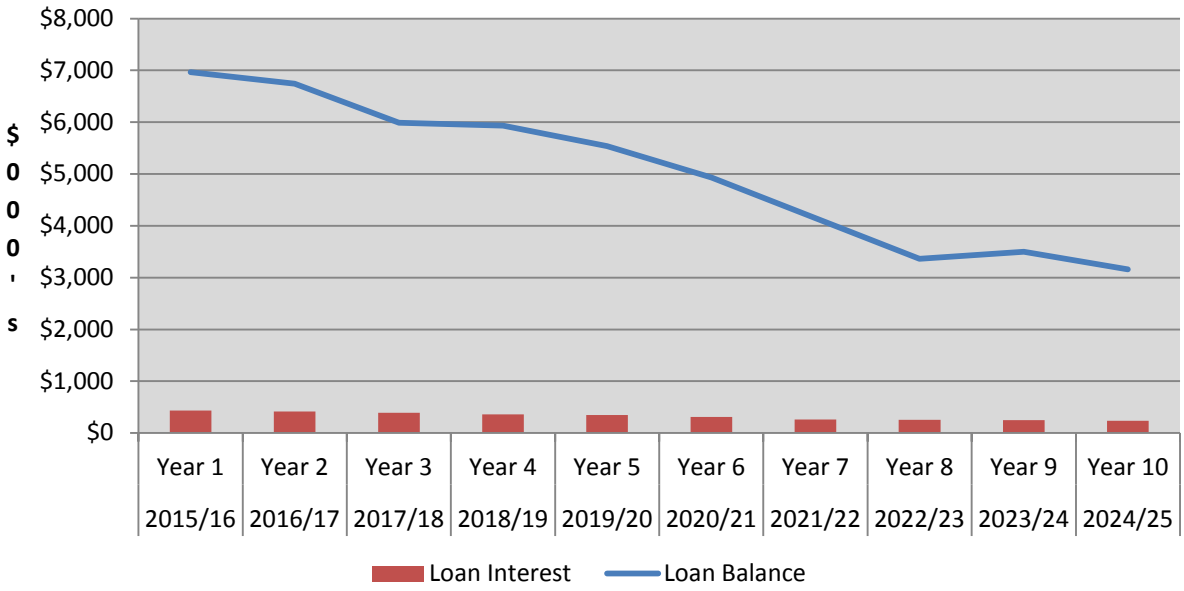


Figure K-1: 10 Year Annual Debt and Interest Cost Forecast

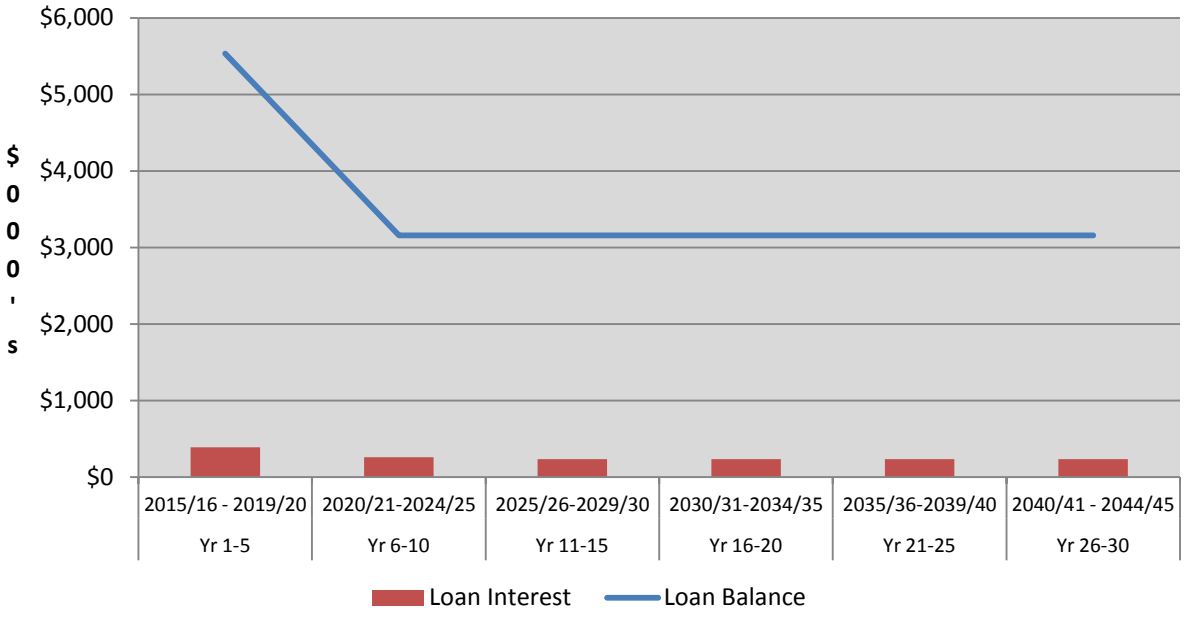


Figure K-2: 30 Year Five Yearly Average Debt and Interest Cost Forecast

APPENDIX L SUMMARY OF FUTURE OVERALL FINANCIAL REQUIREMENTS

Table L-1 presents a summary of the overall future requirements for the solid waste activity in the Tasman district.

Table L-1: Summary of Projected Costs and Income for Next 10 Years

Tasman District Council											
Funding Impact Statement - Solid Waste											
For the Long Term Plan 2015-25											
	2014/15 Budget $000	**2015/16 Budget $000**	**2016/17 Budget $000**	**2017/18 Budget $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**
SOURCES OF OPERATING FUNDING											
General rates, uniform annual general charges, rates penalties	341	351	213	127	148	42	62	(93)	(95)	(445)	(490)
Targeted rates (other than a targeted rate for water supply)	2,170	2,163	2,286	2,344	2,383	2,447	2,537	2,652	2,767	3,017	3,066
Subsidies and grants for operating purposes	0	0	0	0	0	0	0	0	0	0	0
Fees, charges and targeted rates for water supply	0	0	0	0	0	0	0	0	0	0	0
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	5,510	5,578	5,878	6,075	6,310	6,541	6,786	7,047	7,267	7,094	7,357
TOTAL OPERATING FUNDING	**8,021**	**8,092**	**8,378**	**8,546**	**8,841**	**9,029**	**9,385**	**9,606**	**9,938**	**9,666**	**9,934**
APPLICATIONS OF OPERATING FUNDING											
Payments to staff and suppliers	6,084	6,590	6,820	6,929	7,210	7,386	7,708	7,978	8,391	8,240	8,558
Finance costs	432	437	414	392	361	349	309	264	256	249	235
Internal charges and overheads applied	732	457	482	521	530	557	586	604	629	675	694
Other operating funding applications	0	0	0	0	0	0	0	0	0	0	0
TOTAL APPLICATIONS OF OPERATING FUNDING	**7,247**	**7,483**	**7,715**	**7,843**	**8,101**	**8,291**	**8,603**	**8,846**	**9,275**	**9,164**	**9,487**
SURPLUS (DEFICIT) OF OPERATING FUNDING	**774**	**608**	**662**	**704**	**740**	**738**	**782**	**760**	**663**	**501**	**447**

	2014/15 Budget $000	2015/16 Budget $000	2016/17 Budget $000	2017/18 Budget $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
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	(142)	(208)	(725)	(16)	(383)	(612)	(783)	(786)	134	(338)	(143)
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
TOTAL SOURCES OF CAPITAL FUNDING	**(142)**	**(208)**	**(725)**	**(16)**	**(383)**	**(612)**	**(783)**	**(786)**	**134**	**(338)**	**(143)**
APPLICATIONS OF CAPITAL FUNDING											
Capital expenditure											
- to meet additional demand	0	17	31	315	151	115	0	24	850	185	380
- to improve the level of service	395	515	0	451	287	111	46	0	0	33	0
- to replace existing assets	147	0	0	0	0	0	0	0	0	0	0
Increase (decrease) in reserves	90	(132)	(94)	(79)	(81)	(99)	(46)	(50)	(52)	(54)	(76)
Increase (decrease) in investments	0	0	0	0	0	0	0	0	0	0	0
TOTAL APPLICATIONS OF CAPITAL FUNDING	**632**	**401**	**(63)**	**687**	**357**	**126**	**(1)**	**(26)**	**798**	**163**	**304**
SURPLUS (DEFICIT) OF CAPITAL FUNDING	**(774)**	**(608)**	**(662)**	**(704)**	**(740)**	**(738)**	**(782)**	**(760)**	**(663)**	**(501)**	**(447)**
FUNDING BALANCE	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**(0)**	**0**

N.B. Figures include inflation.

L.1 Total Expenditure

Figure L-1 and Figure L-2 show the total expenditure for the solid waste activity for the first 10 and 30 years respectively.

Operating cost increases are due to inflation and increases in waste volumes and kerbside collection routes. Capital expenditure increases in the last twenty years due to development at the Eves Valley landfill.

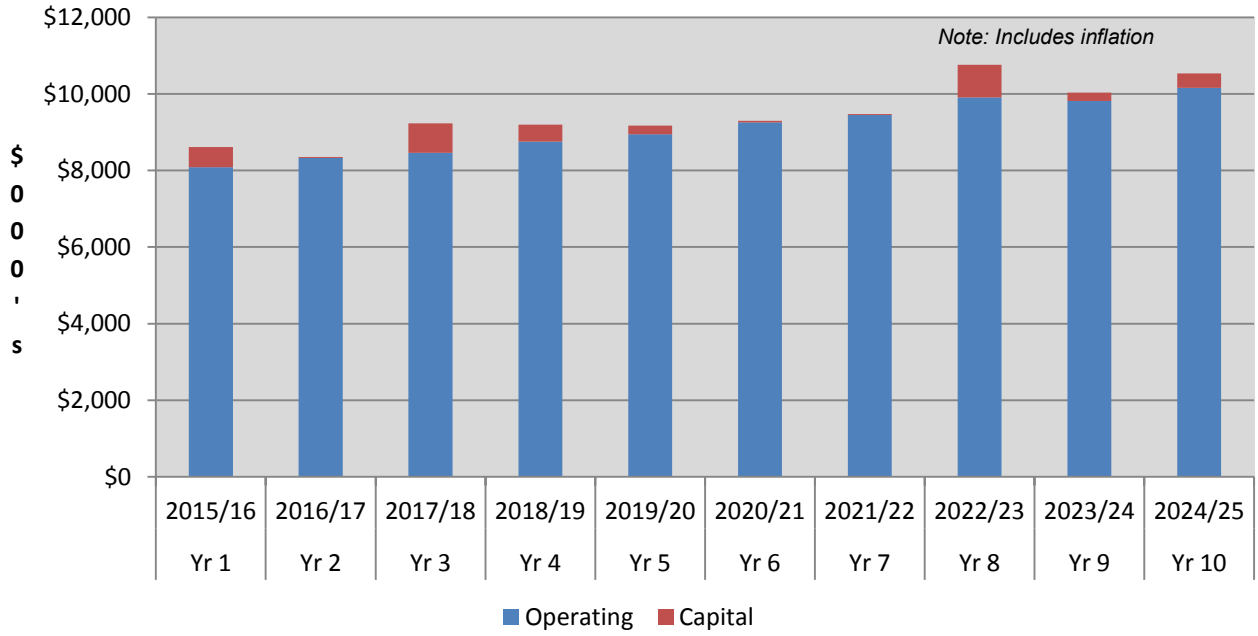


Figure L-1: Total Annual Expenditure Years 1 to 10

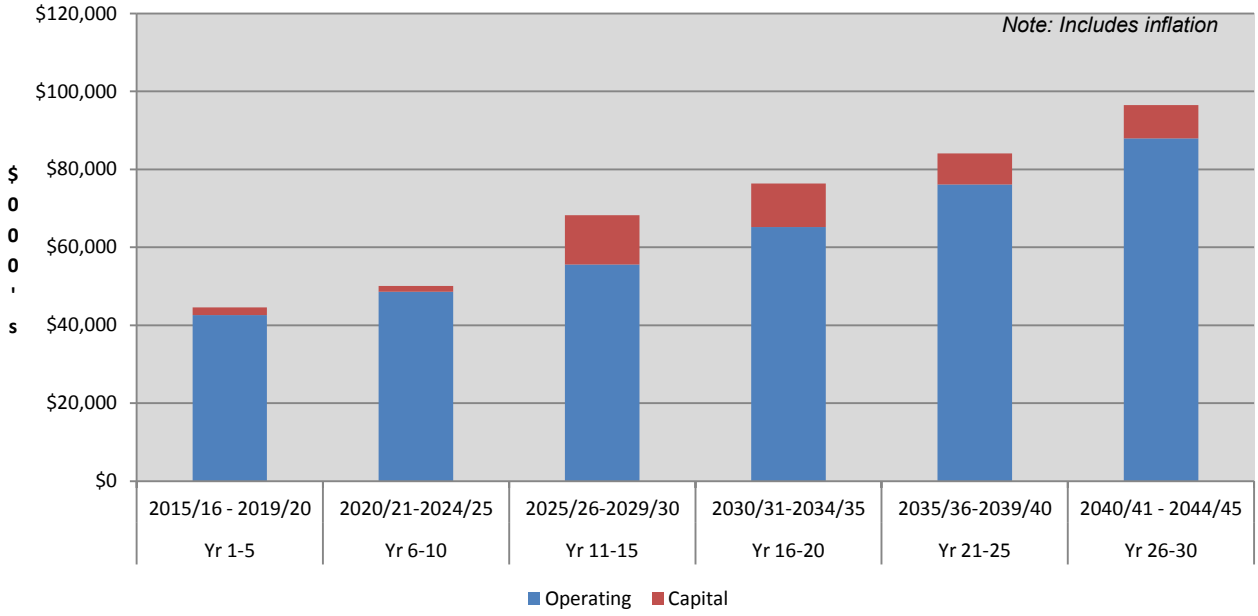


Figure L-2: Five Yearly Total Expenditure Years 1 to 30

L.2 Total Income

Figure L-3 and Figure L-4 show the total income for the solid waste activity for the first 10 and 30 years respectively. Income throughout the period is dominated “other income” which is largely income from fees and charges and from the Nelson City Council.

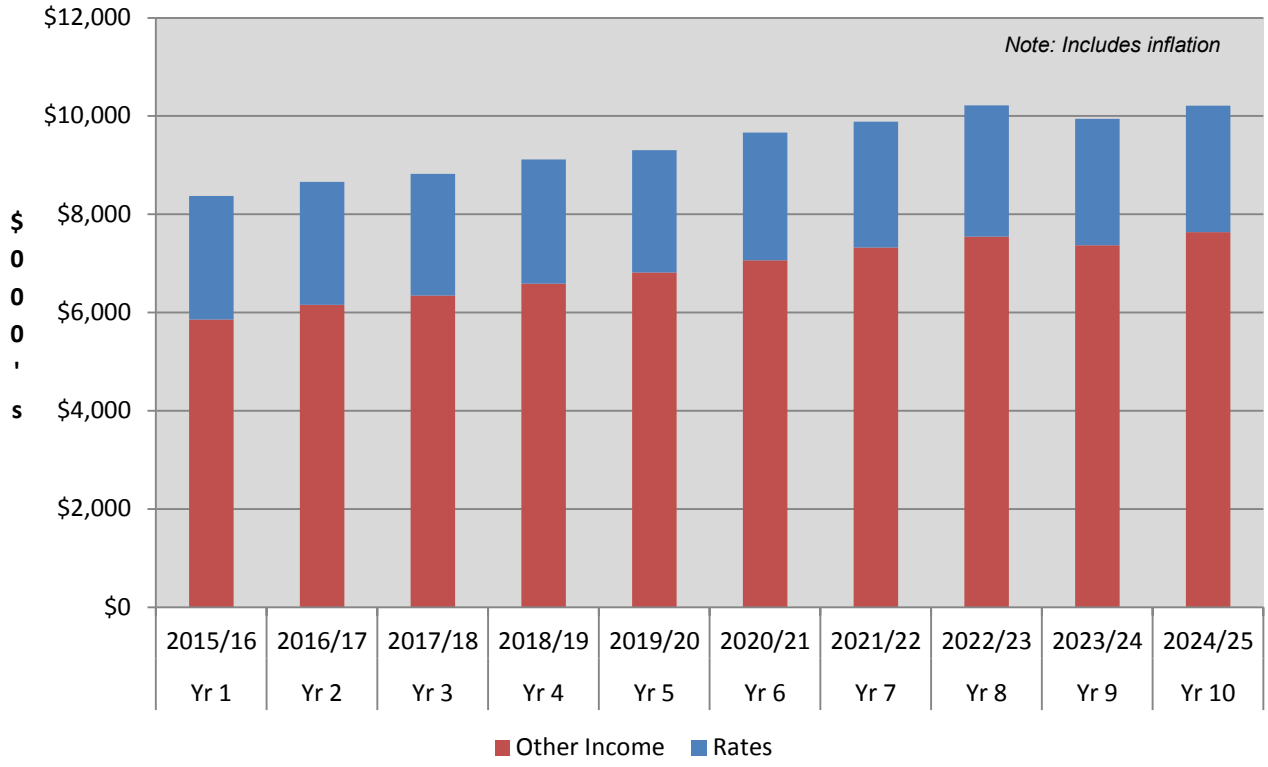


Figure L-3: Total Annual Income Years 1 to 10

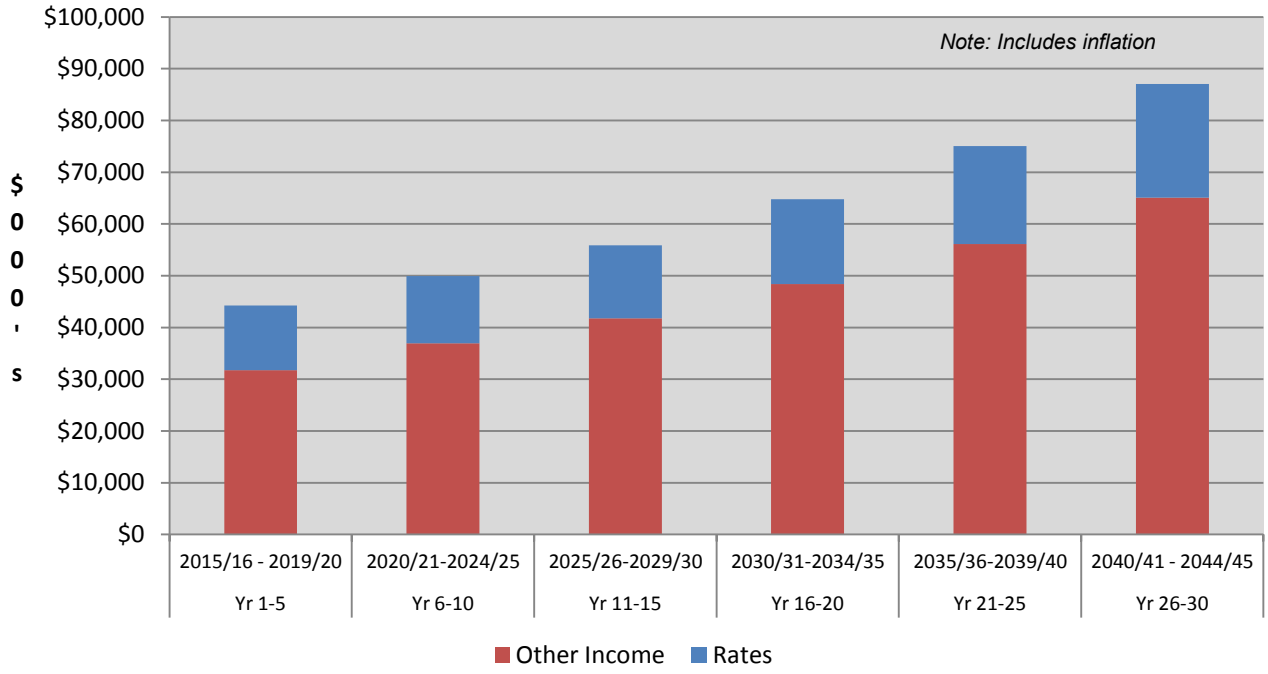


Figure L-4: Five Yearly Total Income Years 1 to 30

L.3 Operational Costs

Figure L-5 and Figure L-6 show the total operating expenditure for the solid waste 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.

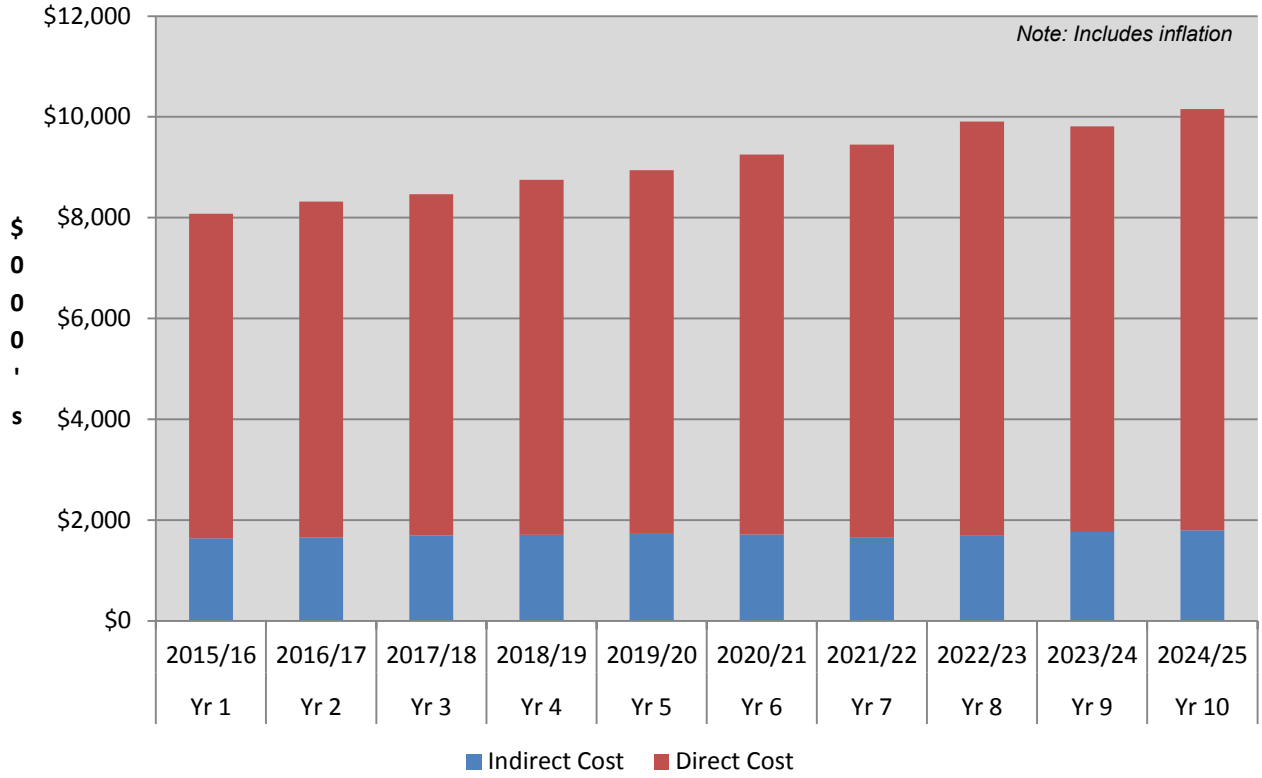


Figure L-5: Annual Operating Costs Years 1 to 10

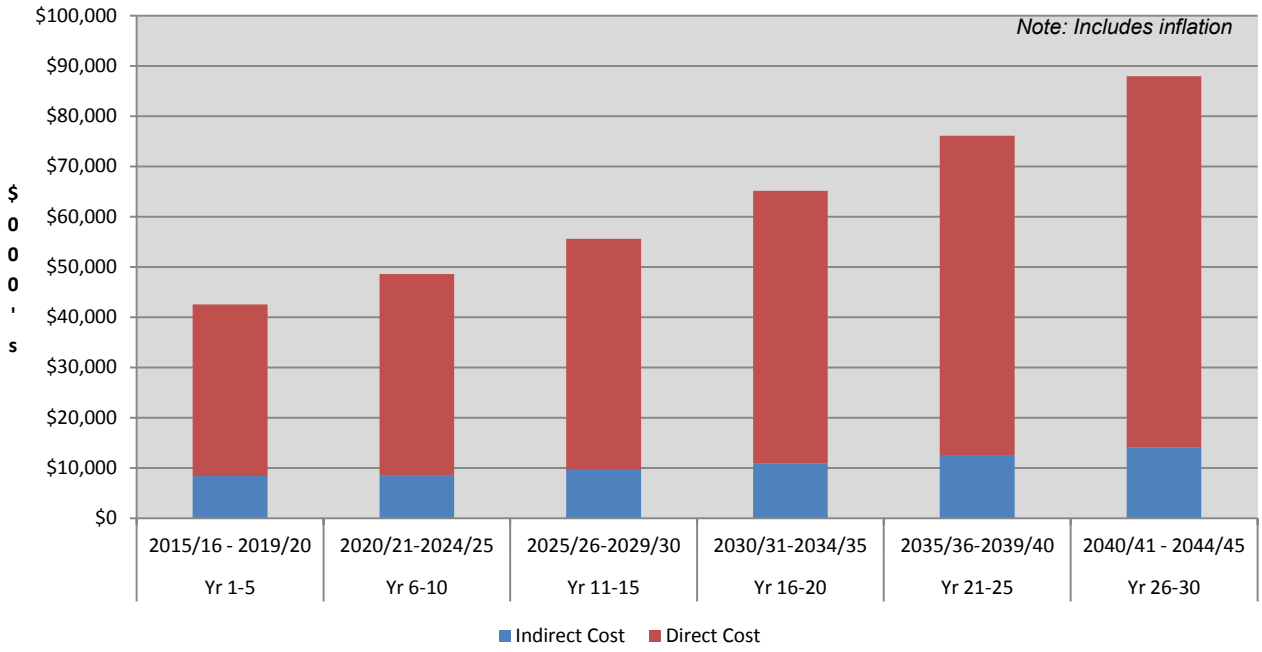


Figure L-6: Five Yearly Operating Cost Years 1 to 30

L.4 Capital Expenditure

Figure L-7 and Figure L-8 show the total capital expenditure for the solid waste activity for the first 10 and 30 years respectively. They show a relatively low level of capital expenditure in the first ten years, which increases substantially in the last twenty years.

This trend reflects a “pause” on new capital development following improvements which have lifted levels of service in recent years. It also reflects a transition to regional landfill activities and new recycling services from 2015/16. New capital from 2026/27 is dominated by development of Stage 3 at the Eves Valley landfill.

A review of services and a waste assessment in 2015/16 will identify future capital needs for the region, which will be incorporated into the next AMP.

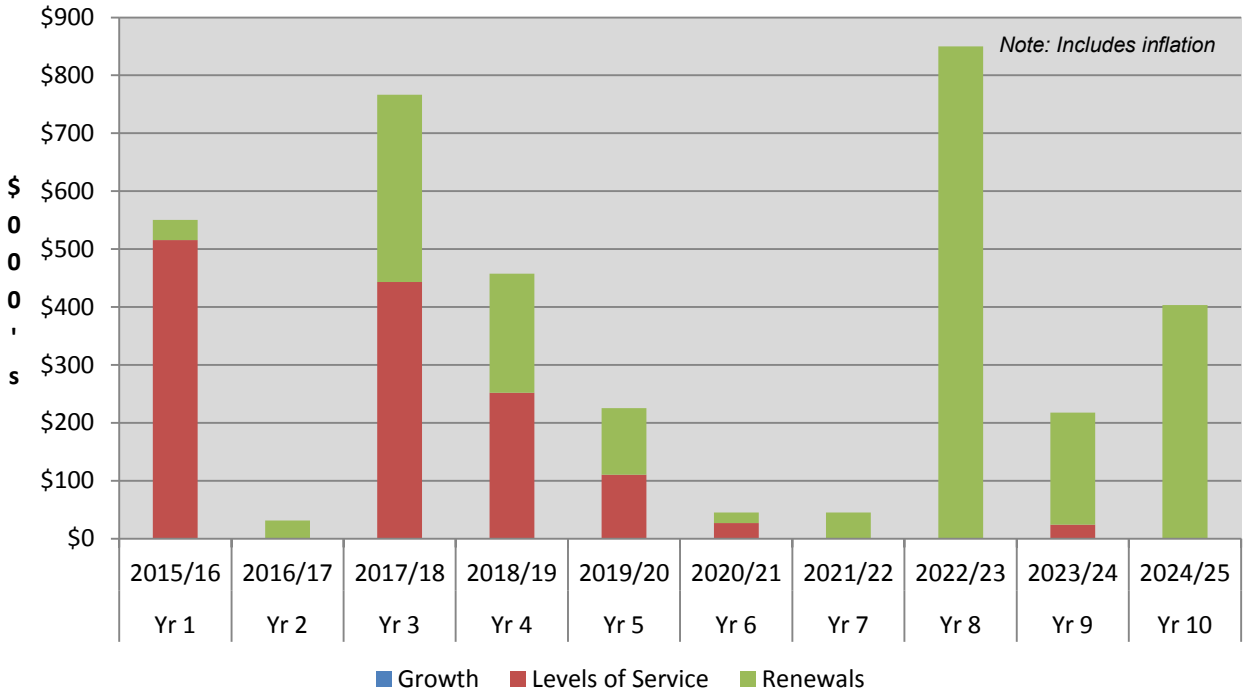


Figure L-7: Annual Capital Expenditure Years 1 to 10

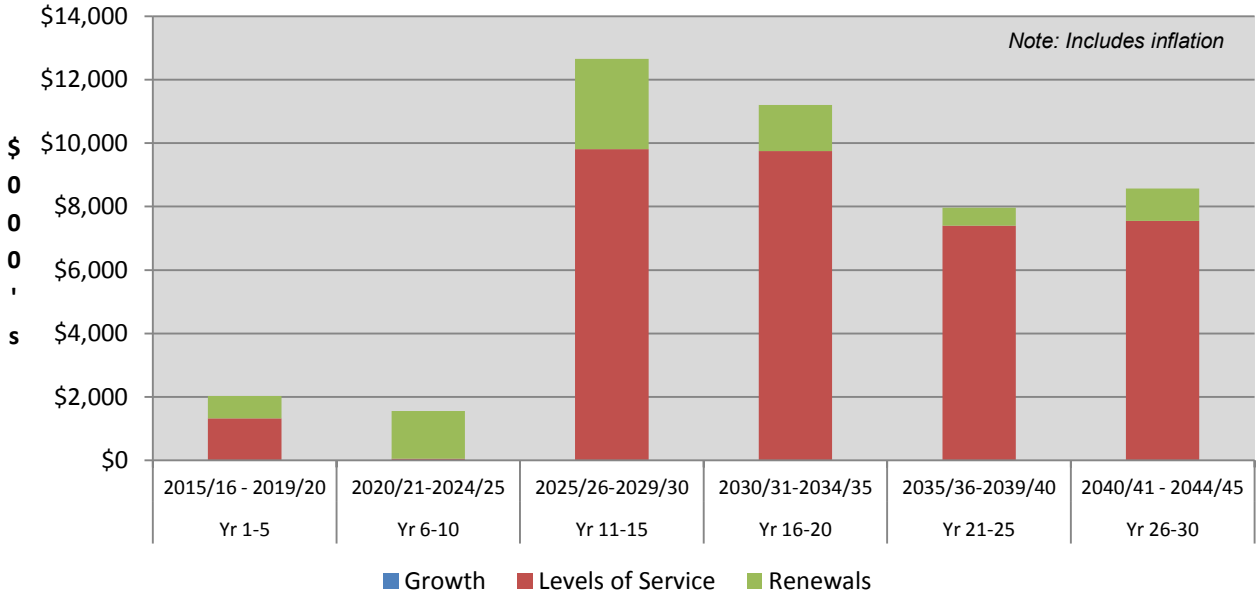


Figure L-8: Five Yearly Capital Expenditure Years 1 to 30

APPENDIX M FUNDING POLICY, FEES AND CHARGES

M.1 Overview

The solid waste activity is funded from the following sources:

- fees and charges for disposal of refuse and other materials;
- revenue distributions for refuse bag sales and sale of recyclables;
- regional landfill revenue distributions from the Nelson City Council;
- waste levy distributions for territorial authorities from central government;
- targeted rates (for kerbside services);
- general rates:
- other sundry income distribution from other Council activities.

M.2 Scheduled fees and charges

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 will be highly affected by pricing of landfill disposal at York Valley from July 2015, as the Council will pay the published gate rate.

From July 2015, the Council will also charge by invoice for additional recycling services to eligible properties who wish to purchase these services.

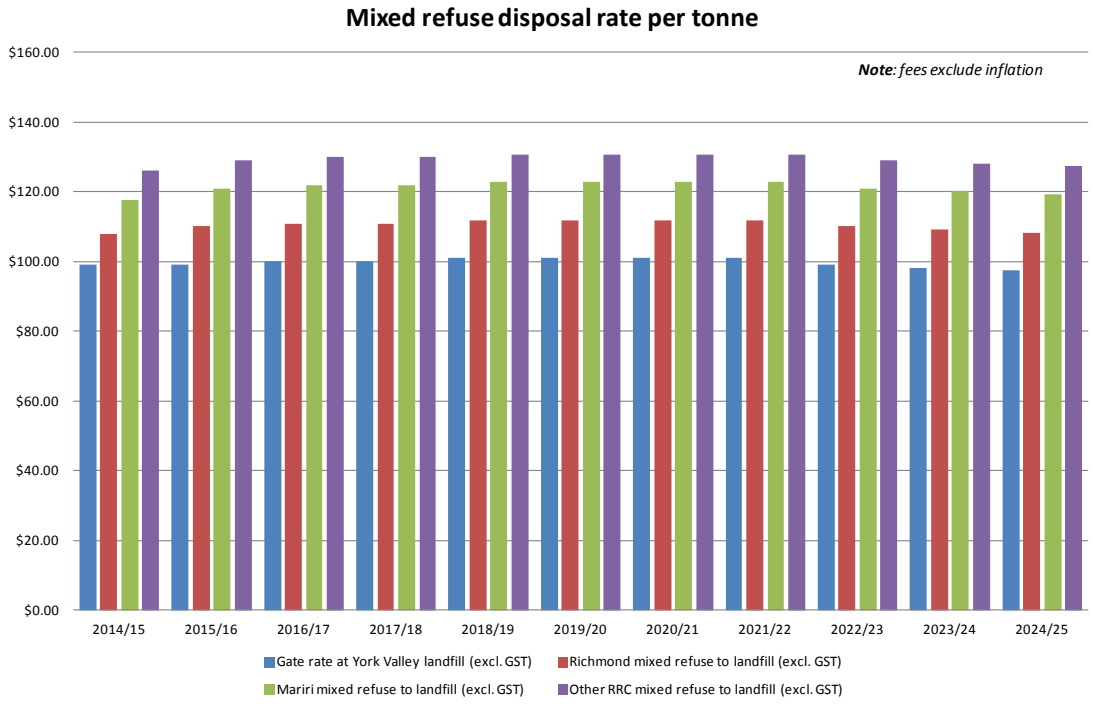


Figure M-1: Projected disposal fees for solid waste

The Council annually sets fees and charges for waste disposal through the Annual Plan/LTP process, but has also granted delegated authority to the Chief Executive to amend charges during the financial year.

M.3 Revenue distributions for sale of recyclables

The Council's contract with the collections contractor allows for the distribution of surplus revenue from the sale of recyclable materials revenues exceed a given target. The Council has not assumed any revenue from this source during the term of the contract.

M.4 Regional landfill revenue distributions from the Nelson City Council

Under the regional landfill arrangement, the Council pays Nelson City Council the published gate rate for disposal at York Valley. In return, Nelson City Council gives the Council a distribution of landfill revenue – a fixed payment of $1.7m and a variable or "at risk" portion of 40% of operating surpluses (estimated at $1.0m in 2015/16).

Figure M-2 shows the projected revenue over the first ten years of the AMP. A deduction of $200,000 in 2015/16 is to create a revenue "stabilisation fund" for the York Valley landfill.

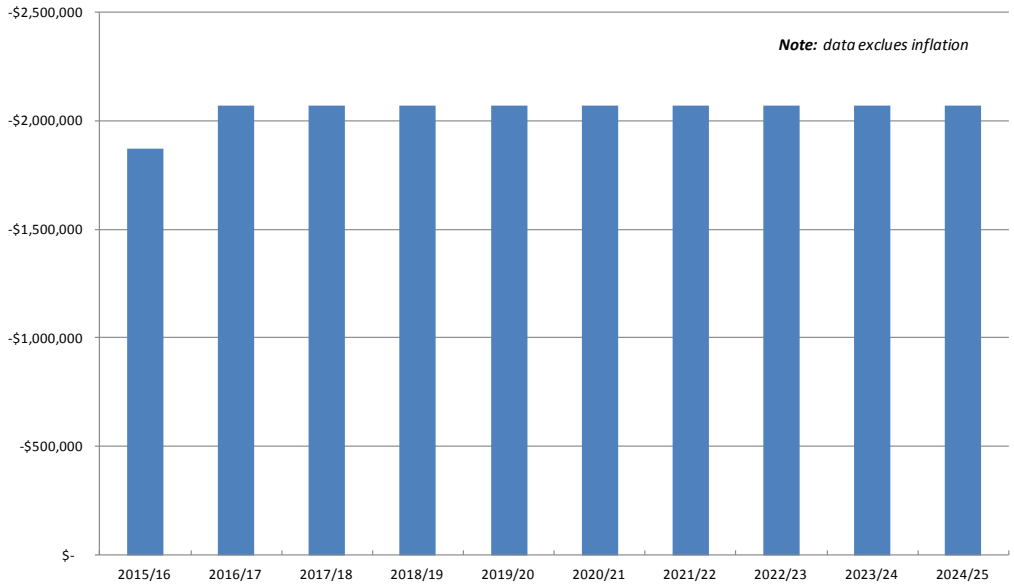


Figure M-2: Projected revenue from Nelson City Council

M.5 Waste levy distributions for territorial authorities

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.

The Council expects to receive $150,000 per annum from the waste levy.

M.6 Refuse Recycling Rate

This a targeted rate set for the purpose of funding kerbside recycling and other waste related activities. This rate is based on where the land is situated and will be set on each rating unit in the Kerbside Recycling Rating Area.

APPENDIX N DEMAND MANAGEMENT

N.1 Introduction to 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;
- respond to customer needs.

N.2 Demand Projections

The solid waste activities of the Council differ from other utility services (water supply, wastewater and stormwater) in that supply and demand are 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).

This movement of waste and recyclables between Nelson and Tasman has made it difficult to plan for income, expenditure and new waste infrastructure, particularly for landfill facilities.

Recent experience in Nelson-Tasman indicates that movement of waste across the Nelson-Taman boundary is sensitive to pricing at the Richmond RRC and the York Valley Landfill. Figure N-1 illustrates this effect, when in late 2004 higher charges in Richmond moved significant quantities to the York Valley Landfill.

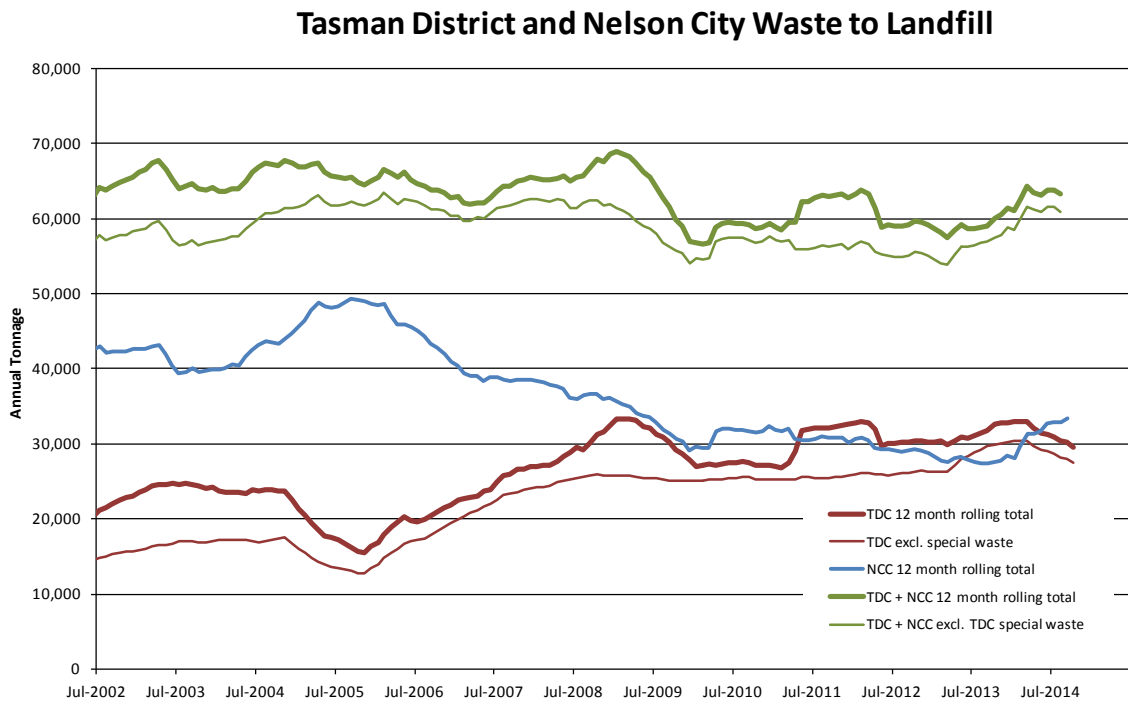


Figure N-1: Tasman District and Nelson City Waste to Landfill

Figure N-1 also illustrates the relatively "peaky" pattern of special waste quantities. Large fluctuations are normally due to large infrastructure projects (biosolids or contaminated land) or from adverse events (such as flooding or fire).

The approach taken in this AMP is to calculate the total waste per head of population from historical data, and to deduct from this the material diverted per annum.

The following graph (Figure N-2) shows historical waste to landfill for Nelson-Tasman and shows the expected waste per capita for the next ten years. Waste per capita to landfill is expected to drop in Year 1 and Year 2 because of the introduction of improved recycling services and increased greenwaste collections (by the private sector). These "supply side" measures are not expected to reduce total waste generated, but will reduce landfill demand.

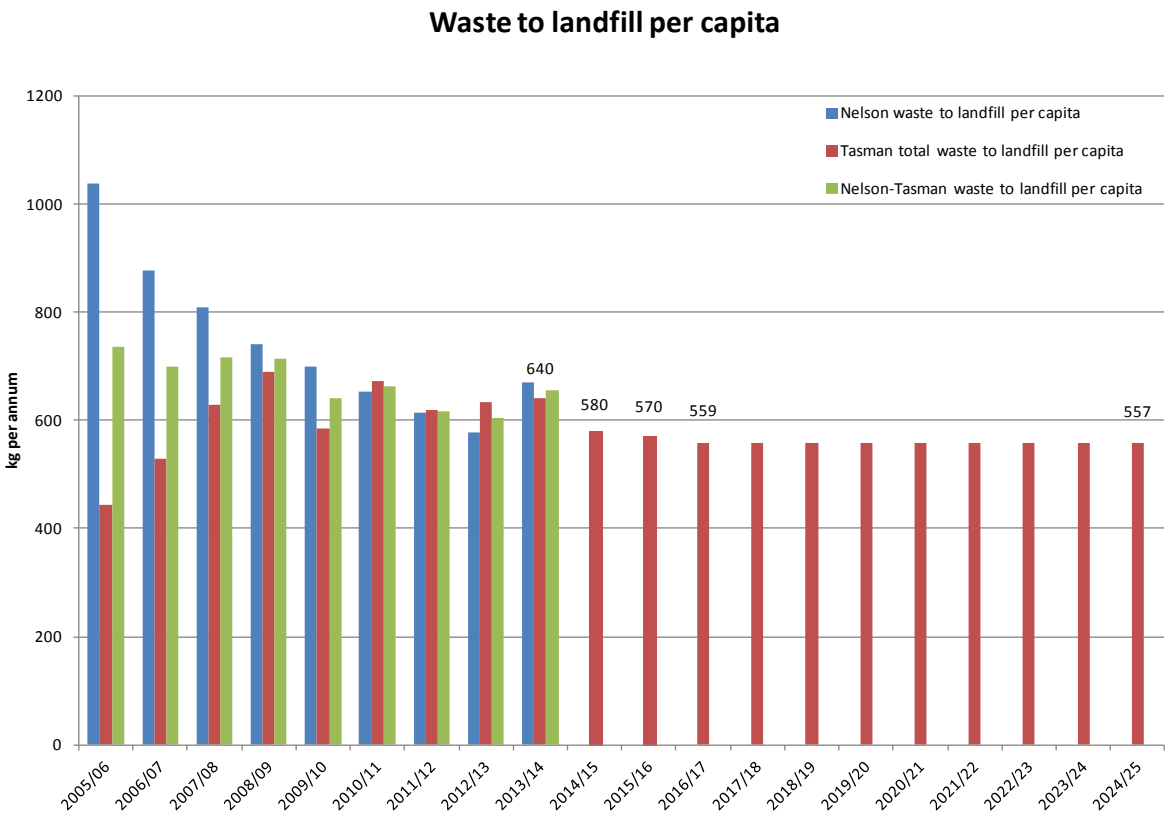


Figure N-2: Waste to Landfill Per Capita

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 more related to economic activity (particularly construction).The effect of the economic recession in 2008-09 is evident in waste quantities to landfill.

N.3 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;
- waste minimisation services.

These are discussed separately in Appendix M (fees and charges) and Appendix B (waste minimisation and promotion).

These measures are all expected to reduce demand for landfill capacity, but it is difficult to separate the effect of these measures on waste trends when analysing waste data.

The rationalisation of landfills in the Nelson-Tasman region (2015/16) 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.

N.4 Climate Change

N.4.1. Changing Climatic Patterns

The RMA 1991 states, in Section 7, that a local authority shall take account of the effects of climate change when developing and managing its resources. To assist local authorities, the Ministry for the Environment (MfE) prepared a report1 to support councils' assessing expected effects of climate change, and to help them prepare appropriate responses when necessary.

This section summarises information presented in the MfE report and a report by NIWA on Climate Change and Variability in the Tasman district. This section aims to explore the impacts of expected climate changes for the Tasman-Nelson region and will conclude with anticipated impacts on this activity.

N.4.2. Temperature Change

Table N-1: Projected Mean Temperature Change (Upper and Lower Limits) in Tasman-Nelson (in ^{0}C)

	Summer	Autumn	Winter	Spring	Annual
Projected changes 1990-2040	0.2 - 2.2	0.2 - 2.3	0.2 - 2.0	0.1 - 1.18	0.2 – 2.0
Projected changes 1990-2090	0.9 – 5.6	0.6 – 5.1	0.5 – 4.9	0.3 – 4.6	0.6 – 5.0

Source: Climate Change and Variability – Tasman District (NIWA, June 2008)

It is the opinion of NIWA[2] scientists that the actual temperature increase this century is very likely to be more than the "low" scenario given here. Under the mid-range scenario for 2090, an increase in mean temperature of 2.0^{0}C would represent annual average temperature in coastal Tasman in 2090.

N.4.3. Rainfall Patterns

Table N-2 following shows an expected increase in mean annual precipitation in Tasman-Nelson from 1990 to 2090.

Table N-2: Projected Mean Precipitation Change (Upper and Lower Limits) in Tasman-Nelson (in %)

	Summer	Autumn	Winter	Spring	Annual
Projected changes 1990-2040	-14, 27	-2, 19	-4, 9	-8, 9	-3, 9
Projected changes 1990-2090	-13, 30	-4, 18	-2, 19	-20, 19	-3, 14

Source: Climate Change and Variability – Tasman District (NIWA, June 2008)

N.4.4. Heavy Rainfall

A warmer atmosphere can hold more moisture (about 8% more for every 10ºC increase in temperature), so there is an obvious potential for heavier extreme rainfall under global warming.

More recent climate model simulations confirm the likelihood that heavy rainfall events will become more frequent.

[1] Climate Change Effects and Impacts Assessment A Guidance Manual for Local Government in NZ (MfE, May 2008)
[2] Climate Change and Variability – Tasman District (NIWA, June 2008)

N.4.5. Evaporation, Soil Moisture and Drought

From their report, NIWA conclude that there is a risk that the frequency of drought (in terms of low soil moisture conditions) could increase as the century progresses, for the main agriculturally productive parts of Tasman district.

N.4.6. Climate Change and Sea Level

NIWA report that a revised guidance manual for local government on coastal hazards and climate change is currently in preparation. For the interim, NIWA's report suggests.

For planning and decision timeframes out to the 2090s (2090-2099) use:

- a base mean sea-level rise of 0.5m relative to the 1980-1999 average should be used along with;
- an assessment of the sensitivity of the issue is under consideration to possible higher mean sea-levels taking account of possible additional contributions. This level is currently under discussion, but is likely to be no less than 0.8m relative to the 1980-1999 average.

For planning and decision timeframes beyond 2100 where, as a result of the particular decision, future adaptation options will be limited, an allowance for mean sea-level rise of 10mm/year beyond 2100 is recommended (in addition to the above recommendation).

These projections are for mean sea levels. Less information is available on how extreme storm sea levels will change with climate change.

N.4.7. Potential Impacts on Council's Infrastructure and Services

Table N-3 lists the potential impacts of climate change on Council's infrastructure and services.

Table N-3: Local Government Functions and Possible Negative Climate Change Outcomes

Function	Affected Assets or Activities	Key Climate Influences	Possible Effects
Water supply and irrigation.	Infrastructure.	Reduced rainfall, extreme rainfall events and increased temperature.	Reduced security of supply (depending on water source). Contamination of water supply.
Wastewater.	Infrastructure.	Increased rainfall.	More intense rainfall (extreme events) will cause more inflow and infiltration into the wastewater network. Wet weather overflow events will increase in frequency and volume. Longer dry spells will increase the likelihood of blockages and related dry weather overflows.
Stormwater.	Reticulation. Stopbanks.	Increased rainfall. Sea-level rise.	Increased frequency and/or volume of system flooding. Increased peak flows in streams and related erosion. Groundwater level changes. Saltwater intrusion in coastal zones. Changing flood plains and greater likelihood of damage to properties and infrastructure.
Transportation.	Road network and associated infrastructure (power, telecommunications, drainage).	Extreme rainfall events, extreme winds, high temperatures.	Disruption due to flooding, landslides, fallen trees and lines. Direct effects of wind exposure on heavy vehicles. Melting of tar.
Planning/policy	Management of	All.	Inappropriate location of urban expansion

Function	Affected Assets or Activities	Key Climate Influences	Possible Effects
development.	development in the private sector. Expansion of urban areas. Infrastructure and communications planning.		areas. Inadequate or inappropriate infrastructure, costly retro-fitting of systems.
Land management.	Rural land management.	Changes in rainfall, wind and temperature.	Enhanced erosion. Changes in type/distribution of pest species. Increased fire risk. Reduction in water availability for irrigation. Changes in appropriate land use. Changes in evapotranspiration.
Water management.	Management of watercourses/ lakes/wetlands.	Changes in rainfall and temperature.	More variation in water volumes possible Reduced water quality. Sedimentation and weed growth. Changes in type/distribution of pest species.
Coastal Management.	Infrastructure. Management of coastal development.	Temperature changes leading to sea-level changes. Extreme storm events.	Coastal erosion and flooding. Disruption in transportation, communications. Loss of private property and community assets. Effects on water quality.
Civil defence and emergency management.	Emergency planning and response, and recovery operations.	Extreme events.	Greater risks to public safety, and resources needed to manage flood, rural fire, landslip and storm events.
Bio security.	Pest management.	Temperature and rainfall changes.	Changes in the range of pest species.
Open space and community facilities management.	Planning and management of parks, playing fields and urban open spaces.	Temperature and rainfall changes. Extreme wind and rainfall events.	Changes/reduction in water availability. Changes in biodiversity. Changes in type/distribution of pest species. Groundwater changes. Saltwater intrusion in coastal zones. Need for more shelter in urban spaces.
Public Transport.	Management of public transport. Provision of footpaths, cycleways etc.	Changes in temperatures, wind and rainfall.	Changed maintenance needs for public transport infrastructure. Disruption due to extreme events.
Waste management.	Resource recovery centres and landfills.	Changes in rainfall and temperature.	Increased flooding and clean-up wastes Biosecurity changes. Changes in ground water level and leachate flows. Increased methane emission costs
Water supply and irrigation.	Infrastructure.	Reduced rainfall, extreme rainfall events and increased temperature.	Reduced security of supply (depending on water source). Contamination of water supply.

Source: Climate Change Effects and Impacts Assessment (MfE, May 2008)

The Council has incorporated the potential impacts of climate change in the 2008 update of the Engineering Standards and Policies.

APPENDIX O. NOT RELEVANT TO THIS ACTIVITY

APPENDIX P. POTENTIAL SIGNIFICANT EFFECTS

P.1 Potential Significant Negative Effects

Potential significant negative effects and the proposed mitigation measures are listed below in Table P-1.

Table P-1: Potential Significant 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.

P.2 Significant Positive Effects

Potential significant positive effects are listed below in Table P-2.

Table P-2: Potential Significant 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 a significant majority of residents.
Economic benefits	Access to waste disposal and recycling services at reasonable cost supports economic activity. Council is able to offer kerbside collections to 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 through general rate support.
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.

APPENDIX Q. SIGNIFICANT ASSUMPTIONS, UNCERTAINTIES, AND RISK MANAGEMENT

Q.1 Assumptions and Uncertainties

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

Q.1.1. Financial Assumptions

The following assumptions have been made:

- all expenditure is stated in dollar values as at 1 July 2014, with no allowance made for inflation;
- all costs and financial projections are GST exclusive.

Q.1.2. Asset Data Knowledge

While the Council has asset registers and many digital systems, processes and records, Council does not have complete knowledge of the assets it owns. To varying degrees the Council has incomplete knowledge of asset location, asset condition, remaining useful life and asset capacities. This requires assumptions to be made on the total value of the assets owned, the time at which assets will need to be replaced and when new assets will need to be constructed to provide better service.

Council considers these assumptions and uncertainties constitute only a small risk to the financial forecasts because:

- significant amounts of asset data is known;
- the majority of assets are above ground and able to be monitored;
- asset performance for the significant structures is well known;
- there are plans to upgrade poorly performing assets.

The assumption that has been made that is considered significant includes:

- the existing asset condition is such that further deterioration will not require renewal or maintenance beyond that currently allowed for.

Q.1.3. Growth Forecasts

Growth forecasts are inherently uncertain and involve many assumptions. The growth forecasts generally have a very strong influence on the financial forecasts, especially in Tasman District where population growth is higher than the national average. The growth forecasts underpin and drive:

- the asset creation and renewal programme;
- Council income forecasts including rates and development contributions;
- funding strategies.

Thus the financial forecasts are sensitive to the assumptions made in the growth forecasts. If the growth is significantly different it will have a significant impact. If higher, Council may need to advance capital projects and increase operating costs. If it is lower, Council may have to defer planned works.

The significant assumptions in the growth forecasts are covered in the explanation on method and assumptions in Appendix F: Demand and Future New Capital Requirements.

Q.1.4. Timing of Capital Projects

The timing of many capital projects can be well defined and accurately forecast because there are few limitations on the implementation other than the community approval through the LTP/Annual Plan

processes. However, the timing of some projects is highly dependent on some factors which are beyond the Council's ability to fully control. These include factors like:

- obtaining resource consent, especially where community input is necessary;
- obtaining community support;
- obtaining a subsidy from central government;
- securing land purchase and / or land entry agreements;
- the timing of larger private developments;
- the rate of population growth.

Where these issues may be a factor, allowances have been made to complete the projects in a reasonable timeframe. However these plans may not always be achieved and projects may be deferred as a consequence.

Timing of projects in the solid waste activity is mainly driven by renewal needs and expansion of collection routes and no specific infrastructure is required for subdivision activity. Growth in a particular area is less likely to require unscheduled works than for other utility activities (wastewater, water and stormwater).

Q.1.5. Funding of Projects

When forecasting projects that will not occur for a number of years, a number of assumptions have to be made about how the project will be funded.

Funding assumptions are made about:

- whether projects will qualify for subsidies;
- whether major beneficiaries of the work will contribute to the project, and if so, how much will they pay;
- whether the network has compulsory connections or voluntary connections;
- whether the Council or other parties will subsidise the development of the project.

The correctness of these assumptions has major consequences on the affordability especially of new projects. The Council has considered each new project and concluded for each a funding strategy. The funding strategy will form one part of the consultation process as these projects are advanced toward construction.

Refer to Appendix M for further information.

Q.1.6. Accuracy of Capital Project Cost Estimates

The financial forecasts have been estimated from the best available knowledge. The level of uncertainty inherent in each project is different depending on how much work has been done in defining the problem and determining a solution. In many cases, only a rough order cost estimate is possible because little or no preliminary investigation has been carried out. It is not feasible to have all projects in the next 30 years advanced to a high level of accuracy. It is general practice for all projects in the first three years and projects over $500,000 in the first 10 years to be advanced to a level that provides reasonable confidence with the estimate.

To get consistency and formality in cost-estimating, the following practices have been followed:

- applying financial assumptions listed in Q.1.1;
- a project estimating template has been developed that provides a consistent means of preparing estimates;
- where practical, a common set of rates has been determined;
- specific lines have been included to deal with non-construction costs like contract preliminary and general costs, engineering costs, Council staff costs, resource consenting costs and land acquisition costs;
- specific provisions have been included to deal with construction contingency, project complexity and estimate accuracy as described below;

- where capital items from the 2012 AMP have been retained, the estimates have not been revised in detail. Capital costs for the works have been increased by 8.5%.

A 10% construction contingency provision has been included to get a "Base Project Estimate" to reflect the uncertainties in the unit rates used. A further provision has been added to reflect the uncertainties in the scope of the project – i.e. is the adopted solution the right solution?

Often detailed investigation will reveal the need for additional works over and above that initially expected. The amount added depends on the amount of work already done on the project.

Each project has been assessed as being at the project lifecycle stage as detailed in Table Q-1 below, and from this an estimated accuracy assessed. The estimate accuracy is added to the Base Project Estimate to get the Total Project Estimate – the figure that is carried forward into the financial forecasts.

Project complexity ratings of "simple", "normal" or "complex" lead to different cost estimate multipliers of 0.8, 1.0 and 1.3 respectively.

Table Q-2 below shows the complexity ratings assigned for large projects. In the 2015-2025 AMP preparation cycle, contingencies were reduced to allow for the reduced risk of full cost overruns on a programme-wide basis. Individual projects are now more likely to go over budget and Council has specifically accepted this risk.

Table Q-1: Life Cycle Estimate Accuracies

Stage in Project Lifecycle	Estimate Accuracy
Concept / Feasibility	± 20%
Preliminary Design / Investigation	± 10%
Detailed Design	± 5%

Table Q-2 details estimate accuracies and significant uncertainties for major projects in the next three years of this AMP.

Table Q-2: Major Projects (>$250k) Assigned to the First Three Years of this AMP

Project	Project Stage and Estimate Accuracy	Complexity	Project Value in First 3 years	Factors that Could affect Estimate Accuracy
Mariri RRC – improve access to recycling areas (Y1) and greenwaste and cleanfill (Y3)	Preliminary Design / Investigation	Normal	$634k	Ground conditions, changes in demand, operational requirements of new contract

Q.1.7. Land Purchase and Access

The Council has made the assumption that it will be able to purchase land, and/or secure access to land to complete projects. The risk of delays to project timing is high due to possible delays in obtaining the land. The Council works to mitigate this issue by undertaking consultation with landowners sufficiently in advance of the construction phase of a project. The consequence of not securing land and/or land access for projects may require redesign which can have a moderate cost implication. If delays do occur, it may influence the level of service the Council can provide.

Q.1.8. Future Changes in Legislation and Policy

The legal and planning framework under which local government operates frequently changes. This can significantly affect the feasibility of projects, how they are designed, constructed and funded. The Council has assumed that there will be no major changes in legislation or policy. The risk of significant changes

remains high owing to the nature of government policy formulation. If major changes occur it will impact on required expenditure and the Council has not provided mitigation for this effect.

Q.1.9. Resource Consents

The need to secure and comply with resource consents can materially affect asset activities and the delivery of capital projects.

The need to comply with resource consent conditions can affect the cost and time required to perform an activity, and in some instances determine whether or not the activity can continue. Council has assumed that there will be no material change in operations due to consenting requirements over the period of the AMP.

There may be some risk of change in the following areas of the activity:

- re-consenting of Stage 2 of the Eves Valley Landfill.

Securing resource consents is often a significant task in the successful delivery of a capital project or to continue to operate a particular facility. Consent application may consume considerable time and resources, particularly in the instance of a publically notified application or where a decision is subject to appeal.

Council has assumed that there will be no material change in the need to secure consents for construction activities and that consent costs for future projects will be broadly in line with the cost of consents in the past.

Exceptions to this assumption, or projects with significant risks include:

- obtaining resource consents for regional activities at Eves Valley from 2030.

Q.1.10. Disaster Fund Reserves

The assumption has been made that the level of funding held in the Council's disaster fund reserves and available from insurance cover will be adequate to cover reinstatement following emergency events. The risk of inadequate reserves and recovery from insurance claims would mean deferral of future projects to provide any financial shortfall required to cover reinstatement costs.

Q.1.11. System Capacity

System capacity in the solid waste activity is provided by a combination of Council owned infrastructure (RRC sites, fixed and mobile plant such as waste compactors and bins) and contracted services (such as collection vehicles and plant). Most of the system capacity is easily defined.

System capacity upgrades have been planned where shortfalls are known or where growth is expected, but changes in economic activity or waste generation trends could quickly change demand and affect capacity.

If the network capacity is lower than assumed, Council may be required to advance capital works projects to address this issue. The risk of this occurring is low; however the impact on expenditure could be large. If the network capacity is greater than assumed, Council may be able to defer works. The risk of this occurring is low and is likely to have little impacts.

Q.1.12. Activity Specific Assumptions

Q.1.12.1 Significant Changes - Landfill Activities

Council has reached agreement with Nelson City Council to mothball the Eves Valley Landfill from July 2015 and to transport all waste to the York Valley Landfill in Nelson City. The Eves Valley site will remain available for disposal in emergencies and is likely to reopen when the York Valley site is full (likely 2030).

An assessment of regional waste services is scheduled in Year 1 and this will likely affect long term infrastructure planning for the two Councils in the waste area.

For disposal of waste at York Valley, Tasman District will pay the published commercial gate rate.
This is expected to create a significant surplus for Nelson City Council. The Councils have agreed a revenue sharing for this surplus. Nelson City Council currently budgets for some landfill revenues to fund waste minimisation activities through a "local levy allocation". Nelson City will pay a fixed sum that matches this allocation to Tasman District. Nelson City Council will also pass 40% of operating surpluses to Tasman District Council.

On an operational basis, the proposal significantly changes the Council's operating costs and revenue. The key changes are:

- a very substantial decrease in operational costs at the landfill
- elimination of all revenue at Eves Valley (both from Resource Recovery Centres, Buller district and special waste customers)
- waste disposal costs for RRCs will be paid to Nelson City Council and will increase very substantially
- two new large income streams from Nelson City Council (fixed and variable) will be created
- the cost of transporting waste from RRCs will increase slightly (+3%).

In the short term, the net impact of these changes would be that operating costs increase by an estimated $2.2 million. However, this would be matched by a payment of an estimated $2.1 million by Nelson City Council, meaning the proposal is slightly negative in the short term when compared with the status quo. A "stabilisation fund" proposed by Nelson City Council will reduce the Council's income in Year 1 of the arrangement.

Both the payments to Nelson City Council and the income from landfill revenue distributions are very significant components of Council's operating costs and revenue streams in the activity. Small changes in these income and expenses can have material impact on the activity.

Appendix M sets out the specific assumptions on these expenses and revenues.

Tasman District Council has also agreed to fund the next regional landfill. This is expected to be the area proposed for Stage 3 of the Eves Valley Landfill, with the site required from 2030. The arrangement would be favourable to Tasman District because the Memorandum of Understanding provides for a similar distribution of operating surpluses as with the York Valley arrangement.

The AMP provides $19.2m of capital funding for this, commencing with resource consent applications in 2026.

Q.1.12.2 Significant Changes – Recycling and Kerbside Rubbish Collections

Council has also recently entered into a new eight year contract with the kerbside collections contractor (who also operates four of the five RRCs). The contract will operate from 29 June 2015 to 30 June 2023. This new contract will bring changes to the way we collect solid waste and recycling and likely increase the volume of recycling collected by up to 20%.

Included in this contract is the construction of a new materials recovery facility (MRF) in Richmond. Although not quantified in this AMP, Council expects that this MRF will provide for additional commercial recycling services in the Nelson-Tasman region, and further reduce total waste to landfill.

In the rubbish collection area Council recognises that private waste companies are more flexible and able to quickly amend pricing and services to meet consumer demand. Council is reducing its financial exposure in the rubbish bag collection service by passing this risk to the kerbside collection contractor.

While still providing a contracted bag collection service to the entire district, the Council is allowing variable pricing of services by also allowing fully commercial bag collections to be provided by the contractor. Council expects that this will see lower priced collections in urban areas through this commercial bag service and a gradual increase in price for the official bag service in rural areas.

Q.1.12.3 Waste Generation Trends

All transactions at RRCs are recorded as a volume, number or tonnage as appropriate. These records enable Council to assess the changes in quantities over time and to predict future demands and capacity requirements.

Since 2004 the level of solid waste data recorded and provided to Council through the solid waste contracts has increased significantly. All material disposed of at landfill is weighed prior to disposal.

With installation of weighbridges at Richmond RRC and Mariri RRC, all waste material delivered by commercial operators entering or leaving these sites is also weighed, increasing the quality of data. The lack of weighbridge at the Takaka RRC means that waste data for this site is less reliable, and work is programmed to include a weighbridge at this site from 2015/16. As part of projecting future waste quantities

and costs, a number of assumptions in relation to the amount of waste generated within the district have been made.

All these assumptions are contained in the supporting spreadsheets to this AMP. Key assumptions are detailed below:

1 Rateable Properties – projection is directly proportional to population growth in the Council's Growth Model (2014).

2 Growth rates of wastes – While Council has good data on waste to landfill in the region there is poor data available for most material diverted from landfill. Council has good information on Council contracted recycling and greenwaste processing, but has no knowledge of materials diverted from landfill by commercial services (e.g. commercial recycling, scrap metal dealers and second hand shops) or avoided through waste reduction.

For the purposes of this AMP "waste arisings" have been defined as total to landfill plus Council contracted recycling tonnages plus total compostable tonnages processed by Council's contractor. It has been assumed that waste arisings will be 710 kg per person, and total tonnages will follow population growth in the Council's Growth Model. The following Figure Q-1 plots assumed arisings over the first ten years of the AMP.

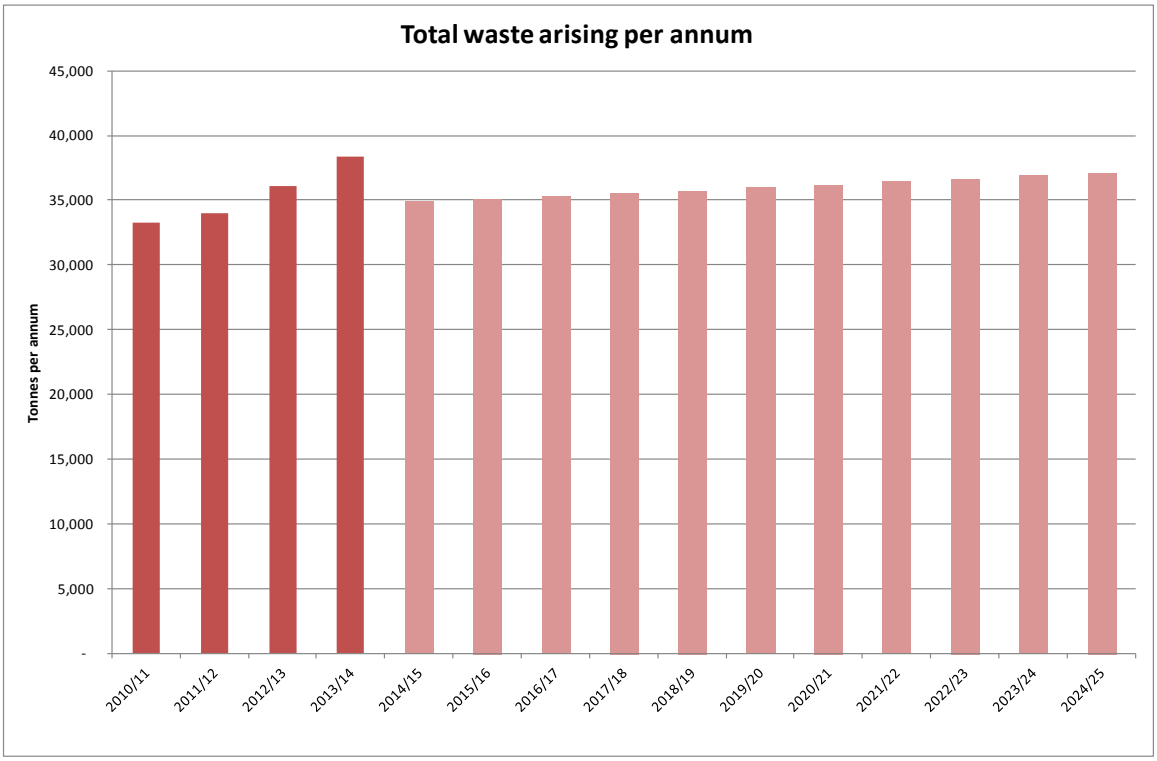


Figure Q-1: Past and Predicted Waste Arising Per Annum

3 Waste Diversion – the assumed percentage of waste diversion through Council recycling and composting services has been estimated using historical data and assumed as below in Table Q-3:

Table Q-3:

	Average last 3 Years	Year 1 2015/16	Year 2 2016/17	Year 3 2017/18	Years 4 onwards
Recyclables*	6.7%	8.3%	9.2%	9.2%	9.2%
Compostables*	13.3%	16.0%	16.6%	16.6%	16.6%

* assessed as total quantity diverted by Council contracted service as a proportion of waste arisings (total to landfill + Council contracted recycling + compostables by Council contractor

4 It is assumed that the total waste diverted from the pit at each RRC will continue as normal.

5 Split of recyclable materials – these will continue based on historical trends, which are shown in Table Q-4:

Table Q-4:

	Average % of total recyclables collected
Mixed materials	42.8%
Glass	57.2%

Figure Q-2 shows the resulting estimates of materials that will be diverted from landfill per annum.

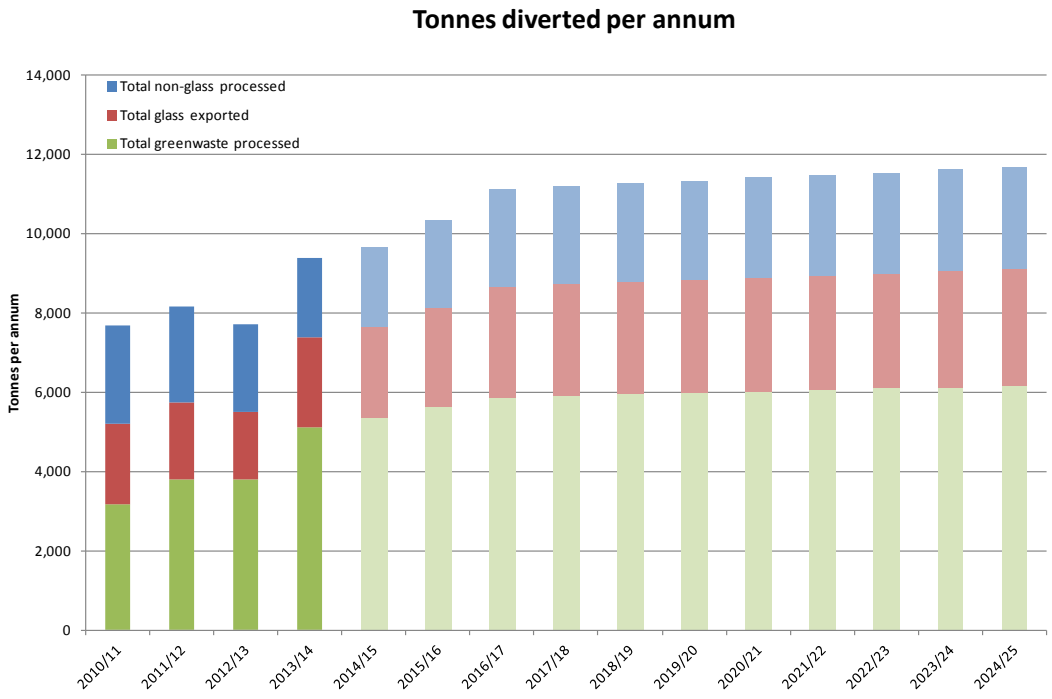


Figure Q-2: Past and Predicted Diversion Per Annum

6 Materials arising at each RRC have been based on 2013/14 data as shown below in Table Q-5

Table Q-5:

RRC	Percentage
Richmond	68.5%
Mariri	24.4%
Takaka	6.0%
Collingwood	0.3%
Murchison	0.8%
Total	**100.0%**

7 Revenue from solid waste bag sales - it has been assumed that will remain static (in line with new contractual arrangements).

8 Contractual assumptions as outlined in Table Q-6.

Table Q-6: Current Contracts

No.	Description	End Date
C781	Landfill maintenance and waste haulage contract concludes	30 June 2023
C1020	RRC operation and kerbside collections contract	30 June 2023
New	New greenwaste contract from 1 July 2015	30 June 2020
C652	Murchison RRC operation extended to	30 June 2023
C897	Waste minimisation engagement contract	30 June 2016

9 Contract Rates – projected operational costs are based on contract rates applied over the 2014/15 year. Where cost fluctuations apply part way through a financial year (for example from October) these rates have been used. In the case of the new kerbside contract, rates effective 1 June 2015 have been agreed. These rates have been reduced by 2.3% in this AMP, reflecting the assumed inflation of 2.3% in the financial model from 1 June 2014 to 1 June 2015.

10 No further cost fluctuations have been included in the projections as these are being incorporated with the inflation factor used in the LTP financial model.

11 It is 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. The financial model also assumes no net change in operating expenditure with the change from York Valley to Eves Valley landfill in 2030. This may be a conservative assumption.

11 Waste revenues - A significant proportion of revenue for the activity is directly related to the quantity of waste received. In the event of inaccurate forecasts or unexpected changes to waste volumes Council may exceed or fail to meet revenue forecasts.

12 Landfill disposal - A large proportion of 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 Nelson City Council. If these change then Council will need to change RRC fees and charges and projected income and expenditure.

12 Revenue from Nelson City Council – it has been assumed that $2.1m will be received from Nelson City in 2015/16 as Council's agreed share of landfill revenue. This revenue will be inflation adjusted each year and the estimate has been reduced by 2.5% in the AMP to represent the income in 2014/15 dollars. A one-off deduction of $0.2m will be made in 2015/16 to create a revenue "stabilisation fund" at Nelson City Council. In the event that surpluses from York Valley do not meet expected levels the Council will receive less revenue than budgeted.

12 Income from local government share of landfill levy – it is estimated that $153,750 will be provided in 2015/16 and that this will increase with inflation each year.

13 Revenue from RRCs – it has been assumed that because changes in gate rates for waste disposal will be moderate that they will not materially change waste disposal volumes at each RRC.

Q.2 Risk Management

Q.2.1. Why Do We Do Risk Management?

Risk management is the systematic process of identifying, analysing, evaluating, treating and monitoring risk events so that they are mitigated as far as possible, refer to Figure Q-3.

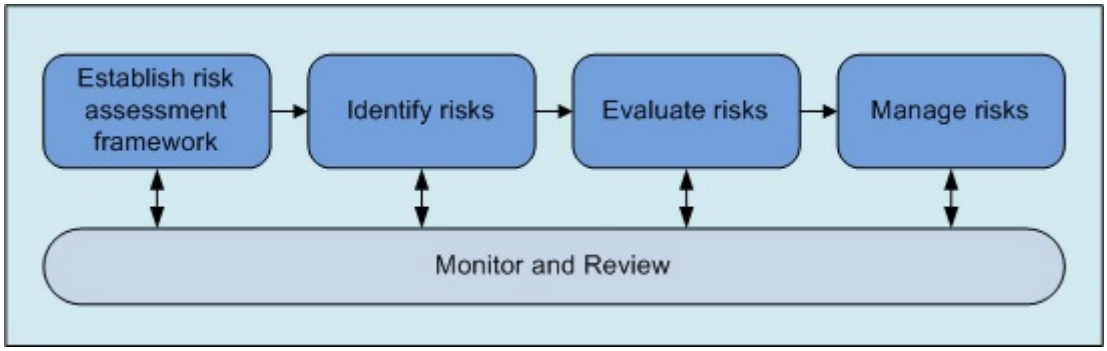


Figure Q-3: Risk Management Process

Risk management involves assessing each risk event and identifying an appropriate treatment. Treatments are identified to try and manage or reduce the risk. There are some risk events for which it is near impossible or not feasible to reduce the likelihood of the event occurring, or to mitigate the effects of the risk event if it occurs e.g. extreme natural hazards. In this situation the most appropriate response may be to accept the risk as is, or prepare response plans and consider system resilience.

Well managed risks can help reduce:

- disruption to infrastructure assets and services;
- financial loss;
- damage to the environment;
- injury and harm;
- legal obligation failures.

Q.2.2. Our Approach to Risk Management

Q.2.2.1 Risk Assessment Framework

The Council's risk assessment framework was developed in 2011 to be consistent with *AS/NZS IS 4360:2004 Risk Management.* It assesses risk exposure by considering the consequence and likelihood of each risk event. Risk exposure is managed at three levels within the Council organisation, refer to Figure Q-4:

- Level 1 – Corporate Risks
- Level 2 – Activity Risks
- Level 3 – Operational Risks.

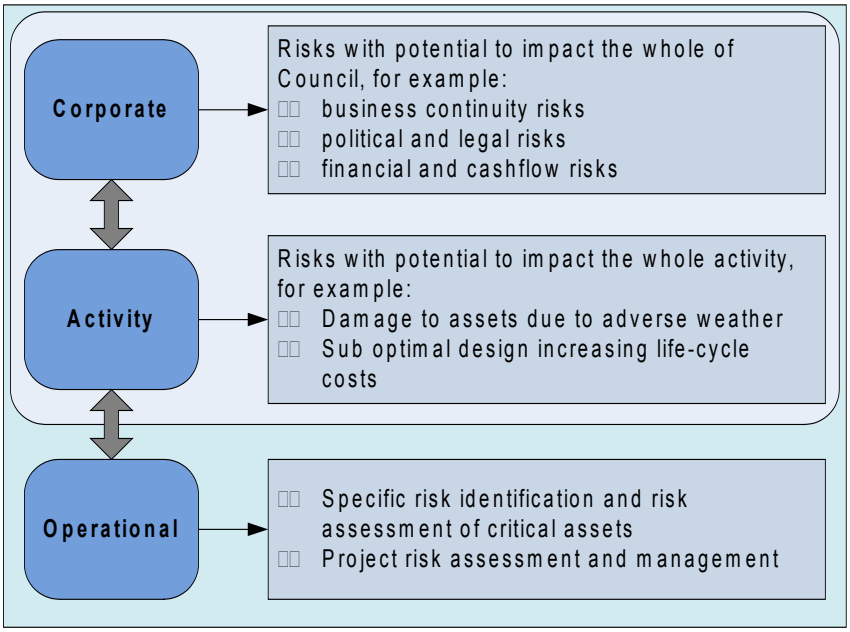


Figure Q-4: Levels of Risk Assessment

The risk assessment framework discussed in Section Q.2.2.1 and Q.2.2.2 is applied to Corporate and Activity specific risks. There are some risk events which could be interpreted as either Corporate or Activity level risks. For example, a risk event may have the potential to impact the Council organisation as a whole or many parts of the organisation if it was to occur. In the first instance this type of risk would be classified as a Corporate risk. There is however a secondary consideration that needs to be given, that is, "is the risk best managed in different ways within the separate activities?" For example, a large seismic event will likely impact the Council organisation as a whole, however each activity will prepare for and manage these risks differently; e.g. water reservoirs may be strengthen to minimise the risk of collapse, or corporate services may prepare a business continuity plan.

The Council is yet to implement consistent risk management processes at the Operational risk level. Development of the critical asset framework is discussed in Section **Error! Reference source not found.**. The Council plans to develop a framework for assessing maintenance and project risks in 2015.

Q.2.2.2 Risk Identification and Evaluation

The risk management framework requires the activity management team to identify activity risks and to then assess the risk, likelihood and consequence for each individual event. The definitions of risk, likelihood and consequence are defined Figure Q-5.

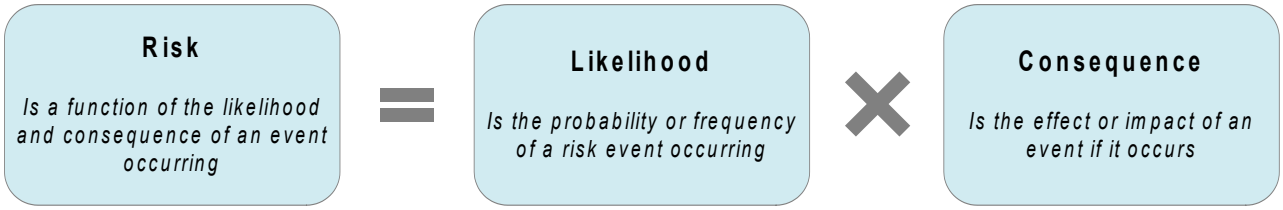


Figure Q-5: Risk Assessment Definitions

The Council has developed objective based scales to assist asset managers when determining the likelihood and consequence scores for all risk events. The consequence of each risk event is assessed on a scale of 1 to 100 for all of the consequence categories listed in Table Q-7 and the respective consequence rating score (Table Q-8) is selected. The detailed objective scale used to assess the consequence rating of the risk event against the risk is attached to this appendix.

Table Q-7: Risk Consequence Categories

Category		Sub Category	Description
Consequence Categories	Service Delivery	N/A	Asset's compliance with Performance Measures and value in relation to outcomes and resource usage.
	Social / Cultural	Health and Safety	Impact as it relates to death, injury, illness, life expectancy and health.
		Community Safety and Security	Impact on perceived safety and reported levels of crime.
		Community / Social / Cultural	Damage and disruption to community services and structures, and effect on social quality of life and cultural relationships.
		Compliance / Governance	Effect on the Council's governance and statutory compliance.
		Reputation / Perception of Council	Public perception of the Council and media coverage in relation to the Council.
	Environment	Natural Environment	Effect on the physical and ecological environment, open space and productive land.
		Built Environment	Effect on amenity, character, heritage, cultural, and economic aspects of the built environment.
	Economic	Direct Cost	Cost to the Council.
		Indirect Cost	Cost to the wider community.

Table Q-8: Consequence Ratings

Consequence Rating					
Description	Extreme	Major	Medium	Minor	Negligible
Rating	100	70	40	10	1

Table Q-9 provides a summary of the likelihood assessment criteria.

Table Q-9: Likelihood Ratings

Likelihood Rating			
Description	**Frequency**	**Criteria**	**Rating**
Almost certain	Greater than every 2 years	The threat can be expected to occur ***or*** A very poor state of knowledge has been established on the threat	5
Likely	Once per 2-5 years	The threat will quite commonly occur ***or*** A poor state of knowledge has been established on the threat	4
Possible	Once per 5-10 years	The threat may occur occasionally ***or*** A moderate state of knowledge has been established on the threat	3

Likelihood Rating			
Description	**Frequency**	**Criteria**	**Rating**
Unlikely	Once per 10-50 years	The threat could infrequently occur ***or*** A good state of knowledge has been established on the threat	2
Very Unlikely	Less than once per 50 years	The threat may occur in exceptional circumstances ***or*** A very good state of knowledge has been established on the threat	1

Using the existing risk management framework summarised in Table Q-10, the risk score is calculated by multiplying the likelihood of the risk event with the highest rated individual consequence category for that risk event to generate a risk score, as shown in Figure Q-6.

Table Q-10: Risk Scores

Risk Scoring Matrix		Consequence					Risk Score
		Negligible	Minor	Medium	Major	Extreme	Extreme
Likelihood	Almost Certain	5	50	200	350	500	Very High
	Likely	4	40	160	280	400	High
	Possible	3	30	120	210	300	Moderate
	Unlikely	2	20	80	140	200	Low
	Very Unlikely	1	10	40	70	100	Negligible

An example of how the risk score is calculated is below.

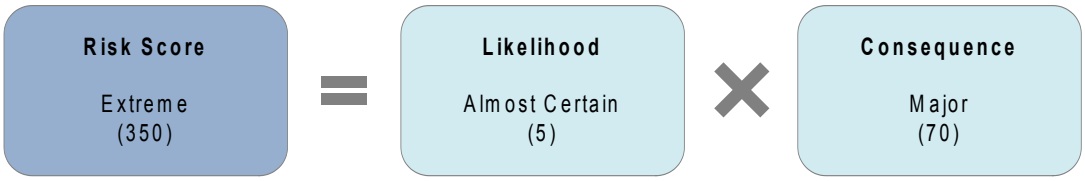


Figure Q-6: Risk Score Calculation

Risk scores are generated for inherent risk, current risk and target risk:

Inherent risk is the raw risk score without taking into consideration any current or future controls

Current risk the level of risk to the Council after considering the effect of existing risk management controls

Target risk is the level of risk the Council expects and wants to achieve after applying the proposed risk management controls.

In some cases it is not feasible to reduce the inherent risk and in this case the Council would accept the inherent risk level as the current and target risk levels.

Q.2.2.3 Limitations

The processes outlined above forms a conservative approach to evaluating risk and could been seen as representing the worst case scenario. It also provides limited ability to differentiate the priority of risks due to the potential to score highly in at least one of the consequence categories; this tends to create a smaller range of results. For example two events with a likelihood of "Almost Certain (5)" have been compared below:

- **Event A** – scores "Major (70)" for one consequence category and "Negligible (1)" in all the remaining consequence categories, this will generate an inherent risk score of "Extreme (350)".
- **Event B** – scores "Medium (40)" in all 10 consequence categories, this will generate an inherent risk score of "Very High (200)".
- **Event C** – scores "Major (70)" in all 10 consequence categories, this will generate an inherent risk score of "Extreme (350)".

These examples show that there are limitations for the Council when prioritising risk events, especially those that may have a wider impact on the activity e.g. Event B or C. Consequently, the Council acknowledges that there are some downfalls in its existing framework and it has proposed to undertake a full review of its risk management framework during 2015.

Q.2.3. Corporate Risk Mitigation Measures

Q.2.3.1 Asset Insurance

Tasman District Council has various mechanisms to insure assets against damage. These include:

- Tasman District Council insures its above ground assets, like buildings, through private insurance which is arranged as a shared service with Nelson City and Marlborough District Councils.
- Tasman District Council is a member of the Local Authority Protection Programme (LAPP) which is a mutual pool created by local authorities to cater for the replacement of some types of infrastructure assets following catastrophic damage by natural disasters like earthquake, storms, floods, cyclones, tornados, volcanic eruption and tsunami. These infrastructure assets are largely stopbanks along rivers and underground assets like water and wastewater pipes and stormwater drainage.
- Taman District Council has a Classified Rivers Protection Fund, which is a form of self-insurance. The fund is used to pay the excess on the LAPP insurance, when an event occurs that affects rivers and stopbank assets.
- Tasman District Council has a General Disaster Fund, which is also a form of self-insurance. Some assets, like roads and bridges, are very difficult to obtain insurance for or it is prohibitively expensive if

it can be obtained. For these reasons Council has a fund that it can tap into when events occur which damage Council assets that are not covered by other forms of insurance. Some of the cost of damage to these assets is covered by central government, for example the New Zealand Transport Agency covers around half the cost of damage to local roads and bridges (as set out in the co-investment rate/financial assistance rate).

- Refer to the Council's Financial Strategy for insurance disclosures as required under Section 31 of the Local Government Act.

Q.2.3.2 Civil Defence Emergency Management

The Civil Defence Emergency Management Act 2002 was developed to ensure that the community is in the best possible position to prepare for, deal with, and recover from local, regional and national emergencies. The Act requires that a risk management approach be taken when dealing with hazards including natural hazards. In identifying and analyzing these risks the Act dictates that consideration is given to both the likelihood of the event occurring and its consequences. The Act sets out the responsibilities for Local Authorities. These are:

- ensure you are able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency;
- plan and provide for civil defence emergency management within your own district.

Tasman District Council and Nelson City Council jointly deliver civil defence as the Nelson Tasman Civil Defence Emergency Management (CDEM) Group. The vision of the CDEM Group is to build "A resilient Nelson Tasman community".

Civil Defence services are provided by the Nelson Tasman Emergency Management Office. Other council staff are also heavily involved in preparing for and responding to civil defence events. For example, Council monitors river flows and rainfall, and has a major role in alleviating the effects of flooding.

The Nelson Tasman Civil Defence Emergency Management Group developed a Regional Plan in 2012. The Plan sets out how Civil Defence is organised in the region and describes how the region prepares for, responds to and recovers from emergency events. A review is scheduled for 2016/2017.

Q.2.3.3 Engineering Lifelines

The Nelson Tasman Engineering Lifelines (NTEL) project commenced in 2002. The NTEL Group formed in 2003. Its report *Limiting the Impact* was reviewed in 2009. The purpose of the report was:

- to help the Nelson Tasman region reduce its infrastructure vulnerability and improve resilience through working collaboratively;
- to assist Lifeline Utilities with their risk reduction programmes and in their preparedness for response and recovery;
- to provide a mechanism for information flow during and after an emergency event.

The NTEL Group is in the process of applying for funding to hold a further review to begin in 2015.

The project was supported and funded by the two controlling authorities, Nelson City Council and Tasman District Council. Following the initial start-up forum in 2002, a Project Steering Group was formed and initial project work was completed. The initial work to investigate risks and assess vulnerabilities from natural hazard disaster events was divided amongst five task groups:

- Hazards Task Group;
- Civil Task Group;
- Communications Task Group;
- Energy Task Group;
- Transportation Task Group.

These groups were then tasked with assessing the risk and vulnerability of segments of their own networks against the impacts of major natural hazard disaster events. These natural hazards included:

- earthquake;

- landslide;
- coastal / flooding.

The Nelson Tasman region is geotechnically complex with high probabilities of earthquake, river flooding and landslides. By identifying impacts that these hazards may have on the local communities, the NTEL Group aim to have processes in place to allow the community to return to normal functionality as quickly as possible after a major natural disaster event.

To date the project has identified the impacts of natural hazards and the critical lifelines of the regions service networks including communication, transportation, power and fuel supply, water, sewerage, and stormwater networks. The initial NTEL assessment work is the first stage of an on-going process to gain a more comprehensive understanding of the impacts of natural hazards in the Nelson Tasman region.

Q.2.3.4 Recovery Plans

These plans are designed to come into effect in the aftermath of an event causing widespread damage and guide the restoration of full service.

The Recovery Plan for the Nelson Tasman Civil Defence and Emergency Management Group (June 2008) identifies recovery principles and key tasks, defines recovery organisation, specifies the role of the Recovery Manager, and outlines specific resources and how funds are to be managed. A review of the Recovery Plan is required and a budget has been applied for.

Information about welfare provision in the Nelson-Tasman region is contained in a Welfare Plan (December 2005), which gives an overview of how welfare will be delivered during the response and recovery phases of an emergency.

The plan is a coordinated approach to welfare services for both people and animals in the Nelson Tasman region following an emergency event.

Q.2.3.5 Business Continuance

Council has a number of processes and procedures in place to ensure minimum impact to solid waste services in the event of a major emergency or natural hazard event.

- Council has limited business continuity plans that were developed around the influenza pandemic planning in 2014
- Council's contractors have up to date Health and Safety Plans in place.

Q.2.4. Solid Waste Risks

At the time of writing this AMP, the solid waste activity is making changes in two significant areas of the activity:

- entering into an agreement with Nelson City Council to close the Eves Valley landfill and use the York Valley Landfill (in Nelson) as a regional facility;
- entering into a new contract for the collection of recycling and rubbish at the kerbside and operation of four or five RRC. This change will include semi-automated collection techniques and new semi-automated sorting facilities.

Both of these changes affect Council's risk profile in the solid waste activity, but these have not been updated at the time of writing. Particular risk areas that are likely to change will include:

- revenue risks (likely to reduce);
- landfill risks (some will transfer to Nelson City Council);
- health and safety risks (likely to require additional works, but mitigated by new contract arrangements).

An asset management improvement item included in Appendix V is to review all inherent, current and target risk scores following the adoption of the amended framework.

Q.2.4.1 Other Risks Mitigation Measures

General risk mitigation is fostered by continual staff and system development to progressively improve the "what" and "how" we are undertaking the activity.

Q.2.5. Level 3 – Critical Assets Risk Assessment

Critical assets and those assets considered to be significant within each solid waste site. A criticality assessment of solid waste assets is expected to be completed in 2015 and will lead to a critical assets risk assessment in 2015/16.

The risk assessment will determine the issues arising from the asset group that may prevent delivering of the required service. Treatment strategies that mitigate each risk for the asset group will be identified.

CONSEQUENCE TABLE

	Consequence Description	SERVICE DELIVERY: Compliance with Key Performance Measures (KPIs)	SOCIAL / CULTURAL: Health & Safety	SOCIAL / CULTURAL: Community Safety & Security	SOCIAL / CULTURAL: Community / Social / Cultural	SOCIAL / CULTURAL: Compliance / Governance	SOCIAL / CULTURAL: Reputation / Perceptions of Council	ENVIRONMENT: Natural Environment	ENVIRONMENT: Built Environment	ECONOMIC: Direct Cost/Benefit	ECONOMIC: Indirect Cost/Benefit	Consequence Rating
Threat	Extreme	Failure to meet **100%** of performance measures	**Multiple fatalities**	**100%** increase in recorded crime rates for selected crimes	**Extremely** negative social impact resulting from significant unplanned disruption to **essential/significant community services and/or structures**	**Ministerial Inquir**y (or equivalent) in relation to breach of compliance by Council OR **commissioner appointed**	**Sustained** negative **international or national** media coverage	**Irreversible serious** environmental damage and/or degradation to a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Complete** or **long term loss** of **large area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**>$50M**	**>$250M**	**100**
		Failure to meet **all key** performance measures	**Widespread severe illness**	**50%** reduction in the community / stakeholders' perceptions of safety	**Extremely** negative effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)		**Extremely poor** perception of Council	**Loss** of, or **significant irreversible** damage to, an area of **nationally** significant recreational / open / natural space or productive land	**Complete** or **long term loss** of an of **highly significant** economic, cultural or heritage value			
		Performance measures **exceeded by 50%** - implying overspend / overallocation of resources	Significant reduction in life expectancy / health of **many** people						**100%** reduction in the level of satisfaction with the amenity of the built environment			
	Major	Failure to meet **75%** of performance measures OR failure to meet **100%** of performance measures with **reasonable defence**	**Multiple fatalities** with **reasonable defence** OR **single fatality**	**50%** increase in recorded crime rates for selected crimes	**Major** negative social impact resulting from significant unplanned disruption to **numerous households or commercial premises** or **community services and/or structures**	**Ministerial questions in parliament** in relation to breach of compliance by Council	**Negative international or national** media coverage OR **sustained** negtaive **international or national** media coverage with **reasonable defence**	**Long-term serious** environmental damage and/or degradation, **difficult restoration,** to a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Significant damage** to **large area** of **built environment** OR **complete** or **long term loss** of **significant area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**>$5M**	**>$25M**	**70**
		Failure to meet **many key** performance measures	**Multiple severe illnesses**	**20%** reduction in the community / stakeholders' perceptions of safety	**Very** negative effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Breach of Act, regulation or consent condition with **major material effect**	**Very poor** perception of Council	**Loss** of, or **significant irreversible** damage to, an area of **regionally** significant recreational / open / natural space or productive land OR **significant** degradation or damage to, an area of **nationally** significant recreational / open / natural space or productive land, **or loss of a significant part of such land**	**Long term serious damage** to an asset of **highly significant** economic, cultural or heritage value			
		Performance measures **exceeded by 40%** - implying overspend / overallocation of resources	Significant reduction in life expectancy / health of **several** people		**Formal complaint** by **key stakeholder**				**50%** reduction in the level of satisfaction with the amenity of the built environment			
					Complete breakdown of relationship with Maori							
	Medium	Failure to meet **50%** of performance measures OR failure to meet **75%** of performance measures with **reasonable defence**	**Permanent disability** OR **single fatality** with **reasonable defence**	**40%** increase in recorded crime rates for selected crimes	**Major** negative social impact resulting from significant unplanned disruption to **several households or commercial premises** or **community services and/or structures**	**Ministerial questions** or **3rd party investigation** in relation to breach of compliance by Council	**Sustained** negative **local or regional media coverage** OR **negative international or national** media coverage with **reasonable defence**	**Medium to long term major** but **recoverable** environmental damage and/or degradation to a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Damage to large area** of **built environment** OR **significant damage** to **significant area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**>$500K**	**>$2.5M**	**40**
		Failure to meet **multiple key** performance measures	**Severe illness** OR **illness** to **multiple individuals**	**15%** reduction in the community / stakeholders' perceptions of safety	**Moderately negative** effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	**Breach** of Act, consent condition or regulation with **moderate material effect** OR **breach** of Act, consent condition or regulation with **potentially major material effect with strong legal rebuke**	**Poor** perception of Council	**Significant** degradation or damage to, an area of **regionally** significant recreational / open / natural space or productive land or **loss of a significant part of that land** OR **degradation** or **damage** to, an area of **nationally** significant recreational / open / natural space or productive land **or loss of part of such land**	**Medium term serious** damage to an asset of **significant** economic, cultural or heritage value			
		Performance measures **exceeded by 30%** - implying overspend / overallocation of resources	Significant reduction in life expectancy / health of **multiple** people		**Formal complaint** by **key stakeholder** with **reasonable defence** OR **formal complaint** by **members of the public or ratepayers**				**30%** reduction in the level of satisfaction with the amenity of the built environment			
					Large significant negative effect on relationship with Maori							
	Minor	Failure to meet **25%** of performance measures OR failure to meet **50%** of performance measures with **reasonable defence**	**Serious injuries** OR **permanent disability** with **reasonable defence**	**20%** increase in recorded crime rates for selected crimes	**Minor** negative social impact resulting from significant unplanned disruption to **multiple households or commercial premises** or **community services and/or structures**	**Information request** from the **ombudsman** in relation to breach of compliance by Council	**Negative short term international or national** media coverage OR **sustained** negative **local or regional** media coverage with **reasonable defence**	**Limited medium-term recoverable** environmental damage and/or degradation to a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Damage** to **significant area** of **built environment** OR **significant damage** to **single building / infrastructure asset** (i.e. amenity, lifeline assets, character, heritage / cultural)	**>$50K**	**>$250K**	**10**
		Failure to meet **a key** performance measure	**Illness** to **several individuals**	**10%** reduction in the community / stakeholders' perceptions of safety	**Minor** negative effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	**Minor** breach of Act, consent condition or regulation &/or resulting in **minor material effect** OR **breach** of Act, consent condition or regulation with **potentially moderate material effect** with **strong legal rebuke**	**Somewhat poor** perception of Council	**Degradation** or **damage** to, an area of **regionally** significant recreational / open / natural space or productive land or **loss of part of such land**	**Short term serious** damage to an asset of **significant** economic, cultural or heritage value			
		Performance measures **exceeded by 20%** - implying overspend / overallocation of resources	Significant reduction in life expectancy / health of **one** person		**Formal complaint** by **member of the public or ratepayer**				**20%** reduction in the level of satisfaction with the amenity of the built environment			
					Moderate significant negative effect on relationship with Maori							
	Negligible	Failure to meet **10%** of performance measures OR failure to meet **25%** of performance measures with **reasonable defence**	**Minor injuries** OR **serious injuries** with **reasonable defence**	**10%** increase in recorded crime rates for selected crimes	**Negligible** negative social impact resulting from unplanned disruption to a **single household or commercial premises or community service and/or structure**	**Official information request** in relation to breach of compliance by Council	**Negative local or regional** media coverage	**Short-term recoverable** environmental damage and/or degradation to a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Damage** to **single building or infrastructure asset** (i.e. amenity, lifeline assets, character, heritage / cultural)	**<$50K**	**<$250K**	**1**
		Performance measures **exceeded by 10%** - implying overspend / overallocation of resources	**Illness** to **individual**	**5%** reduction in the community / stakeholders' perceptions of safety	**Limited negative** effects on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	**Minor** breach of Act, consent condition or regulation &/or resulting in **negligible material effect** OR **breach** of Act, consent condition or regulation with **potentially minor material effect** with **strong legal rebuke**	**Ambivalent** perception of Council	**Negligible degradation** of, or **damage** to, an area of **significant** recreational / open / natural space or productive land or **loss of part of such land**	**Short term minor** damage to asset of significant economic, cultural or heritage value			
					Minor complaint				**<20%** reduction in the level of satisfaction with the built environment			
					Negative effect on relationship with Maori							
Opportunity	Negligible	Performance measures improved by **10%** - with nil financial impact	**Negligible** improvement to casualty and accident rates (road toll, workplace, recreation etc)	**10%** improvement in recorded crime rates for selected crimes	**Limited** positive enduring effects on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Council employs **transparent** governance practices	**Positive local or regional** media coverage	**Short-term** environmental enhancement, restoration or protection of a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Improvement** to, or **protection** of, **single building** or **infrastructure asset** (i.e. amenity, lifeline assets, character, heritage / cultural)	**<$25K** benefit	**<$125K** benefit	**-1**
			Negligibe increase in life expectancy / health of several people	The community / stakeholders perceive a **5%** improvement in perceptions of safety	**Nil response** from **community / stakeholders**		**Ambivalent** perception of Council	**Negligible** environmental enhancement to an area of **nationally or regionally** significant recreational / open / natural space or productive land or **negligible** addition to such land	**Negligible improvement** to amenity, critical asset / lifeline or asset of significant economic, cultural or heritage value	Benefit Cost Ratio **<1:1**	Benefit Cost Ratio of **<10:1**	
					Positive effect on relationship with Maori				**<20%** increase in the level of satisfaction with the amenity of the built environment			
	Minor	Performance measures improved by **20%** - with nil financial impact	**Minor** improvement to casualty and accident rates (road toll, workplace, recreation etc)	**20%** imrpovement in recorded crime rates for selected crimes	**Minor** positive enduring effects on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Council **demonstrates good** governance practice	**Positive short term international or national** media coverage	**Minor** environmental enhancement, restoration or protection of a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Improvement** to, or **protection** of, **significant area** of **built environment** OR **significant improvement** to, or **high level of protection** of, **single building** or **infrastructure asset** (i.e. amenity, lifeline assets, character, heritage / cultural)	**$25K** benefit	**$125K** benefit	**-10**
			Minor increase in life expectancy / health of several people	The community / stakeholders perceive a **10%** improvement in perceptions of safety	**Letter of support from** the general public		**Somewhat positive** perception of Council	**Minor** environmental enhancement to an area of **nationally** significant recreational / open / natural space or productive land or **minor** addition to such land OR **moderate** environmental enhancement to an area of **regionally** significant recreational / open / natural space or productive land or **moderately significant** addition to such land	**Minor improvement** to amenity, critical asset / lifeline or asset of significant economic, cultural or heritage value	Benefit Cost Ratio of **1:1**	Benefit Cost Ratio of **10:1**	
					Moderate significant positive effect on relationship with Maori				**20%** increase in the level of satisfaction with the amenity of the built environment			
	Medium	Performance measures improved by **30%** - with nil financial impact	**Moderate** improvement to casualty and accident rates (road toll, workplace, recreation etc)	**40%** imrpovement in recorded crime rates for selected crimes	**Moderate positive** enduring effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Council **demonstrates best appropriate** governance practice	**Sustained positive local or regional** media coverage	**Moderate** environmental enhancement, restoration or protection of a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Improvement** to, or **protection** of, **large area** of **built environment** OR **significant improvement** to, or **high level of protection** of, **significant area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**$250K** benefit	**$1.25M** benefit	**-40**
			Moderate increase in life expectancy / health of several people	The community / stakeholders perceive a **15%** improvement in perceptions of safety	Letter of support from **significant stakeholder**		**Positive** perception of Council	**Moderate** environmental enhancement to an area of **nationally** significant recreational / open / natural space or productive land or **moderate** significant addition to such land OR **significant** environmental enhancement to an area of **regionally** significant recreational / open / natural space or productive land or **significant**addition to such land	**Improvement** to amenity, critical asset / lifeline or asset of significant economic, cultural or heritage value	Benefit Cost Ratio of **10:1**	Benefit Cost Ratio of **20:1**	
					Large significant positive effect on relationship with Maori				**30%** increase in the level of satisfaction with the amenity of the built environment			
	Major	Performance measures improved by **40%** - with nil financial impact	**Large** improvement to casualty and accident rates (road toll, workplace, recreation etc)	**50%** imrpovement in recorded crime rates for selected crimes	**Very** positive enduring effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Council is a **leader in developing best governance** practice	**Positive international or national** media coverage	**Major significant** environmental enhancement, restoration or protection of a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Significant improvement** to, or **high level of protection** of, **large area** of **built environment** OR **highly significant improvement** to, or **highest level of protection** of, **significant area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**$2.5M** benefit	**$12.5M** benefit	**-70**
			Large increase in life expectancy / health of several people	The community / stakeholders perceive a **20%** improvement in perceptions of safety	**Council viewed as leaders** in the community	National change to the interpretation of the law in favour of future activities	**Very positive** perception of Council	**Major significant** environmental enhancement of an area of **nationally** significant recreational / open / natural space or productive land or **significant** addition to such land OR **highly significant** environmental enhancement of an area of **regionally** significant recreational / open / natural space or productive land or **significant** addition to such land	**Significant** improvement to amenity, critical asset / lifeline or asset of significant economic, cultural or heritage value	Benefit Cost Ratio of **20:1**	Benefit Cost Ratio of **40:1**	
					Very large significant positive effect on relationship with Maori				**50%** increase in the level of satisfaction with the amenity of the built environment			
	Extreme	Performance measures improved by **50%** - with nil financial impact	**Very large** improvement to casualty and accident rates (road toll, workplace, recreation etc)	**100%** imrpovement in recorded crime rates for selected crimes	**Extremely** positive enduring effect on social quality of life (i.e. cohesion, harmony, community spirit, free cultural expression)	Change in regulation &/or law in favour of future activities	**Sustained** positive **international or national** media coverage	**Extreme significant** environmental enhancement, restoration or protection of a widespread area or area of critical importance (flora, fauna, quality of life, visitor experience etc)	**Highly significant improvement** to, or **highest level of protection** of, **large area** of **built environment** (i.e. amenity, lifeline assets, character, heritage / cultural)	**$25M** benefit	**$125M** benefit	**-100**
			Very large increase in life expectancy / health of many people	The community / stakeholders perceive a **50%** improvement in perceptions of safety			**Extremely positive** perception of Council	**Extreme significant** environmental enhancement of an area of **nationally** significant recreational / open / natural space or productive land or **highly significant** addition to such land	**Highly significant** improvement to amenity, critical asset / lifeline or asset of highly significant economic, cultural or heritage value	Benefit Cost Ratio of **50:1**	Benefit Cost Ratio of **80:1**	
									100% increase in the level of satisfaction with the amenity of the built environment			

APPENDIX R LEVELS OF SERVICE, PERFORMANCE MEASURES, AND RELATIONSHIP TO COMMUNITY OUTCOMES

R.1 Introduction

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

The levels of service for solid waste have been developed to contribute to the achievement of the stated Community Outcomes that were developed in consultation with the community, but taking into account:

- The Council's statutory and legal obligations
- The Council's policies and objectives, as outlined in the Nelson-Tasman Joint Waste Management and Minimisation Plan
- The Council's understanding of what the community is able to fund.

R.2 Levels of Service

Levels of service are attributes that Tasman District Council expects of its assets to deliver the required services to stakeholders.

A key objective of this plan is to clarify and define the levels of service for the solid waste assets, and then identify and cost future operations, maintenance, renewal and development works required of these assets to deliver that service level. This requires converting user's needs, expectations and preferences into measureable and meaningful levels of service.

Levels of service can be strategic, tactical, operational or implementation and 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 By-laws that impact on the way assets are managed (eg. 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.

R.2.1. Industry Standards and Best Practice

The AMP acknowledges Council's responsibility to act in accordance with the legislative requirements that impact on Council's solid waste activity. A variety of legislation affects the operation of these assets, as detailed in Appendix A.

R.2.2. Prioritisation Related to Available Resources

With solid waste assets, there are often higher levels of maintenance and renewal requirements desired (increased Levels of Service etc) than the resources allow for. Tradeoffs have to be made between projects that delivery amenity or service improvements and those that protect or maintain core asset functions and meet statutory obligations.

R.3 What Level of Service Do We Seek to Achieve?

There are many factors that need to be considered when deciding what level of service the Council will aim to provide. These factors include:

- Council needs to aim to understand and meet the needs and expectations of the community;
- Council must meet its statutory obligations;
- the services must be operated within Council policy and objectives;
- the community must be able to fund the level of service provided.

Two tiers of levels of service are outlined: strategic and operational.

The operational levels of service and performance measures are used to ensure the service and facilities are able to achieve the strategic levels of service and Councils objectives.

Level of services need to be reviewed and upgraded on a continuous basis in line with legislative and regulatory changes and feedback from customers, consultation, internal assessments, audits and strategic objectives.

The levels of service that the Council has adopted for this AMP have been developed from the levels of service prepared in the July 2006, 2009 and 2012 AMPs. They also take into account the objectives of the JWWMP and feedback from various parties including Audit New Zealand, industry best practice and ease of measuring and reporting of performance measures.

Council has decided to reduce the number of levels of service reported in the LTP, showing only those that are considered to be Customer Focussed. The AMP extends the levels of service and performance measures to include the more technical associated with the management of the activity.

The levels of service reported in the LTP have been amended so that they have greater meaning for residents. For example, measures of waste to landfill and diversion from landfill are presented on a “per capita” basis, rather than as a district total.

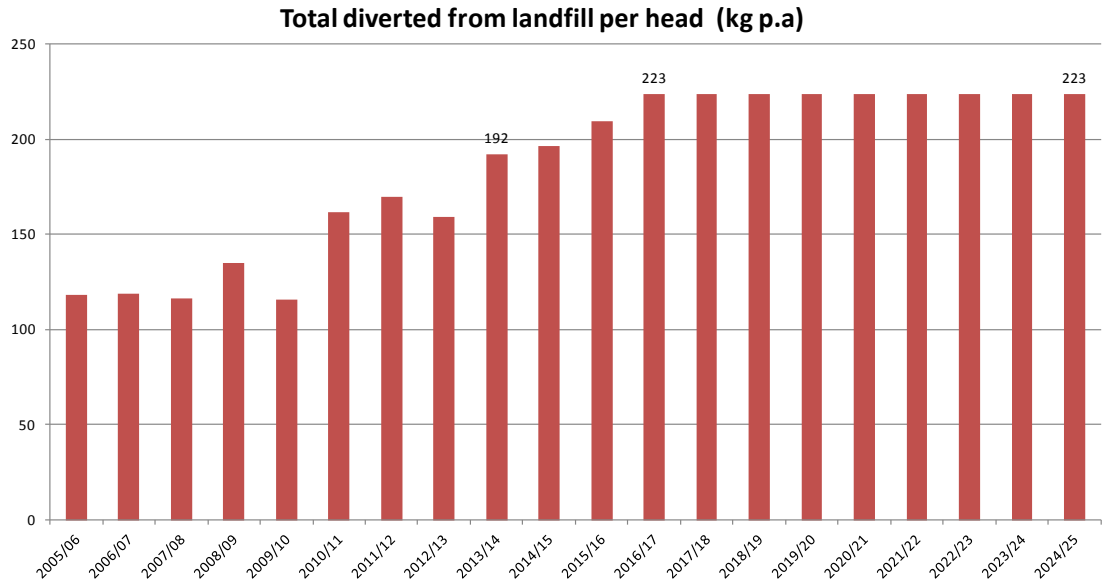
Table R-1 details the levels of service and associated performance measures for the solid waste activity. Those shaded are the customer focussed measures which are included in the LTP. The table sets out Council’s current performance and the targets they aim to achieve within the next three years and by the end of the next 10 year period.

The levels of service and performance measures are consulted on and adopted as part of the LTP consultation process.

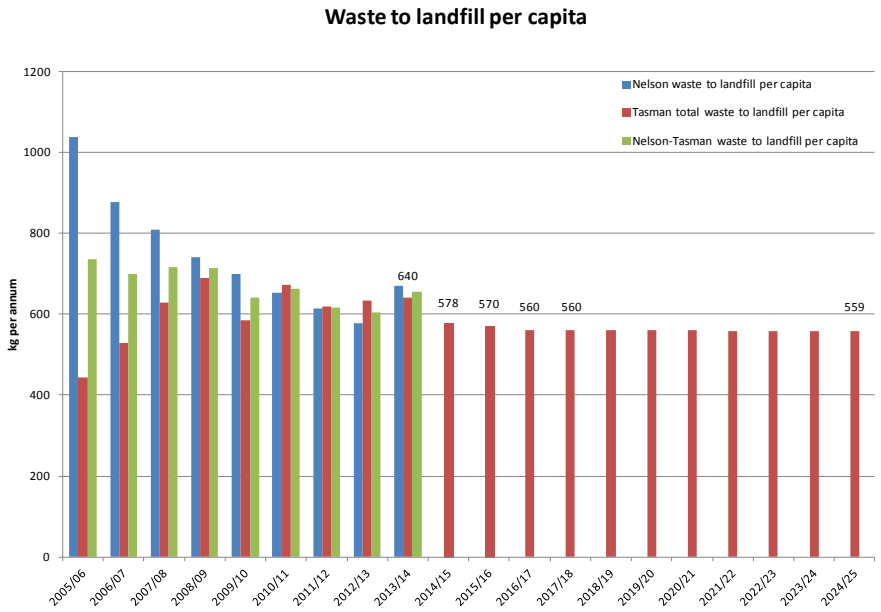
Table R-1: Performance Against Current Levels of Service, and Intended Future Performance

The shaded rows indicate those Levels of Service and performance measures which are included in the Long Term Plan.

ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at year end 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
Community Outcome: Our unique natural environment is healthy and protected.							
1	**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.*	**Actual = 192 kg per person**	197 kg	206 kg	206 kg	*206 kg*



ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at end Year 2 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
2		*There is a reduction in waste per capita going to landfill.* *As measured by tonnage recorded at landfill.*	**Actual = 640 kg per person**	*570 kg*	*560 kg*	*560 kg*	*559 kg*



ID	Levels of Service (we provide)	Performance Measure (We will know we are meeting the level of service if…)	Current Performance (as at end Year 2 2013/14)	Future Performance			Future Performance (targets) in Year 10 2025/26
				Year 1	Year 2	Year 3	
				2015/16	2016/17	2017/18	
Community Outcome: Our urban and rural environments are pleasant, safe and sustainably managed.							
5	**Our kerbside recycling and bag collection services are reliable, easy to use.**	*% of enquiries resolved within 24 hours.* *As measured through Confirm.*	**Actual = 95%**	*95%*	*95%*	*95%*	*95%*
6		*% customer satisfaction with kerbside recycling services.* *As measured through annual resident survey of those provided with Council's kerbside recycling collection services.*	Actual = 89% satisfied or very satisfied	*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.*	Actual = 69% satisfied or very satisfied	*70%*	*70%*	*70%*	*70%*
Community Outcome: Our infrastructure is safe, efficient and sustainably managed.							
8	**Our resource recovery centres are easy to use and operated in a reliable manner.**	*% customer satisfaction based on-site surveys.* *As measured by annual customer surveys at RRCs.*	**Actual = 96% satisfied or very satisfied**	*95%*	*95%*	*95%*	*95%*
9	**All Council solid waste activities, facilities and services comply with the TRMP, site management plans and other appropriate legislative requirements.**	*All necessary resource consents are held. Resource consents information is held in Council's NCS database.*	**Actual = 100%** **A current resource consent is in place for each site as required.**	100%	100%	100%	100%
		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.*	**Nil**	Nil	Nil	Nil	Nil

R.4 Plans Council Has Made to Meet The Levels of Service

Appendix F sets out Council's plans for new capital works to maintain or lift levels of service.

Key projects to lift levels of service over the next ten years are:

- improved access and layout arrangements at the Mariri RRC (2015/16 and 2017/18);
- new weighbridge and improved access at Takaka RRC (2015/16 and 208/19).

R.5 Levels of Service Linked to Legislation

Whilst Councils are required to comply with various legislation and regulations when managing the solid waste activity, no specific levels of service are included which relate to legislation.

APPENDIX S COUNCIL'S DATA MANAGEMENT, ASSET MANAGEMENT PROCESSES AND SYSTEMS

S1 Introduction

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 standards. The IIMM describes the Asset Management (AM) process as a step by step process applied to an activity or network level, to manage assets from planning to disposal or renewal. This process is shown in Figure S-1.

Each of these processes is summarised in this Appendix.

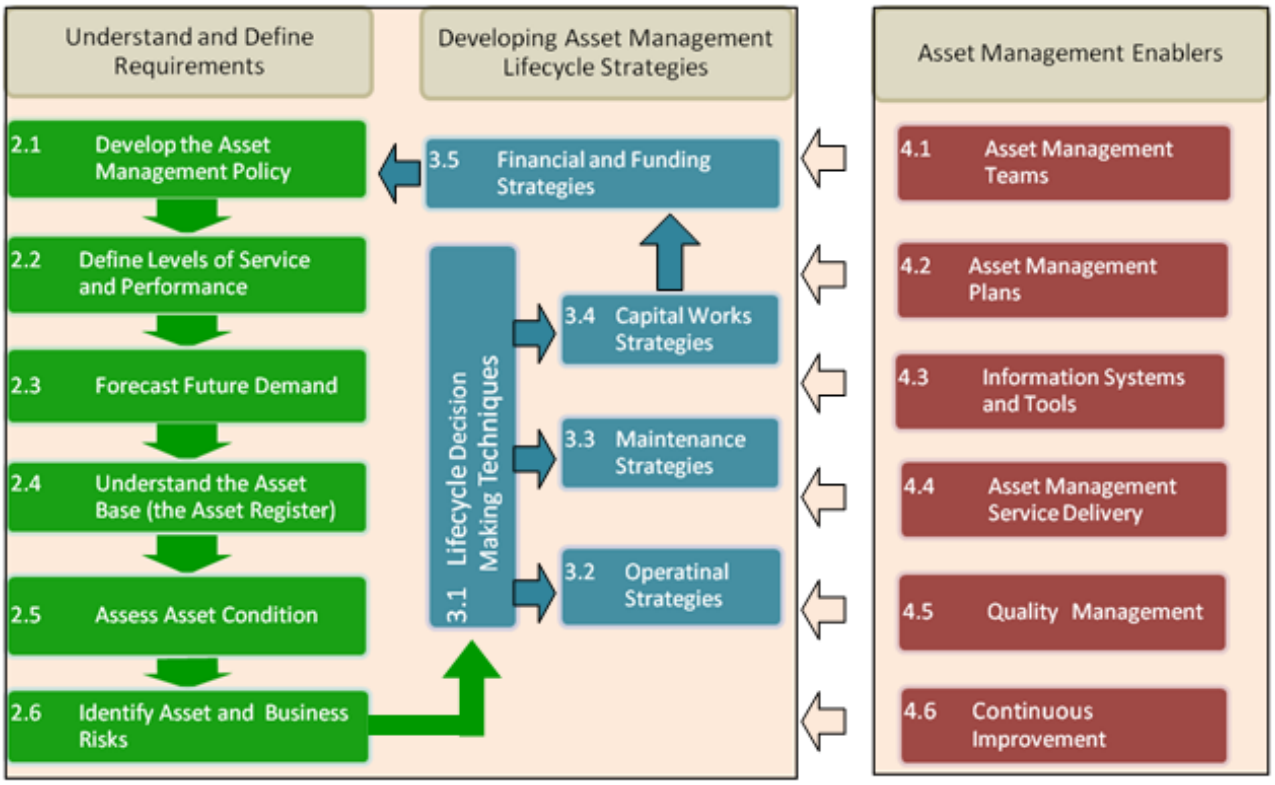


Figure S-1: The Asset Management Process (taken from IIMM 2011)

S2 Understand and Define Requirements

This phase determines what service levels are required and how future demand might change over time, as well as the current assets' capability to deliver on those requirements.

S2.1 Develop the Asset Management Policy

The Asset Management policy framework guides the organisation in terms of priorities and strategies, and sets out specific responsibilities, objectives, targets and plans. The Council has approached this by determining the desired and actual levels of asset management practice, and identifying the gaps between them for future improvement.

S2.1.1 Determine the Appropriate (Desired) Level of Asset Management Practice

The level of Asset Management expected can differ between activities. The IIMM defines the standards of the Activity Management Plans (AMPs) on a scale as follows:

- Minimum — Starting point
- Core — Basic
- Intermediate (core plus) — Transition between Core and Advanced
- Advanced — Most thorough

In 2010, Waugh Infrastructure Management Ltd undertook a review these levels and advised on target levels. A range of parameters (including populations, issues affecting the district, costs and benefits to the community, legislative requirements, size, condition and complexity of assets, risk associated with failure, skills and resources available, and customer expectation) was assessed to determine the most suitable level of asset management.

The results showed that Tasman District Council should be managing its assets at the following levels:

- Transportation — Intermediate with demand management and resource availability drivers
- Stormwater, Water, Wastewater — Intermediate with demand and risk management drivers
- Solid Waste — Core with risk management drivers
- Rivers — Core
- Coastal Structures — Core (future reassessment may be required)

S2.1.2 Determine the Actual Level of Asset Management Practice and Identify Gaps

The Council underwent a process at the end of the 2009 AMP to undertake a high level review of the AMPs and associated activity management processes against good practice asset management as described in the IIMM and in accordance with the Office of Auditor General. During this process, the AMP and associated practices were scored to give a snapshot of the current status and then set targets as to where the Council wished to head. The 2009 AMP Improvement Plan was assessed in its effectiveness to close the gap between actual and target compliance levels and new items added to the Improvement Plan where gaps were identified.

The results of the review are detailed in a separate report (Performance Review of Stormwater Activity Management Processes, MWH New Zealand Ltd, February 2010).

The two reviews described above were carried out independently of each other however the outputs from both were compared to ensure consistency of recommendations. Whilst both reviews focused on slightly different aspects of asset management practices, there was no conflict between the recommendations made.

This work is now somewhat dated as the AMPs have changed substantially since 2009. This area will be renewed following development of the LTP.

Table S-1 below shows analysis undertaken to link the two reviews to identify the compliance gaps and actions that should be undertaken to address them.

Table S-1: Analysis of Asset Management Reviews

	CORE	Compliance Status	Compliance Gaps to address to meet CORE
Description of Assets	Advanced	Substantially Compliant	**Action:** improve level of performance data in Confirm.
Levels of Service	Core	Compliant	
Managing Growth	Core (forecasts to include various factors)	Compliant	**Action:** More robust translation of demand analysis into new asset works and non-asset solutions.
Risk Management	Core (plus demonstration of IRM)	Partially Compliant	Compliance will improve with implementation of IRM.
Lifecycle Decision Making	Core	Partially Compliant	**Action:** Improve level of detail in AMP on decision making tools and techniques.
Financial Forecasts	Advanced (with the exception of sensitivity testing of forecasts)	Compliant	No plans to undertake sensitivity testing of forecasts.
Planning Assumptions and Confidence Levels	Core (plus assumptions listed)	Compliant	**Action:** Identify and capture assets not currently in formal system.
Outline Improvement Programmes	Advanced	Partially Compliant	**Action:** Identify timeframes, priorities and resources for Improvement Plan actions.
Planning by Qualified Persons	Core	Compliant	Intending to achieve Advanced by undertaking Peer Review.
Commitment	Advanced	Substantially Compliant	**Action:** More emphasis and commitment needed to Improvement Plan.

S2.2 Define Levels of Service and Performance

The Level of Service and Performance Management frameworks will ensure that agreed stakeholder requirements are met. Levels of Service, Performance measures, and Relationship to Community Outcomes are detailed in Appendix R.

S2.3 Forecast Future Demand

Understanding how future demand for service will change enables the Council to plan ahead to meet that demand. Demand and future new capital requirements are dealt with in Appendix F.

S2.4 Understand the Asset Base (the Asset Register)

A robust asset register is a core requirement for asset management.

Data on the Council assets is collected via as-built plans (supplied through capital works and subdivision), maintenance contract work and field studies. Two enterprise asset systems are used to record core data:

- RAMM – Transportation excluding Streetlights;
- Confirm – Stormwater, Water, Wastewater, Solid Waste, Rivers, Coastal Structures, Streetlights.

Most data sets are viewable on the corporate GIS browser, Explore Tasman. Reporting systems summarise data for management and performance reporting, and for providing links between AM systems and GIS / financial systems. Several other standalone applications exist for specific purposes.

The Asset Register and other Information Systems are described more comprehensively in section S4.3 Information Systems and Tools.

S2.5 Assess Asset Condition

The Council needs to understand the current condition of its assets. Monitoring programmes should be tailored to consider how critical the asset is, how quickly it is likely to deteriorate, and the cost of data collection.

Condition checks are done as follows – waste compactors every five years, large moveable bins annually. Closed landfills are audited every two years and Eves Valley Landfill once a month. General site audits are done on the RRCs every 1 or 2 months. Separate condition assessments of individual assets is deemed unnecessary, as regular audits will pick up repair or maintenance work.

Where condition rating is done, a 1-5 scale is used, as per the NZQQA Infrastructure Asset Grading Guidelines, as shown in Table S-2.

Table S-2: Asset Condition Rating Table

Condition Grade and Meaning	General Meaning
1 **Very Good**	Life: 10+ years. Physical: Fit for purpose. Robust and modern design. Access: Easy; easy lift manhole lids, clear access roads. Security: Sound structure with modern locks. Exposure: Fully protected from elements or providing full protection.
2 **Good**	Life: Review in 5 – 10 years. Physical: Fit for purpose. Early signs of corrosion/wear. Robust, but not latest design. Access: Awkward; heavy/corroded lids, overgrown with vegetation. Security: Sound structure with locks. Exposure: Adequate protection from elements or providing adequate protection.
3 **Moderate**	Life: Review in 5 years. Physical: Potentially impaired by corrosion/wear, old design or poor implementation. Access: Difficult: requires special tools or more than one person. Secure: Locked but structure not secure, or secure structure with no locks. Exposure: Showing signs of wear that could lead to exposure.
4 **Poor**	Life: Almost at failure, needs immediate expert review. Physical: Heavy corrosion impairing use. Obvious signs of potential failure. Access: Restricted, potentially dangerous. Secure: Locks and/or structure easily breeched. Exposure: Exposure to elements evident e.g. leaks, overheating.
5 **Very Poor**	Life: 0 years – broken. Physical: Obvious impairments to use. Heavy wear/corrosion. Outdated/flawed design/build. Access: Severely limited or dangerous. Security: No locks or easily breached. Exposure: Exposed to elements when not specifically designed to be.

S2.6 Identify Asset and Business Risks

A key process is assessing critical assets and risks. This feeds into all lifecycle decision making processes.

S2.6.1 Asset Risks - Critical Assets

All assets except transportation ones are now being graded for criticality as shown in Table S-3. This process is expected to be complete in 2015/16. The assessment will take into account recent changes with the activity (mothballing of landfill and new recycling services).

Table S-3: Asset Criticality Rating Table

Condition Grade	Meaning	Significance for Future Maintenance
A	Critical	Advanced condition assessment and preventative maintenance
B	Normal	Standard condition assessment and maintenance
C	Non-critical	Reduced maintenance acceptable

S2.6.2 Business Risks

The Council has adopted an Integrated Risk Management framework to manage risks, both at corporate and activity level. This is detailed in Appendix Q: Significant Assumptions, Uncertainties and Risk Management.

S3 Developing Asset Management Lifecycle Strategies

S3.1 Life Cycle Decision-Making Techniques

The lifecycle decision phase looks at how best to deliver on the requirements by applying various decision-making techniques, strategies and plans. These are discussed in separate appendices as listed below.

S3.2 Operational Strategies and Plans

Demand management strategies (reducing overall demand and / or reducing peak demands) are covered in Appendix N: Demand Management.

Emergency management processes are covered in Appendix Q: Significant Assumptions, Uncertainties and Risk Management.

S3.3 Maintenance Strategies and Plans

Optimised maintenance programmes are dealt with in Appendix E: Operations and Maintenance.

S3.4 Capital Works Strategies

Forecast growth and demand and new asset investment programming are detailed in Appendix F: Demand and Future New Capital Requirements.

Optimised renewal programmes and Asset investment programmes are covered in Appendix I: Capital Requirements for Future Renewals.

S3.5 Financial and Funding Strategies

A robust, long-term financial forecast is developed as the culmination of this phase, which identifies strategies to fund these programmes. This section covers how the resource demand of AM can be identified, disclosed and funded.

The following appendices hold this information:

- Appendix D: Asset Valuations
- Appendix G: Development Contributions / Financial Contributions
- Appendix K: Public Debt and Annual Loan Servicing Costs
- Appendix L: Summary of Future Overall Financial Requirements
- Appendix M: Funding Policy, Fees and Charges

S4 Asset Management Enablers

Underpinning Asset Management decision-making at each stage are the following.

S4.1 Asset Management Teams

The Council has an organisational structure and capability that supports the AM planning process. Responsibility for asset planning across the lifecycle is delivered by teams within the Council as shown by Figure S-3 below.

Corporate and Strategic Planning is performed by the Strategic Policy team in the Community Development Department.

The Asset Management function is managed by Engineering's Activity Planning team. Operations are the responsibility of the Utilities and Transportation teams, while Projects and Contracts are managed by the Programme Delivery team.

Operations and maintenance and Contracts are externally tendered. Professional services are supplied by MWH New Zealand Ltd and other consultants. Details are discussed in Section 4.4.

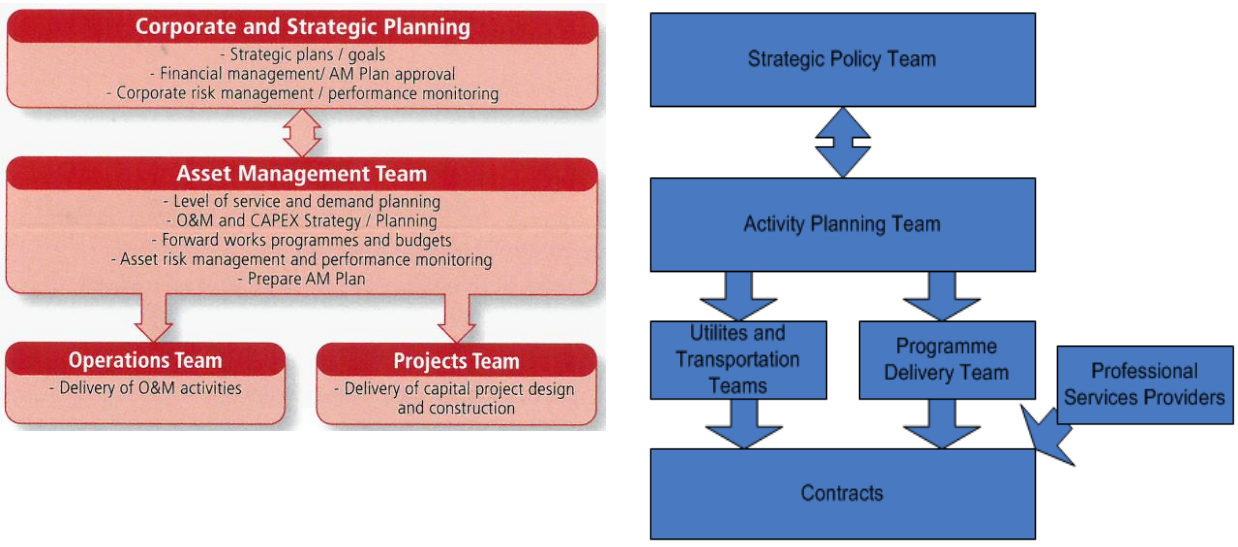


Figure S-2: Asset Management Team Roles (taken from IIMM 2011) and Asset Management Teams at Tasman District Council

S4.2 Asset Management Plans

Asset Management plans need to be robust and set out clear future strategies and programmes. This document is a key part of the Asset Management process and will be updated on a regular basis in between AMP planning cycles.

S4.3 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 optimal asset programmes. These are detailed in Figure S-3 below.

There is a continual push to incorporate all asset data into the core AM systems where possible; where not possible, attempts are made to integrate or link systems so that they can be easily accessed.

Table S-4 lists the various data types and systems they are held in, with a summary of how they are managed.

Table S-5 defines the Accuracy and Completeness grades applied to asset data in Table S-2.

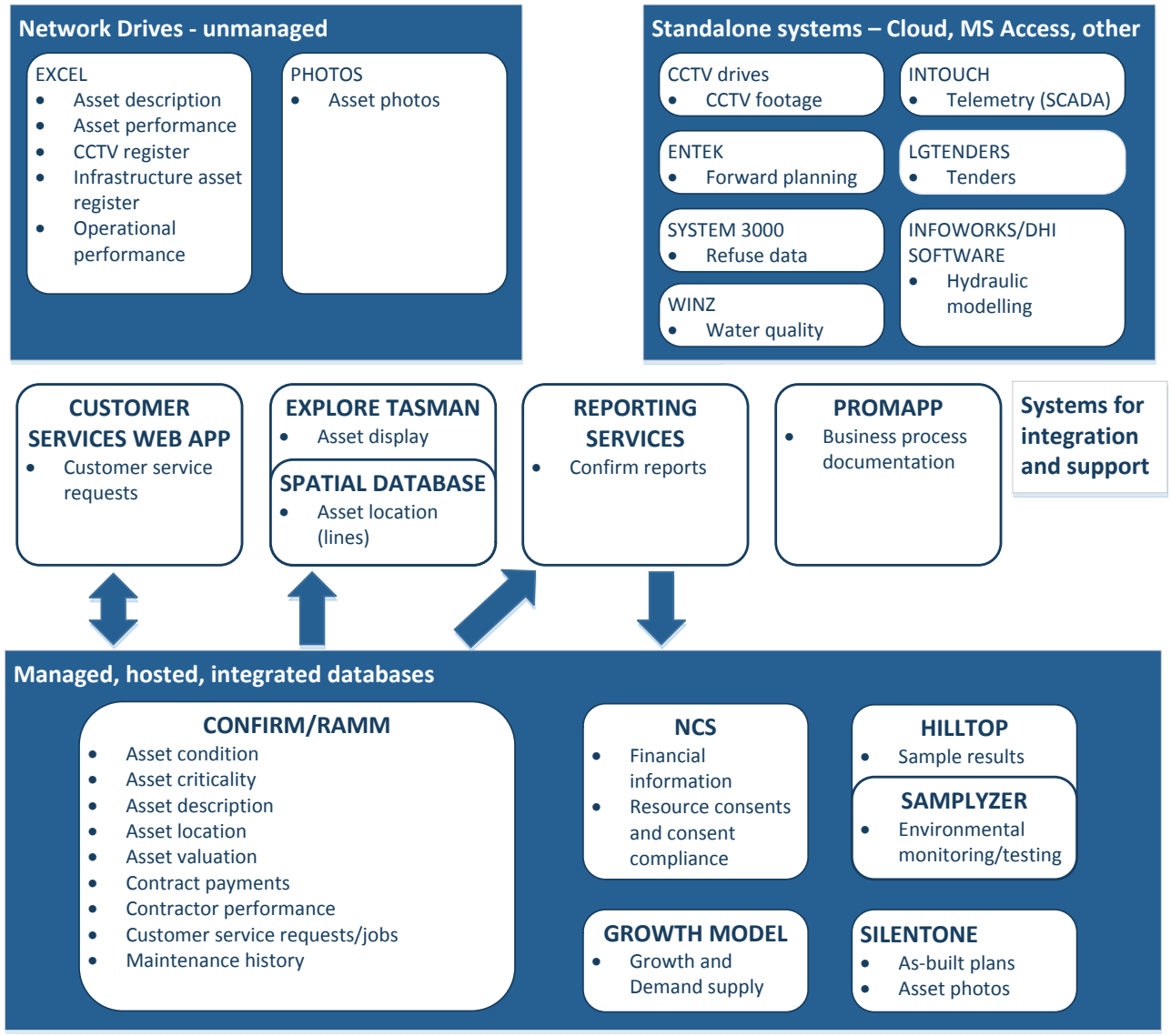


Figure S-3: Systems used for Asset Management at Tasman District Council

Table S-4: Data Types and Information Systems Used

Data Type	Information System	Management Strategy	Data Accuracy	Data Complete-ness
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	2
Asset condition	Confirm	See discussion in section S2.5	N/A	N/A
Asset criticality	Confirm	See section S2.6.1 Asset Risks - Critical assets	N/A	N/A
Asset description	Confirm	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.	2	3
Asset location	Confirm (point data) / GIS (line data)	Co-ordinates for point data completely (NZTM) describe spatial location.	3	3
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	Time to complete jobs is measured against contract KPIs through Confirm's Maintenance Management module.	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 or as a RAMM Contractor Dispatch.	N/A	N/A
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.	N/A	N/A

Data Type	Information System	Management Strategy	Data Accuracy	Data Complete-ness
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	Entek TPM (Time and Space Project Management)	Forward programmes for the Council's activities, and reseal / footpath renewal programmes, are uploaded to TPM in order to identify clashes and opportunities. The strength of this module relied on buy in from Utilities Companies and Local Contractors (neither of which occurred).	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	Contractor work is issued via Confirm's Maintenance Management module. History of maintenance is stored against individual assets. Prior to 2007 it was logged at a scheme level.	2	5
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
Processes and documentation	Promapp	Promapp is process management software that provides a central online repository where the 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 S-5: Asset Data Accuracy and Completeness Grades

Grade	Description	% Accuracy	Grade	Description	% Completeness
1	Accurate	100	1	Complete	100
2	Minor inaccuracies	± 5	2	Minor gaps	90 – 99
3	50% estimated	± 20	3	Major gaps	60 – 90
4	Significant data estimated	± 30	4	Significant gaps	20 – 60
5	All data estimated	± 40	5	Limited data available	0 – 20

S4.4 Asset Management Service Delivery

The Council has opted to tender capital works and operations and maintenance externally to obtain more cost-effective service delivery.

The Council has adopted effective procurement strategies, such that activity management activities are being delivered in the most cost-effective way (value for money rather than lowest cost).

S4.4.1 Procurement Strategy

Tasman District Council has a formal Procurement Strategy for its Engineering Services. This Strategy has been prepared to meet New Zealand Transport Agency's (NZTA) requirements for expenditure from the National Land Transport Fund, and it describes the procurement environment that exists within the Tasman District. It has been developed following a three-year review of the Strategy and approved in November 2013. It principally focuses on Engineering Services activities but is framed in the NZTA procurement plan format, which is consistent with whole of government procurement initiatives.

The Council's objectives are to:

- Implement policies and financial management strategies that advance the Tasman District
- Ensure sustainable management of natural and physical resources, and security of environmental standards
- Sustainably manage infrastructure assets relating to Tasman District
- Enhance community development and the social, natural, cultural and recreational assets relating to Tasman district
- Promote sustainable economic development in the Tasman District.

The Council has recently implemented a procurement and tender award governance gateway process. This is shown in Figure S-3 below.

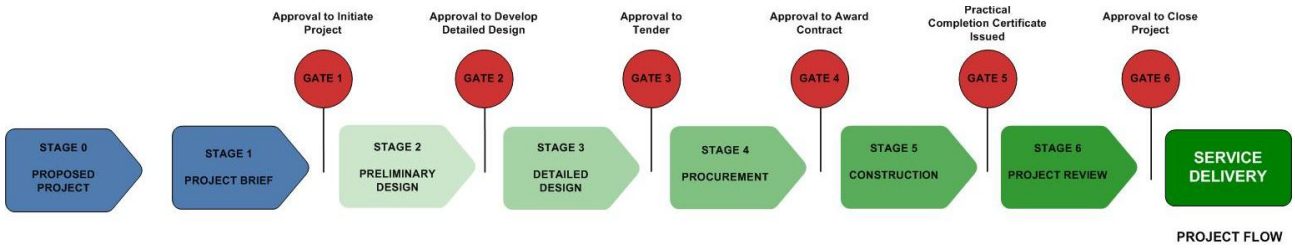


Figure S-4: Gateway Process Used by Programme Delivery Team for Project Delivery

At the Approval to Tender gate (Gate 3), the Tender Evaluation Team:

1 Carefully reviews the specifications, drawings, detailed design.

2 Reviews estimate against allocated budget and checks availability of funds.

3 Assesses/ reviews project-specific risks and critical success factors;

4 Selects the evaluation method (supplier panel or direct to market; Price/Quality, Lowest Price Conforming, Weighted Attributes, Target Price, Brooks Law, etc) – check best suited to project's scope and risk levels.

5 Checks peer review of design.

6 Checks status of required consents and land issues.

7 Reviews Price/ Non-Price weightings, risk review and quality premium they are prepared to pay.

8 Reviews attributes (including pass/ fail and/ or weightings) and targeted questions in RFT to check for relevance to project-specific success factors and differentiators.

9 Reviews the response period (relative to RFT requirements) to ensure there is sufficient time for quality responses.

At the Approval to Award gate (Gate 4), the Programme Delivery Manager:

1 Reviews the tender process to check relevance/ effectiveness.

2 Reviews the recommendation.

3 Checks if Tender Panel approval is required.

4 Awards the Contract.

S4.4.2 Professional Services Contract

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 solid waste capital works programme. 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 following a six month tender selection process and commenced on 1 July 2014 with an initial three year term and two three-year extensions to be awarded at the Council's sole discretion.

S4.5 Quality Management

Table S-6 outlines quality management approaches that support the Council's AM processes and systems.

Table S-6: Quality Management Approach

Approach	Description
Process documentation	This is being phased in across the Council with the implementation of Promapp. Over time business units are capturing organisational knowledge in an area accessible to all staff, 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.
Quality Management systems	Tasman District Council does not have a formal Quality Management system across the Council; quality is ensured by audits and checks that are managed in individual teams. Quality checks are done at many stages throughout the Asset Management process.
Planning	The planning process is formalised across the Council, with internal reviews and the Council approval stages. Following completion of the AMPs, a peer review is done. From that a comprehensive Improvement Plan is drawn up. Actions are discussed at regular meetings and progress noted. These will be incorporated into the following round of AMPs.
Programme Delivery	This strictly follows a gateway system with inbuilt checks and balances at every stage. Projects can't proceed until all criteria of a certain stage have been completely met and formally signed off.
Subdivision works	Subdivision sites are audited for accuracy of data against the plans submitted. CCTV is performed on all subdivision Stormwater and Wastewater assets at completion of works and again before the assets are vested in the Council, so that defects can be repaired.
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.
Asset performance	Audits of reticulation flows are done regularly to ensure that system performance is optimal.
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 linked to financial penalties for the contractor.
Levels of Service	KPIs are reported regularly in Engineering Services council meetings and then again annually and audited by the OAG.
Customer Service Requests (CSRs)	Asset based CSRs (in Confirm and RAMM) are checked monthly for outstanding items via a customised report that is e-mailed to action officers. Non-asset based CSRs (in NCS) are checked for compliance weekly at Senior Management Teams, via a dashboard reporting system.
Reports to Council	All reports that are presented to the Council are reviewed and edited by the Executive Assistant prior to approval by the Engineering Manager and the Senior Management Team.

S4.6 Continuous Improvement

Processes are in place to monitor the adequacy, suitability and effectiveness of all asset management planning activities to drive a continuous cycle of review, corrective action and improvement. These are covered by Appendix V: Improvement Programme.

APPENDIX T BYLAWS

The following bylaws have been adopted by Council:

- Consolidated Bylaws 2013 - Introduction
- Control of Liquor in Public Places 2012
- Dog Control Bylaw 2014
- Freedom Camping Bylaw 2011
- Freedom Camping (Motueka Beach Reserve) Bylaw 2013
- Navigation Safety Bylaw 2014
- Speed Limits Bylaw 2013
- Stock Control and Droving Bylaw 2005
- **Wastewater Bylaw 2015***
- Trading in Public Places Bylaw 2010
- Traffic Control Bylaw 2013
- Water Supply Bylaw 2009.

In accordance with the Local Government Act 2002, these bylaws will be reviewed no later than 10 years after they were last reviewed.

***Bylaws of direct relevance in to this activity.**

The Council will be considering the need for a solid waste bylaw in 2015-16.

APPENDIX U STAKEHOLDERS AND CONSULTATION

U.1 Stakeholders

There are many individuals and organisations that have an interest in the management and / or operation of Council's assets. Council has a Community and Engagement Policy which is designed to guide the expectations with the relationship between the Council and the Tasman community. The 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 the solid waste activity are:

- elected members (Councillors and Community Board members);
- Nelson City Council*;
- Iwi/Maori* (including Tiakina te Taiao and Manawhenua ki Mohua, iwi monitors);
- 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.

U.2 Consultation

U.2.1. Purpose of Consultation and Types of 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 surveys;
- public meetings;
- feedback from elected members, advisory groups and working parties;
- analysis of customer service requests and complaints;
- consultation via the annual plan and ltp process.

The Council commission's resident surveys on a regular basis, every year since 2008, from the National Research Bureau Ltd1. These CommunitrakTM surveys assess the levels of satisfaction with key services, including wastewater services, and the willingness across the community to pay to improve services.

From time to time the Council undertakes focussed surveys to get information on specific subjects or projects.

U.2.2. Consultation Outcomes

The most recent NRB Communitrak™ survey was undertaken in May 2014. This asked whether residents were satisfied with the Council's kerbside recycling and rubbish collection services.

The survey included residents that had access to the Council service and some that were not. For this reason the survey reports satisfaction for those where the services are provided and as well as overall satisfaction (including results from those where no service is provided).

U.2.2.1 Kerbside Recycling

The results from this survey for recycling are summarised in Figure U-1. Perhaps unsurprisingly, it shows satisfaction is higher when residents not receiving the service are excluded from the analysis.

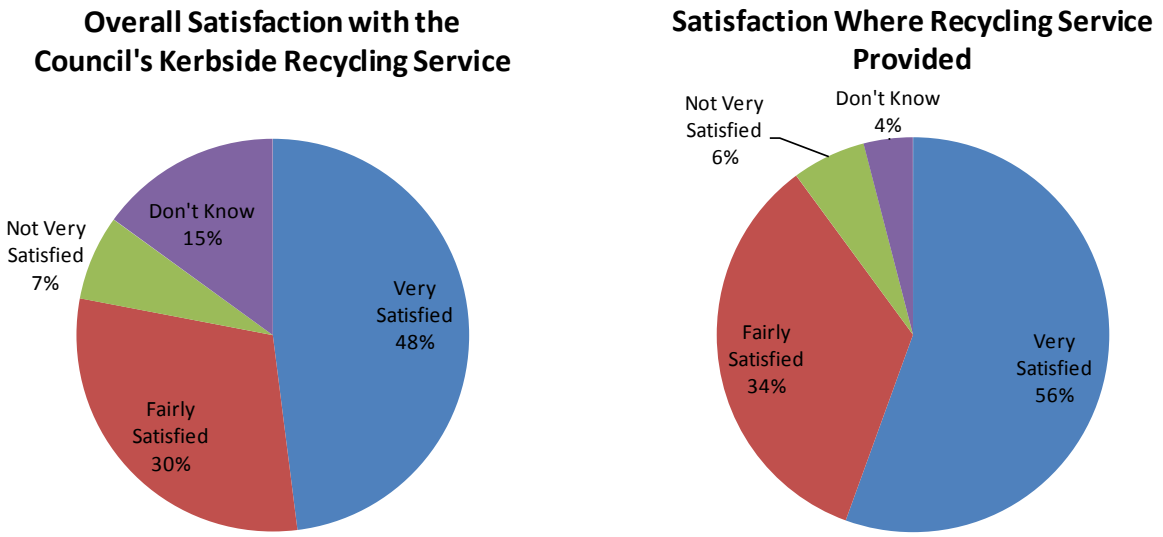


Figure U-1: Satisfaction with Kerbside Recycling

The 2014 satisfaction score for receivers of the service (89%) is higher than the Council's peer group for 2014 (78%) and higher than the national average (84%). The 2014 overall satisfaction (78%) is on a par with Council's peer group and lower than the national average.

The survey also reports satisfaction of residents that have used the service. Of those surveyed, 81% of households had used Council's kerbside recycling services in the past 12 months. Of those users, 90% were satisfied.

U.2.2.2 Rubbish Collection

The results from this survey for rubbish collection are summarised in Figure U-2.

[1] Communitrak™: Public Perceptions and Interpretations of Council Services / Facilities and Representation, NRB Ltd May 2014.

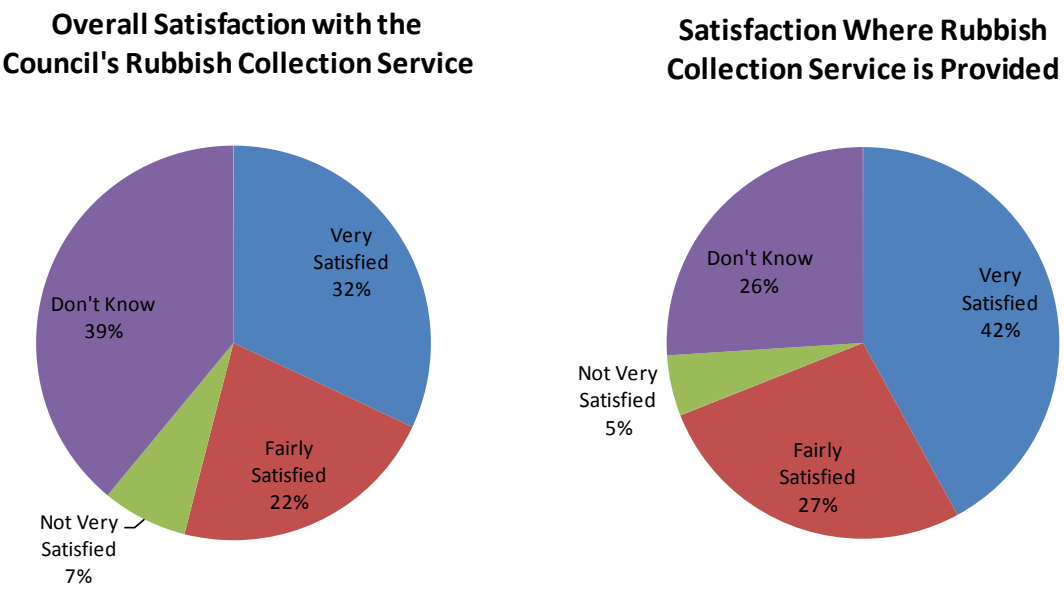


Figure U-2: Satisfaction with Rubbish Collection

The 2014 satisfaction score for receivers of the service (69%) is higher than the Council's peer group for 2014 (65%) and lower than the national average (81%). The 2014 overall satisfaction (54%) is substantially lower than Council's peer group and the national average.

The survey also reports satisfaction of residents that have used the service. Of those surveyed 53% percent of households had used Council's kerbside recycling services in the past 12 months. Of those users, 81% were satisfied.

U.2.2.3 Trends over Time

Figure U-3 shows the satisfaction trends since 2005. It shows an overall increase in satisfaction in kerbside recycling since surveys began, although satisfaction dropped slightly in 2014. It also shows an overall decline in satisfaction for rubbish collection, particularly since 2010.

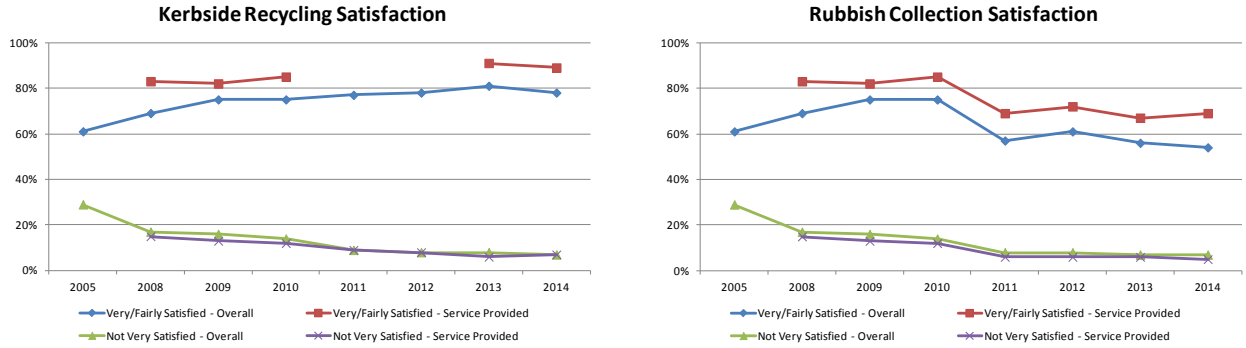


Figure U-3: Satisfaction with Recycling and Rubbish Collections

U.2.2.4 Spending Emphasis

Figure U-4 shows the results of residents' preference for Council spending on kerbside recycling and rubbish collections in 2008, 2011 and 2014. In 2008 spending preferences for kerbside recycling and rubbish collections were asked as a single question.

When asked about kerbside recycling in 2014, 83% of those surveyed said they would like Council to spend "about the same" for kerbside recycling. This is an increase from previous years (70% in 2005 and 76% in 2011).

The proportion of residents requesting additional spending on recycling has decreased from 20% in 2008 to 8% in 2014. The proportion requesting less spending has remained static at 3-4%.

In the area of Council rubbish collections 74% of residents want Council to spend "about the same", which is not much different from previous surveys (70% and 74%). Residents requesting more spending on rubbish collections have decreased from 20% in 2008 to 11% in 2011 and 8% in 2014. The proportion requesting less spending has remained static at 3-4%.

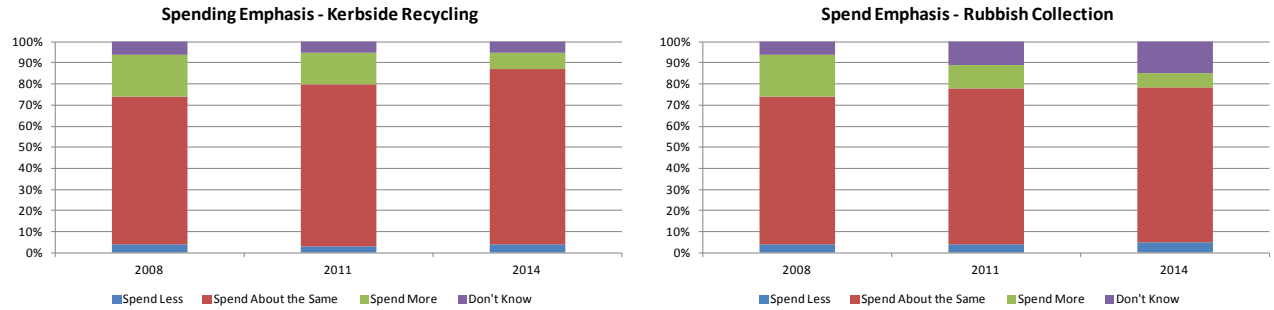


Figure U-4: Do People want More or Less Spent on Solid Waste

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 continues to fall, although satisfaction among those able to use the service is no longer declining;
- there is a high level of participation in the council recycling scheme;
- demands to spend more on kerbside recycling and rubbish collection have dropped away significantly, indicating that any improvements to services would need to be within historical budgets.

APPENDIX V IMPROVEMENT PLAN

To be provided in final document.

APPENDIX W ASSET DISPOSALS

W.1 Asset Disposal Strategy

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.

Asset disposal is primarily a by-product of renewal or upgrade decisions that involve the replacement of assets, as there are no significant areas of operation that the Council wishes to permanently cease.

Assets may also become surplus to requirements for any of the following reasons:

- under-utilisation;
- obsolescence;
- provision exceeds required level of service;
- uneconomic to upgrade or operate;
- policy change;
- service provided by other means (eg. private sector involvement);
- potential risk of ownership (financial, environmental, legal, social, vandalism).

Depending on the nature and value of the assets they are either:

- made safe and left in place;
- removed and recycled or disposed to landfill;
- removed and sold.

W.2 Disposal Standards

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.

W.3 Forecast Asset Disposals

Council has no significant assets that it intends to dispose of in the foreseeable future.

The Council may close the Collingwood RRC in the future. This site is shared with water supply and wastewater treatment activities of the Council. In the event of closure the Council would either leave assets on the site or transfer them to other solid waste sites.

The Council will moth-ball the Eves Valley Landfill for a period of 15 years, from 2015 to 2030. While the landfill is moth-balled the Council will transport waste to the York Valley landfill in Nelson City, but will maintain Eves Valley in a state that it can be readily re-opened in an emergency.

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.

APPENDIX X GLOSSARY OF ASSET MANAGEMENT TERMS

Acronyms and Abbreviations

AMP	Activity Management Plan
LGA	Local Government Act
LTP	Long Term Plan
TRMP	Tasman Regional Management Plan

Term	Description
Activity	An activity is the work undertaken on an asset or group of assets to achieve a desired outcome.
Activity Management Plan (AMP)	Activity Management Plans are key strategic documents that describe all aspects of the management of assets and services for an activity. The documents feed information directly in the Council's LTP, and place an emphasis on long term financial planning, community consultation, and a clear definition of service levels and performance standards.
Advanced Asset Management	Asset management that employs predictive modelling, risk management and optimised renewal decision-making techniques to establish asset lifecycle treatment options and related long term cash flow predictions. (See Basic Asset Management).
Annual Plan	The Annual Plan provides a statement of the direction of Council and ensures consistency and co-ordination in both making policies and decisions concerning the use of Council resources. It is a reference document for monitoring and measuring performance for the community as well as the Council itself.
Asset	A physical component of a facility that has value enables services to be provided and has an economic life of greater than 12 months.
Asset Management (AM)	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner.
Asset Management System (AMS)	A system (usually computerised) for collecting analysing and reporting data on the utilisation, performance, lifecycle management and funding of existing assets.
Asset Management Plan	A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service. A significant component of the plan is a long-term cash flow projection for the activities.
Asset Management Strategy	A strategy for asset management covering, the development and implementation of plans and programmes for asset creation, operation, maintenance, renewal, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved at optimum cost.

Term	Description
Asset Register	A record of asset information considered worthy of separate identification including inventory, historical, financial, condition, construction, technical and financial information about each.
Basic Asset Management	Asset management which relies primarily on the use of an asset register, maintenance management systems, job/resource management, inventory control, condition assessment and defined levels of service, in order to establish alternative treatment options and long term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than risk analysis and optimised renewal decision making).
Benefit Cost Ratio (B/C)	The sum of the present values of all benefits (including residual value, if any) over a specified period, or the life cycle of the asset or facility, divided by the sum of the present value of all costs.
Business Plan	A plan produced by an organisation (or business units within it) which translate the objectives contained in an Annual Plan into detailed work plans for a particular, or range of, business activities. Activities may include marketing, development, operations, management, personnel, technology and financial planning.
Capital Expenditure (CAPEX)	Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of an asset.
Condition Monitoring	Continuous or periodic inspection, assessment, measurement and interpretation of resulting data, to indicate the condition of a specific component so as to determine the need for some preventive or remedial action
Critical Assets	Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.
Current Replacement Cost	The cost of replacing the service potential of an existing asset, by reference to some measure of capacity, with an appropriate modern equivalent asset.
Deferred Maintenance	The shortfall in rehabilitation work required to maintain the service potential of an asset.
Demand Management	The active intervention in the market to influence demand for services and assets with forecast consequences, usually to avoid or defer CAPEX expenditure. Demand management is based on the notion that as needs are satisfied expectations rise automatically and almost every action taken to satisfy demand will stimulate further demand.
Depreciated Replacement Cost (DRC)	The replacement cost of an existing asset after deducting an allowance for wear or consumption to reflect the remaining economic life of the existing asset.
Depreciation	The wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted for by the allocation of the historical cost (or revalued amount) of the asset less its residual value over its useful life.
Disposal	Activities necessary to dispose of decommissioned assets.

Term	Description
Economic Life	The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service. The economic life is at the maximum when equal to the physical life however obsolescence will often ensure that the economic life is less than the physical life.
Facility	A complex comprising many assets (eg. swimming pool complex, etc.) which represents a single management unit for financial, operational, maintenance or other purposes.
Geographic Information System (GIS)	Software which provides a means of spatially viewing, searching, manipulating, and analysing an electronic database.
Infrastructure Assets	Stationary systems forming a network and serving whole communities, where the system as a whole is intended to be maintained indefinitely at a particular level of service potential by the continuing replacement and refurbishment of its components. The network may include normally recognised 'ordinary' assets as components.
I.M.S.	Infrastructure Management System - computer database
Level of Service (LoS)	The defined service quality for a particular activity (ie. water) or service area (ie. Water quality) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost.
Life	A measure of the anticipated life of an asset or component; such as time, number of cycles, distance intervals etc.
Life Cycle	Life cycle has two meanings. • The cycle of activities that an asset (or facility) goes through while it retains an identity as a particular asset ie. from planning and design to decommissioning or disposal. • The period of time between a selected date and the last year over which the criteria (eg. costs) relating to a decision or alternative under study will be assessed.
Life Cycle Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
Life Cycle Maintenance	All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.
Long Term Plan (LTP)	The Long Term Plan is the primary strategic document through which Council communicates its intentions over the next 10 years for meeting community service expectations and how it intends to fund this work. The LTP is a key output required of Local Authorities under the Local Government Act 2002. The LTP replaces the Long Term Council Community Plan (LTCCP).
Maintenance Plan	Collated information, policies and procedures for the optimum maintenance of an asset, or group of assets.

Term	Description
Objective	An objective is a general statement of intention relating to a specific output or activity. They are generally longer-term aims and are not necessarily outcomes that managers can control.
Operation	The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. Operation costs are part of the life cycle costs of an asset.
Optimised Renewal Decision Making (ORDM)	An optimisation process for considering and prioritising all options to rectify performance failures of assets. The process encompasses NPV analysis and risk assessment.
Performance Indicator (PI)	A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.
Performance Monitoring	Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.
Planned Maintenance	Planned maintenance activities fall into three categories. • Periodic – necessary to ensure the reliability or sustain the design life of an asset. • Predictive – condition monitoring activities used to predict failure. • Preventive – maintenance that can be initiated without routine or continuous checking (eg. using information contained in maintenance manuals or manufacturers' recommendations) and is not condition-based.
Recreation	Means voluntary non-work activities for the attainment of personal and social benefits, including restoration (recreation) and social cohesion.
Rehabilitation	Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally involves repairing the asset using available techniques and standards to deliver its original level of service without resorting to significant upgrading or replacement.
Renewal	Works to upgrade, refurbish, rehabilitate or replace existing facilities with facilities of equivalent capacity or performance capability.
Renewal Accounting	A method of infrastructure asset accounting which recognises that infrastructure assets are maintained at an agreed service level through regular planned maintenance, rehabilitation and renewal programmes contained in an asset management plan. The system as a whole is maintained in perpetuity and therefore does not need to be depreciated. The relevant rehabilitation and renewal costs are treated as operational rather than capital expenditure and any loss in service potential is recognised as deferred maintenance.
Repair	Action to restore an item to its previous condition after failure or damage.
Replacement	The complete replacement of an asset that has reached the end of its life, so as to provide a similar or agreed alternative, level of service.

Term	Description
Remaining Economic Life	The time remaining until an asset ceases to provide service level or economic usefulness.
Risk Cost	The assessed annual cost or benefit relating to the consequence of an event. Risk cost equals the costs relating to the event multiplied by the probability of the event occurring.
Risk Management	The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.
Routine Maintenance	Day to day operational activities to keep the asset operating (eg. replacement of light bulbs, cleaning of drains, repairing leaks) and which form part of the annual operating budget, including preventative maintenance.
Service Potential	The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset.
Strategic Plan	Strategic planning involves making decisions about the long term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long term survival, value and growth of the organisation.
Unplanned Maintenance	Corrective work required in the short term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.
Upgrading	The replacement of an asset or addition/ replacement of an asset component which materially improves the original service potential of the asset.
Valuation	Estimated asset value that may depend on the purpose for which the valuation is required, ie. replacement value for determining maintenance levels or market value for life cycle costing.

APPENDIX Z AMP STATUS AND DEVELOPMENT PROCESS – SOLID WASTE

Z.1 Quality Assurance

Quality Assurance Statement		
Tasman District Council 189 Queen Street Private Bag 4 Richmond 7050 Telephone: (03) 543 8400 Fax: (03) 543 9524	**Version:**	Draft – January 2015
	Status:	Draft
	Project Manager:	Dwayne Fletcher
	Prepared by: **AMP Author**	David Stephenson
	Approved for issue by: **Engineering Manager**	Peter Thomson

Z.2 Quality Requirements and Issues

	Issues and Requirements	Description
1	Fitness for Purpose	The AMP has to be "fit for purpose". It has to comply with Audit NZ expectations of what an AMP should be to provide them the confidence that the Council is adequately managing the Council activities.
2	AMP Document Consistency	Council want a high level of consistency between AMPs so that a reader can comfortably switch between plans.
3	AMP Document Format	The documents need to be prepared to a consistent and robust format so that the electronic documents are not corrupted (as happens to large documents that have been put together with a lot of cutting and pasting) and can be made available digitally over the internet.
4	AMP Text Accuracy and Currency	The AMPs are large and include a lot of detail. Errors or outdated statements reduce confidence in the document. The AMPs need to be updated to current information and statistics.
5	AMP Readability	The AMPs in their current form have duplication – where text is repeated in the "front" section and the Appendices. This needs to be rationalised so that the front section is slim and readable and the Appendix contains the detail without unnecessary duplication.
6	Completeness of Required Upgrades/Expenditure Elements	The capital expenditure forecasts and the operations and maintenance forecasts need to be complete. All projects and cost elements need to be included.
7	Accuracy of Cost Estimates	Cost estimates need to be as accurate as the data and present knowledge allows, consistently prepared and decisions made about timing of implementation, drivers for the project and level of accuracy the estimate is prepared to.

	Issues and Requirements	Description
8	Correctness of Spreadsheet Templates	The templates prepared for use need to be correct and fit for purpose.
9	Assumptions and Uncertainties	Assumptions and uncertainties need to be explicitly stated on the estimates.
10	Changes Made After Submission to Financial Model	If Council makes decisions on expenditure after they have been submitted into the financial model, the implications of the decisions must be reflected in the financial information and other relevant places in the AMP – eg. Levels of service and performance measures, improvement plans etc.
11	Improvement Plan Adequate	Improvements identified, costed, planned and financially provided for in financial forecasts.