Solid Waste

Asset Management Plan

2021-2031

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Update (April 2020): COVID-19

The recent international COVID-19 virus pandemic and lockdown of New Zealand's borders will undoubtedly have a huge impact on tourism. The full impacts cannot be predicted due to the huge level of uncertainty.

However, it is reasonable to expect that this may significantly impact the resident population in Franz Josef and Fox Glacier (the majority of whom are employed either directly or indirectly via the tourism sector).

As many small businesses may be unable to remain financially viable if the lockdown continues for an extended period of time, the availability of contractors may also change.

Central Government is currently offering Territorial Authorities the opportunity to put together funding applications for "shovel-ready" projects to kick start the economy once these restrictions lift.

Westland District Council is submitting several applications across a variety of infrastructure areas. These have been based on known projects already listed in this document, however, it is worth noting that the timings and costings of projects listed in this Plan could change as a result of COVID-19, due to supply chain shortages and cost increases.

Procedural changes have been implemented at transfer stations and landfills as a result of COVID-19 including payWave implementation (for contactless payment), installation of COVID app QR scanning posters, physical distancing and increased sanitation measures. These measures have not resulted in any noticeable cost increases to Council.

Glossary of Terms

Term	Definition
4R	This refers to the waste hierarchy of reduction, reuse, recycling and recovery.
Asset Management	The process applied to manage assets over each stage of their service life including asset needs analysis, creation, operation, maintenance, renewal and disposal. The objective of asset management is to ensure the assets deliver the required level of service in the most effective and efficient manner now and into the future.
Condition Monitoring	Continuous or periodic inspection, assessment, measurement and interpretation of resulting data, to indicate the condition of a specific component to determine the need for some preventive or remedial action.
Critical Asset	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.
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.
Depreciation Austerity	A policy to significantly reduce the level to which depreciation is funded. Usually introduced during difficult economic conditions as a means of reducing public expenditure to minimise costs to ratepayers. The risk of depreciation austerity is that it may create a funding shortfall for renewal of assets in future years.
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.
HSNO	Refers to Hazardous Substances and New Organisms and the associated 1996 Act of Parliament.
IIMM	International Infrastructure Management Manual is a global how to guide in terms of applying the standards for infrastructure asset management.
IPWEA	Institute of Public Works Engineering Australasia is a professional association for persons who deliver public works and engineering services to communities in Australia and New Zealand. IPWEA provides professional development, technical publications, and promotes knowledge sharing among its member base. It also lobbies for policy change and for grants to undertake projects that benefit the public works industry.
Kaitiakitanga	Kaitiaki is a New Zealand Māori term used for the concept of guardianship, for the sky, the sea, and the land. A kaitiaki is a guardian, and the process and practices of protecting and looking after the environment are referred to as kaitiakitanga.
KPI	Key Performance Indicator: a measurable target against which Council can evaluate the success of its delivery of Levels of Service standards.
Level of Service	The defined service standard particular to an activity or service area (i.e. interior) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, regulatory and environmental acceptability and cost.
Lifecycle Management	A process of managing an asset from initial construction through to disposal. Lifecycle cost is the Total expenditure required throughout the life of an asset in order to fund the creation, design, construction, operation, maintenance, renewal and disposal so that the asset can deliver the desired service level over its life.

Local Government Act (LGA)	Act of Parliament that outlines general framework and powers for local government authorities in New Zealand, including: • Principles for the governance and management of local authorities (Part 4). • A framework for consultation, planning, decision-making, financial management, and reporting – including requirements to produce long-term plans, annual plans, annual reports and pre-election reports (Part 6). • A range of obligations, restrictions and powers, including requiring local authorities to assess their communities' needs for sanitary services (including solid waste disposal), and placing an obligation on local authorities to provide services to ensure continued public ownership (Parts 7-9 & 11). • The powers of the Minister of Local Government in relation to local authorities (Part 10).
Long Term Plan (LTP)	Council's main strategic planning document. Documents projects and budgets over a 10-year period to ensure consistency and coordination in both making policies and decisions concerning the use of Council resources. This document is reviewed every three years and in non-LTP years, an Annual Plan is produced to cover the strategic direction and any amendments to the Long Term Plan for the upcoming financial year.
Maintenance Standards	The standards set for the maintenance service, usually contained in preventive maintenance schedules, operation and maintenance manuals, codes of practice, estimating criteria, statutory regulations and mandatory requirements, in accordance with maintenance quality objectives.
MBIE	Ministry of Business, Innovation and Employment. Sometimes provides grants to Council for freedom camping projects (including mobile waste stations at these sites) under their Tourism Infrastructure Funding (TIF) scheme.
MfE	Ministry for the Environment – Government agency responsible for providing: • Environmental management systems, including laws, regulations and national environmental standards • National direction through national policy statements and strategies • Guidance and training on best practices • Information about the health of the environment MfE also administer the Contaminated Sites Remediation Fund which provides funding for clean-up of historic contamination sites.
MGB	Mobile Garbage Bin – the official terminology for what is commonly known as a rubbish or recycling 'wheelie bin'.
MSWD	Municipal Solid Waste (Domestic) – this refers to the total amount of solid waste that Council landfills and transfer stations received annually from self-haul and kerbside collection combined for the following: green waste, recycling and general domestic waste.
NES	National Environmental Standards – these are regulations issues under section 43 of the Resource Management Act 1991, prescribing technical or non-technical standards related to discharges, land use and water use.
NPS	National Policy Statements – these are instruments issued under section 52(2) of the Resource Management Act 1991 and these give direction to local authorities about how policies and objectives should be implemented.
NZ ETS	The New Zealand Emissions Trading Scheme (NZ ETS) is the Government's main tool for meeting domestic and international climate change targets. The scheme aims to encourage people to reduce greenhouse gas emissions.
Papatipu Rūnanga	Traditional Maori settlements for the hapu (sub-tribe) of a particular iwi are Papatipu Rūnanga. Westland's Papatipu Rūnanga are Bruce Bay (home to Makaawhio) and Arahura (home to Ngāti Waewae). Representatives from both papatipu rūnanga sit on the Butlers Landfill Liaison Group.

Performance Monitoring	Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.
PGF	Provincial Growth Fund: a funding pool made available by the Ministry of Business, Innovation and Employment with the aim of lifting productivity in the regional and/or rural provinces. Its priorities are to enhance economic development opportunities, create sustainable jobs, enable Māori to reach full potential, boost social inclusion and participation, build resilient communities, and help meet New Zealand's climate change targets.
Rehabilitation	Works to rebuild or replace parts of 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 to deliver its original level of service without resorting to significant upgrading or renewal, using available techniques and standards.
Renewal	Works to replace existing facilities with facilities of equivalent capacity or performance capability (re-instating existing asset).
Resource Management Act (RMA)	The main piece of legislation outlining Council's wastewater responsibilities in terms of environmental management. The provisions of this Act are enforced by the West Coast Regional Council.
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.
RPS	Regional (West Coast) version of the National Policy Statement. The RPS is created by the West Coast Regional Council.
RTS	Refuse Transfer Station – These are local sites that temporarily collect waste and recycling which is then transported to active landfills for disposal or processing.
Sustainability	The process of meeting the needs of the present community without compromising the ability of future generations to meet their own needs.
Upgrade	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, i.e. replacement value for determining maintenance levels or market value for life cycle costing.
WCRC	Abbreviation for West Coast Regional Council, the regional authority for the West Coast region with key roles in environmental management, hazard management, biosecurity and regional economic development.

Section 1: Executive Summary

Due to staff resourcing issues, no new Solid Waste Asset Management Plan has been created since January 2016. Since this time a number of changes have taken place to the way Solid Waste activities are delivered.

1.1 Significant Changes since the last AMP

The Fox Glacier landfill erosion event of March 2019 was an unanticipated force majeure weather event which received national publicity. During a significant rainfall event that also resulted in the Waiho Bridge (owned by NZTA) on State Highway 6 being washed away, the legacy landfill adjacent to the Cook River, was severely eroded. The river cut through approximately 40 metres of bush, causing rubbish to be taken downstream. Some of this drifted north at sea with material found as far north as Ōkārito. Although the landfill site was subsequently armoured and reinforced to a high standard, it is not likely to be guaranteed to protect the site in the long-term. After expert advice including soil and water samples, engineering opinions, and consultation with the Regional Council, the most feasible option is to uplift remaining site materials and re-deposit at Butlers Landfill. This project has a high priority rating and is included in the updated capital projects plan. The Fox landfill erosion event of March 2019 highlighted the need to protect many of our closed landfills that are subject to erosion or incursion from the sea or adjacent rivers. Therefore proactive landfill erosion mitigation measures are discussed in this Plan also.

Westland District Council lodged a shovel-ready projects funding application in 2020 and was successful in obtaining $3.3 million of Central Government funding. This funding is for:

- the extraction of the contents of Fox Glacier landfill and depositing these materials into Butlers landfill;
- construction of a new cell set out at Butlers to compensate for the loss of capacity due to the incoming materials from Fox Glacier
- a small team to do some additional riverbed clean up in Cook/Fox river basins and surface removal of material.

This funding boost is extremely positive news as it removes significant ratepayer burden for this expensive and necessary project.

A more recent trend that has emerged is an increase in incidents of recycling bin contamination. As a consequence, improvements to the policing of bins have been made by Council's contractors. Non-compliant recycling bins are now photographed and offenders are contacted.

The global solid waste environment is changing including legislation and policy. The China National Sword Policy in 2018, and the upcoming Basel Convention Amendments in 2021 will have an impact on recycling. This topic is covered in more depth in Section 7.2.5 of this Plan.

1.2 Process Improvements since the last AMP

A number of significant improvements in process have also occurred over the last few years. Council has made considerable effort to improve its sampling and reporting regime to better comply with resource consent conditions. An expert in soil sampling has also been engaged.

Better contract management and contract documentation is also in place. An operational audit schedule has been introduced that includes bi-monthly audits of kerbside waste and recycling operations. Active landfills are now reviewed quarterly and a checklist has been developed for site inspections.

The Refuse and Recycling Bylaw was updated and went through a public consultation process in 2018. The next revision of this is due in 2028.

1.3 What We Do

The Asset Management Plan includes the following asset groups:

- Operational landfills
- Closed landfills
- Refuse Transfer Stations (RTSs)
- Town litterbins and recycling bins
- Freedom camping waste stations

Also included in this AMP is the following operational activities:

- Kerbside collection of rubbish and recycling
- Education on waste minimisation

Westland District Council (WDC) is responsible for encouraging efficient and sustainable management of solid waste. Westland District Council is party to a shared West Coast Regional Waste Minimisation and Management Plan in conjunction with Buller District Council and Grey District Council to ensure efficiency and consistency between the local authorities to best manage waste in our relatively isolated, low populated region. This plan focuses on the management of solid waste using a waste hierarchy of reduction, reuse, recycling and recovery (4R) of waste, with treatment or disposal of the remaining waste as shown in Figure 1.1.

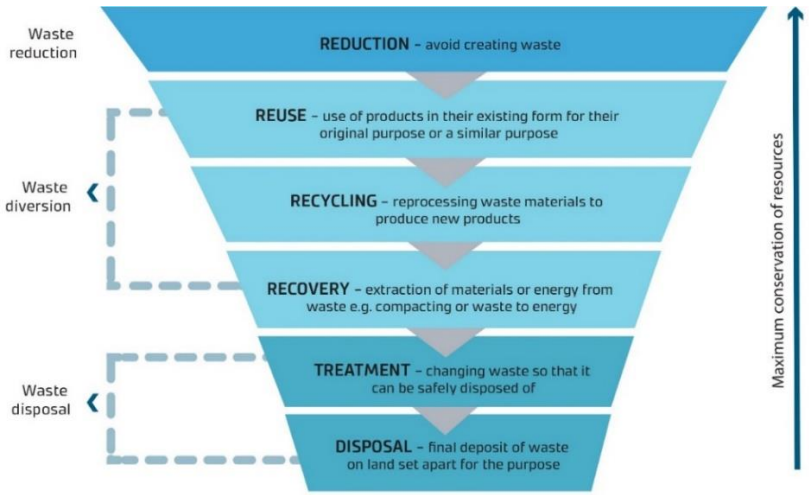


Figure 1: The Waste Hierarchy

The graph below shows the Municipal Solid Waste (Domestic) patterns in Westland. Council landfills and transfer stations annually receive:

- 3,679 tonnes of refuse (2,784 tonnes received via self-haul and an additional 895 tonnes picked up from household refuse collection service).
- 567 tonnes of recycling per annum (485 from kerbside pick-up and an additional 82 from self-haul); and
- 215 tonnes of green waste.

From a resident population of 8,307 residents[1], this represents a per capita refuse breakdown of 443kg (0.44t) and a per capita recycling breakdown of 68kg (0.07t) each year. The full breakdown of waste and recycling data can be viewed in Figure 1.2 below[2]. This is an increase on figures stated in the 2015/16 Solid Waste AMP of 340kg (0.34t) for refuse and 54kg (0.05t) for recycling.

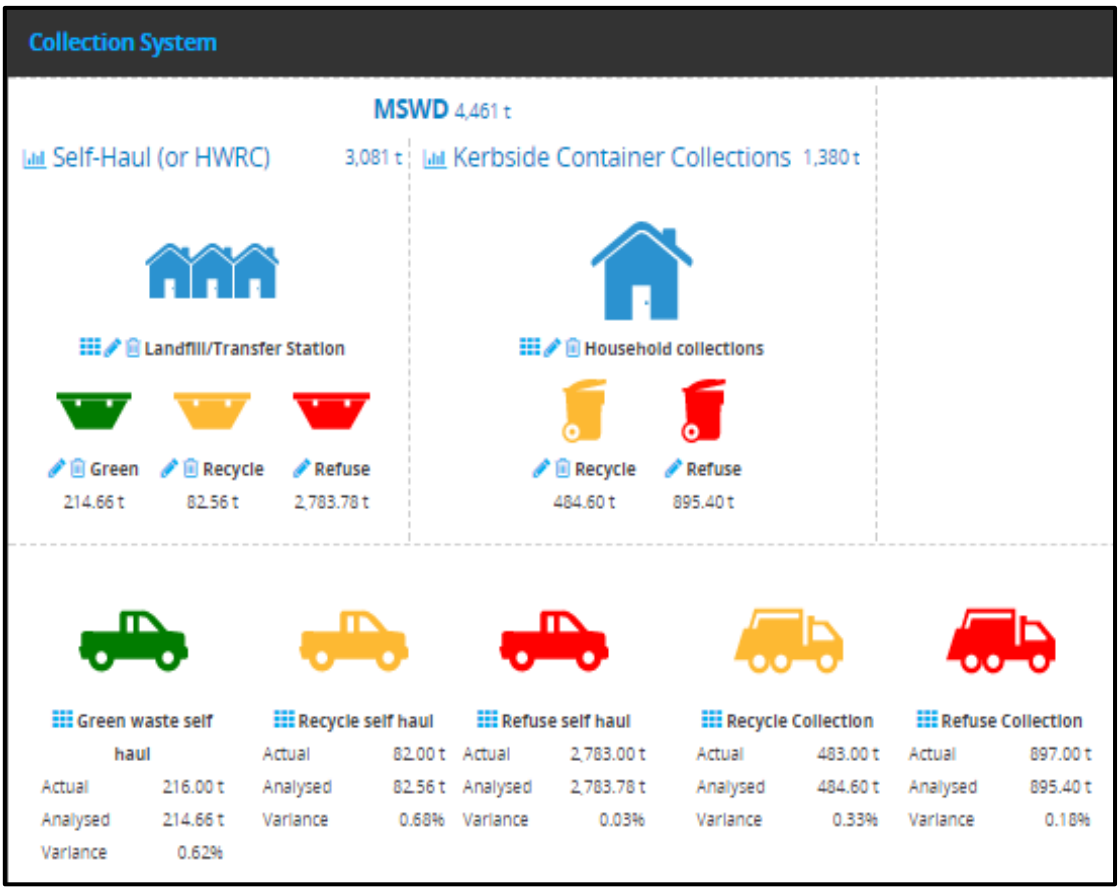


Figure 2: Westland District Waste Overview

1.4 Levels of Service Changes

As Westland District Council's landfills are filling up fast and in line of the nationwide waste minimisation movement, the Levels of Service KPIs for Solid Waste have been revised to include a 5% annual reduction in waste volumes target.

[1] 2013 Census QuickStats about a place: Westland District
[2] West Coast Regional WMMP V3.0

1.5 Key Issues

Over the next 10 years, Council's solid waste activity faces a variety of issues and challenges, the biggest of which are:

Significant issues	Principal options for managing the issue
Remediation of erosion prone Fox River Closed Landfill	• Review existing landfill sites to ensure mitigation actions are identified • Use Government funding to mitigate risk to the environment • Set up monitoring system for major storm events in the interim period • Implement and review Civil Defence and Emergency response plans
Impact of China's National Sword / Blue Sky policy change	• Respond reactively to the effects of China's policy change • Engage with the Ministry for the Environment on its work programme from the National Resource Recovery Taskforce
Reducing waste to landfill and increasing recycling volumes, particularly glass	• Explore viability of glass collection services for the District • Increase communication information on Council's website for glass drop off service

Table 1: Key Issues

Other significant issues are discussed in Section 3.5 of this Plan.

1.6 Operational Programme

The operations and maintenance programme covers all day to day activities that are required to manage the solid waste activity. Council plans to spend around $32 million over the next 10 years.

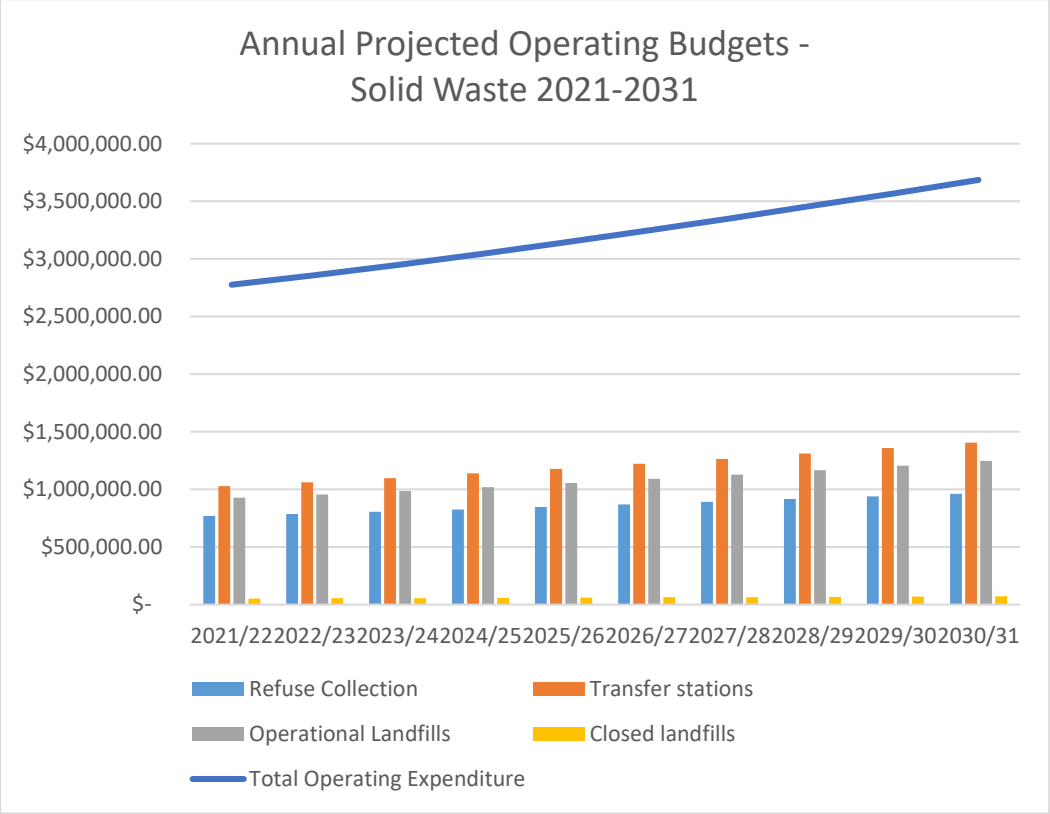


Figure 3: Projected 10-year Operations Budget

The major activities in this programme are summarised below:

- Kerbside collection of household waste and recycling. This also incorporates management and operation of the Hokitika transfer station.
- Operation of smaller collection transfer sites regionally, from Kumara to Fox Glacier inclusive of transportation to Butlers Landfill.
- Transfer / cartage of waste material to Butlers landfill from Hokitika and management of the landfill operation itself.
- Management of the Haast landfill and Franz Josef transfer station in contractual arrangement with South Westland Rubbish Removal.
- Cyclic empting of street litter bins from Kumara, Hokitika and Ross.

1.7 Capital Programme

Council plans to spend $740,000 on capital improvements over the 10 years 2021/22-2030/31.

Figure 4: Projected 10-year Capital Expenditure Budget

Of this 68% is for asset renewals and 32% Levels of Service improvements.

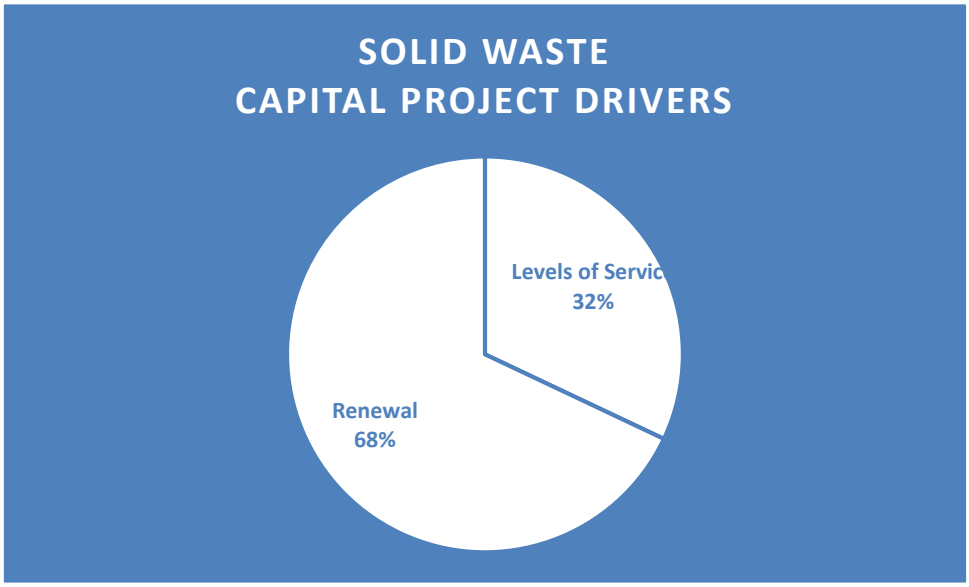


Figure 5: Capital Project Drivers

The level of capital expenditure funding is low as Council has minimal solid waste assets.

Additionally, in July 2020, Westland District Council was awarded $3.3 million through the Provincial Growth Fund (PGF) to cover the following three interrelated projects:

- Fox Glacier landfill: Council will remove the waste material at the closed Fox Glacier landfill. Whilst the landfill is currently protected it still remains at risk of erosion by the river if an extraordinary weather event occurs. The waste will be dug out and transported to Butlers landfill South of Hokitika. This project will start as soon as possible and is expected to take several weeks to complete.
- Butlers Landfill: The funding will also enable a new cell to be opened at Butler's landfill, which will extend the lifespan of the landfill for an anticipated 15 years. The project will begin when resource consent is granted and is expected to take six months.
- Clean-up of Cook and Fox Rivers: Funding will allow Council to employ people to complete a follow-on clean-up of any remaining rubbish and debris deposited along the Cook River and the foreshore of the National Park and World Heritage Area in March 2019. This will provide employment in the Fox Glacier area and reduce the ongoing environmental impact from the landfill washout. The project can begin as soon as possible and will last for approximately six weeks.

The clean-up of the Cook and Fox Rivers will be undertaken on Council's behalf by Fox Glacier Guiding and is set to start in October 2020 and be completed by the end of 2020.

The other two projects will be started in the 2020/21 Annual Plan financial year, and finished by September 2021. These projects will therefore be nearing completion by the time this Asset Management Plan takes effect. However, they are mentioned here due to their significance.

Section 2: Introduction

The solid waste activity involves collecting, treating and disposing of solid waste generated by households and businesses in an environmentally and socially satisfactory manner, using the most economical means available.

This Asset Management Plan (AMP) contains full details of operational landfills and refuse transfer stations, proposed capital works, a risk register and improvement plan as well as a financial summary and demand projections.

The objectives of this Asset Management Plan are to:

- Provide better quality information for Council decision-making
- Promote clarity of vision and transparency
- Consolidate and verify information in an orderly structure
- Accurately plan for future financial expenditure
- Improve customer satisfaction (where realistic) and understand gaps in asset provision
- Meet the requirements of auditors for an unqualified audit opinion.

2.1 Rationale for Council Involvement

Waste management and minimisation services have been provided by Council and its predecessors for a substantial period of time. The expectation that Council will continue to provide these functions as core services is not expected to change in the foreseeable future.

Council undertakes solid waste activities for the following reasons:

- The district as a whole benefits from waste being disposed of conveniently and correctly within the statutory requirements set by the New Zealand Government. The public also benefits from Council taking care of illegal waste disposal; and
- To comply with Council's legislative obligations including provisions of the Waste Minimisation Act 2008, Local Government Act 2002, Resource Management Act 1991 and Hazardous Substances and New Organisms Act 1996. Obligations also exist from various resource consents granted for facilities (landfills) by the West Coast Regional Council.

Certain solid waste activities have a user-pays funding mechanism whereby the person who creates the waste pays for its disposal. This is sometimes a contentious issue as some community members believe that the fees and charges are too high. This can result in the illegal dumping of waste.

This AMP summarises Council's management of, and strategic long-term approach to, the provision, maintenance, renewal and upgrading of the solid waste services throughout Westland District.

2.2 Description of Assets & Services

Figure 6: Summary of Solid Waste Assets & Services

WDC manages solid waste across Westland District, including waste and recycling collection in the northern and southern part of the district and the provision of transfer stations.

2.2.1 Open Landfills

Westland District Council currently has two active landfills still receiving waste: Butlers (near Hokitika) and the Haast landfill, known locally as Denis Road.

Butler's landfill is open for authorised deliveries on a weekly basis and accepts most types of waste including asbestos. Monitoring is carried out in accordance with the resource consent. A review of the volume remaining in the existing cell has revealed a life expectancy of 6.5 to 7.5 years depending on waste to site yearly volumes. The land parcel has room for another cell of the same size to be created, however, this would require scoping, budget and the preparation of the required documentation in order to obtain the necessary resource consents.

Haast landfill is open twice weekly for limited hours. There is an estimated 1.5 to 2 years of life remaining and there is now a need to plan for landfill capping and closure. This includes also considering if a new South Westland landfill is to be created and, if so, where this could be located.

2.2.2 Closed Landfills

Council also holds (or has previously held) resource consents for 10 closed landfills across the District: These being located in Otira, Kumara, Hokitika, Ross, Hari Hari, Whataroa, Franz Josef, Fox Glacier, Hannah's Clearing and Neil's Beach.

	Approximate Volume	Years closed[3]	Capped	Lined	Potentially contains hazardous waste	No vegetation	Grassed/ Re-vegetated	Coastal environment	River flood plain	Earthquake fault zone	Actively managed	Passively managed	WDC (incl. Road Reserve)	Department of Conservation land	KiwiRail land	Private land
Fox Glacier	15,000m^3	15-40			☑	☑			☑		☑			☑		
Franz Josef	15,000m^3	5-15	☑		☑	☑						☑	☑			
Hari Hari	10,000m^3	5-15	☑		☑		☑		☑			☑	☑			
Hannah's Clearing	2,000m^3	15-40	☑		☑		☑	☑			☑			☑		
Hokitika (Hau Hau Rd)	180,000m^3	5-15	☑	☑	☑		☑				☑		☑			
Kumara	Up to 10,000m^3	5-15	☑		☑		☑					☑	☑			
Neil's Beach	2,000m^3	15-40			☑		u.	☑				☑				☑
Otira	No data available (likely to be up to 1,500m^3)	15-40			☑		u.		☑	☑		☑			☑	
Ross	Up to 10,000m^3	15-40	☑		☑		☑					☑	☑			
Whataroa	Up to 10,000m^3	5-15	☑		☑		☑					☑		☑		

Table 2: Site Characteristics of Closed Landfills

[3] Years since closure: based on MfE guideline ranges regarding monitoring requirements

2.2.3 Transfer Stations

Of the 10 closed landfills, five (5) currently have transfer stations being run on, or adjacent to, the original landfill site. Those sites are at Kumara, Ross, Hari Hari, Whataroa and the Hokitika transfer station on Hau Hau Road. The operation and maintenance of these facilities is undertaken by various contractors on Council's behalf. The Franz Josef transfer station is run by South Westland Rubbish Removals and located on a different (and privately-owned) site to the former landfill. There was a transfer station on the closed Fox Glacier landfill site until March 2019 when an extreme rain event eroded the site. A mobile transfer station is now located on Cook Flat Road to replace this. The transfer stations accept residential and green waste.

2.2.4 Kerbside Refuse and Recycling

Kerbside refuse and recycling in the Westland District is collected in compactor trucks and disposed of at Butlers Landfill near Hokitika. Households and businesses in Hokitika, Kumara, Ross and connecting roads are automatically provided with a 120L Mobile Garbage Bin (MGB) for refuse (collected fortnightly). Council also offers a single-stream kerbside recycling service (excluding glass) in the same areas. Households and businesses are supplied with a 240L yellow MGB for recycling that is collected fortnightly (on alternate weeks to rubbish pick-up). Ratepayers, may, at their discretion, opt to receive a second set of 1x120L MGB for rubbish and 1x240L MGB for recycling and pay an additional rating charge. No kerbside rubbish or recycling service is provided outside Hokitika, Kumara and Ross.

The Council does not provide trade solid waste collection services. Businesses can take limited types of trade waste to the transfer stations/small landfills or contract a suitable refuse collection operator. Private waste operators are a key provider of refuse and recycling collection services for both residential and commercial customers. Green waste can be dropped off at RTSs where it is handled by the site operator who mulches it and uses it for site remediation purposes.

2.2.5 Town Litter Bins and Recycling Bins

Town litter bins are provided in town centre areas in Hokitika, Ross, and Kumara.

Love NZ public area recycling bins are also located at a number of locations in Kumara, Haast, Whataroa, Fox Glacier and Franz Josef.

2.2.6 Fly-tipping

Council also receives periodic service requests reporting incidents of illegally dumped waste (fly-tipping) in public places. Council's contractors usually deal with clean-up of these sites. This is typically paid for out of Council's roading or reserves budgets (depending on where the fly-tipping occurs). The compliance team will typically attend and check the material or any identifying information that can be used for prosecution and recovery of costs. Annually, approximately 15 incidents will be reported to Council, usually 1-2 incidents per month.

2.2.7 Freedom Camping Waste Stations

In addition, Council has a number of freedom camping sites throughout the District (locations for the upcoming tourist season still being confirmed at time of writing). Ten recycling/waste stations were purchased by Council in 2018 for use across these sites. Each station has three 240 litre

compartments: one for rubbish to landfill, one for glass bottles and one for recycling of plastic and cans.

2.2.8 Hazardous Waste

Hazardous waste activities in the District are minimal and disposed of as per consent conditions.

2.2.9 Waste Minimisation Education Activities

Council funds a number of waste minimisation and education activities. In the 2018/19 year, Council spent $15,000 plus GST to enable an external facilitator to co-ordinate the Enviroschools programme that runs in three local primary schools and two Early Childhood Centres. This funding has now increased by an additional $3,000 per annum, which allows an extra school to be involved with the programme. The Enviroschools programme works with schools to:

- Provide professional development training for teachers on waste minimisation
- Promote and initiate Zero Waste programmes with students, teachers and whanau
- Create long-term vision statements regarding waste minimisation (including Waste Policies for culture change)
- Support new and on-going biodiversity restoration projects

Council also funds the Paper4trees programme run by an external organisation. This provides registered schools and preschools with classroom recycling bins for paper and cardboard. When schools use the recycling bins, they receive free native trees every year for planting.

In addition, Council staff members, including Council's Operations Manager, are part of the Hokitika Green Team. This is a local group of businesses, organisations and community groups who meet every six weeks to exchange ideas and collaborate on sustainability projects within the community.

Section 3: Strategic Direction

Strategic direction provides overall guidance to the Council and specifies the organisational objectives and how it is intended that these be achieved. It also identifies how resources will be allocated to implement these objectives and plans. The strategic direction for Westland District Council's asset management function is set by the Asset Management Policy and the 30-year Infrastructure Strategy (which includes the Asset Management Strategy). The strategic direction specific to the Solid Waste activity is outlined in the West Coast Regional Waste Minimisation and Management Plan shared in conjunction with Buller District Council and Grey District Council.

3.1 Our Goals

The goals for this activity are to continue to:

- Reduce the harmful effects of waste and improve the efficiency of resource use by providing for the safe and efficient disposal of waste, ensuring hazardous wastes do not enter the waste streams
- Provide residents in Hokitika, Kumara and Ross with access to recycling services through kerbside collection and the district's refuse transfer stations, using contracted services
- Provide waste minimisation education and promote reductions in quantities of waste to landfill and encourage the community to take ownership and personal responsibility for the waste they produce
- Liaise with key stakeholders such as the Hokitika Green Team to work with local commercial businesses to identify avenues for waste minimisation
- Work collaboratively with Buller District Council and Grey District Council on waste minimisation and management plans
- Provide two open landfills in the district (one near Hokitika and one in South Westland)
- Enforce the refuse and recycling bylaw to ensure environmentally responsible methods of waste disposal by residents
- Meet statutory obligations including those outlined under the Waste Minimisation Act, Local Government Act and resource consents Council holds for its solid waste activities (as governed by the Resource Management Act 1991 and subsequent amendments).
- Maintain and enhance levels of service for the solid waste activity to meet the needs of the local economy
- Provide solid waste facilities that are accessible for residents and that are delivered reliably, efficiently and economically
- To ensure solid waste assets are adequately maintained to maximise their service capacity and long-term integrity
- To anticipate when it may be necessary to extend or upgrade existing assets or build new assets and to plan and budget for the identified future needs prudently, sustainably and cost-effectively through the Long Term Planning process
- Understand and take into account community needs in all significant decisions where practicable, being mindful to minimise the cost of waste minimisation to Council, the public and the ratepayer.

3.2 Contribution to Community Outcomes

Council's vision statement is:

We work with the people of Westland to grow and protect our communities, our economy and our unique natural environment.

In early 2020, Council undertook an extensive engagement process with the local Westland communities to define community outcomes, indicators and descriptors for each of the four wellbeings. Following on from this work in May 2020, Council adopted the following definitions and measures of success:

Diverse Economy	**Sustainably Managed Environment**	**Resilient Communities**
This means...	***This means...***	***This means...***
• We work to find sustainable, diverse and resilient options for encouraging economic growth. • Innovation supports diversity from traditional district industries and sustainable economic growth. • We collaborate with other stakeholders to achieve common outcomes. • Economic growth has a minor / reduced impact on the natural environment.	• The district is involved in sustainable waste management practices • We support sustainable environmental practices. • We support strategies to enhance and protect the district's ecosystems. • Development is sustainable, meeting the needs of the present without compromising the ability of future generations to meet their own needs.	• All areas of the district have access to quality recreational and cultural facilities. • A community that cares for all members at all life stages to reduce isolation and promote inclusion. • Communities less vulnerable to natural hazards and climate change. • All voices are enabled and heard, power is more evenly distributed and the community can share its strengths.
This is measured by...	***This is measured by...***	***This is measured by...***
• Retention of residents in the district. • Housing and employment for all life stages. • Growth in small businesses. • Growth in businesses outside of traditional Westland industries, i.e. technology based. • Fewer tourists who stay longer for high value activities.	• Recycling increases and waste to landfill decreases. • Council meets central government environmental targets including 3 waters and carbon. • Zero tolerance for unsustainable and polluting practices. • Proactive planning around climate change. • Communities prepared for severe weather events and natural disasters.	• More opportunities for walking and cycling, connecting our communities safely and healthily. • Community participates in engagement and consultation opportunities. • Reduced social isolation. • Reduced crime and harm. • Community sees definitive action from local and central government after participating in engagement and consultation opportunities.

Table 3: Community Outcomes Definitions

How the solid waste activity achieves the community outcomes is shown in the table below:

Community Outcomes	How Solid Waste Activity Contributes to Community Outcome
Sustainably Managed Environment	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 are managed to minimise the impact on the receiving environment. Our kerbside collections ensure the environment is functional, pleasant and safe by receiving materials from members of the public for recycling with a minimum of public nuisance or complaint.
Resilient Communities	Local transfer stations exist in most community areas. This enables our smaller townships to be independent and supported whether or not a local landfill site exists in their area. Waste minimisation education in local Westland schools helps empower the communities to be proactive and informed on waste minimisation.
Diverse Economy	Solid waste activities are planned with the needs of future growth in mind therefore waste and recycling services enable our District's economy.

Table 4: Community Outcomes' Relationship to Solid Waste

3.3 Infrastructure Strategy

Council's 30-Year Infrastructure Strategy reports on the assets needed to support (primarily) its water supplies, wastewater, stormwater and transportation activities. It also covers in less detail Council's landfills, parks, reserves, cycle trail and building assets (including pensioner housing). The purpose of the 30 Year Strategy is to ensure that the creation, operation, maintenance, repairs and replacement of assets is managed in the most cost-effective manner and provides the appropriate level of service to meet the needs of present and future residents and visitors.

3.4 Financial Strategy

The Financial Strategy outlines Council's financial vision for the next 10 years and the impacts on rates, debt, levels of service and investments. It will guide Council's future funding decisions, and along with the Infrastructure Strategy, inform Council's capital and operational spending for the period covered by the Long Term Plan 2021-2031. The Financial Strategy also sets key financial limits and boundaries.

3.5 Planned Response to Key Issues

The most important issues relating to solid waste are listed below along with proposed responses:

Key Issue	Discussion	Our Response
Changing global solid waste situation	China's National Sword / Blue Sky policy change is likely to have impacts.	• Respond reactively to the effects of China's policy change • Engage with the Ministry for the Environment on its work programme from the National Resource Recovery Taskforce
Erosion-prone landfills	The Fox Glacier landfill erosion event of March 2019 highlighted the need to protect many of our closed landfills that are subject to erosion or incursion from the sea or adjacent rivers. Besides Fox Glacier landfill, there are three closed landfills at high risk of erosion: Hannah's Clearing, Neil's Beach and Hari Hari,	• Case by case management and/or remediation plan to be created and implemented for each landfill vulnerable to erosion. This may include rock armouring. • Fox Glacier's remaining Landfill contents will be uplifted and removed for re-burial at Butlers Landfill. Council has currently engaged external consultants to obtain

	with some other landfills at moderate risk.	the necessary resource consents before this work begins. • Hannah's Clearing landfill has recently been rock armoured. The consent for this expires in November 2029.
Capacity at open landfills	3-4 years life remaining at existing cell at Butlers. Less than one year capacity remaining at Haast landfill.	• Creation of an additional cells at Butler's landfill. • South Westland solid waste to be transported to Butlers once Haast landfill reaches capacity and is capped and closed. • Potential to investigate a new suitable landfill site in South Westland should demand and waste volumes necessitate this.
Illegal dumping	Items associated with "fly tipping" expected to increase.	• Utilisation of compliance team to investigate cases and monitor any escalations.
Changing legislation and costs	Increase in Central Government Waste Levy from July 2021 per tonne from $10 to $20. This creates a net increase in costs to Council for this year of $30,000. Increases post 2021/22 have yet to be confirmed but may increase to $50 per tonne by 1 July 2023. Traditionally, this expense is returned to Council as a subsidy for waste education initiatives.	• Need to target waste reductions and increase recycling capabilities.
Compliance with resource consents (sampling, monitoring, reporting and aftercare)	In the last two years, a lot of work has been undertaken by Council to improve its record-keeping of consent requirements (using CS-VUE) and catch up on a backlog of reporting. Concurrently, West Coast Regional Council signalled their intention to increase enforcement of our consent conditions and reporting requirements.	• Need to lock down specialist services suppliers to ensure conditions of consents are undertaken at a secure & reasonable cost. • In-house training for selected staff in sampling & reporting to reduce external costs.
Changes in recyclables market	In the last year, there has been a decrease in the range of plastics that can accepted for recycling. There is also a strong community expectation for Council to process organics and collect and sort glass recycling (which are not currently offered). The costs associated with offering these services are likely to be high because of the small population of our District (hence low volume).	• Public education re changes in recyclable materials accepted. • Options assessment including costs to be sought for glass and organics for public engagement and consultation.

Table 5: Key Issues and Proposed Responses

3.6 Prioritisation

It is not pragmatic or financially prudent for Council to undertake works on all identified needs and address every priority at once. Council has to balance a number of considerations when allocating priority ratings for planned programmes of work. Generally, mandatory requirements such as statutory compliance take priority over discretionary activities. Similarly, public health issues or safety risks take precedence over waste minimisation and educational activities. Other factors that affect the priority level of different works include:

- Public health risks
- Planning for future demand e.g. population growth
- Readiness of contractors, employees, machinery, resource consents etc. to implement works
- Co-funding opportunities
- Benefits versus risks
- District distribution
- Strategic fit for the organisation
- Creating tidy, pleasant community environments

Where co-funding opportunities are available and are a strategic fit for the organisation, Council generally gives these priority as this enables Council to undertake activities for community benefit (increasing existing levels of service), or to meet future demand (growth) while minimising the cost to the ratepayer. As external funding sources available to Council change quite quickly, Council's attitude is to proactively seek funding for relevant projects while such avenues of financial support are available, especially given the small number of rateable units within our geographically large rating district. In some cases, these external funding sources enable us to create new infrastructure in other areas of our district, enabling us to extend the district distribution of services in ways that otherwise would not be financially possible.

3.7 Strategic Aspirations for Each Solid Waste Area

The table below details the issues and strategic approach affecting each solid waste area:

Area	Issues and Proposed Approach
Butlers Landfill	• 3-4 years life remaining of existing cell – new cell to be budgeted for and created. • Increase in Government Waste Levy from June 2021 - continue with Waste Minimisation Plan to reduce waste to landfill.
Haast Landfill	• 1 year life remaining of existing cell then landfill will be completely capped and closed following the process outlined in the resource consent document. In the interim, Butlers Landfill will serve as the sole landfill for Westland District and solid waste from South Westland will be transported up to Butlers from transfer stations in southern part of District. There is the possibility to investigate options for a new landfill site in South Westland in the future if demand if sufficient.
Closed Landfills	• Some closed landfills are prone to erosion (from sea, rivers etc.) or subsidence. Frequent visual inspections and monitoring – rockwall and stabilisation works where required. Where site stabilisation is likely to be ineffective in the long-term (e.g. Fox Glacier landfill) contents of landfill will be uplifted and redeposited in Butlers Landfill, subject to the necessary consents being obtained.
Transfer Stations	• No known issues. Continue to operate existing transfer stations. Monitor contractors to ensure sites are kept tidy and are open at advertised hours.
Recycling	• Issues with contamination of recycling from consumers bins. Recycling education campaign and domestic recycling contamination audits to be continued and increased.

	Investigating options (and costs) for transparent, clear recycling bins and bin identification chips. • Community desire for organics processing and collection and sorting of glass. Costs for these services likely to be expensive due to low quantities – nonetheless options to be investigated for public engagement and consultation.
Freedom camping waste stations	• Securing ongoing funding is critical for the continued operation of our freedom camping sites including emptying of the waste stations. A funding application for the 2021/22 year was lodged with MBIE in August 2020. Currently the waste stations are in off-season storage pending the outcome of the application. The existing sites are not being maintained at present. However, due to the COVID-19 pandemic there is decreased tourism in our district. • Long-term, the intention is to retain the same number of sites (10), however, the location of some sites may change. Expansion or growth of this scheme will depend on the continuing financial support of Central Government as Council does not have the funding capability to continue this programme on its own. • Public support for freedom camping among residents and ratepayers is mixed and promotes lively public debate. Some commercial tourist operators are strongly opposed.
Kerbside collection	• No known issues with the operation of this service. Services will continue to operate in existing areas (Hokitika, Kumara & Ross). No plans to expand kerbside collection into other areas.
Township bins	• Bins of differing ages and materials. Need for updated data collection and capture including GIS linking and condition assessment. Some bins may need to be renewed/replaced.

Table 6: Strategic Aspirations by Activity

Section 4: Key Linkages

The Solid Waste Asset Management Plan does not exist in isolation. There is a need to ensure that the AMP is consistent with all other relevant plans and policies, and that it complies with external legal constraints and obligations Council has to meet in undertaking this activity. It is also important to ensure that this document aligns with the Council vision and desired community outcomes/goals.

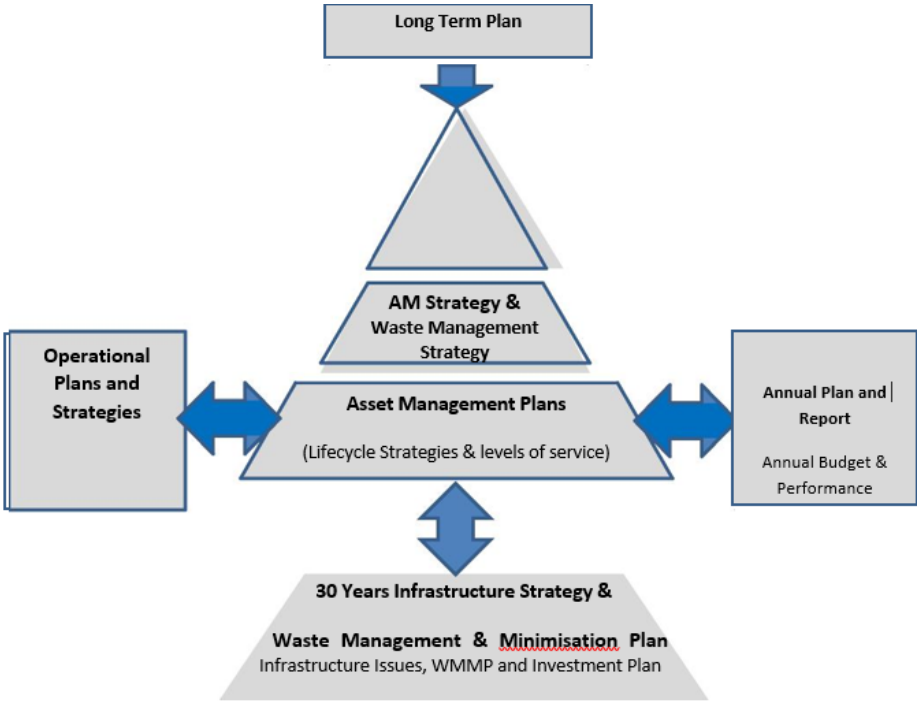


Figure 7: Council Planning Documents Linkages & Synergies

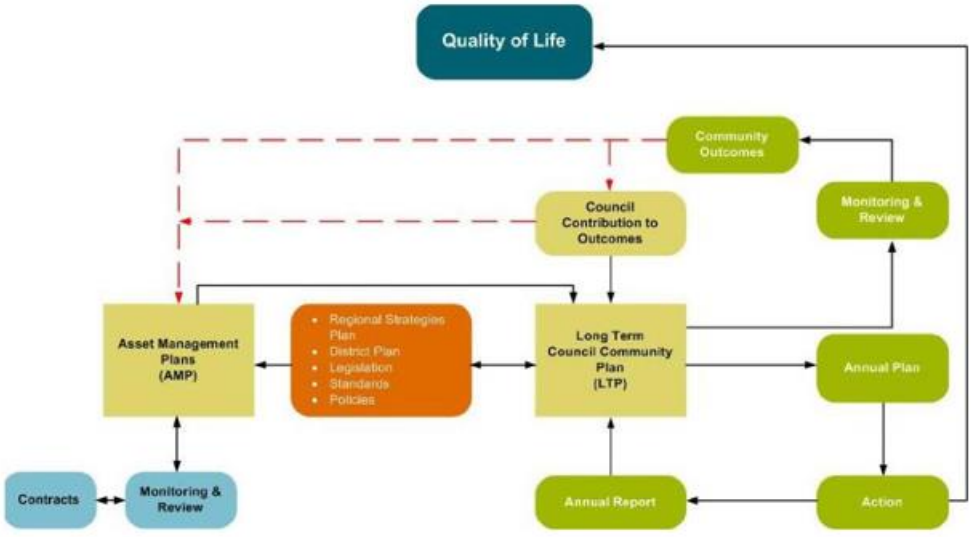


Figure 8: Planning Process Flow

4.1 Key Legislation

This activity is guided by a range of national legislation, most specifically the Acts listed below. For brevity's sake, only the original version of currently enacted legislation is listed, however, all subsequent Amendment Acts should be considered in conjunction with the original act. For the latest available information please refer to www.legislation.govt.nz

Key Legislation	Implications for the Activity
Climate Change Response Act 2002, (Emissions Trading Reform) Amendment Act 2020 & (Zero Carbon) Amendment Act 2019	The Climate Change Response Act 2002, Climate Change (Waste) Regulations 2010 and Amendments to the Climate Change (Unique Emissions Factors) Regulations are implemented through the New Zealand Emission Trading Scheme (NZ ETS). The NZ ETS requires those emitting greenhouse gases to pay for increases in emissions, whilst rewarding emission reductions. The waste sector is affected by the NZ ETS, as those who operate landfills are required to participate in the scheme, report emissions and surrender emission units (NZUs). As a result, Council has to pay Waste Disposal Levies. The Zero Carbon Amendment Act requires New Zealand to prepare its first National Climate Change Risk Assessment and to implement a National Adaptation Plan by August 2022. Local government authorities and iwi will have input into the plan, and this will go through public consultation. The Plan is likely to place some responsibilities for implementation of certain targets/goals on local authorities.
Health and Safety at Work Act 2015	Health and Safety legislation and associated regulations (e.g. Asbestos Regulations 2016) requires that the PCBU has an obligation to ensure that staff and contractors are kept safe at work. Also notes that this responsibility is shared as staff and contractors also have a duty of care. Ongoing changes to this act and associated new regulations means that health and safety measures will need continual improvement and monitoring.
Hazardous Substances and New Organisms Act 1996 (and subsequent amendments) & (Hazardous Substances) Regulations 2017	The Hazardous Substances and New Organisms Act is an environmental health and safety law that replaces laws such as the Explosives, Dangerous Goods, Toxic Substances and Pesticides Acts and pulls them into one combined Act. It also includes new organisms such as new species of animals, plants, bacteria, viruses and genetically modified organisms. Note: it does not cover radioactive, ozone-depleting and infectious substances. The Act also provides a basis for the public to have input into decision-making/approvals of hazardous substances and new organisms and provides a mandate to take Maori concerns and international agreements into account. The Act establishes a consistent process for assessing the risks of hazardous substances and setting national controls to manage effects of these risks.
Litter Act 1979 (and Amendment Act 2006)	This Act gives Councils ability to create Litter Control Officers who have powers to issue infringement notices and fines for those who have committed a littering offence.
Local Government Act 2002	This Act requires local authorities to: • describe the activities of the local authority • undertake periodic assessments of sanitary services • provide a long-term focus for the decisions and activities • prepare a LTP, at least every three years, including WDC's activities associated with the provision of waste disposal and management. • to meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost effective for households and businesses. AMPs are the main method of demonstrating this.

Resource Management Act 1991	Describes Council's responsibilities to protect natural resources including land, air, water, plants, ecology and stream health. This includes avoiding, remedying or mitigating any adverse effect on the environment. Also requires Council to obtain a resource consent for infrastructure works in certain scenarios. Council is also required to comply with resource consents for discharges and land use (i.e. designations for certain activities such as treatment plants) and to take into account the principles of the Treaty of Waitangi in exercising functions and powers under the Act.
Te Tiriti o Waitangi – Treaty of Waitangi	Agreement between Māori and Crown signed in 1840. Section 4 of the Local Government Act 2002 requires local authorities to 'recognise and respect…the principles of the Treaty of Waitangi and to maintain and improve opportunities for Māori to contribute to local government decision-making processes.' Sections 77 and 81 outline in more detail the expectations in terms of seeking contribution and involvement from Māori in consultation and decision-making processes.
Waste Minimisation Act 2008	Sets out responsibilities of territorial authorities in relate to waste management and minimisation. Section 42 states that Council "must promote effective and efficient management and minimisation within its district." It mandates the following activities: that Council must -adopt a Waste Management and Minimisation Plan (WMMP) -review the WMMP at least every six years -prepare a Waste Assessment prior to the review of the WMMP.

Table 7: Legislation Affecting Solid Waste

4.2 Key Regional & National Plans, Policies & Strategies

Key National/Regional Policies, Regulations & Strategies	Hierarchy Level (National/ Regional)	Relationship to the Activity
New Zealand Waste Strategy 2010	National	High-level guidance on managing and minimising waste in New Zealand. The NZWS sets the following two goals: • Reducing the harmful effects of waste; • Improving the efficiency of resource use. The Waste Strategy should guide local spending of Council's portion of the waste disposal levy.
West Coast Regional Policy Statement 2000	Regional	An overview of significant regional resource management issues with general policies and methods to address these.
West Coast Regional Air Quality Plan 2001	Regional	The Regional Air Quality Plan provides a framework for managing adverse effects of discharges of contaminants to air, such as odour, dust, smoke, and other particulate matter. It permits discharges to air that are unlikely to have significant adverse effects on the environment, and requires a resource consent for discharges that may have more than minor adverse effects.

West Coast Regional Land and Water Plan 2014	Regional	The Regional Land and Water Plan promotes the sustainable management of the West Coast's natural and physical resources as they apply in the context of land and water by applying rules and conditions to various activities. These resources include the Region's lakes, rivers, groundwater, wetlands, geothermal water, and land including river and lake beds.
West Coast Regional Waste Minimisation and Management Plan 2018-2024	Regional	Joint plan prepared for Buller, Grey and Westland District Councils by Tonkin + Taylor to guide and standardise Waste Minimisation and Management activities on West Coast.

Table 8: Relevant National & Regional Policies, Strategies & Plans

4.3 Westland District Council Documents & Policies

Council documents	Relationship to the Activity
Westland District Council Financial Strategy	Sets out how Council funds its activities, projected population growth rates, funding expenditure, projected debt levels and management of investments.
Westland District Council Infrastructure Strategy	Identifies key infrastructure challenges, implications and options for dealing with those issues over the next 30 years. Outlines in detail the major projects over the next 10 years.
Westland District Council Procurement Policy and Procurement Strategy	Provides guidance to staff who have delegated authority for procurement. Also outlines Council's governance role in funding, procurement and purchasing decisions to use Council resources effectively, efficiently and economically. Differentiates the varying procurement processes for projects and contracts of different values and special scenarios e.g. emergency procurements, All of Government supply contracts etc.
Long Term Plan	Requirement of Local Government Act 2002 to give a long-term focus to decision-making. The LTP outlines the priorities for the next ten years and gives a breakdown of each asset/activity area.
Refuse and Recycling Bylaw	This bylaw covers restrictions regarding refuse and recycling and gives Council powers to impose penalties for persons who conduct offences under the bylaw.
Asset Management Policy	Outlines the approach to be taken by WDC when preparing or developing Asset or Activity Management Plans.
Significance and Engagement Policy 2019	Lists Council's Strategic Assets and contains a framework for defining what decisions are considered to be 'significant' so the appropriate level of community engagement and/or consultation can be undertaken.
Risk Management Policy	Policy about how to appropriately address and manage organisational risks.

Table 9: Council Documents and Policies Affecting Solid Waste

Council is in the process of introducing a Sustainability Policy for Westland District Council. This has been drafted but has not been tabled with Council for adoption.

Council is also intending to work on the development and introduction of a Carbon Policy (in light of the Climate Change Response (Zero Carbon) Amendment Act 2019). This has not been started as at the time of writing (September 2020).

4.4 Industry Standards and Guidelines

Industry Standards and Guidelines	Author/Organisation
A Guide for the Management of Closing and Closed Landfills in New Zealand (2001)	Ministry for the Environment
Guide to Landfill Consent Conditions (2001)	Ministry for the Environment
Health and Safety Guidelines: for the Solid Waste and Resource Recovery Sector	wasteMINZ
National Climate Change Risk Assessment for New Zealand 2020	Ministry for the Environment
Technical updates to the NZ ETS regulations -2019	Ministry for the Environment
User's Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2012)	Ministry for the Environment

Table 10: Industry Standards and Guidelines Relating to Solid Waste

Section 5: Levels of Service

A key objective of this plan is to match the levels of service provided by this activity and the associated assets with the realistic expectation of our customers and their willingness to pay for that level of service. These levels of service underpin the lifecycle management strategies identified in Section 8 and the forward works programme outlined in this Plan.

Levels of service can be tactical, strategic or operational and in alignment with current industry standards and are guided by the four following factors:

Basis for Levels of Service	
Customer research and expectations	• Information gathered from customers on expected services (relative to their desire to pay for these)
Strategic and corporate goals including the Waste Minimisation and Management Plan	• Provides guidance for the scope of current and future services offers, the manner of service delivery and specific levels of service that Council wishes to achieve
Legislative requirements	• National legislation, regulations and environmental standards impact on the way assets are managed
Design standards and codes of practice	• Design and construction standards outline the minimum design parameters for solid waste facilities.

Table 11: Basis for Levels of Service

Levels of service and any changes to performance measures are consulted on as part of the LTP.

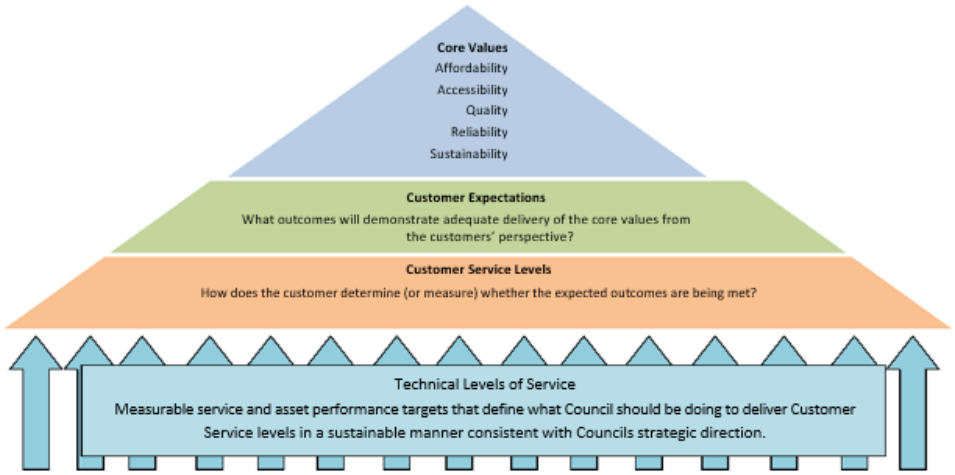


Figure 9: Levels of Service Hierarchy: Technical & Customer LoS

5.1 Our Levels of Service Review

At present, there are no mandatory performance measures for solid waste set by the Department of Internal Affairs. The current levels of service are self-set and focus on waste minimisation education and resource consent compliance.

The current Levels of Service measures are summarised in the first table below. The second table shows the proposed new Level of Service measures to be introduced from 1 July 2021.

5.2 Current Performance Measures & Proposed KPI Changes

Table 12: Current Levels of Service - Solid Waste

Community Outcome(s)	Level of Service	Performance Measure	How this is measured	Current Target & Latest Performance Data (Per 2018/19 annual report)	Desired Performance (Years 1-3)	Desired Performance (Years 4-10)	Explanation
Sustainably-Managed Environment	Solid waste is managed appropriately.	***Resource consent compliance*** All necessary consents for solid waste activities and capital projects are applied for, held and monitored accordingly.	CS-VUE database tracks this information.	Target:100% compliance. Performance: A review is underway of the compliance and monitoring for all sites.	100% compliance.	100% compliance.	This KPI is still valid and is indeed to be retained.
Sustainably-Managed Environment & Resilient Communities	Education about waste minimisation is provided to the community.	***Educational visits and talks*** Number of visits to schools and community groups per annum.	Numbers are tracked.	Target: 3 school visits and 3 talks to community groups per annum. Performance: 5 x school inclusion programmes (delivered via Enviroschools and Paper4Waste) and one community group liaison role via the Hokitika Green Team.	This KPI is not intended to be retained. Council involvement in the Hokitika Green Team is ongoing and outside parties deliver the school education programme which continues to expand.		

Table 13: Proposed Future Levels of Service - Solid Waste

Community Outcome(s)	Level of Service	Performance Measure	How this is measured	Current Target & Latest Performance Data (Per 2018/19 annual report)	Desired Performance (Years 1-3)	Desired Performance (Years 4-10)	Explanation
Sustainably-Managed Environment	Solid waste is managed appropriately.	***Resource consent compliance*** All necessary consents for solid waste activities and capital projects are applied for, held and monitored accordingly.	CS-VUE database tracks this information.	Target:100% compliance. Performance: A review is underway of the compliance and monitoring for all sites.	100% compliance.	100% compliance.	This KPI is still valid and is indeed to be retained.
Sustainably-Managed Environment	Maximised recycling efficiency (thereby reducing overall waste volumes to landfill)	***Decreased recycling contamination*** Reduce incidents of recycling bin contamination. This can be achieved via better controls and protocols with contractors and increased public education.	Domestic recycling contamination audits.	Target: Less than 5% of bins contaminated annually. Performance: Current baseline data from July 2019 to June 2020 is approximately 17%.	Less than 5% of bins contaminated annually.	Less than 5% of bins contaminated annually.	Recycling contamination is becoming increasingly problematic. Council believes it is no longer sufficient to educate the public without tracking the success of such efforts and aiming for a decrease in volumes of recycling rejected.

5.3 Levels of Service Performance and Analysis

5.3.1 Waste Volumes

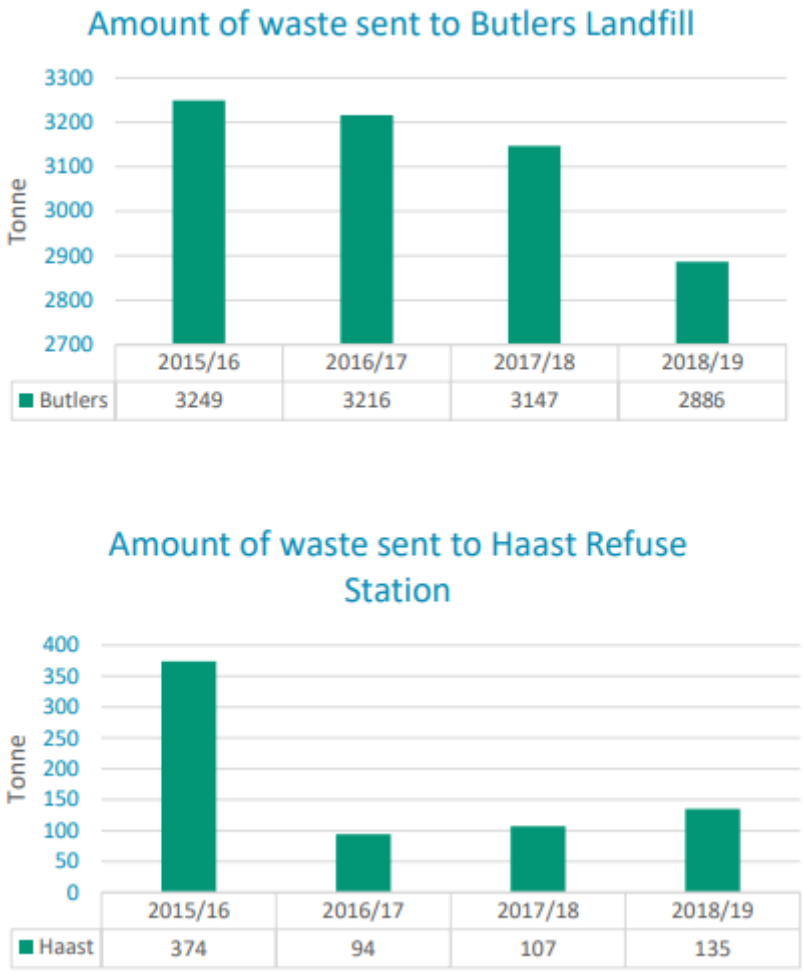


Figure 10: Waste Volumes - Butlers & Haast Landfills

The amount of solid waste going to Butlers Landfill is decreasing significantly. This is due to more accurate reporting and a focus on capturing recycling material and information.

The amount of solid waste going to the Haast landfill decreased significantly from 2015/16 to 2016/17. Since then, it has been increasing slowly but incrementally. This has been to a number of severe storm events in the southern part of our District in recent years which has increased debris being sent to landfill.

5.3.2 Resource Consent Compliance

Landfill Name	Open/ Closed	Surface Water Compliance (Y/N)	Groundwater Compliance (Y/N)	Visual Monitoring Compliance	Full Compliance	Date of Last Report
Haast Landfill	Open	N/A	N/A	✓	✓	June 2020
Kumara Landfill	Closed	✗	N/A	✓	✗	August 2019
Hokitika (Hau Hau Rd)	Closed	✗	✗	✗	✗	August 2019

Table 14: Resource Consent Compliance Status

Haast landfill has consistently achieved full compliance with its resource consents in recent years.

Both Kumara and Hokitika (Hau Hau Road) closed landfills had parameter breaches in the last year.

Butlers Landfill has much more extensive monitoring requirements, covering water quality, sediment quality and biomonitoring. The 2018/19 annual report for Butlers Landfill conducted on Council's behalf by EOS Ecology noted the following in regards to each category:

4.1 Water Quality

- No comment on groundwater quality can be made for the reporting period as no groundwater monitoring samples were collected.
- No intercepted landfill groundwater samples were collected as at no time were the pipes observed to be discharging.
- Weekly visual inspection of Stenhouse Creek adjacent to the landfill were undertaken 47 times over the reporting period. The following were not observed at any time: conspicuous oil or grease films, scums or foams, or floatable or suspended materials; conspicuous change in water colour or visual clarity; objectionable odour; signs of significant adverse effect on aquatic life; and undesirable biological growths.
- Weekly Tier 1 water quality sampling was undertaken 47 times over the reporting period, despite the land treatment field holding pond not ever being noted as discharging. The compliance limit for pH was breached five times (when pH was <6.5 at both sites) and 15 times (when pH was <6.5 at one or both sites) and water clarity once. Additionally, the criterion that initiates Tier 2 monitoring was breached once for dissolved oxygen and pH and twice for water clarity. I suspect the observed differences are unrelated to surface discharge from the land treatment field holding pond as it very likely has not discharged at all over the reporting period.
- Quarterly Tier 1 water quality sampling was undertaken once or twice (depending on the parameter) during the reporting year. On some occasions certain parameters are elevated downstream (e.g. nitrate-nitrogen, chloride), however there were no breaches of compliance limits.
- Annual Tier 2 sampling was undertaken on twice during the reporting period, with not all parameters being measured on each occasion. Of the measured parameters only total aluminium breached the compliance limits on the one occasion it was measured.
- No sampling of the stormwater discharge was undertaken during the 1 November 2018 to 30 October 2019 reporting period.

Figure 11: Butlers Water Quality Summary 2018/19

4.2 Sediment Quality

- No stormwater discharge sediment quality samples were collected during the reporting period.
- The Totara Lagoon sediment sampling that was due "at an interval not less than five years but not exceeding six years from first discharge of water from the land treatment holding pond into Stenhouse Creek;" is yet to be completed and was not undertaken during the reporting period.

4.3 Biomonitoring

- There is no evidence of Butlers Landfill having any adverse effects on aquatic macroinvertebrates based on twelve sampling occasions over an eight year period. Many of the most abundant taxa found at the downstream (impact) site have high MCI scores and are generally considered intolerant of pollution (e.g., the caddisflies *Helicopsyche* and *Olinga* and the mayflies *Zephlebia* and *Neozephlebia*). Further the downstream (impact) site has had MCI and QMCI scores indicative of "excellent" and "good" conditions, respectively, for the last three sampling occasions.
- The macroinvertebrate community metrics taxa richness and EPT taxa richness have a significant declining trend over time at both sampling sites. Other community metrics such as MCI, QMCI, and percentage EPT have fluctuated over time, especially at the upstream (control) site, such that no trend over time is evident except for a small (1%) annual increase in MCI at the downstream (impact) site only.

Figure 12: Butlers Sediment Quality & Biomonitoring Summary 2018/19

Annual Compliance Summary:

Parameter	Full Year Compliance Y/N
Flow Rate	✓ Full compliance – no issues noted
Clarity (Tier 2 surface water sampling)	✗ One breach
pH	✗ Numerous breaches
Conductivity	✓ Full compliance – no issues noted
Temperature	✓ Full compliance – no issues noted
Dissolved Oxygen (Tier 2 surface water sampling)	✗ One breach
Discharge volume (interception drain)	✓ Full compliance – no issues noted
Grease, films or scum	✓ Full compliance – no issues noted
Floatable or suspended material	✓ Full compliance – no issues noted
Objectionable odour	✓ Full compliance – no issues noted
Signs of adverse effect on aquatic life	✓ Full compliance – no issues noted
Undesirable biological growths	✓ Full compliance – no issues noted
Groundwater Quality	Not measured
Sediment Quality	Not measured
Total aluminium (Tier 2 surface water sampling)	✗ One breach
Macroinvertebrate health	✓ Full compliance – no issues noted

Table 15: Butlers Annual Compliance Summary 2018/19

5.4 Service Interruptions (including effect of COVID-19)

The only main service interruption in recent years was the temporary loss of access to a transfer station in Fox Glacier for approximately five months. This followed the partial river erosion of the former closed Fox Glacier landfill (which also served as the site of the transfer station). A new mobile transfer station was later established on Cook Flat Road to re-establish this level of service.

The drop in tourist numbers to our District as a result of the COVID-19 pandemic has resulted in large decreases in the volume of solid waste in the Glacier country region handled under the South Westland Rubbish Removals contract.

5.5 Recycling Contamination

Westland District Council has experienced issues with contaminated recycling from residents' recycling bins. This has resulted in a number of bins being rejected for pick-up. The following graph shows a large increase in the number of bins rejected for pick-up over the 12 months from August 2019-July 2020 (inclusive):

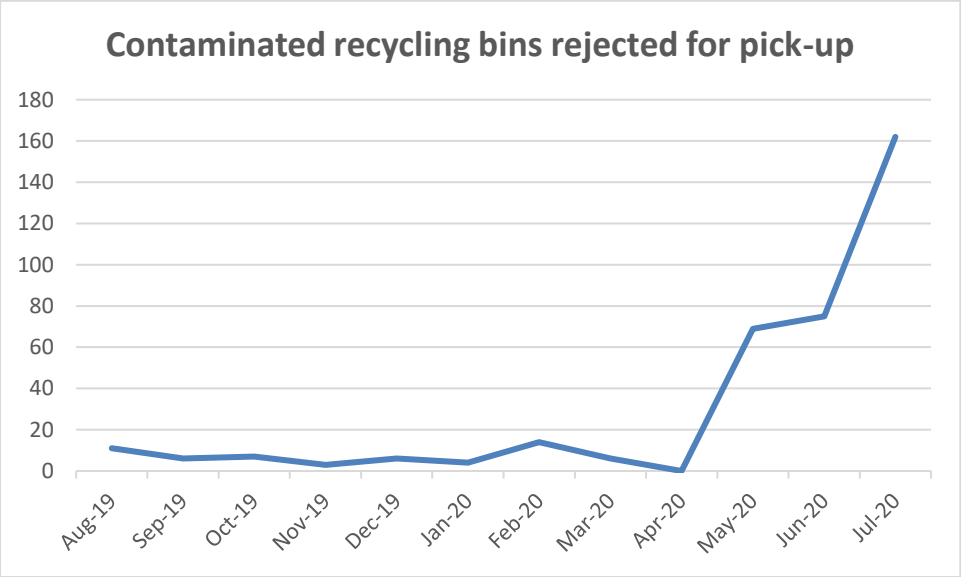


Figure 13: Recycling Bin Contamination Incidents 2019/20

Bins are mostly rejected due to the inclusion of glass or general waste. On some occasions these have been rejected because they are overfilled and therefore pose a health and safety risk for emptying. Additionally, nappies and LPG bottles are periodically found in recycling bins, resulting in rejection.

There are several reasons for the sharp increase. One grade of plastic has been removed from the list of recyclable materials that was previously recyclable. Council's contractors have increased their policing of recycling bins and since COVID-19, there appears to have been an increase in contamination. This is thought to be because some people may be spending more time at home, generating more rubbish than they may be able to dispose of in their waste bins and 'sneaking' rubbish into their recycling.

As a consequence of this trend, Council has taken the following steps to educate residents on correct recycling protocol, including what can go in bins and what cannot:

- Updated information on Council website
- Facebook posts
- Tour of Butlers Landfill for interested parties (arranged by Soroptimists Westland)
- Educational display in place at Westland District Library for all of the month of July
- Westland Matters (ratepayer newsletter) article
- Updated posters with recycling information which are displayed on town noticeboards.

The protocol for dealing with contaminated recycling bins is for bins to be stickered in the first instance; and pick-up refused in second instance. All incidents of stickers and pick-up refusals are reported by the contractor to Council Officer and documented internally against the property address. The customer is then emailed or phoned by a Council Officer as part of increasing educational awareness.

Section 6: Our Customers and Stakeholders

6.1 Stakeholders

There are many individuals and organisations that have an interest in the management and operation of Council's solid waste assets, including landfills, transfer stations and freedom camping waste stations.

Identifying and acknowledging customers and stakeholders is an important step in supplying the right services at an appropriate costs.

The following list of key customers and stakeholders are those who receive a direct or indirect benefit from solid waste activities or who have a key relationship in delivering the service expectations:

Customer Group	Relationship	Expectations
Community: Residents, tourists and local businesses	Users of Council solid waste facilities	Clear signage and direction Conveniently located Accessible e.g. for disabled/elderly Car parking Convenient hours of operation Clean and sanitary facilities
	Non-users	Civic pride Protection of natural environment
Ratepayers	Rates contribute towards cost of services and facilities	Value for money Financial sustainability Responsible investment in assets Clear and transparent decision-making processes with opportunities to have a say.
Elected members	Governance Public accountability for decisions	Timely reports to Council present all the relevant facts, costs and options to enable good decision-making and highlight potential risks. Reports to Council
Iwi	Special status as mana whenua and kaitiaki of the natural environment. Co-governance role as members of Council and its committees (no voting rights).	Appropriate consultation on matters relating to land, waterways and cultural or environmental impacts and issues.
Regulatory authorities (e.g. West Coast Regional Council)	Responsible for overseeing Council's compliance with its resource consents and receiving and assessing new consent applications lodged by Council	Compliance with statutory obligations under the RMA and resource consents. Site sampling, monitoring and filing of annual reports. Co-operation and sharing of information.

Department of Conservation	Land owner of sites of some of Council's closed landfills.	Council to consult with them regarding changes to any activities on their land.
Butlers Landfill Liaison Management Group	Responsible for reviewing Butlers Landfill operations including leachate and stormwater issues, site contingency and nuisance controls, and any other relevant issues/concerns.	Council to facilitate this group and invite relevant parties to meetings. Sharing of monitoring data, development plans and other relevant information.
Landfill and transfer station neighbours	Persons potentially most affected by on-site operations	Advance warning of impacts that could have a negative impact on their property Activities do not create nuisance (e.g. noise/odour)
Council insurers	Mitigate Council's financial risks in the event of assets being stolen, destroyed etc.	Solid waste activities legally compliant and safe.
Central Government Agencies including Ministry of Business, Innovation and Employment	These agencies allocate and administer funds for infrastructure projects (e.g. Tourism Infrastructure Funding and Provincial Growth Fund)	Well-scoped business cases, proof of cost (quotes and estimates), timely reporting, Council accountability for project execution.
Ministry for Culture and Heritage	Administers culture and heritage legislation to protect objects and symbols of national identity (taonga).	Preservation of heritage and cultural features
Ministry of Civil Defence and Emergency Management	Manage and respond to natural disasters in New Zealand	Council fulfils EOC responsibilities in event of emergency and maintains normal business operations simultaneously Record and cost keeping from any Civil Defence incidents.
Township Community Groups, Associations and Incorporated Societies	Strong interest (i.e. informal local governance) as it results to their specific community	Inclusion or involvement in decision-making process Consultation on local community issues Co-operation and sharing of information
Hokitika Green Team	Liaison group of local businesses and organisations inspiring, influencing and delivering sustainable behaviours and initiatives	Council representation on Team and support/promotion of their activities.
Service providers and contractors (including South Westland Rubbish Removals, EnviroWaste/Mastagard and Westroads)	Provide maintenance and management of contract services	Fair and open procurement processes Clearly defined contract terms Reasonable site and facility access Known hazards are communicated Safe and secure work environment

Table 16: Customers & Stakeholders

6.2 Consultation & Engagement

6.2.1 Purpose of Consultation and Types of Consultation

Council has a Consultation Policy and a Significance and Engagement Policy. This document outlines when, why and how we consult, what decisions we consult on and whom we consult with.

Consultation with the community serves the purpose of gaining a better understanding of customer expectations and preferences.

Council's knowledge of customer expectation and preferences primarily is based on:

- Biennial formal residents survey undertaken by phone from independent research organisation
- Alternate years' online customer survey conducted by Council's Strategy and Communications Officer
- As-needed community consultation on specific issues e.g. freedom camping sites
- Feedback direct from public via service requests or staff customer contact
- Consultation on the joint Waste Minimisation and Management Plan
- External benchmarking tools
- Feedback from elected members, advisory groups and working parties
- Consultation via the Annual Plan and Long Term Plan processes.

6.2.2 Engagement with Mana Whenua

Steps have been taken in the last two years by Council to improve engagement and consultation with the mana whenua of Westland District, Poutini Ngāi Tahu (Te Rūnanga o Ngāti Waewae and Te Rūnanga o Makaawhio), for example iwi representation and attendance at Council meetings.

The effective handling and disposal of solid waste is of importance and spiritual significance to Māori. This is because of the ability of leachate to affect the quality of nearby waterways. Traditionally the sea, lakes and rivers have been a key source of food (kai moana) for Māori, regarded as their pataka (pantry). As a result, maintaining the mauri (special nature / life force) of the receiving waters is of utmost importance.

Under the Butlers Landfill resource consent, Council is required to facilitate the establishment of a Landfill Liaison Group. Membership of this group is to be open to both Te Rūnanga o Ngāti Waewae and Te Rūnanga o Makaawhio as well as representatives from Council, contracted operators of the landfill, West Coast Regional Council, neighbouring landowners, the Department of Conservation, and the Royal Forest and Bird Protection Society of New Zealand. The role of the liaison group is to:

(a) Reviewing the monitoring data for all site discharges and leachate treatment trials;
(b) Reviewing the effectiveness of leachate and stormwater treatment methods;
(c) Reviewing the stages of the planned landfill and leachate treatment field development;
(d) Reviewing the effectiveness of site contingency and nuisance controls; and
(e) Identifying concerns regarding the operation of the landfill.

Integrating Maori cultural considerations into infrastructure solutions is underpinned by the following pieces of legislation[4]:

Three key pieces of legislation that set out principles to be followed in relation to Maori-tangata whenua considerations on human waste-domestic sewage and wastewater systems.

The first is the Environment Act 1986 which sets out the principles of the management of natural and physical resources, including intrinsic ecosystem and community values, the Treaty of Waitangi, the sustainability of natural and physical resources, and the needs to future generations.

The second is the Resource Management Act 1991 (RMA), a statute that controls all development in New Zealand. The purpose of RMA is "*…to promote the sustainable management of natural and physical resources*" where sustainable management means: "*…managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety…*"

The third significant piece of legislation is the Local Government Act 2002 (LGA) which identifies that purposes of local government is New Zealand is: "*… to promote the social, economic, environmental, and cultural well-being of communities, in the present and for the future.*" These are the four well beings.

6.2.3 Residents Survey Data

Council's main community engagement exercise is the biennial Residents Survey conducted on Council's behalf by National Research Bureau Ltd (NRB). In alternate years, an in-house online survey is conducted by Council's Strategy and Communications Advisor.

The most recent NRB Communitrak™ Survey was undertaken in January 2020 and it provided feedback on satisfaction with Council's transfer stations and refuse and recycling service.

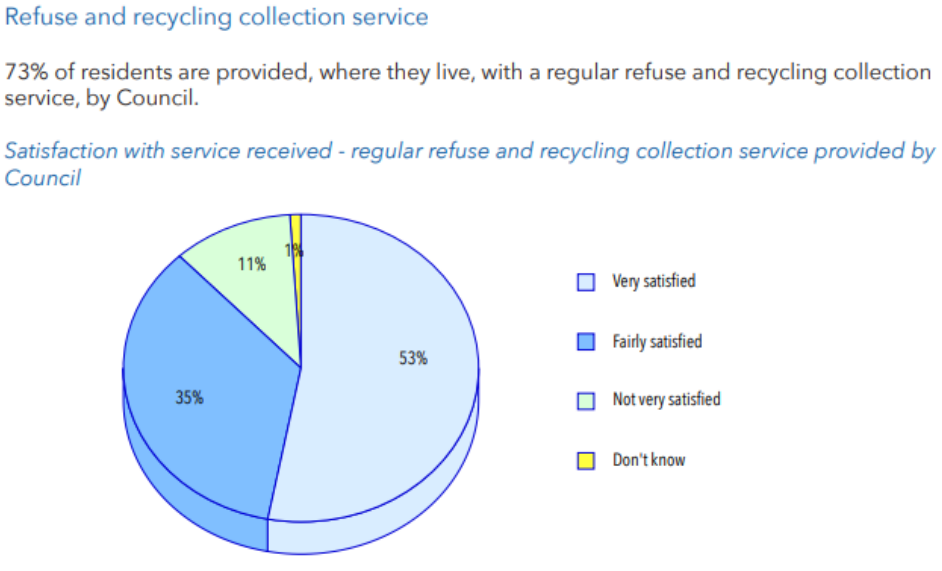


Figure 14: Residents Survey Feedback - Refuse & Recycling Collection

[4] Excerpt from Jim Bradley's paper: *Maori cultural considerations in developing and operating wastewater systems – case history experiences*. Retrieved 26 May 2020 from https://www.confer.co.nz/tiwf/index_htm_files/jim%20bradley%20full%20paper.pdf

The chart above shows that 88% of users are either very or fairly satisfied (versus 90% in 2018 survey).

Compared with 2018, the percentage of very satisfied users has decreased by 10% and the percentage of not very satisfied users has increased by 2%. Our results are on par with the average of our Rural Councils Peer Group:

Satisfaction with refuse and recycling collection service

	Very satisfied %	Fairly satisfied %	Very/Fairly satisfied %	Not very satisfied %	Don't know %
Service provided					
2020	53	35	88	11	1
2018	63	27	90	9	1
2016†	56	32	88	12	1
Comparison*					
Peer Group Average (Rural)	52	36	88	8	4
National Average	59	29	88	9	3
Ward					
Northern	58	33	91	9	-
Hokitika	49	36	85	14	1
Southern	59	36	95	5	-
Household Size					
1-2 person household†	60	32	92	6	1
3+ person household	42	40	82	18	-

Base = 304
% read across
* Peer Group and National Average readings relate to satisfaction with rubbish collection for households provided with the service
† does not add to 100% due to rounding

Table 17: Analysis of Residents Survey Satisfaction Data

The qualitative comments were mostly positive, however, a few points of dissatisfaction were noted including the lack of glass recycling and a desire for larger rubbish bins. (As Council is trying to encourage residents to minimise waste to landfill waste bins are half the size of recycling bins).

The main reasons* residents† are very satisfied with refuse and recycling collection service are ...

- regular/reliable/consistent, mentioned by 53% of residents† who are very satisfied,
- good service/do a good job/good standard/well run/no problem, 35%.

The main reasons* residents† are fairly satisfied are ...

- regular/reliable/consistent, mentioned by 25% of residents† who are fairly satisfied,
- bins not big enough/size of bins/need more bins, 20%,
- good service/do a good job/good standard/well run/no problems, 16%,
- would like glass collected, 16%.

The main reasons* residents† are not very satisfied are ...

- bins not big enough/size of bins/need more bins, mentioned by 37% of residents† who are not very satisfied,
- needs to be more frequent/more frequent over holiday period, 34%,
- would like glass collected, 33%.

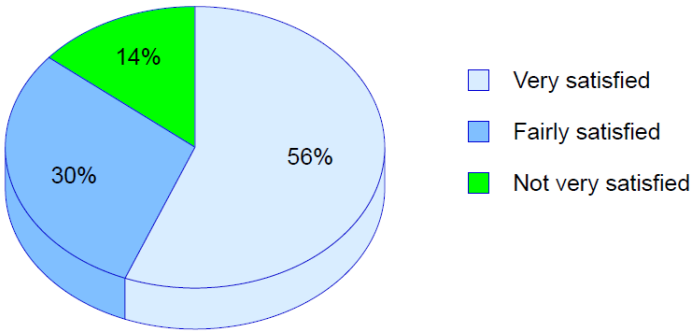
* multiple responses allowed
† those residents who say Council provides them with a regular refuse and recycling collection service, N=304

In the 2018 NRB Communitrak™ Survey, the satisfaction with transfer stations was also polled (results below) although this was not polled in 2020.

Transfer Stations

In the last year, 58% of residents have personally used a transfer station in the District.

Satisfaction With The Reliability Of The Transfer Station - Users



Base = 226

Figure 15: Residents Survey Feedback - Transfer Stations (2018)

The qualitative comments were mostly overwhelming positive, however, a few points of dissatisfaction were noted, mainly regarding costs:

- "Unhappy with the cost. Hokitika."
- "Greymouth is cheaper than Hokitika."

- “Still too dear for rubbish. It is easier to fly tip on the side of the roads and bushes.”
- “Expensive. Okuru.”

A few unhappy comments were received regarding the maintenance standard:

- “The maintenance standard is not that high. It is pretty rough. Haast.”
- “Rubbish waiting to be processed. Maybe lack of staff.”

Other comments were in relation to operating hours:

- “The hours. They close at four. Most people work until five.”

Final some accessibility issues were raised:

- “A bit difficult for older people to get up steps. Hokitika.”
- “We have to take our glass to the transfer station. You have to climb a ladder and I’m not young at all and it’s difficult.”

Section 7: Current and Future Demand

The ability to predict future demand for services enables Council to plan ahead and identify the best way of meeting that demand. That may be through a combination of demand management and investing in improvements as required.

7.1 Demand Drivers

Demand considers the current users of the District's transfer stations and kerbside recycling and rubbish services, freedom camping sites and waste minimisation educational activities and who else might want to use them. This includes looking at current usage levels, patterns of use (e.g. seasonal, time of day etc.), the profile of use (what aspects of these services do they use) and the desired usages not currently catered for.

The key demand drivers which influence the demand (both quality and quantity) for solid waste and waste management/minimisation activities include:

Service	Population, Business & Development Trends	Economic Growth & Waste Production Levels	Changes in Customer Expectations	Legislative Change & Increased Requirements	Sustainability Trends	Tourism	Cost Fluctuations
✓	✓	✓	✓	✓	✓	✓	✓

Figure 16: Demand Drivers - Solid Waste

7.2 Assessing Demand

7.2.1 Population Growth (Data source: Statistics New Zealand)

Demographic changes such as an increase in population impacts the demand for solid waste services. More people creates a higher volume of solid waste to recycle or process at landfills. The geographic spread of population and residential growth can also necessitate the location of transfer stations and landfills.

Statistics New Zealand's 2018 Census showed 8,640 people as usually resident in the district when the data was released in September 2019, compared to 8,304 in 2013.

This represents a 4.05% increase in resident population since the 2013 census. This is in contrast to the rest of the West Coast which experienced a reduction in the resident population.

The graph below shows the change in population numbers in Westland District between the 2006, 2013 and 2018 censuses:

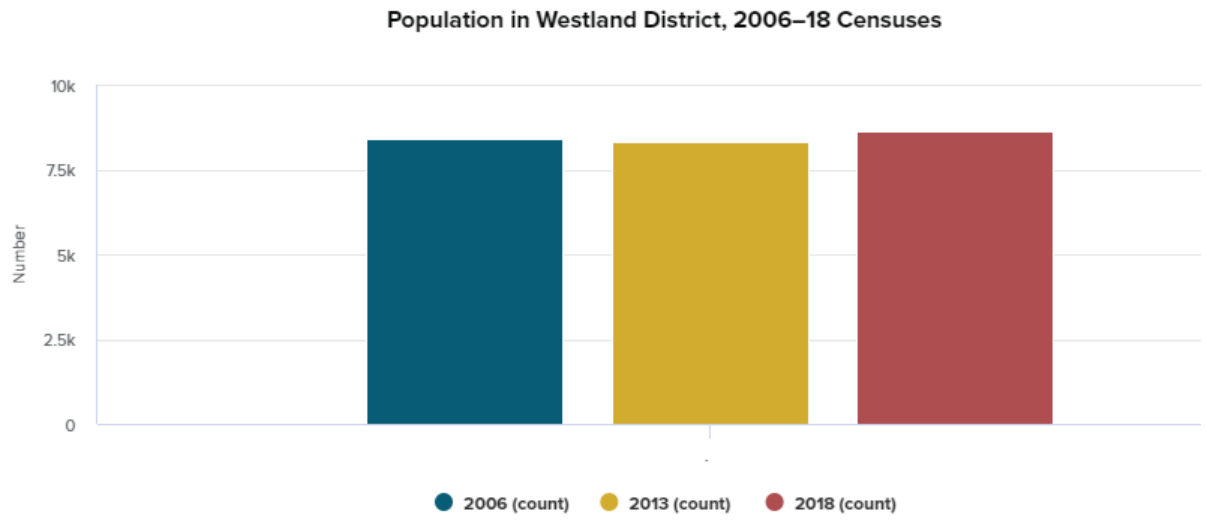


Figure 17: Population in Westland District - 2006, 2013 & 2013 Censuses

Figure 18 below predicts population growth of approximately 0.7% for the ten years between 2018 and 2028, followed by a decline of approximately 4.6% over the subsequent 15 years to 2043, reducing the population below the 2013 level*.

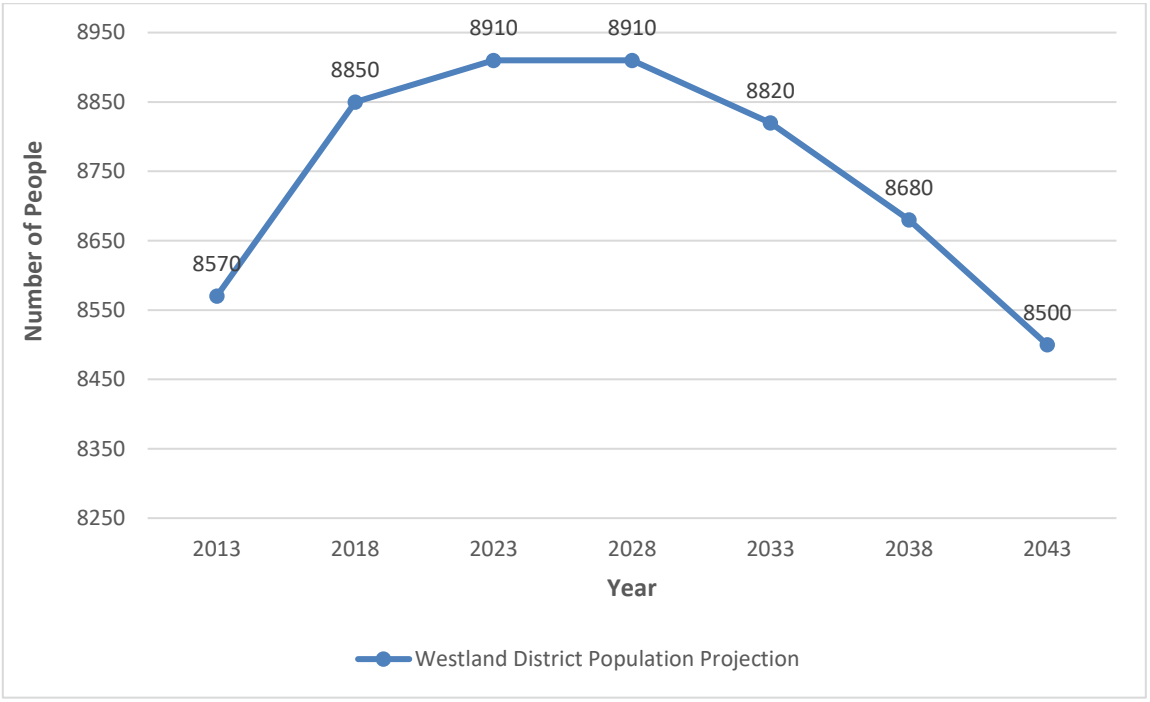


Figure 18: Westland Medium Growth Population Projections 2013-2043

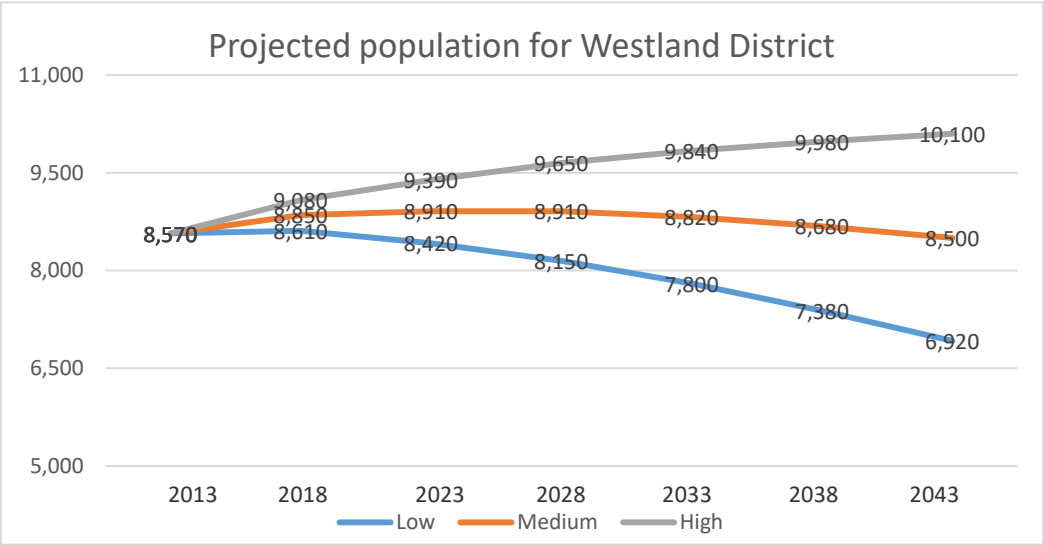


Figure 19: Low, Medium & High Population Projections - Westland District

*Due to problems with the execution of the 2018 Census, at this time updated future population projections are not available. The figure below shows the population projections as per 2013, which are thus the most current.

This would tend to suggest that any fluctuations in growth will be insignificant in the longer term. These changes are made up of a decrease in the total fertility rate, a decrease in net migration and an increase in life expectancy. By 2043, deaths will outnumber live births and net migration is predicted to reduce.

Projection			Medium					
Measure			Births (live) - 5 years ended 30 June	Deaths - 5 years ended 30 June	Natural increase - 5 years ended 30 June	Net migration - 5 years ended 30 June	Population at 30 June	Median age (years) at 30 June
Area	**Year at 30 June**							
Westland district	2013		..	..	..	..	8570	42.3
	2018		500	320	180	100	8850	42.9
	2023		490	330	160	-100	8910	43.8
	2028		460	360	100	-100	8910	44.6

	2033		430	410	20	-100	8820	45.4
	2038		410	450	-40	-100	8680	46.5
	2043		410	480	-80	-100	8500	47.4

Table 18: Westland births, death, migration projections 2013 (base) - 2043

Implications of Population Trends for Westland District

Generally speaking, changes in population forecasts have the following impacts on the solid waste activity:

- An increase in population and new dwellings will see the overall demand for solid waste services rise, particularly public expectation for expanded catchment zone boundaries for refuse and recycling collection.
- Growth in households will increase the number of kerbside bins serviced.
- Current total mass to landfill (domestic, commercial and industrial) is around 0.44 tonnes per capita/year. The increase in population in Westland District of 4% (from 2013-2018) could increase annual tonnage by a similar amount. Therefore total tonnage to landfill could increase to 3,826 tonnes/annum.
- Gender and ethnic mix do not seem to have any significant bearing to the solid waste activity.
- Ageing population may lead to more concentrated populations in urban areas (where rest homes and pensioner housing units exist). This could lead to a more concentrated solid waste generation in Westland's urban areas.

7.2.2 Township Growth

Township growth tends to fluctuate form census to census. No significant census trends have been identified that would necessitate changes to the location of solid waste service services.

Haast

Growth node data based on trends seen in subdivision applications through Council's Planning Department show that there is nil significant development growth in Haast.

Residential population data for greater Haast area over the last three censuses is shown below:

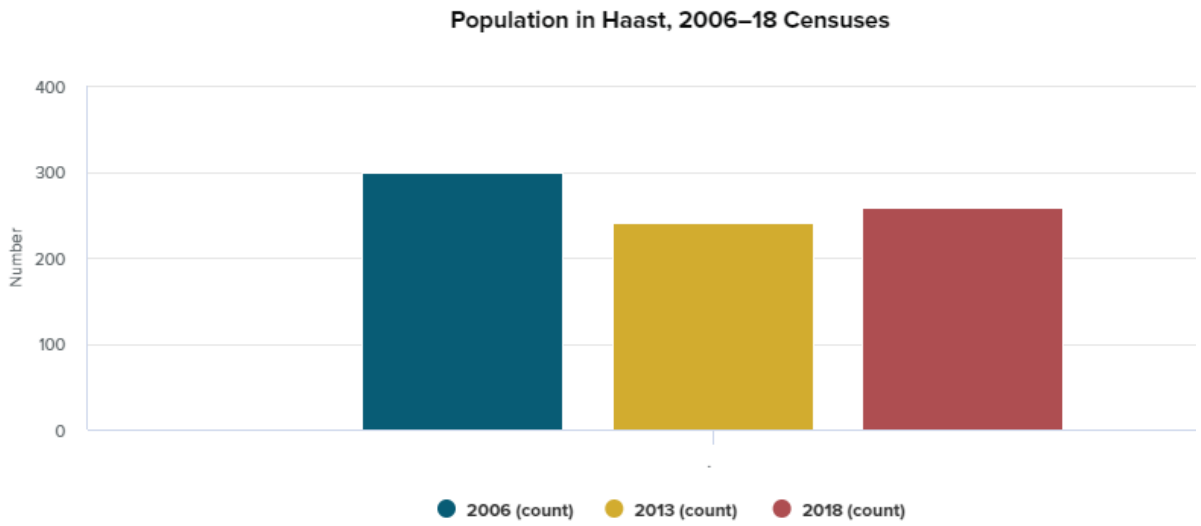


Figure 20: Population Growth - Last 3 Censuses (Haast)

The 2018 census count for this area was 258 people with a median age of 52.6 years. Population in Haast area is slightly up on 2013 data but still down on 2006 data.

Fox Glacier & Franz Josef

Fox Glacier township is expanding out Cook Flat Road. It is expected that the township will sprawl down this road towards Lake Matheson. The type of residential development in this area is small dwellings that include Airbnb units, private residences and staff accommodation units.

Residential and tourism developments in Franz Josef have been in a holding pattern for the last few years due to the Future Franz proposal, which may necessitate relocating the town centre.

More recently, the closure of international borders due to COVID-19 has resulted in closure (temporary or permanent) of some business in this tourism-dependent area. Prior to the global COVID-19 pandemic, Franz Josef also had large seasonal staff accommodation needs.

In 2019, a number of new housing developments were identified along the Waiho Flat Road – it is unlikely that new developments in this area (or in the Fault Line Area of Franz Josef) will continue to be supported in light of the Future Franz concept or environmental risk factors.
Population in combined Franz Josef, Fox Glacier and Bruce Bay area is significantly up on 2013 data, with a percentage increase of 22.6%. This data should be used with caution as COVID-19 will have had an impact on this. The 2018 census count for this area was 1,074 people (compared to 876 in 2013) with a median age of 31.3 years.

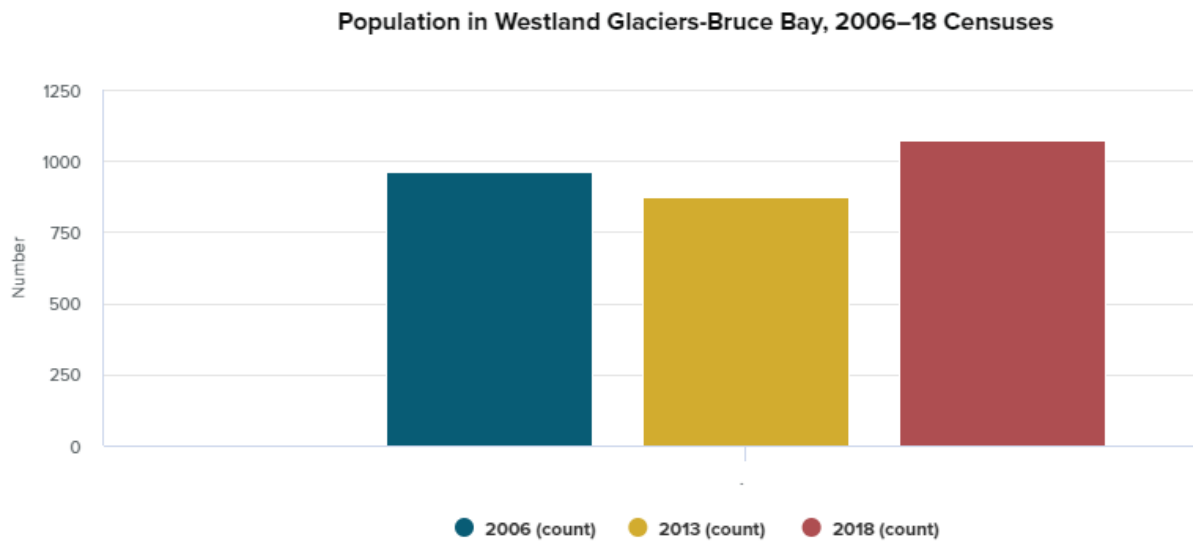


Figure 21: Population Growth - Last 3 Censuses (Glacier Region)

Hokitika & Kaniere

In the wider Hokitika area, new builds are taking place in the semi-rural areas outside of the Hokitika itself. Kaniere is also experiencing growth.

Population in Hokitika rural area has increased by 6% between 2013 and 2018 and this reflects the growth node observations of increasing subdivisions in the rural areas surrounding Hokitika. The 2018 census count for this area was 1,440 people (compared to 1,359 in 2013) with a median age of 46.2 years.

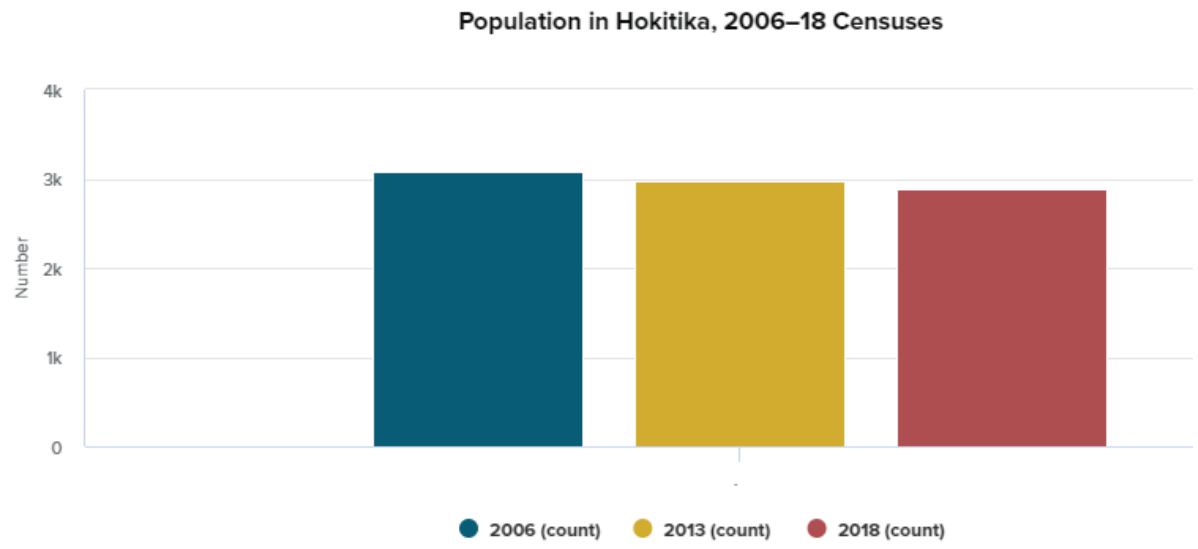


Figure 22: Population Growth - Last 3 Censuses (Hokitika Urban)

Population in Hokitika urban area is slowly declining. The 2018 census count for this area was 2,892 people with a median age of 47.5 years.

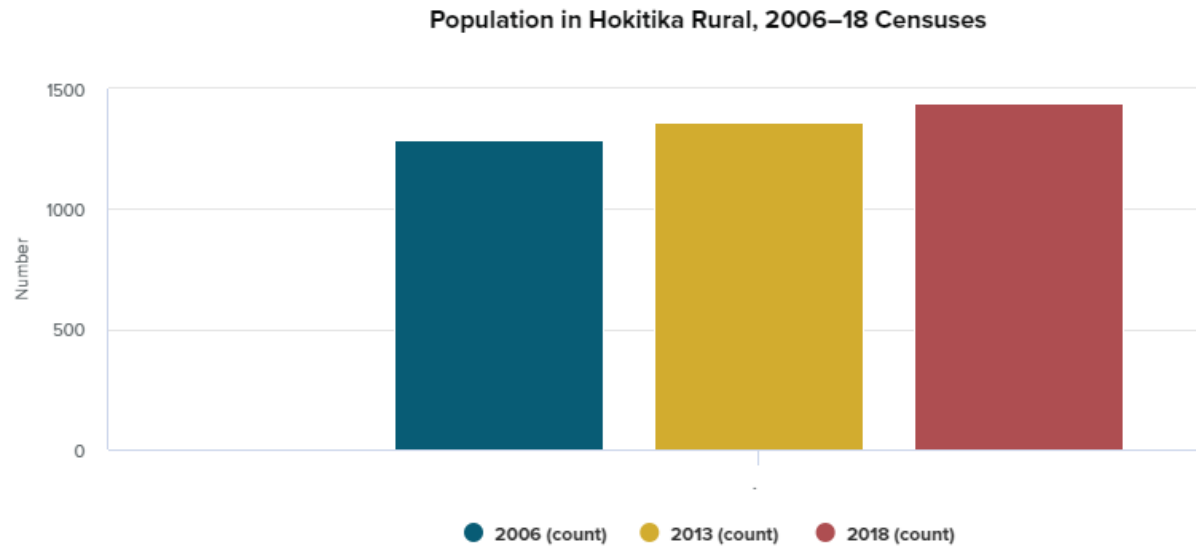


Figure 23: Population Growth - Last 3 Censuses (Hokitika Rural)

7.2.3 Industrial/Commercial Usage Patterns, Economic Growth and Effects on Solid Waste

Economic growth is closely linked to waste growth. Westland District has few major industrial operations. At this stage, industrial demand within the district is minimal. One of the major industrial operators is Westland Milk Products, located in Hokitika. Additionally, there is an animal processing plant, Silver Fern Farms, and Coastpak, a company which supplies sphagnum moss to domestic and international customers. There are also a variety of gold operations of various sizes, one of the largest being Birchfield Developments in Ross.

Major economic contributors and industrial growth in recent years have been: tourism, dairy farming, real estate sales, and the construction sector. Forestry and fishing also have a moderate presence. While there may be changes in the local industrial sector in the future, it is not expected that these will have a significant impact on solid waste.

Rural waste sources from agriculture typically include agrichemical containers, silage wrap and on-site disposal or burning of waste.

The consent for Butlers Landfill allows for receiving of many different types of likely industrial waste including:

(a) Asbestos in accordance with Asbestos Regulations;
(b) Tyres; and
(c) Difficult wastes that require special handling, e.g. cess pit sludge, sewage plant screenings and sludges, offal, animal carcasses and bulky items.

The following materials are not permissible:

- Bulk liquid waste, being any waste that contains free liquid on arrival at the landfill, or has a solids content of less than 20%, except such waste that passes the USEPA Paint Filters Liquid Test (EPA Method 9095A);
- Hazardous waste including hazardous medical wastes.

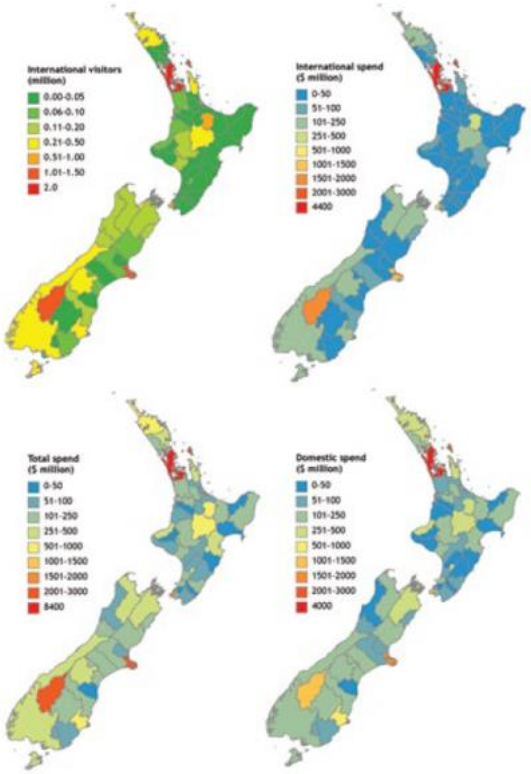
7.2.4 Tourism and Seasonal Peaks in Solid Waste Demand

Westland District is a popular tourist destination and tourist numbers are increasing over time (COVID-19 excluded). The glaciers in Franz Josef and Fox Glacier are international tourist attractions. Hence, there is increased seasonal demand for solid waste services in Franz Josef and Fox Glacier.

In the last two years, the increasing expansion and promotion of the West Coast Wilderness Trail has increased both domestic and international tourism. The trail is located in Kumara, Hokitika and Ross. The cycle trail is particularly popular with the over-50 demographic.

The August 2020 opening of the extension to Department of Conservation's Hokitika Gorge Walk will make this popular tourist attraction more of a drawcard in the future.

International visitors to Westland District for year ended March 2019 was between 210,000 and 500,000 visitors based on the MBIE's International Visitor Survey 2019. The annual spend of international visitors is between $101 - $250 million. The annual spend of domestic visitors is in the same bracket, making the combined annual spend of all visitors in our District for year ended March 2019 between $251 - $500 million.



Source: International Visitor Survey and Monthly Regional Tourism Estimates, MBIE

Figure 24: NZ Districts' Domestic & International Tourism Numbers & Annual Spend 2018/19

NOTE: The recent COVID-19 pandemic which is still ongoing is expected to have a huge impact on many parts of Westland District for many months (potentially years) to come. International borders currently remain closed to international citizens (as at September 2020). A reduction in demand for waste services in the South Westland Glacier Region has already been observed. The following charts have been created from raw data obtained from contractor reports from South Westland Rubbish Removals:

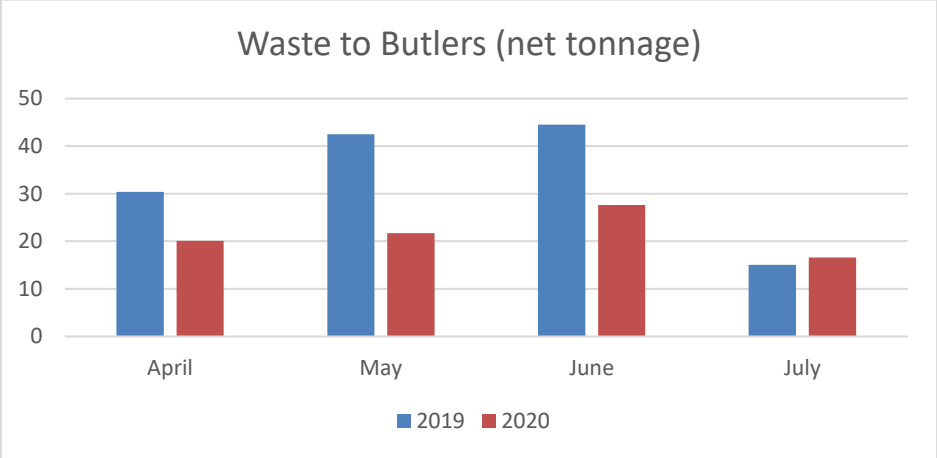


Figure 25: Butlers Waste Tonnage - April to July 2019 vs 2020

Waste volumes were down between 34% and 49% on the same time last year in April, May and June. However, a 10% increase in waste volumes was observed in July 2020, compared to same time last year. This could be due to Kiwis travelling domestically during a traditional international tourist off-season.

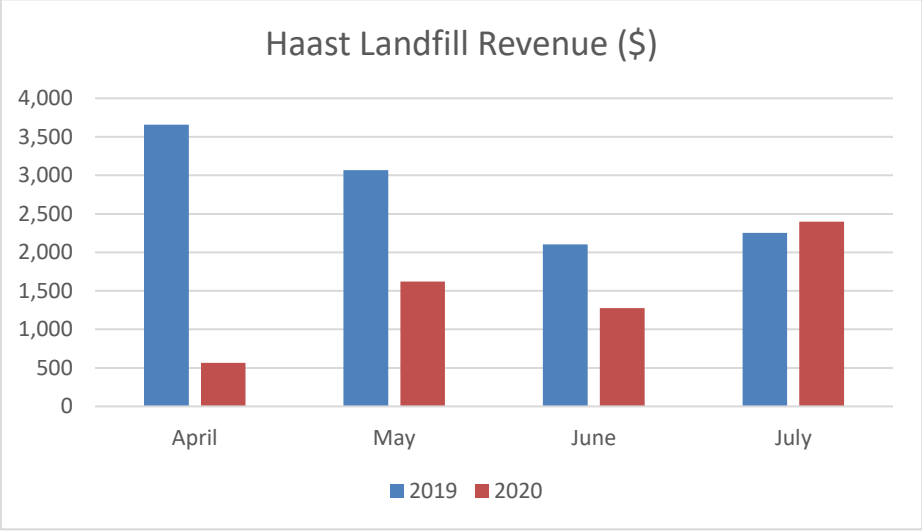


Figure 26: Comparison of Haast Landfill Revenue - April to July 2019 vs April to July 2020

Haast landfill revenue compared to same time previous year was down 85% in April, 47% in May and 39% in June. Revenue has increased by 6.5% in July, compared with 2019, mirroring the trend seen in the waste volumes chart.

7.2.5 International Changes in Recycling Markets

The tolerance for contamination in recycled materials has dropped significantly with the enactment of the China National Sword Policy in 2018, and the upcoming Basel Convention Amendments in 2021. There are limited onshore markets to recycle some materials, such as fibre and glass, and much of Aotearoa New Zealand's reprocessing infrastructure is aging. While there are onshore markets for plastic recycling, most of these are limited to "downcycling". In addition, geographic distances make it uneconomical for some local authorities (including Westland District Council) to ship (by land or sea) materials to local markets. In contrast, some other local authorities nationwide are fortunate to have reprocessors in their region. This has created an unfair "postcode lottery" where some local authorities (such as WDC) have to heavily subsidise recycling services to their householders, and as a result less recycling options are available to our residents. WasteMINZ recently wrote a report of recommendations for standardisation of kerbside collections in Aotearoa which summarises these issues and proposed future solutions in more depth.

7.2.6 Legislative Changes

Legislative changes from The Climate Change Response (Zero Carbon) Amendment Act introduced in 2019 are discussed in detail in Section 10.6. Legislative changes affecting Emissions Trading are discussed in detail in Section 10.7.

7.2.7 Cost Fluctuations

The above legislative changes will drive cost fluctuations over the next ten years. Again refer to Sections 10.6 and 10.7 for detail.

The ongoing global pandemic of COVID-19 also creates a huge level of uncertainty for economies and governments worldwide and may contribute to increased prices for contractors, materials etc. The ongoing effect of unparalleled levels of government stimulus funding remain to be seen.

7.2.8 Public Expectations

The main public expectations for Solid Waste are to continue to protect the natural environment by operating all solid waste facilities in environmentally-sustainable ways in accordance with resource consents. The nationwide publicity surrounding the Fox Glacier closed landfill erosion event has added extra momentum to this expectation.

In addition, the main community desires are for glass recycling pick-up. This is may not be cost-feasible for gate pick-up but options could be explored for a number of more centralised glass disposal receptacles in townships areas. Additionally, there is a desire for organics collection. Both of these options are being explored by Council staff. Organics collection in particular is likely to have huge benefits in terms of decreases of waste volume to landfill. Council has to find ways of balancing the community's desire for increased levels of service for recycling with the ability of the community to pay for the cost of these services (either directly or indirectly e.g. through rates).

7.2.9 Waste Demand & Composition over Time

Total Waste Tonnage and Annual Tonnes per Capita

Butlers and Haast landfills are the only operational landfills accepting solid waste in the District. The table below shows the changes over time in tonnage volumes and tonnes per capita.

Waste	2004	2007	2011	2016
Total tonnage of waste to landfills (excluding glass, hardfill and biosolids)	3,541t	4,356t	1,919t	3,679t
Population based on Statistics NZ latest Census data	8,360	8,690	8,880	8,307
Tonnes per capita per annum	0.42t	0.501t	0.22t	0.44t

Table 19: Historical Waste Trends

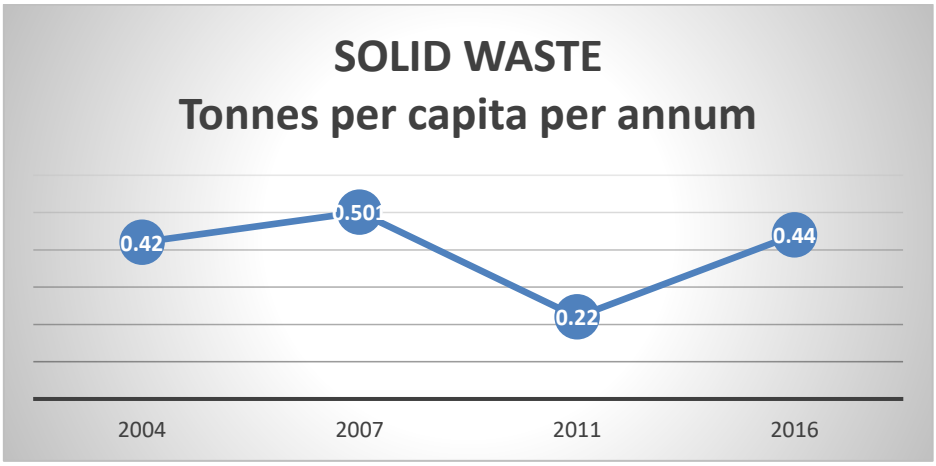


Figure 27: Solid Waste Tonnes per capita per annum - 2004, 2007, 2011, 2016

Based on the above graph, 2016 waste is fairly consistent with 2004 waste. There was a peak in waste consumption in 2007, followed by a marked decrease in 2011. The decrease in 2011 could be a result of two things:

- The aftermath of the 2008 global recession which may have resulted in less development, reduced household spending and less waste being produced; and
- The employment of a Waste Management and Resources Officer during this period who introduced a number of new waste minimisation practices: including the purchase of a recycling van, the creation of a community garden, and participation in the KNZB Clean-up Week. During this time Westland District Council won the Keep New Zealand/Barnita Trust Trophy for its efforts to promote the abatement of litter.

Waste Composition

In 2004, 2007 and 2011, waste audits were completed by Council at the Hokitika Landfill/Refuse Transfer Station to measure the composition of the waste stream in the District. The table below outlines this composition.

Classification	Tonnes Total Waste			% Total Waste		
	2004	2007	2011	2004	2007	2011
Paper	785.6	1,306.9	431.6	12.21	10.43	19.9
Plastic	363.4	503.4	332.8	5.65	4.02	15.3
Organics	1,639.2	1,499.8	540.8	25.48	11.97	24.9
Ferrous	297.6	310.2	57.2	4.63	2.47	2.6
Non-ferrous	21.2	20.1	10.4	0.33	0.16	0.5
Glass	191.0	304.7	72.8	2.97	2.43	3.3
Textile	100.7	220.5	98.8	1.57	1.76	4.5
Sanitary	55.6	43.9	119.6	0.86	0.35	5.5
Rubble	2,701.0	7,873.5	182	41.99	62.82	8.4
Timber	251.1	428.2	306.8	3.90	3.42	14.1
Rubber	21.9	21.2	5.2	0.34	0.17	0.2
Hazardous	4.5	1.5	15.6	0.07	0.01	0.7
Total	**6,433**	**12,534**	**2,174**	**100.0**	**100.0**	**100.0**

Table 20: Composition Breakdown 2004, 2007, 2011

Figure 28: Volumes of Main Solid Waste Stream Components

The table and graph above shows that organics, paper and plastic are consistently high contributors by net tonnage to Westland District Council's waste stream, followed by timber.

Rubble was the biggest individual contributor to the waste stream in both 2004 and 2007, however in 2011, rubble volumes dramatically decreased. No updated composition study has been conducted since 2011 for Westland District.

7.3 Demand Projections

At present, future demand projections are based on:

- Historic consumption

- Forecast residential, industry and business growth
- Current levels of service

Haast landfill is not forecast to be operational beyond July 2021.

Butler's landfill is expected to be operational for at least the next 15-20 years once the new cells and landfill bay is constructed.

The following schematic diagram shows the status of Butlers Landfill at present and the impact on Butlers of absorbing the Fox Glacier landfill contents:

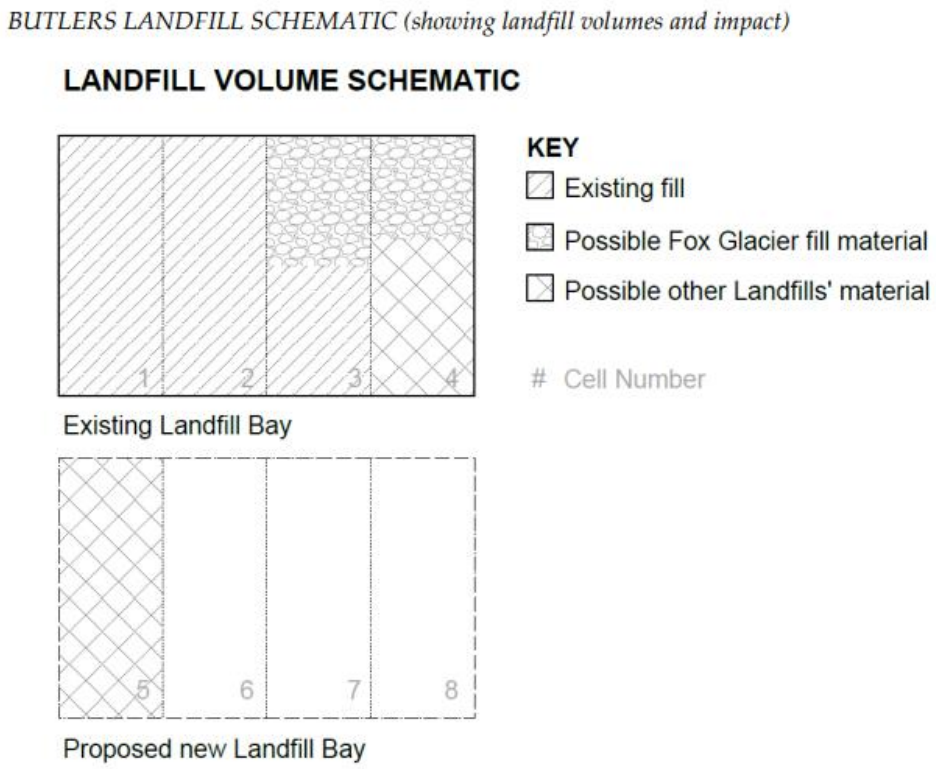


Figure 29: Butlers Landfill Schematic

In the future, it is recommended that formal low, medium and high demand projections be mapped and graphed, showing the likely demand levels of the following scenarios:

- **Scenario One (high growth, negative diversion)**
  Based on optimistic population projections of 2%, GDP long-run growth of 3% and diversion rates that decrease by 1% per year.
- **Scenario Two (medium growth, medium diversion)**
  Based on positive population growth of 1%, GDP long-run growth of 2% and diversion rates that are increase by 1% per year.
- **Scenario Three (negative/minimal growth, high diversion)**
  Based on population decrease of 1%, GDP long-run growth of 1% and diversion rates that increase by 3% per year.

7.4 Demand Management Plan

Council has no formal, documented demand management plan. However, as existing facilities come closer towards the end of their useful lives, consideration has been given to the best way to move forward. In general, Council's demand management plan has four key elements:

- Demand management initiatives i.e. non-asset development strategies aimed at reducing demand for services by encouraging re-use, reduction, recovery etc. as alternatives.
- Operational strategies to maximise the potential of the existing network (operational landfills and refuse transfer stations)
- Maintenance and renewal programmes to ensure assets perform to their potential
- Capital development strategies (analysis of existing usage rates to justify new capital projects or network upsizing).

7.4.1 Current Demand Management Strategies

Public Waste Minimisation and Management Education and Community Outreach

Education and awareness (communication initiatives) in the areas of waste and waste management is increasing important from a global perspective of resource management. It is a process of recognising values and clarifying concepts in order to develop skills and added tools necessary to understand and appreciate the concepts of waste management. Public education also encourages waste reduction and compliance with recycling protocols.

There are various are education and awareness initiatives that WDC employs including:

- Written and visual content shared through Facebook and Westland Matters (Council's electronic newsletter to ratepayers and residents).
- Waste education talks and activities in schools, and with community groups and industries
- Partnering with external organisations to achieve this e.g. Enviroschools, Paper4Trees, Hokitika Green Team
- Support of nationwide activities e.g. Plastic Free July
- Liaison role with Hokitika Green Team
- Recycling displays at Westland District Library
- Customer follow-up phone calls for non-compliant bins
- Participation in Regional and Central Government initiatives, e.g. making submissions on policies and proposed legislation reforms
- Taking part in the combined West Coast Waste Minimisation / Solid Waste Group

In July 2020, Council staff collaborated with local community groups to offer a tour of Butlers Landfill.

Figure 30: Educational Visit to Butlers Landfill (People on board Richie's Bus)

Kerbside Collection of Refuse and Recyclables

This reduces the amount of waste to be disposed of via landfill and fosters a sustainable behaviour through resource recovery. Council is investigating options to expand recycling activity (however, this is dependent on market conditions and the feasibility of costs).

Green Waste & Glass Recovery

Green waste and glass can be dropped off at RTSs where it is handled by site operators who mulch/chip these materials for site remediation purposes. Both these items are accepted free of charge.

Litterbin & Freedom Camping Waste Station Servicing

Litter receptacles and LoveNZ recycling bins are provided throughout the district in areas such as main streets, parks, beach reserves and near public toilets and community halls. Council also has 10 freedom camping waste stations that it deploys annually to suitable sites to mitigate and prevent illegal dumping of litter at tourist hot spots. These receptacles, bins and waste stations are emptied regularly.

Removal of Illegally Dumped Waste

Council's contractors also remove illegally dumped waste from public places as required.

Monitoring of Closed Landfills

Closed landfills are monitored by Council and also by the West Coast Regional Council.

Hazardous Waste Management

Hazardous waste stores are maintained at certain landfills and transfer stations. Hazardous waste is then disposed of on a regular basis as part of a West Coast-wide hazardous materials disposal programme.

Operations and Management of Two Active Landfills

There are two Council owned operational landfills at present – one serving the Southern part of the District and Butlers Landfill which is the largest facility which receives the majority of solid waste.

7.4.2 Future Demand Management Strategies

The following is a list of possible strategies that Council may consider in the future to manage the impact on its facilities and the environment:

- Apply for funding under Waste Minimisation Fund to provide new recycling and waste minimisation schemes to consumers
- Investigate new technology available for recyclable materials
- Review fees and charges for use of RTSs and landfills to better reflect service delivery costs i.e. reduce charges for services that are underutilised or increase costs where over-utilised.
- Continue to expand regional collaboration efforts and investigated opportunities for shared provision of services to reduce costs.
- Conduct updated Water and Sanitary Services Assessment
- Conduct updated waste composition analysis
- Rationalisation and/or disposal or under-utilised or poor condition facilities.

Section 8: Lifecycle Management Plan

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

Depending on the asset type, its lifecycle may vary from 10 years to 100 years. The asset lifecycle can be summed up the diagram below:

Figure 31: Asset Lifecycle Flow

Asset Strategy & Planning	Before a new asset is created, the organisation must consider its strategic goals and investigate all options for achieving these goals, including non-asset solutions.
Asset Design & Procurement	Assets may be created/constructed from new or acquired (i.e. vested in Council). This process includes capital costs, design and construction standards, commissioning of assets, guarantees by suppliers or written agreements for the terms of consider acquiring a pre-existing asset from a third party or shared funding arrangements.
Asset Operations & Maintenance	Operations relates to a number of elements including efficiency, power and insurance costs and throughput/capacity. Maintenance relates to preventative maintenance where minor work is carried out to prevent more expensive work in the future. This also covers reactive maintenance to fix items or components that have failed.
Asset Modification	Assets are examined and checked on a regular basis to ascertain the condition, performance and estimated remaining life. Such inspections help determine corrective actions and modifications including rehabilitation, renewal, augmentation or upgrade to ensure required level of service can continue to be delivered or capacity can be extended.
Asset Disposal	Assets will be disposed of when they have failed beyond repair or are redundant and surplus to requirements. Assets may be put to another use, sold off or abandoned. The lifecycle process then starts again by re-evaluating the strategy and planning for the future.

Table 21: Asset Lifecycle Stages

8.1 Asset Portfolio

Asset Portfolio

A summary of Westland District Council's solid waste assets is listed below:

Asset	Quantity	Optimised Replacement Cost	Depreciated Replacement Value	Annual Depreciation
Household Litter MGBs	3,000*			
Household Recycling MGBs	2,891*			
Freedom Camping Mobile Waste Stations	10			
Township Bins				
Hokitika Street Bins	37*			
Kumara Street Bins	3*			
Hari Hari Street Bins	3*			
Ross Street Bins	3*			
Fox Glacier Street Bins	10*			
Franz Josef Street Bins	10*			
Haast Landfill				
Access Road Pavement	525m^2			
Fence	305m			
Gates	2			
Signs	2			
Hazardous Waste Container	1			
Shipping Container	1			
Drainage Pipe	17.5m			
Drainage Soakhole	1			
Kumara Transfer Station				
Access Road Pavement	1750m^2			
Fence	496m			
Gates	4			
Sign	1			
Refuse Trailer Platform	40.5m^2			
Drainage Pipe	9m			
Drainage Soakhole	1			
Ross Transfer Station				
Access Road Pavement	350m^2			
Fence	120m			
Gates	3			
Sign	1			
Refuse Trailer Platform	40.5m^2			
Drainage Pipe	10m			
Drainage Soakhole	1			
Hari Hari Transfer Station				
Access Road Pavement	717.5m^2			
Fence	118.3m			
Fence	18m			
Green waste bin	1			
Gates	3			
Signs	2			
Refuse Trailer Platform	40.5m^2			
Drainage Pipe	17.5m			
Drainage Soakhole	1			
Canopy	1			
Garden Shed	1			
Whataroa Transfer Station				
Access Road Pavement	700m^2			
Fence	161m			
Gates	2			
Sign	1			
Refuse Trailer Platform	68.48m^2			
Drainage Pipe	9m			
Drainage Soakhole	1			
Hokitika Transfer Station				
Weighbridge	1			
Offloading ramp	111.11m^2			
Commission press unit	1			
Glass crusher	1			
Access Road Pavement	1750m^2			
Fence	450m			
Gate	1			
Signs	5			
Refuse Trailer Platform	111.11m^2			
Tandem Trailer	10			
Landfill capping				
Buildings	(covered separately in Buildings AMP)			
Butlers Landfill				
Landfill Base	6,000m^3			
Internal Bunds	14,200m^3			

Primary Flexible Membrane Liner -PE	10,700m^3			
Secondary Geosynthetic Clay Liner	10,700m^3			
Stormwater Bunds	850m^3			
Groundwater Drainage Liner Layer	2,000m^3			
Leachate Collection Main Pipe	150m^3			
Leachate Collection Lateral Perforated Pipe	360m^3			
Leachate Drainage Layer – AP60	2500m^3			
Primary Leachate Pond	650m^3			
Secondary Leachate Pond	650m^3			
Leachate Oxidator	1			
Leachate Holding Tank	1			
Water Tank	1			
Water Pipe	50m			
Water Valve	1			
Leachate Pump	1			
Pump station	1			
Electrical Switchboards	2			
Electrical Cable	300m			
Irrigation Sprinkler Head	324			
Irrigation Main Pipe -PE	1050m			
Irrigation Main Gate Valve	12			
Irrigation Lateral Pipe	2052m			
Irrigation Lateral Gate Valve	72			
Unsealed Pavement Access Road	3850m^2			
Soakage Field Main Pipe PE	450m			
Soakage Field Dripline Lateral Perforated Pipe	300m			
Unlined Open Stormwater Drain	1150m			
Signs - Miscellaneous	6			
Farm gates – galvanised iron	3			
Main gate – galvanised iron	2			
Wind fence – post and chain link	100m			
Post and wire fencing	195m			
Total Value		**$5,736,637.84**	**$4,946,964.88**	**$85,872.19**

*Estimated only.

Table 22: Solid Waste Asset Portfolio

In addition to these assets listed above, there is a mobile transfer station unit being used in Fox Glacier and private-owned assets at the Franz Josef transfer station.

Most Solid Waste assets are not GIS mapped by location. However in May 2020, Council started mapping the location of its township litter bins:

HOKITIKA

Figure 32: Location of Hokitika Town Bins

KUMARA

Figure 33: Location of Kumara Town Bins

ROSS

Figure 34: Location of Ross Town Bins

(Note one additional bin not pictured is located at entranceway to Ross Beach.)

8.2 Asset Condition

No formal condition assessment for solid waste assets has been carried out. The following assessments have been derived from staff knowledge and visual, undocumented, site inspections.

8.2.1 Operational landfills

Butlers' landfill contains the majority of Council's solid waste assets. Butlers Landfill is in good condition and is generally operated in compliance with resource consents for the discharge of leachate, landfill gas, dust, odour and waste management.

Haast landfill assets are mostly in good condition, although half of the assets are aged.

8.2.2 Transfer stations

Hokitika transfer station has the most assets and those of higher value compared to the transfer stations of the smaller, rural townships. Hokitika transfer station's assets include a weighbridge, off-loading ramp and commission press unit for cardboard and recycling. There are also multiple buildings at the Hokitika transfer station; however, these are captured separately in the Buildings Asset Management Plan. The majority of the Fox Glacier transfer station assets were washed away or destroyed in the March 2019 heavy rainfall event. These assets have not been replaced to date as the Fox Glacier transfer station has since been closed to allow for protection of the site which is vulnerable to erosion. A mobile transfer station has now been set up on Cook Flat Road in Fox Glacier as an alternative.

Some refuse transfer station assets at Hokitika, Whataroa and Hari Hari are in average condition. All refuse transfer station assets at Kumara and Ross are in good condition.

8.2.3 Kerbside collection bins

The majority of assets relating to this category, including kerbside collection vehicles with compactor bins, are owned and maintained by the contractors who undertake the activity on Council's behalf. However, rubbish and recycling bins are the assets of Westland District Council and these are assigned to an individual property. Household rubbish and recycling bins are not currently listed on the solid waste asset register but need to be so that end-of-life replacement cost can be budgeted for. Per advice received from EnviroWaste Hokitika, it is estimated that the majority of recycling bins are six years old and the majority of waste bins are 11 years old at time of writing. The expected useful life of the bins is 15-20 years and therefore sometime between Years 3 and 8 of the 2021-2031 Long Term Plan, the waste bins should be renewed/replaced. There are 2,891 documented household recycling bins: 1,526 in Hokitika and 1,365 rural (i.e. Kumara and Ross). Household litter bins are expected to be slightly higher, in the vicinity of 3,000 approximately total.

8.2.4 Township litter and recycling bins

Other waste assets include public place litter and recycling bins (which include both single bins and multi-pod Love New Zealand bins). Bin material types differ and bins are not formally monitored. Therefore, some may be in need of renewal. LoveNZ bins and other litterbins are subject to contamination and this is an issue for Council to resolve.

8.2.5 Other assets

Council also has freedom camping waste stations. These are all new (purchased within the last 12 months) so are not anticipated to need replacement over the life of this plan.

Waste transport bins (open top bins) are owned by maintained by the waste transport contractor.

Closed landfills typically have few assets on site apart from fencing and access gates. As most closed landfill sites now act as transfer stations, these assets have already been covered in Section 8.1.2 above. Closed landfills are monitored by both West Coast Regional Council and Westland District Council.

8.3 Asset Performance

The performance of a solid waste asset is generally assessed against its fitness for purpose criteria, made up of seven components:

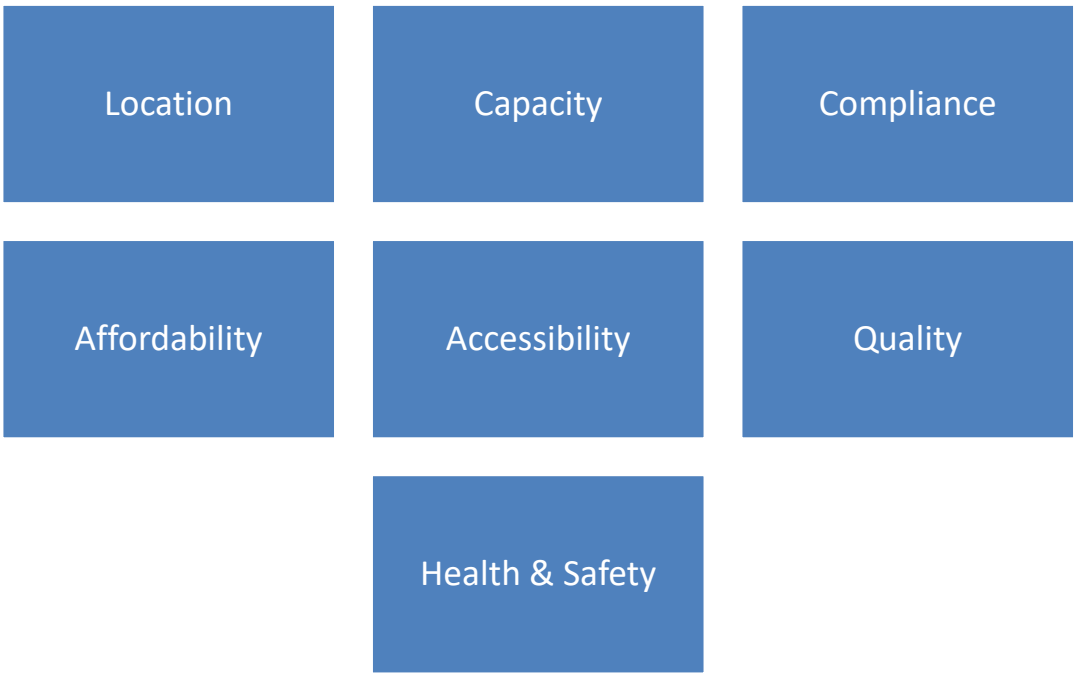


Figure 35: Asset Performance - Fitness for Purpose Criteria

When determining fitness for purpose, Council staff typically obtain feedback from the waste management contractors.

Refuse Transfer Stations
No formal capacity and performance assessment has been carried out, however, currently all RTS facilities are performing well and functioning to meet fit for purpose requirements and have appropriate capacity to meet current demand, routine maintenance notwithstanding.

Open Landfills
Open landfills are generally performing well. However, both landfills have fit for purpose challenges with 'capacity' and 'affordability': the latter due to the increase in Waste Levy rates.

8.4 Operations and Maintenance

8.4.1 Key Maintenance and Operational Themes

The majority of assets relating to solid waste are maintained on a reactive basis. This is because many of the assets are relatively low-cost, and assets are mostly above ground. Therefore, deterioration is normally visible before failure, and the risk of failure is relatively low.

The exception to this rule is closed landfills. Several closed landfills in the district are vulnerable to erosion (by coastal intrusion or river). Council is aware of this risk and trying to proactively plan for site remediation and/or management. This will add significant costs over the next 10 years.

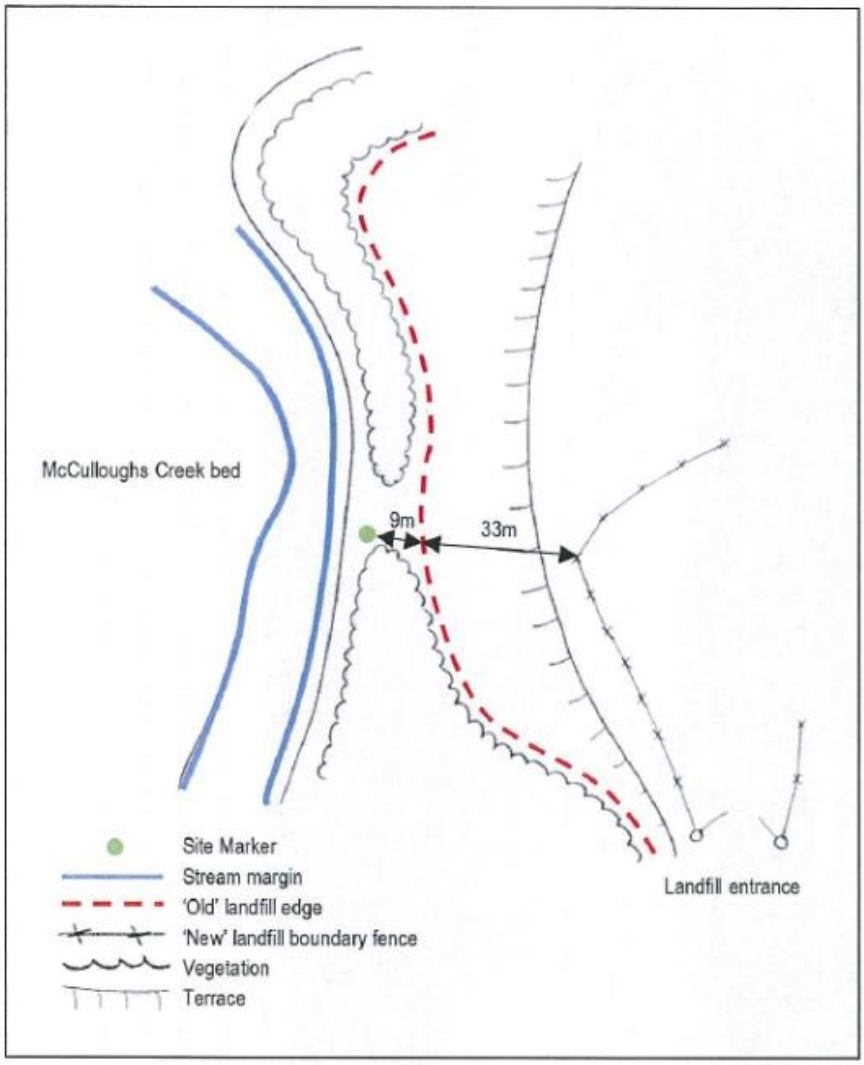


Figure 36: Sketch map showing edge of former Hari Hari landfill 9m away from true left bank of McCullough's Creek

8.4.2 Maintenance Contracts

Council currently contracts out the day-to-day operation and maintenance of waste management assets and services with the aim of maintaining agreed levels of service in a cost-effective manner. Contracts outline the service standard, frequency and maintenance response times for certain reactive maintenance activities. A list of the current contracts and the contractor responsible for delivering each service is detailed in Table 23 below.

Contract No.	Contractor	Description of contract	Expiration date
18/09/06	Westroads Ltd	Butlers landfill operation + cartage of materials from transfer stations to Butlers	30 June 2024
12/13/06	South Westland Rubbish Removals	Haast landfill operation + Whataroa, Franz Josef and Fox Glacier transfer stations (or mobile recycling station) operation	30 June 2022
10/11/25	EnviroWaste	Kerbside Collection + Kumara, Hokitika, Ross & Hari Hari transfer stations operation	30 June 2022
2020-21-01	MT Drums	Emptying of township rubbish and recycling bins*	30 June 2025

Table 23: Current Solid Waste Contracts

8.4.3 Operations and Maintenance Activities

Operations activities are regular tasks undertaken to deliver the agreed level of service. This includes regular proactive maintenance tasks undertaken to ensure assets reach their service potential.

Typical solid waste operation activities include:

- Kerbside refuse and recycling collection (delivered by contractor)
- Contracted payments for landfill and transfer station operations
- Environmental monitoring and reporting
- Payment of government waste levies
- Handling customer enquiries.

Site operations include sorting, receiving and compacting of waste at transfer stations and burying of waste at landfills. Routine landfill operations also include periodic checking that drainage system inlets are unobstructed, access roads are serviceable, site litter and odour is minimal and that there are operative vermin control methods in place.

Maintenance activities are identified under three major categories as shown in the following table:

Maintenance type	Description	Examples
Compliance	Works identified from annual solid waste audits to comply with regulatory requirements.	Essential safety measures e.g. fire protection system, security, leachate control.
Routine	Works routinely undertaken e.g. on annual frequency as included in Solid Waste maintenance budget line.	Servicing of fire, electrical and mechanical equipment, repairs and maintenance of access roads, fencing etc. Cleaning and de-silting of drains and stormwater ponds.
Reactive	Works required in response to reported, unforeseen problems.	Noise, dust, groundwater monitoring; fixing equipment which unexpectedly breaks.

Table 24: Maintenance Types - Compliance, Routine and Reactive

8.4.4 Maintenance Strategies

Maintenance strategies are designed to enable existing assets to operate to their service potential over their useful life. The primary considerations, in order of priority, that drive the above maintenance programmes are:

Maintenance Strategies	
Safety/Structural Stability/H&S Risk	Is there a health and/or safety risk?
Site Security	Is there a security risk?
Compliance/Resource Consents/Legal	Is there likely to be a compliance breach?
Functional/Operations/Performance	How well does it function?
Appearance/Aesthetics	Is the asset tidy and having an acceptable presentation?

Table 25: Maintenance Strategies

8.4.5 Forecast Operations & Maintenance Expenditure

The following figure shows the forecast operations and maintenance expenditure for the next 10 years. Expenditure is consistent over the ten years but inflation has been applied from year to year.

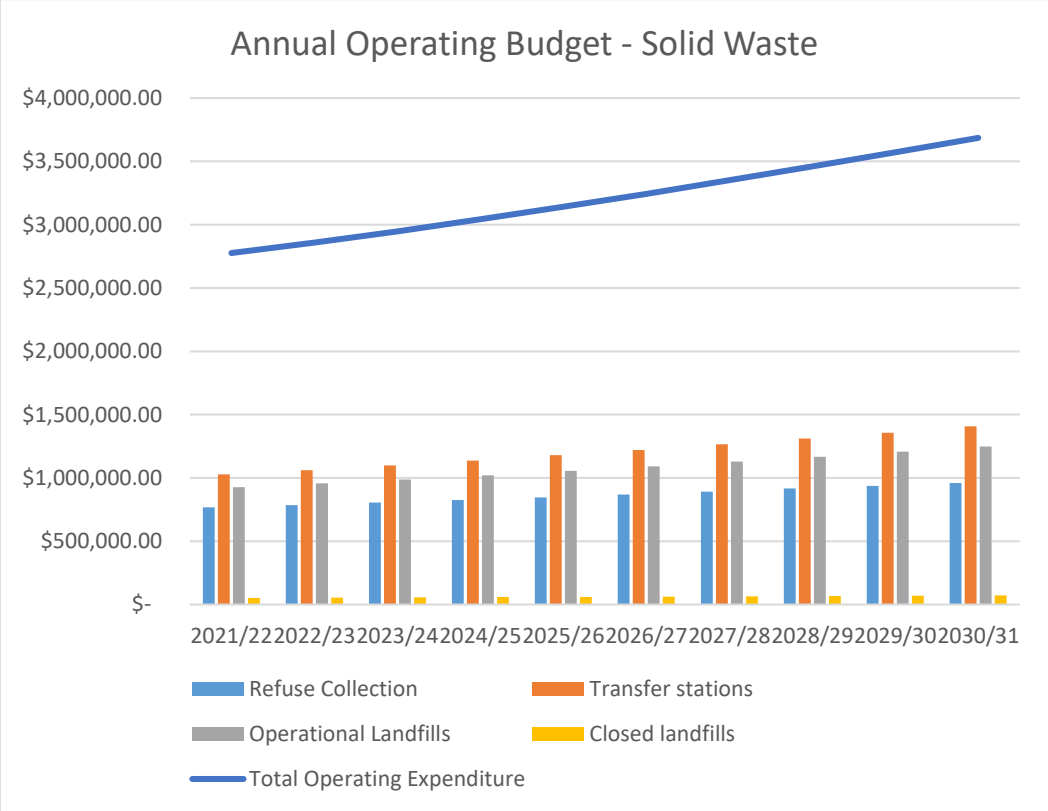


Figure 37: Solid Waste Forecast Operations & Maintenance Expenditure

It is worth noting that Council's District Assets department does not have in place a formal methodology for estimating future operations expenditure. The estimated annual operating budgets listed above should be validated against average expenditure over the past few years plus adding in known cost increases or decreases.

The operations budgets above are inclusive of $50,000 funding per annum for closed landfill monitoring and reporting, and an increase of $30,000-$60,000 annually in Waste Levy expenses. The latter cost increase is expected to be offset by an increased revenue for Waste Minimisation education.

8.5 Asset Replacement

Major asset replacement expenditure that does not increase the asset's design capacity but instead restores, rehabilitates, renews or replaces an existing asset to its original capacity, using like-for-like materials is considered to be capital (maintenance) expenditure. Funding of work over and above an asset's original function or capacity is considered to be capital works (levels of service) expenditure.

8.5.1 Renewal Strategies

Assets are considered to need renewal when:

- They near the end of their effective useful life;
- Cost of maintenance becomes uneconomic and it would cost less to renew the asset than keep maintaining;
- Risk of failure of critical assets is unacceptable (for this activity area, critical assets have not been defined and therefore this is not relevant).

To improve the information base for the renewals strategy and replacement programme, the following improvements are recommended:

- Updating the solid waste valuation
- Completion of more detailed physical asset inspections and documentation including capacity and performance of all transfer station and landfill facilities to be done, using the Water NZ Above-Ground Asset Grading Manual for reference.
- Factoring in renewals/replacements of household litter and recycling MGBs.

8.5.2 Key Renewal Themes

WDC's main renewal themes include replacement of street litter bins and replacement of ageing infrastructure at transfer stations. The following transfer station assets have been prioritised for renewal based on a combination of their expected useful economic life and their deteriorating asset condition:

Hokitika Transfer Station
RTS Commission Press Unit
RTS Glass Crusher
Tandem Trailer

Whataroa Transfer Station
Fence
Gate

Hari Hari Transfer Station
Green Waste Bin

8.5.3 Delivery of Renewals

Butlers Landfill assets

Other assets

There is a total of $121,364.82 (fair value) worth of other solid waste assets (i.e. excluding those at Butlers Landfill) in Council's AssetFinda database rated as being in average condition or worse.

This is in comparison to $348,405.36 (fair value) worth of other solid waste assets in Council's AssetFinda database with useful economic lives expiring before 2031 (inclusive of $223,765.32 of assets with useful economic lives falling on or before 2019).

This means that in many cases, assets are outperforming their useful economic lives and can be sweated for longer.

There is approximately $51,000 of assets located at Haast Landfill, condition rated either good or average, with suggested replacement dates of between 2004 and 2023. These are unlikely to be replaced when they expire due to this landfill soon to be closed.

8.5.4 Deferred Renewals (shortfall)

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

- Renewal work that is not performed at its scheduled time and put off until a later date (often due to affordability reasons); or
- A depreciation austerity funding policy, whereby investment in renewals is capped for a period of time. At the time of WDC's 2015-2018 Long Term Plan, a depreciation austerity policy was in place. This was removed by the time of the 2018-2028 Long Term Plan but this means that council is still rebuilding its depreciation reserves.

Deferred renewals is not a significant issue for solid waste assets.

8.6 Asset Development

Development works will be planned in response to identified service gaps, growth and demand issues, risk issues and economic considerations. When evaluating significant development proposals, the following issues will be considered:

- the contribution to new or improved assets will make to the current and anticipated future Levels of Service and community outcomes;
- the risks and benefits anticipated to be made from the investment;
- the risks faced by not proceeding with the development works (these could include safety risks, social risks and political risks);
- ability and willingness of the community to fund the works; and
- future operating and maintenance cost implications.

As discussed in Chapter 7, the district is not experiencing any significant growth. There are no existing plans to create or acquire any new assets with a view to accommodate any significant growth within the district.

The main asset development need identified is the creation of a new landfill cell at Butler's landfill near Hokitika to extend the landfill life.

8.7 Asset Disposal

Disposal of assets may occur when assets become surplus to requirements for any of the following reasons:

- Under-utilisation or provision exceeds level of service
- Obsolescence
- Uneconomic to upgrade or operate
- Policy change
- Service provided by other means (e.g. private sector)
- Risks of ownership outweigh public benefit (financial, environmental, legal, social etc.).

No significant solid waste assets have been identified by Council for disposal.

Asset disposal processes will comply with the Council's legal obligations under the Local Government Act 2002, including:

- public notification procedures required prior to sale;
- restrictions on the minimum value recovered; and
- use of revenue received from asset disposal.

All relevant costs of disposal will be considered. These costs may include:

- evaluation of options;
- consultation/advertising;
- obtaining Resource Consents;
- professional services, including engineering, planning, legal, survey; and
- demolition/site clearing/make safe costs.

The use of revenue from the sale of assets, or the source of funds required to dispose of assets, will be decided by the Council at the time of its consideration of the asset's disposal.

Historically, it was not unusual for councils to dispose of closed landfills. However, as many of these in the Westland district are located within flood plains, close to the rivers or the coastal marine environment, Council is proposing to retain them so they can be managed appropriately. Where appropriate, these may be redeveloped as reserves or freedom camping sites for public access or revegetated with native plants.

Section 9: Financials

9.1 Funding Sources

The landfills activity is currently funded through general rates and also recoveries.

The refuse activity is currently funded via the following mechanisms: Targeted rates (for rubbish and recycling collection), and refuse site fees (at transfer stations). Minor income is also collected in the forms of fines (for fly-tipping infringement) and retail sales of rubbish bags (for sale from transfer stations only).

Freedom camping is currently funded by general rates, operational grants and subsidies from Ministry of Business, Innovation and Employment (MBIE). Camping infringement fines are also collected where campers breach the conditions of our Freedom Camping Bylaw. In the 2018-19 year, Council also received significant capital works subsidies from the MBIE to establish freedom camping sites.

Waste minimisation is currently funded through the waste levy that Council receives from Central Government. Fifty percent of all national landfill levy income is distributed to territorial authorities by the Secretary of the Ministry for the Environment. Distribution of funding is on a population basis. Levy funds are to be spent on waste minimisation measures as outlined in the Joint West Coast WMMP.

Rates are the primary income source for the majority of solid waste activities as these functions contribute to public good by advancing the achievement of community outcomes or the overall wellbeing of the community.

As for capital expenditure, where financial assistance or reserves (including funded depreciation and Central Government funding) are not available, significant projects are often funded by way of loans to spread the costs more effectively over the life of the asset and provide better intergenerational equity.

External funding opportunities exist under the Waste Minimisation Fund. This annual funding pool provides funding for projects that promote or achieve waste minimisation. This includes any projects to increase resource efficiency, reuse, recovery and recycling or decrease waste to landfill. The potential exists for Council to submit joint bids and applications to this fund in partnership with the other West Coast district councils which will potentially yield better results than WDC applying for funding and implementing stand-alone projects.

9.1.1 Fees and charges

Fees and charges (such as transfer station fees) are only applied where a particular individual or identifiable group of the community benefit from the activity and costs can be recovered directly from the benefitting party. Under Council's Revenue and Financing Policy, Council has the ability to set a Schedule of Fees and Charges to recover some costs associated with Council's services. Some of these fees and charges are set by statute and others by Council. The schedule of fees and charges is published on Council's website and reviewed every year. Council engages with the community on the proposed changes through the Special Consultative Procedure set out in Section 83 of the Local Government Act. This typically occurs as part of the Annual Plan or Long Term Plan process.

Waste disposal prices are affected by factors outside of the control of Council. These costs include emission liabilities through the Emissions Trading Scheme and any changes in the national waste disposal levy (as these occur).

9.2 Asset Valuation and Depreciation

The Local Government Act 1974 and subsequent amendments contain a general requirement for local authorities to comply with Generally Accepted Accounting Practice (GAAP). The Council requires its infrastructure asset register and valuations to be updated in accordance with Financial Reporting Standards and the Asset Management Planning improvement cycle. Solid Waste assets were last revalued in 2016 by ANA Group on Council's behalf.

9.2.1 Estimated Useful Economic Asset Lives

The useful lives and associated depreciation rates of major classes of solid waste assets are estimated as follows using the useful lives from the 2016 Solid Waste AMP:

Solid Waste Component	Estimated Total Useful Life (Years)
Butlers Landfill	50
Commission Press Unit	10
Crusher	10
Fences	20
Loading Ramps & Refuse Trailer Platforms	10
Street litterbins	10
Household MGBs (refuse & recycling)	10-15
Sheds	50
Freedom camping waste station units	10

Table 26: Estimates Useful Economic Asset Lives

9.2.2 Depreciation

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

The replacement value, depreciated replacement value, and the annual depreciation of the solid waste assets (as forecast in 2016 from ANA Group) are populated in the table below.

Replacement Value (2016)		Depreciated Replacement Value	Annual Depreciation ($/year)
Solid Waste Assets	$5,736,637.84	$4,946,964.88	$85,872.19

Table 27: Replacement Value 2016 & Depreciation

This is broken down further by community as follows:

Community	ORC16	DRC16	ADR16	SOURCE
Haast	$260,545.50	$195,918.23	$4,971.33	**ASSETFINDA**
Kumara	$167,587.94	$119,324.79	$4,754.26	**ASSETFINDA**
Ross	$67,478.80	$29,113.91	$2,992.64	**ASSETFINDA**
Hari Hari	$131,342.04	$81,751.95	$4,132.51	**ASSETFINDA**
Whataroa	$71,317.86	$47,642.69	$2,152.29	**ASSETFINDA**
Franz Josef	$8,582.62	$1,839.13	$613.04	**ASSETFINDA**
Fox Glacier	$119,207.38	$53,473.09	$4,545.76	**ASSETFINDA**

Butlers	$2,867,112.76	$2,655,247.95	$35,310.80	**ASSETFINDA**
Hokitika	$2,042,462.96	$1,762,653.15	$26,399.55	
Solid Waste 2016	**$5,735,637.84**	**$4,946,964.88**	**$85,872.19**	
BV 31 March 2016		**$2,287,316.00**		

Table 28: Replacement Value 2016 by Community / Asset Location

The workings behind these figures and more detailed breakdown has never been provided to Council by ANA Group, so it would be prudent for Council in future years to get this data re-assessed by a different party.

9.3 Financial Summary

9.3.1 Operational Costs

Operational expenditure summary

Table 29 outlines the Solid Waste operation and maintenance expenditure for the next ten years.

Table 29 Operation and maintenance expenditure – Solid Waste

Description	Projected Expenditure				
	Year 1	Year 2	Year 3	Year 4-10	Ten-year total
	2021/22	2022/23	2023/24	2024-31	
Waste Levy	$105,000	$140,000	$175,000	$1,225,000	$1,645,000
Collections	$762,000	$762,000	$762,000	$5,334,000	$7,620,000
Buildings Maintenance	$5,500	$5,500	$5,500	$38,500	$55,000
Contractors	$9,852	$9,852	$9,852	$68,964	$98,520
Repairs and Maintenance	$65,180	$65,180	$65,180	$456,260	$651,800
Grounds Maintenance	$7,500	$7,500	$7,500	$52,500	$75,000
Plant Hire	$540	$540	$540	$3,780	$5,400
Advertising	$1,320	$1,320	$1,320	$9,240	$13,200
Management Contract	$884,600	$884,600	$884,600	$6,192,200	$8,846,000
Sundry	$33,900	$33,900	$33,900	$237,300	$339,000
Education	$30,600	$30,600	$30,600	$214,200	$306,000
Consultants Fees	$25,104	$25,104	$25,104	$175,728	$251,040
Monitoring Expenses	$59,640	$59,640	$59,640	$417,480	$596,400
Commission Purchases	$65,004	$65,004	$65,004	$455,028	$650,040
Total	**$2,055,740**	**$2,090,740**	**$2,125,740**	**$14,880,180**	**$21,152,400**

Source: Council's draft opex budget (as at January 2021)

9.3.6 Capital Expenditure

Table 30 Capital Projects 2021-2031 – Solid Waste

Project location	Project description	LoS/Growth/ Maintenance	Timeline	Total cost
Butlers Landfill	Intermediate capping	100% Renewal	Year 1	$100,000
Fox Glacier	Extension of the existing armouring	10% Renewal; 90% Levels of Service	Years 3, 6, 9	$120,000
Haast	Capping for Haast landfill	100% Renewal	Year 1	$30,000
Haast	Development of new transfer station	100% Levels of Service	Year 1	$30,000
Haast	Township litter bins replacement	100% Renewal	Year 8	$5,000
Hari Hari	Hari Hari landfill protection	10% Renewal; 90% Levels of Service	Years 1 &4	$70,000
Neils Beach	Neils Beach landfill protection	10% Renewal; 90% Levels of Service	Year 4	$20,000
Hannahs Clearing	Hannahs Clearing landfill protection	10% Renewal; 90% Levels of Service	Year 4	$20,000
Hokitika	Wheelie bin replacement programme	100% Renewal	Years 1-10	$10,000
Hokitika	Township litter bins replacement	100% Renewal	Year 6	$20,000
Hokitika	Glass crusher	100% Renewal	Years 1, 5 & 9	$300,000
Kumara	Township litter bins replacement	100% Renewal	Year 7	$10,000
Fox Glacier	Township litter bins replacement	100% Renewal	Year 8	$5,000
TOTAL				**$740,000**

Source: Council's draft Capex budget 2019-31 (as at February 2021)

Section 10: Sustainability & Business Continuity

Sustainability means that we effectively balance the needs of present and future communities. In terms of asset management, sustainability is important, as many assets have a long lifespan and should be 'future-proofed' where possible. The Local Government Act 2002 requires local authorities to take into account the current and future needs of their communities for good quality local infrastructure and effective, cost-efficient delivery of services. Council has a responsibility to manage the parks, reserves and cemetery activities in a way that protects economic, social, environmental and cultural wellbeing. This includes planning for business continuity in the event of emergencies and being mindful of environmental trends like climate change that could affect land and infrastructure in the District and the way it can be used in the future.

10.1 Potential Negative Effects of Activity

Effect	Council's Mitigation Measures
Dust, odour and windblown litter	• Council's landfills and transfer stations are generally situated far enough away from households and businesses that they do not create dust, odour or windblown litter nuisances. • Waste is quickly compacted and covered so that it does not release excessive odour, blow away or attract animal pests.
Discharges of pollutants to water and land	• Regular inspection and monitoring of landfills including water and soil sampling and reporting to West Coast Regional Council helps ensure management of solid waste is appropriate and not adversely affecting the environment. • Council's bylaws and policies are also in place to help mitigate illegal dumping.
Health and safety risks	• Health and Safety plans are in place to manage the risks associated with the construction, maintenance and operation of the solid waste infrastructure. • Most hazardous wastes are not accepted at our landfills or transfer stations.
Inefficient use of resources	• Council's shared Waste Management and Minimisation Plan with Buller and Grey District Councils is in place to promote reduction, reuse and recycling and recovery of waste. • Robust maintenance, operation and renewal practices and regular auditing of contractors who deliver services. • Monthly, quarterly and annual financial reporting. Quarterly and annual reporting on performance against Solid Waste Level of Service KPIs.
Unaffordable or uneconomic cost of services	• Although the costs of desired solid waste services may be higher in some instances than the community would like, many of the costs are driven by national factors outside of Council's control. Council appropriately consults on all levels of service changes and new projects through the Annual Plan and Long Term Plan processes.

Table 31: Potential Negative Effects of Solid Waste Activity

10.2 Positive Effects of Activity

Effect	Description
Public health benefits	Council offers kerbside collection services to approximately 30% of properties district wide and has transfer stations in six areas across the

	district (plus one mobile transfer station currently in Fox Glacier). This provides safe and sanitary waste disposal to residents. Our mobile freedom camping waste stations offer the same benefit to tourists travelling through our district.
Economic benefits	Access to waste disposal and recycling services at reasonable cost supports economic activity (and industries) in the district.
Environmental benefits	Provision of recycling services and waste minimisation educational programmes diminishes the demand for landfill space and reduces negative effects of this activity.

Table 32: Positive Effects of Solid Waste Activity

10.3 Resource Management

10.3.1 Overview

The statutory framework which mandates what activities require a resource consent is the Resource Management Act (RMA) 1991. The RMA is administered regionally by the West Coast Regional Council, through the Regional Policy Statement (RPS) and associated plans, e.g. the Regional Land and Water Plan.

An important aspect of the solid waste activity is to ensure that any discharge of contaminants to the district land, air or water (including to the Coastal Marine Area) is managed responsibly. Under the RMA and West Coast RPS, resource consents are required for disposal of solid waste and any associated odours and discharges.

Council's solid waste facilities, including transfer stations and landfills, play an important role in ensuring proper collection and disposal of waste produced by the community, while minimising and significant adverse environmental effects.

10.3.2 Summary of Resource Consents

A summary of current resource consents held for the Council's waste management and minimisation activities is detailed in Table 32 below. This list is accurate at time of compilation (October 2020).

Location	Consent Number	Consent Type	Effective Date	Expiry Date
Butlers	RC06244/1-14	Land Use x3 Discharge x7 Water x3	30/01/2009	30/01/2044
Hokitika – Hau Hau Rd	RC95021/2 & RC95021/3	Discharge Permit to Water Discharge Permit to Land	27/06/2003	27/06/2038
Kumara	RC95020/2 & RC95020/3	Discharge Permit to Water Discharge Permit to Land	27/06/2003	27/06/2038
Franz Josef	RC95025/2	Discharge Permit to Land	27/06/2003	27/06/2038
Haast – Denis Rd	RC00327/1 & RC00327/2	Discharge Permit to Air Discharge Permit to Land	27/06/2003	27/06/2038
	RC08084	Discharge Solid Waste	04/01/2010	27/06/2038
Hannah's Clearing	RC-2018-0106	Earthworks/Rock Protection	12/11/2019	12/11/2029
Neil's Beach	RC95028/2	Discharge Permit to Land	27/06/2003	27/06/2038

Table 33: Schedule of Current Resource Consents

The only consent set to expire within the next 10 years is for the rockwork protection of the historic Hannah's Clearing landfill.

10.3.3 Resource Consent Monitoring and Reporting

The Council aims to achieve minimum compliance with all consents and/or operating conditions. A detailed register of all solid waste resource consents is held in Council's consents database CS-VUE.

CS-VUE is an online software tool for environmental management. Council has an annual licence to use the software and it allows us to generate compliance reports and automate email reminders to staff about pending resource consent conditions requiring action. Council uses this tool mostly for solid waste and three waters resource consents.

Annual monitoring reports are required for the following open landfills, Butlers and Haast, and the following closed landfills: Hokitika (Hau Hau Road), Franz Josef and Kumara. Franz Josef, Kumara, Hokitika resource consents require water sampling (either six monthly or annually).

Butlers has more frequent sampling requirements at various intervals including macroinvertebrate studies, water and soil sampling. Due to no dedicated Solid Waste position, Council engages EOS Ecology to do annual water sampling of Kumara and Hokitika.

10.4 Climate Change

Council is using climate change projections for the West Coast region (sourced from the Ministry for the Environment's website).

The anticipated effects from climate change on the West Coast (including Westland District) include:

Climate Aspect	Description	Future Projections
Temperature	Compared to 1995, temperatures are likely to be 0.7˚C to 1.0˚C warmer by 2040 and 0.6˚C to 3.0˚C warmer by 2090.	By 2090, the West Coast is projected to have up to 30 extra days per year where maximum temperatures exceed 25˚C. The number of frosts could decrease by around 7 to 18 days per year.
Rainfall	Rainfall will vary locally within the region. The largest changes will be for particular seasons rather than annually.	The West Coast is expected to become wetter, particularly in winter and spring. Winter rainfall in Hokitika is projected to increase by 8 to 29 per cent by 2090. According to the most recent projections, extreme rainy days are likely to become more frequent throughout the West Coast region by 2090 under the highest emissions scenario.
Wind	Changes in wind direction may lead to an increase in the frequency of westerly winds over the South Island, particularly in winter and spring.	The frequency of extremely windy days in the West Coast by 2090 is likely to increase by between 2 and 5 per cent.
Storms	Future changes in the frequency of storms are likely to be small compared to natural inter-annual variability.	Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur.
Snowfall	The West Coast region is likely to experience significant decreases in seasonal snow. By the end of the century, the number of snow days experienced annually could decrease by as much as 30-40 days in some parts of the region.	Less winter snowfall and an earlier spring melt may cause marked changes in the annual cycle of river flow in the region. Places that currently receive snow are likely to see a shift towards increasing rainfall instead of snowfall as snowlines rise to higher elevations due to rising

	The duration of snow cover is also likely to decrease, particularly at lower elevations.	temperatures. So for rivers where the winter precipitation currently falls mainly as snow and is stored until the snowmelt season, there is the possibility for larger winter floods.
Glaciers	Overall glacier ice mass has decreased by 25 per cent over the last 60 years in New Zealand, and is expected to continue to do so into the future. Some of our most iconic glaciers (such as Franz Josef) have advanced in recent times. This is a result of more precipitation falling at their glacier heads.	Whether these glaciers continue to advance into the future will depend on the balance between increased melting due to warmer temperatures and increased precipitation in the mountains. For example, one climate modelling study suggests the Franz Josef glacier may retreat approximately 5 km and lose around 38 per cent of its mass by 2100.
Sea-level rise	The Ministry for the Environment provides guidance on coastal hazards and climate change, including recommendations for sea level rise.	New Zealand tide records show an average rise in relative mean sea level of 1.7 mm per year over the 20th century. Globally, the rate of rise has increased, and further rise is expected in the future.

Table 34: Anticipated Effects from Climate Change

Impacts by season

By 2090, seasonally the region could expect*:

Spring	• 0.6°C to 2.5°C temperature rise • 4 to 9 per cent more rainfall in Hokitika
Summer	• 0.6°C to 3.2°C temperature rise • 2 to 4 per cent more rainfall in Hokitika
Autumn	• 0.7°C to 3.1°C temperature rise • 2 to 5 per cent more rainfall in Hokitika
Winter	• 0.7°C to 3.1°C temperature rise • 8 to 29 per cent more rainfall in Hokitika

Table 35: Likely Climate Change Effects by Season

*Projected changes are relative to 1995 levels. The values provided capture the range across all scenarios. They are based on scenario estimates and should not be taken as definitive.

Potential effects

Coastal hazards– Coastal roads and infrastructure may face increased risk from coastal erosion and inundation, increased storminess and sea-level rise. This would poses risk for certain closed landfills in the region e.g. Hannah's clearing, which is adjacent to the coastline.

Flooding and landslides– More heavy rainfall will increase the risk of flooding, erosion and landslides, which is already high in many parts of the region. Many West Coast communities are located along narrow coastal and river strips beneath mountain ranges, leaving them exposed to increased risks of storms, flooding and landslides. The current Fox Glacier closed landfill is in a flood-prone location and has already experienced one significant erosion event due to flooding.

Biosecurity– Warmer, wetter conditions could increase the spread of pests and weeds. This could increase the need for more regular operational vermin and vegetation control at landfills and transfer stations.

Agriculture– Warmer temperatures, a longer growing season and significantly fewer frosts could provide opportunities to grow new crops and farmers might benefit from faster growth of pasture and better growing conditions. However, these benefits may be limited by negative effects of climate change such as increased flood risk or greater frequency and intensity of storms.

In August 2019, LGNZ produced a simple maturity matrix for elected members to assess their climate change readiness and maturity.

Example maturity index for climate adaptation

Progress

Level	Networks and cooperation	Leadership and governance	Risk assessment and adaptation planning
1. **Starting out**	• No meetings with other councils or stakeholders regarding Climate Change. • No working group within council. • No public engagement.	• Climate change not on the radar.	• There is no or limited understanding of infrastructure exposed to climate change. • No understanding of risks to communities or to councils finances or reputation etc.
2. **Making progress**	• Some ad-hoc meetings and cooperation beginning to take shape.	• Commitment to understand climate exposure and risks.	• Risk and vulnerability assessment framework developed and commenced.
3. **Developed**	• Regular cooperation, working groups established.	• Climate risks identified and communicated internally and with the public. • Adaptation plan developed and signed off.	• Risk and vulnerability assessments undertaken, high risks prioritised and options/pathways developed.
4. **Leading**	• Regular cooperation, working groups established across disciplines and stakeholders. • Linking to central government direction. • Strong integration with civil defence, land use planning, asset planning etc.	• Adaptation plan implemented, monitoring and review regularly undertaken. • Climate change is a strategic priority that influences all plans and decisions.	• Defend/accommodate/ retreat options (could be part of a DAPP approach) are developed and implemented via appropriate channels/ mechanisms. • Risks reviewed and updated regularly. • Community are aware and engaged in decision-making - within a robust and transparent process.

Figure 38: LGNZ Climate Change Maturity Index

Using this rating scale, Westland District Council would be somewhere between "starting out": and "making progress". Climate change is on the radar but there has been no formal commitment from Council to understand climate exposure or risks. WDC's Mayor chose not to sign the Local Government Leaders' Climate Change Declaration. However, there is some staff knowledge and understanding of land and infrastructure most vulnerable to climate change risks. No climate change working group has been established, however District Asset's aspiration is to develop a draft Climate Change Policy / Adaptation Strategy within the next 12 months.

10.5 Business Continuity/Emergency Management

10.5.1 Lifelines

Council is a member of the West Coast Lifelines Group, along with other West Coast local authorities and other service providers. Schedule 1 of the Civil Defence Emergency Management Act 2001 provides a list of all legislated lifeline utilities.

The West Coast Lifelines Group currently meets quarterly with all other 'special interests' groups meeting separately.

In the event of an emergency, all Lifeline Utility Providers, emergency services and welfare agencies work together to ensure essential services are restored as soon as possible. Organisations may call upon resources from within or outside of region.

10.5.2 Resilience

The 2017 report on improving resilience to natural disasters, titled the "West Coast Lifelines Vulnerability and Interdependency Assessment[5]" outlines the risks to many of Council's assets from various types of natural disasters. Solid waste assets have not been included. It is recommended that this document be revised and updated to include a vulnerability assessment of both open and closed landfills in the District. A Closed Landfills Risk Report was tabled at Council in July 2019 outlining the main risks. In August 2019, another report to Council was tabled on Fox Glacier Landfill Remediation and Management Options.

10.5.3 Transport network/access vulnerabilities

One of the main resilience issues that the District faces is due to the vulnerability of the transport network. Westland is 350km long and serviced by only one major road, State Highway 6. This leaves the district vulnerable in the event of road closures. This is out of Council control as there are no bypass roads and the State Highway is controlled by the New Zealand Transport Agency (NZTA).
As you can see from graph below, the frequency of State Highway 6 road closures south of Hokitika is increasing. This implications for Council in terms of Solid Waste is much lower than for other Council activities and transfer stations and the Haast Landfill are run by local contractors that live in each township.

[5] https://westcoastemergency.govt.nz/wp-content/uploads/2018/04/12-Westland-Lifelines-Assets.pdf

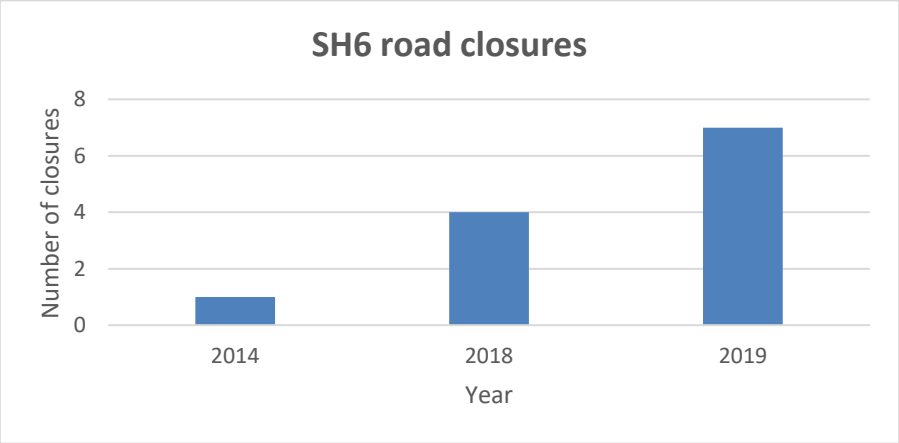


Figure 39: SH6 Unplanned Road Closures (10hrs plus) south of Hokitika, 2010-2020[6]

Date	Location	Reason	Hours closed
17/04/2014	Whataroa to Fox	Strong Winds	20
1/02/2018	Whataroa to Haast	Slip	48
11/02/2018	Fox Hills	Slip	20
20/02/2018	Ross to Haast	Strong winds	17
8/11/2018	Ross to Haast	Surface flooding	28
8/11/2018	Hokitika to Fox	Slips and washouts	26
8/11/2018	Hari Hari to Franz	Slips and washouts	15
26/03/2019	Franz to Fox Glacier	Waiho Bridge	800
26/03/2019	Hokitika to Franz	Flooding and slips	24
26/03/2019	Fox to Haast	Slips and flooding	24
26/03/2019	Haast Pass	Slips and flooding	24
10/04/2019	Diana Falls	Washout	17
12/08/2019	Haast Pass	Rockfall	45

[6] 10 year closures SH6, NZTA, West Coast Maintenance Contract Manager

5/12/2019	Fox to Haast	Storm Damage	73
6/12/2019	Haast Pass	Clarke Bluff	42
7/12/2019	Franz to Fox	Storm Damage	88
7/12/2019	Hari Hari to Whataroa	Storm Damage	295
7/12/2019	Whataroa to Franz	Storm Damage	63
7/12/2019	Hokitika to Hari Hari	Storm Damage	55

Table 36: State Highway 6 Road Closures 10+hrs, south of Hokitika, 2010-2020

The implications for Council in terms of Solid Waste operations is much lower than for other Council activities. This is because transfer stations and the Haast Landfill are run by local contractors that live in each township. However, materials received at transfer stations eventually need to be transported by road to Butler's landfill.

10.5.4 Business Continuity & Emergency Response Plans

Westland District Council does not have an Emergency Response Plan. There is, however, a West Coast Civil Defence Group Emergency Management Plan, and a very historic WDC Disaster Recovery Plan. No overarching Business Continuity Plan exists, although the IT Department is in the process of putting one together specific for the organisation's Information Management needs.

10.5.5 Council Response to COVID-19

The recent COVID-19 pandemic situation was an unusual emergency situation that required new processes to be put in place. Westland District Council chose to keep transfer stations open during Levels 3 and 4 as an essential service to avoid the health and environmental risks associated with stockpiling of rubbish. This move was well received by the public, however, new measures had to be implemented to minimise the potential for spread of the coronavirus. New payWave payment devices were purchased and installed, sign in sheets and COVID app barcode scanning posters were used to assist with contact tracing, and cleanliness and sanitation protocols were applied with increased stringency.

During the Level 4 lockdown, non-critical (project) work stopped. This delayed construction work programmes across Council but had minimal to no impact on solid waste. No maintenance or supply issues were noted during this time.

10.6 Zero Carbon

The Climate Change Response (Zero Carbon) Amendment Act introduced in 2019 provides a framework for New Zealand to develop and implement clear and stable climate change policies that:

- contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels;
- allow New Zealand to prepare for, and adapt to, the effects of climate change.

The Amendment Act has four key changes, including:

- setting a new domestic greenhouse gas emissions reduction target for New Zealand to:
    - reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050
    - reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030;
- establishing a system of emissions budgets to act as stepping stones towards the long-term target;
- requiring the Government to develop and implement policies for climate change adaptation and mitigation; and
- establishing a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals.

The original proposal was for a separate piece of legislation called the Zero Carbon Bill to be passed into law. In May 2019, the Government decided to introduce it as an amendment to the Climate Change Response Act 2002 to ensure that all key climate legislation is within one Act.

As part of preparing for our District's responsibilities under this Act as the devolution of responsibilities flows down from Government to Regional and Local levels, WDC is committed to introducing a Carbon Policy and Climate Change Adaptation Strategy within the next 12 months (before the end of 2021).

10.7 Emissions Trading

The New Zealand Emissions Trading Scheme (NZ ETS) is the Government's main tool for meeting domestic and international climate change targets. The scheme aims to encourage people to reduce greenhouse gas emissions.

It creates a financial incentive for organisations:

- to reduce their emissions
- To earn money by planting forests that absorb carbon dioxide as the trees grow.

One emission unit, the New Zealand Unit, represents one metric tonne of carbon dioxide or carbon dioxide equivalent (i.e., the amount of another greenhouse gas that does as much damage as one tonne of carbon dioxide).

All sectors of the economy must report to the Government on their annual greenhouse gas emissions. These sectors are: forestry, agriculture, waste, synthetic gases, industrial processes (including manufacturers of iron and steel), liquid fossil fuels (including petrol and diesel suppliers), and stationary energy (such as electricity generation and industrial heating).

All sectors apart from agriculture have surrender obligations as well as reporting obligations. Just over 50 per cent of New Zealand's greenhouse gas emissions are covered by surrender obligations.

Figure 40: How NZU Trading Works

WDC currently pays about $25 per NZU. The table below show Council's total emissions and units surrendered for the last eight years:

Annual return year	Total emissions	Units to surrender
2019	3116	3116
2018	3622	3018
2017	3980	2653
2016	3875	1937
2015	5471	2735
2014	3481	1740
2013	2812	1406
2012	2532	0

Table 37: Council Emissions and Surrendered Units 2012-2019

Council currently does not claim forestry credits against our emissions. This is an opportunity that can be explored in the future per recommendations from the 2011 Morrison Low ETS Report[7].

After consulting with the public in August and September 2018, the Government decided to make a number of changes to improve the NZ ETS. One of the most significant changes is to introduce a cap on the number of units in the scheme.

The Government recently consulted on proposals for NZ ETS settings, including unit supply and price controls. These will be set through regulations in mid-2020. The intention is to align the NZ ETS with New Zealand's emissions reduction targets.

As a result of these changes WDC will now consider the introduction of a third kerbside recycling bin for organics to reduce exposure and future ETS cost. Organics would remove up to 40% of waste volume (by weight) from landfill. In addition, increased education campaigning on taking glass to local transfer stations will also help reduce volumes going to landfill.

[7] file:///T:/FILES/District%20Assets/Waste%20Management/WST%2011%20ETS%20&%20MFE/WST%2011.1%20ETS/Westland%20ETS_Final%20Report%20from%20Morrison%20Low%20Jan%202012.pdf

Section 11: Risk Management & Assumptions

This AMP and the financial forecasts contained within have been developed from information that has varying degrees of accuracy and completeness. Some data in its entirety is unable to be obtained at time of writing due to factors which are uncertain. Due to this, the AMP is underpinned by a series of assumptions as decisions regarding future activities still have to be made. This section documents the risks and assumptions relevant to solid waste assets and activities that could have an effect on the financial forecasts.

11.1 Our Approach to Risk Management

A risk is defined in *AS/NZS ISO 31000:2009 – Risk management: Principles and guidelines* as the "effect of uncertainty on objectives". Each of those terms is further defined below:

- **Effect:** Deviation from the expected – positive or negative.
- **Uncertainty:** The state, even partial, of deficiency of information related to, understanding or knowledge of an event, its consequence, or likelihood.

Therefore, risks are characterised by reference to potential events and consequences, and ranked/rated in terms of the combination of both the probable consequences of an event and the likelihood of the event occurring. The combination of these two factors gives the overall risk rating.

		Consequence				
		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Likelihood	Almost certain (5)					
	Likely (4)					
	Possible (3)					
	Unlikely (2)					
	Rare (1)					

Table 38: Risk Matrix - Consequence vs Likelihood

Risk Matrix

	Extreme
	High
	Moderate
	Low

Table 39: Overall Risk Rankings

For the purpose of this Asset Management Plan, we have identified risks related to:

- Strategic (i.e. Achievement of Council Vision or Community Outcomes)
- Financial
- Health and Safety
- Service delivery to community
- Organisational capability and capacity
- Reputational
- Legal / regulatory compliance

Categories and Descriptors of Consequence

	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Strategic (Achievement of the Vision and Community Outcomes)	• No impact on the Vision and Community Outcomes	• Inconvenience or delay in achieving the Vision and Community Outcomes	• Significant difficulty introduced to achievement of the Vision and Community Outcomes • Lost opportunity to contribute positively to one or more of the Vision and Community Outcomes	• Failure to achieve a specific Community Outcome • Lost opportunity to significantly advance a specific Community Outcome	• Failure to achieve multiple Community Outcomes • Lost opportunity to significantly advance multiple Community Outcomes
Financial	• Financial impact of less than $50,000	• Financial impact of between $50,000 and $250,000 • Financial impact of between 1% and 2% of the Council's total operating expenditure	• Financial impact of between $250,000 and $1 million • Financial impact of between 2% and 5% of the Council's total operating expenditure	• Financial impact of between $1 million and $5 million • Financial impact of between 5% and 10% of the Council's total operating expenditure	• Financial impact of more than $5 million • Financial impact of more than 10% of the Council's total operating expenditure
Health and Safety (customers, staff, contractors)	• Minor injury, first aid not required	• First aid or minor treatment	• Medical treatment required	• Serious harm, for example broken bones, hospitalisation	• Loss of life; multiple serious harms; permanent severe disability
Service delivery to community	• Short-term reduction in service delivery which is easily restored and does not compromise the community's health and wellbeing	• Reduced service delivery that does not compromise the community's health and wellbeing	• Key service not available to some of the community for ten hours or more. • Continued service degradation of non-key service for two days or more.	• Key service not available to a significant portion of the community for two days or more. • Continued severe service degradation of non-key service for one week or more	• Key service not available to a large proportion of the community for one week or more • Continued severe service degradation of non-key service for one month or more
Organisational capability and capacity	• Temporary problem with organisational capability resulting in no impact on external service delivery	• Loss of organisational capability in some areas resulting in sub-optimal support to external delivery activities	• Organisation unable to function for less than 10 hours • Serious reduction in organisational capability for one week or more	• Organisation unable to function for more than 10 hours • Serious reduction in organisational capability for two weeks or more	• Organisation unable to function for more than two days • Serious reduction in organisational capability for one month or more
Reputational	• Negative feedback from individuals • Short-term 'letters to the editor' (or online equivalent) commentary	• Short-term loss of confidence among small sections of the community • Regional adverse political or media comment for one or two days • Sustained 'letters to the editor' (or online equivalent) commentary in usual sources	• Short-term and manageable loss of community confidence • Regional adverse political or media comment for more than two days • Significant social media commentary or campaign from new sources	• Loss of community confidence requiring significant time to remedy • National adverse political or media comment for more than two days • Regional adverse political or media comment for more than one week • Requirement for (televised) public explanation	• Insurmountable loss of community confidence • National adverse political or media comment for more than one week • Requirement for (televised) public apology or defence • Adverse comments or questions in Parliament
Legal / regulatory compliance	• One-off minor regulatory or legislative non-compliance with no direct impact on the community's health or wellbeing	• One-off minor regulatory or legislative non-compliance with potential impact on the community's health or wellbeing	• Complaint to the Ombudsman, Auditor-General or other statutory office • Multiple related minor non-compliances due to an underlying systemic issue • Significant breach or non-compliance resulting in regulatory scrutiny	• Significant breach or non-compliance, or multiple breaches or non-compliances, resulting in regulatory action and/or restrictions on Council activities	• Court proceeding or criminal action for breach or non-compliance; potential for imprisonment of elected member or staff • Judicial review on a matter of rates or other funding, or on a matter with significant financial impact

Table 40: Categories and Descriptors of Different Consequences

Categories and Descriptors of Likelihood

Almost certain	5	90% or greater chance of occurring in next 12 months Expected to occur in 9 or next 10 years Certain to occur at least once in next 5 years It would be unusual if this didn't happen
Likely	4	60% to 90% chance of occurring in next 12 months Expected to occur at least once in next 5 years Will occur more often than not
Possible	3	25% to 60% chance of occurring in next 12 months Expected to occur in 4 or next 10 years Likely will occur at least one in next five years (>80% chance) Not likely, but don't be surprised
Unlikely	2	2% to 25% chance of occurring in next 12 months Expected to occur a maximum of once every 5 to 20 years 50% chance of occurring in next 5 years A surprise, but not beyond the bounds of imagination
Rare	1	Up to 2% chance of occurring in next 12 months Could occur once every 50 or more years Less than 10-% chance of occurring in next 5 years Will only occur in exceptional circumstances

Table 41: Risk Likelihood Grading Scale

Council's approach to Risk Management is outlined in Council's Risk Management Policy (refer link in Chapter 4). This document is going through a revision process at time of writing. Council's risks are documented in Quantate, an electronic risk register, and broken down by activity area. It is noted that for many infrastructure areas, risks listed in Quantate are not complete or up-to-date and updating Quantate is a recommended improvement item discussed in Section 13.

11.2 Activity Risks and Mitigation

Council's main solid waste risks are discussed and ranked in table below along with mitigation measures. The key risks associated with this activity are:

- Landfill erosion events
- Serious harm or fatal accident events
- Premature deterioration, obsolescence or catastrophic failure of a key asset (including premature filling of cell at Butlers landfill)
- If market changes in recyclables made recycling less affordable or not viable for some products (e.g. as a flow-on effect from China issue)
- If the government Waste Disposal Levy increases and the government simultaneously discontinued claim back to Council for recycling and special projects subsidies e.g. waste minimisation education initiatives
- Potential inability to comply with resource consent conditions.

Risk Event	Probable Cause	Mitigation Measures	Risk Types	Likelihood of Risk	Potential Consequence	Overall Risk Rating
Total erosion of closed landfill	Extreme Natural Hazard event e.g. severe flooding/Alpine Fault earthquake	*Current* Rockwork protection has been introduced at some erosion-prone landfills adjacent to sea/rivers. Council Engineering and Civil Defence staff have previously been part of a West Coast Lifelines Group that assesses natural hazard vulnerability and shares information and planning with other key lifelines providers e.g. electricity scheme agencies etc. Council Engineering staff have previously been involved in AF8 (Alpine Fault Magnitude 8) meetings and workshops. *Proposed Future* Council to continue involvement with these networks and workshops. Regular monitoring of closed landfills, and more rock armouring or relocation of landfill contents to Butlers landfill.	All	Unlikely	Catastrophic	**High**
Premature deterioration or obsolescence of an asset	Probable causes could be excessive wear and tear from inclement weather, lack of routine maintenance or poor quality materials.	*Current* Routine maintenance and inspections and performance measures are included in contracts. Performance measures documented in maintenance contract. *Proposed Future* To develop progressive forward works programme for replacement of aged infrastructure.	Service Delivery, Financial	Possible	Minor	**Moderate**
Sub-optimal design and/or construction practices or materials or inadequate project scoping resulting in project failure or bad investment	Lack of sufficient knowledge of staff, contractors and consultants	*Current* Engineering Standards and Policies document the desired levels. These are based on modern design and industry best practice and are specified in construction contracts. Professional services and construction contract specifications are peer reviewed as required. Tickets and certifications of staff and contractors must be up to date e.g. confined spaces permits etc. Project scoping based on staff knowledge and consultant reports and investigations. Contract documents reviewed by independent consultants or other District Assets staff members experienced in contract documentation. Tenders evaluated by Committee according to clearly defined grading scale. *Proposed Future* Ongoing staff training and professional development Project priority forms to be reviewed for work scope and budget. Potential delays documented prior to funding being approved and each stage clearly structured. Business case prepared and approved before project progression and financial approval given.	Service Delivery, Financial, Reputational, Strategic	Unlikely	Moderate	**Moderate**
Ineffective stakeholder engagement	Cultural naiveté	*Current* Iwi representation on Council was introduced in 2019 to increase engagement with the local Papatipu Rūnanga. *Proposed Future* Improved LTP project discussion and presentations to/with community	Reputational	Possible	Minor	**Moderate**
Growth greater than expected (Butlers landfill fills up prematurely)	Population boom or construction boom creating more waste to landfill.	*Current* Census data is monitored. New cell project pending for Butlers currently which will give an additional 15 years life. *Proposed Future* Improve inter-departmental reporting of info to ensure subdivision and building consent data is fed into growth forecasts for each settlement.	Financial, Service Delivery, Organisational Capacity	Rare	Minor	**Low**
Inability to comply with necessary resource consents	"She'll be right" attitudes, staff turnover, lack of staff with environmental monitoring and reporting backgrounds.	*Current* Large staff turnover in past and inattention to detail has resulted in past infringement notices /enforcement orders however those issues have been remedied. *Proposed Future* Improved monitoring, reporting and contractor instruction.	Legal/compliance, Reputational	Possible	Moderate	**High**
Lack of availability of contractors and materials	Project clusters, development boom, COVID-19 ongoing shipping delays.	*Current* Spread projects as much as possible and engage with contractors. *Proposed Future* Continue to improve robustness of contracts.	Organisational Capability, Service Delivery, Strategic	Rare	Moderate	**Low**
Poor or incomplete Asset Management Practices	Internal capacity and capability constraints	*Current* There has been no in-house Asset Management Planner since 2015/16. Past data issues have been identified but are still being worked through. Asset Management Plans written by independent consultants. *Proposed Future* A new Asset Manager has just been hired and will start at the end of October 2020 thus scoring of this category should quickly improve.	Organisational Capability	Possible	Moderate	**High**
Member of public or contractor injured	Insufficient hazard controls	*Current* Our contractors generally operate safe work sites. No health and safety incidents have been noted in recent times for solid waste activities. However, this is always a possibility given the nature of the work. Contractors required to have health and safety plans in place and have staff with up-to-date tickets (as needed). *Proposed Future* A new inspection/auditing schedule of our contractors has recently been adopted. This will be rolled out in the near future and will check health and safety practices.	Health & Safety	Unlikely	Major	**High**

Table 42: Westland District Council's Solid Waste Risks

11.3 Assumptions & 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 uncertainties, assumptions have to be made. A number of assumptions have been made while forecasting the 10 year expenditure and activity improvements. These are detailed below:

Significant assumptions	Risk and impact	Level of uncertainty	Mitigation
Asset data Asset condition and performance data is not reliable for certain solid waste components. In most instances age has been used as a proxy except where improvements to data collection and monitoring have been made and therefore more information is available.	Asset data inaccuracies may mean more/less assets need to be renewed than projects and/or projected timing of renewals is incorrect. This could result in some assets failing before they are scheduled for planned renewal, creating a short-term loss/reduction of service delivery.	Medium (due to comparatively low value and low number of assets in solid waste class)	Improvement actions have been identified; some of which are in progress. An Asset Engineer and Asset Management Planner have been budgeted for; hiring for these positions is key to ensuring these issues are remedied in the long term.
Asset lives The useful asset life reflects the best estimate available as at forecast date and is based on current asset information held.	That the useful asset life information held is incomplete or inaccurate and subsequent depreciation calculations will result in incorrect revenue setting meaning rates are either too high or too low. Insufficient funds may not be available.	Medium	Details relating to the Council's current estimates of useful lives are recorded within the depreciation note in the accounting policies.
Availability of contractors and materials Contractors and materials will be available to undertake the work required to agreed standards, deadlines and cost.	Projects could be delayed if there is a shortage of materials or contractors or if contractors fail to deliver to agreed standards, budget and timeframe. Delays may further increase costs and chances of asset failure in the interim which could also impact on Levels of Service.	Low	Spread projects as much as possible and continue to engage with contractors. Ensure robust contracts are in place.
Contract retendering When contracts are re-tendered, any cost increases are expected to be minimal or within acceptable limits.	Tenders for new Solid Waste Contracts represent a significant increase in costs.	Low	Contracts are reviewed by external consultants that specialise in procurement and sound contract documentation prior to re-tendering. The tender evaluation matrix prioritises value for money as a significant proportion of the overall ranking of tenders.
Capital expenditure Capital expenditure costs are based on Council's best estimates and known planned expenditure using current market rates.	Capital expenditure varies from budget. There may be increased operation and maintenance costs associated with maintaining assets that are beyond their useful life and a potential impact and risk to levels of service. New technology or obsolescence could change the nature or cost of a project.	Medium	The Council will review its budget annually through the LTP/Annual Planning process and may adjust work programmes/budgets where necessary. Capital expenditure expected to occur within the first three years of the LTP has undergone a higher degree of review than expenditure beyond that point.
Climate change Significant storm events are already an issue for our District and climate change predictions suggest that the likely effect of climate change will exacerbate the frequency and intensity of extreme weather events and the potential likelihood of coastal erosion/intrusion.	Catastrophic escalation of climate risk makes Butlers landfill unavailable or unsuitable as landfill.	High	Council is looking at the creation and implementation of a Carbon Policy in light of the Climate Change Response (Zero Carbon) Amendment Act 2019). Council has mapped and identified low lying land parcels in the Hokitika area using LIDAR data and hopes to expand this across the district subject to sufficient LIDAR information being made available. Construction of new assets to take place away from coastal or river boundaries.
COVID-19 That the global pandemic continues but is well-managed within New Zealand.	That the global pandemic continues for several years. That global stimulus measures associated with COVID-19 create major financial instability e.g. a period of super-inflation, and that restrict global shipping of goods affecting supply of materials for capital projects and/or prevent shipping off-shore of recyclables.	High	Costs of these changes have not been budgeted for. Westland District Council will take its lead and actions regarding this from Central Government directives and continue to monitor the situation closely.
Depreciation Depreciation for the revalued asset values has been calculated annually using the Council's inflation factors as a proxy for the adjusted revalued asset values.	Revaluation adjustments are different to those forecasts. That detailed components of new assets will be different from the inflation factors, requiring different depreciation rates.	Low	The comparatively low value of the total solid waste assets helps mitigate against this risk.
Demand Current demand growth for existing solid waste serviced areas is expected to be negligible.	Population, industry and tourism to/within the district will significantly increase the demand for solid waste services.	Low	Council regularly reviews population data (from Census stats) and Tourism figures (from MBIE and Tourism West Coast data).
Emissions trading Introduction of a nationwide cap on the number of units in the scheme. This will increase ETS charges. The increase in ETS charges is expected to be within Council's ability to pay due to the comparatively low waste volume of our region. An increase in ETS costs based on currently available estimates has been accounted for.	That Council is unable to secure and pay for necessary units and cannot divert more waste away from landfill.	Medium	WDC is investigating options for the introduction of a third kerbside recycling bin for organics to reduce exposure and future ETS cost. Organics would remove up to 40% of waste volume (by weight) from landfill. In addition, increased education campaigning on taking glass to local transfer stations will also help reduce volumes going to landfill. WDC should also consider claiming forestry credits against ETS.

Funding renewals That Council will choose to Strengthen its assets and infrastructure and fund depreciation on renewals to provide its community with financial stability and financially sustainable infrastructure and services over the long term.	That Council will not choose to strengthen its assets and infrastructure and will forego building depreciation reserves or defer renewals thus creating financial instability of infrastructure and services over the long term.	Low	The Council funds asset replacement through a variety of sources, as detailed in the Revenue and Financing Policy, with depreciation used when replacing assets with 'like for like'. The Council operates within the prudent parameters of its Liability Management Policy.
Levels of Service Some increases in levels of service have been proposed and provisionally budgeted (subject to public consultation and Council approval). Service level increases are mainly to meet legislative compliance and minimise risks. In most other cases, service levels remain unchanged. Levels of Service increases will increase cost to ratepayers.	That the community demands or Central Government imposes additional significantly enhanced service levels. This will lead to increased costs to ratepayers and also possibly require increased in-house resourcing.	Medium	Council to regularly monitor service provision. Minor changes may be made to service levels where contracts and resources allow. Major changes in service levels will be confirmed with the community via consultation and will generally require an increase to fees or rates.
Local Government reorganisation There will be no change to district boundaries or forced merger with other West Coast councils.	That Government initiates merger of West Coast Councils or significantly changes boundaries requiring Council to reorganise its solid waste services accordingly.	Low	Costs of reforms and changes have not been budgeted for. Large-scale infrastructure projects may become superfluous or redundant due to potential amalgamation, potentially resulting in some cost-saving mechanisms. Local government re-organisation has been raised in recent times on the West Coast and in June 2019, a partial reorganisation was ordered requiring all three West Coast Councils to work together to prepare a combined District Plan, while continuing to operate as independent Councils.
Natural hazards The prevalence of heavy rainfall events (as seen in last few years) is likely to continue causing periodic disruption. Other natural hazards such as tsunami, Alpine Fault earthquakes are possible but have not been factored into the life of this Plan.	An alpine fault earthquake, tsunami event or other surprise natural disaster occurs that has a significant impact on solid waste services resulting in unbudgeted costs beyond the capacity of Council to cope.	Low	Council has a Civil Defence Emergency Plan that will be implemented in the event of an emergency. Council has insurance which can be claimed for the replacement of infrastructure damaged in the event of a natural hazard. In addition, Central Government has a role In providing financial aid for disaster recovery.
New legislative requirements Council is aware of many pending Solid Waste legislative changes from Central Government, but acknowledges that these changes come with a level of uncertainty during the October 2020 General Election where a change of government is possible.	Potential government intervention if Council does not respond appropriately.	High	In preparation for some of these changes, Council will be introducing a Carbon Policy and Climate Change Adaptation Strategy within the next 12 months (before the end of 2021).
Population change The population of the District will remain static or grow slightly during the period of the Plan. The population statistics are based on Statistics New Zealand medium growth forecast (from 2013; no updated populations projections available from 2018 Census yet).	Population growth is significantly higher than forecast in a localised area, putting pressure on infrastructure. Or population significantly declines resulting in under-utilisation of infrastructure. OR Population significantly declines resulting in under-utilisation of infrastructure.	Low	Council will continue to monitor population change in the District. Generally, small changes in population i.e. + or – 5% (432 people) can be managed within the existing Level of Service without any significant impact. We are within this threshold at present.
Renewability or otherwise of external (including debt) funding Council assumes reliable and sustainable funding arrangements especially debt through the Local Government Funding Agency both in regards to the quantum of the funding and the terms and conditions of the funding.	That funding arrangements falter.	Medium	The impact would range from changes that Council can respond to up to a catastrophic financial situation. Council has just recently initiated the process to become a guarantor member of LGFA. This increases Council's borrowing limit but also Council's risk of potentially being required to fund debt repayment of a defaulting Council.
Replacement of assets The optimal goal is that assets are replaced at the end of their useful life. In the case of solid waste assets, visual condition inspections indicates that on the whole many assets are outperforming their expected useful lives and still in serviceable condition.	Ineffective practice could result in failure to pay for future replacements or spiraling rates.	Low	Council's new Asset Manager to conduct full gap analysis of Solid Waste assets versus depreciation funding and expected useful lives.
Resource consents Resource consents held for Council activities will require renewal and new consents granted will require increased monitoring. Resource consents will be obtained with acceptable conditions, and expiring resource consents will be renewed with affected party approval.	That resource consents cannot be obtained or renewed with the approval of affected parties requiring hearings. This may require an entirely new approach or would significantly delay projects. That new consent conditions imposed are unacceptable i.e. Council cannot afford to comply or respond to monitoring requirements. Potential service failures and/or adverse environmental effects. Potential infringement fines.	Low	Appropriate planning and investigations (i.e. environmental impact studies, geological surveys etc.) and effective early consultation with mana whenua on issues of significance should ensure that new resource consents are obtained without undue delay. Proactive investment in monitoring equipment for existing consents will help plan for future compliance needs. The renewal of consents is dependent upon the legislative and environmental standards and expectations that exist at that time.

Revaluations Council does not have a high degree of confidence in the existing valuation data due to not being provided with the full methodology and workings from the consultants who did the last revaluation in 2016. However, the low value of assets mitigates against this risk somewhat.	That updated revaluation data values Councils solid waste asset much higher or lower, and changes the renewals calculations.	Medium	Updated solid waste revaluation to take place within the next 3 years.
Support for Butlers Landfill Neighbouring properties and iwi will continue to support Butlers landfill.	That neighbouring properties and iwi do not continue to support the operations of Butlers landfill and Council is forced to look at other options for a landfill site for the District.	Low	Continue positive engagement, communications and meetings with the Butlers Landfill Management Liaison Group.
Tourism Tourism growth expected to significantly decline in the immediate future as a result of COVID-19 pandemic.	That tourist numbers increase more quickly than expected. Potential asset failure due to unsustainable growth of tourism result in service outages and need for new unbudgeted infrastructure that would increase Council's debt.	Low	Council will continue to monitor tourism growth. Where growth requires additional infrastructure, Council will apply for financial contributions for this work.
Waste levies That any increases to the government waste disposal levy won't make the costs prohibitive for the continuation of the solid waste activities we currently deliver.	At present, the proposed waste levy increases are likely to cost Council an extra $30,000 per year in 2022 and an extra $60,000 per year by 2024. These amounts are affordable. However, there is a reasonable degree of uncertainty as these have not been confirmed by Government.	Medium	Solid waste services offered are rationalised by the ability of the community to pay for them. Potential exist for Council to increase Regional collaboration (with Buller and Grey District Council) to achieve synergies and cost savings. This includes submitting joint annual applications to the Waste Minimisation Fund. Council continues to encourage the public to minimise the production of waste and re-use, re-purpose etc as a first option to divert content away from the waste stream.
Waste volumes That there will be no significant increase in volumes of waste to landfill over the life of this plan.	The increase in storm events in our District continues to increase waste volumes and poor household sorting of recyclables continues to result in a lot of recycling being rejected and increasing waste volumes to landfill.	Medium	Updated waste composition study to be obtained and annual waste per capita data to continue to be tracked and logged. New recycling options (organics and glass) to be investigated to encourage diversion of materials from waste stream and continued public education.

Table 43: Assumptions and Uncertainties

Section 12: Asset Management Processes & Practices

Good quality data and asset management processes form the basis of effective long –term planning. This section details WDC's approach to asset management processes, data management systems and strategies relating to the solid waste activity and associated assets.

12.1 Appropriate Practice Levels

The Office of the Auditor General (OAG) uses the International Infrastructure Management Manual (IIMM) as the benchmark for measuring New Zealand councils' performance in asset management practices. There are five maturity levels in the IIMM: Aware, Basic, Core, Intermediate and Advanced. Each level has clear descriptions of the requirements for each area of asset management. Westland District Council's main weakness in terms of asset management is its lack of in-house resource for this function. There is currently no asset management team.

In November 2019, Council approved an Asset and Activity Management Policy to guide the preparation of AMPs. The adopted Asset Management Policy (2019) sets the Asset Management maturity goal for all AMPs to meet at least core maturity level.

The aspirational level for most Solid Waste functions has been set at 65% (the borderline between Core and Intermediate). This reflects the increasing priority level of Solid Waste as an activity within Council, especially given the increasing levels of legislative compliance and community expectations around waste management. However, this target also reflects the low level of asset management resourcing (i.e. no in-house asset management team at present), the small population base of Westland and therefore relatively low value of assets in this activity class. This aligns with recommendations from Ross Waugh of Waugh Infrastructure Management Ltd for districts with a population of less than 10,000[8].

Where some functions are already at or in excess of 65%, the target has been extended by an additional 5% reflecting the desire for continuous improvement in these areas. However, the key priority is addressing those functions of solid waste planning that are not yet up to Core Maturity Level or are at the lower end of the Core range. It is expected that these scores and appropriate targets will be reviewed in the Long Term Plan cycle.

12.2 Service Delivery

12.2.1 Activity and Asset Management Teams

Council's current organisational structure and capability does not support effective asset management planning. This gap is being filled temporarily with the use of contractors with prior organisational knowledge. However, it is acknowledged that this is not a long-term solution.

[8] Study on the development of Asset Management Appropriate Practice and Maturity Assessments in Australasia – Ross Waugh (2012)

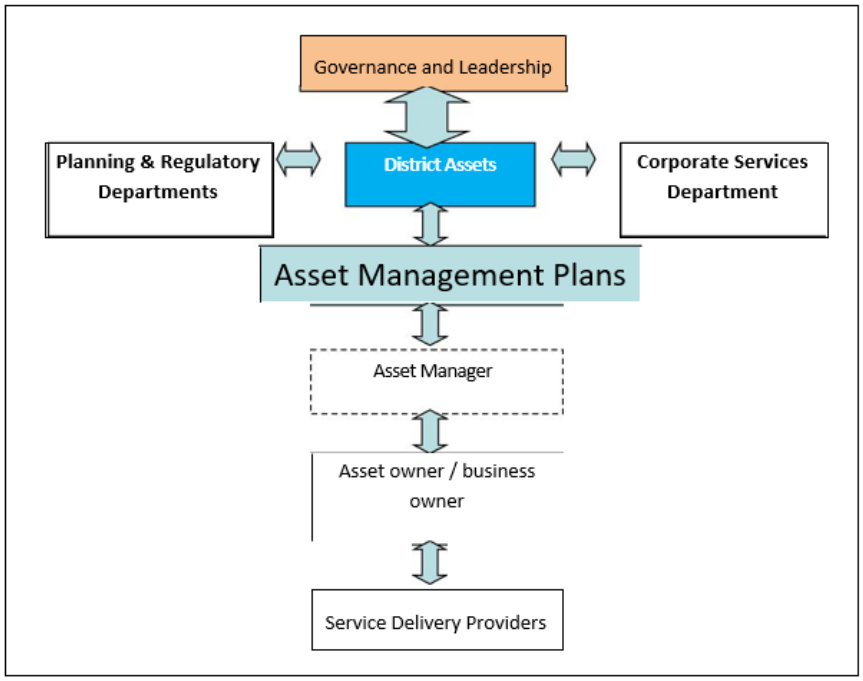


Figure 41: Asset Management Planning Process & Departmental Inputs

The Long Term Plan steering group consists of the WDC Executive Team, Strategy and Communications Advisor, Finance Manager and Accountant. This group sets the strategic focus for the Long Term Plan as a whole; however, this is not always well integrated at the Infrastructure Strategy and Asset Management Plans level.

Westland District Council is in a rebuilding phase in terms of its teams and institutional knowledge. Since 2016/17, Council has had three Chief Executives, three Group Managers for District Assets and three Operations Managers. Council has had not had a full-time Solid Waste Officer since the end of 2017. As a result, a significant amount of institutional knowledge was lost and is being rebuilt and restored. Currently, no Solid Waste Officer position exists and these functions have been absorbed by the Operations Manager with input from other staff members as needed.

12.2.2 Professional Support

Professional support for soil and water sampling is obtained for Butlers Landfill in particular. These activities are undertaken by West Coast Regional Council, EOS Ecology and Golder Associates. Resource consent applications are also undertaken on Council's behalf by external consultants. At present, a former Council staff members have been contracted to provide professional support in relation to asset management. This is due to no Asset Engineer or Asset Management Planner positions on staff currently. However, the Executive Team and Council have approved hiring for these positions in the future, and the recruitment process is underway.

12.2.3 Procurement Strategy

Council has a formal Procurement Strategy and Procurement Policy for engaging contractors and consultants. Both of these documents were reviewed and adopted in 2018.

12.2.4 Service Delivery Reviews & Water and Sanitary Assessments

The Local Government Act was amended in 2014 to include Section 17A requiring councils to review at regular intervals the cost effectiveness of all provision of local infrastructure, services and regulatory functions. This is generally considered as part of the 6-yearly Regional Waste Minimisation and Management Plan.

In addition, the Local Government Act (2002) requires periodic Water and Sanitary Assessments to be conducted. The last Water & Sanitary Assessment was conducted in 2014[9]. However, this did not cover solid waste. This therefore requires an update to be conducted and filed with Community Public Health within the next three years.

12.3 Asset Management Systems and Data

12.3.1 Information Systems and Tools

Council has a variety of systems and tools that support effective operation and maintenance and that record asset data. These are detailed in Figure 41 below. Many of these systems do not integrate well with others and Council is continually reviewing how to ensure all asset data is entered into the core asset management systems where possible. Where this is not achievable, attempts are made to integrate of link systems so they can be easily accessed. Inconsistencies have been noted by asset data held in Council's financials systems versus asset data held in Council's asset management systems and more cross-departmental work needs to be encouraged to ensure consistency. The main tools that Westland District Council uses are shown in the diagram below:

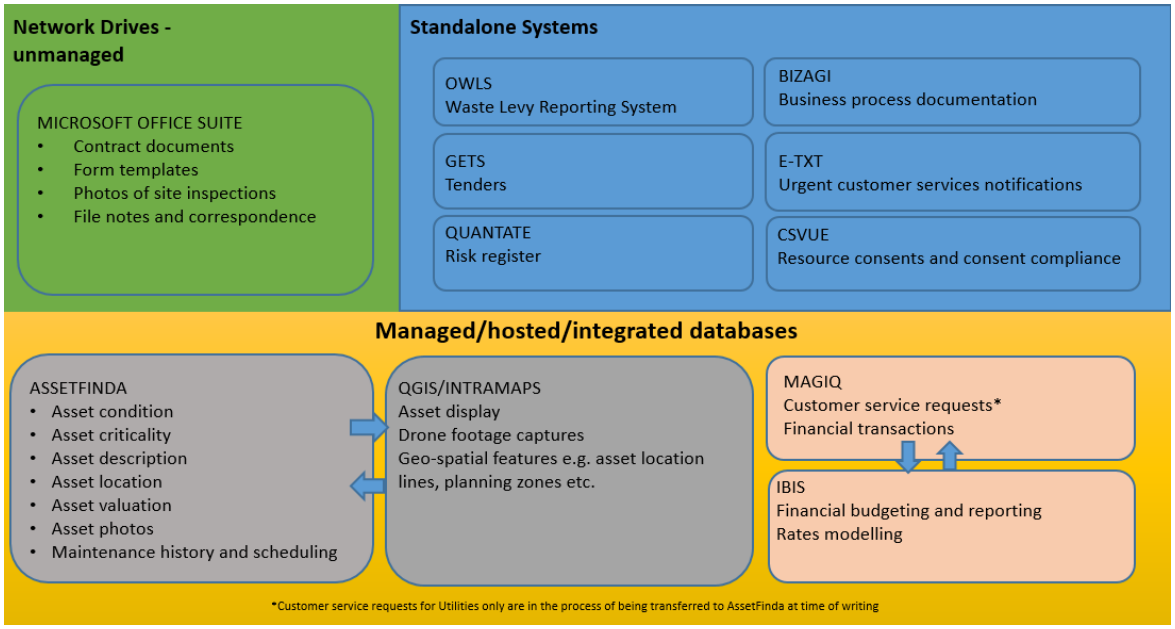


Figure 42: Systems Used for Solid Waste Asset Management and other IT Organisational Tools

In summary:

- AssetFinda is used as the primary technological system for Asset Management. The GIS linked to AssetFinda is updated with alterations and/or additions to capital works. However, original hardcopies and electronic plans are also retained.
- QGIS is used by some staff as an interface through which to edit and update AssetFinda.

[9] https://www.westlanddc.govt.nz/sites/default/files/Water%20%20Wastewater%20Assessment%20%282%29.pdf

- Quantate software is used for Council's organisational risk register including governance and compliance risks.
- MAGIQ/NCS software holds customer requests and contains financial transaction information such as payment to creditors to debtors.
- IBIS software: financial budgeting and reporting is done in IBIS Breeze. This imports transactional informational from the MagiQ ERP system and makes sense of the figures to produce various reports. At the time of writing, the system was not fully operational and did not yet include projects reporting. IBIS Rates Modelling is used for rates and this also interacts with MagiQ.
- No formal process is in place for as-builts. However, these are generally saved against the property files and relevant contracts. A link is also added to AssetFinda through the QGIS interface by using the media button.
- Contract Files: Copies of all tender and contract documents are retained for each project. Unit rates from these tenders form the basis of the replacement costs recorded in the Asset Valuations.
- Operational Data: A number of parameters are constantly monitored (e.g. pump hours) and these records only need be referred to as part of specific performance investigations.
- Performance Records: The performance of key assets is regularly monitored, but not formally graded or classified.

12.3.2 Asset Data Reliability & Confidence Ratings

The confidence in the financial forecasts is dependent on the degree of confidence in the asset data. Council has assessed its confidence in the solid waste asset information according to the IIMM's Guidelines for Infrastructure Asset Grading Standards as shown in the diagram below:

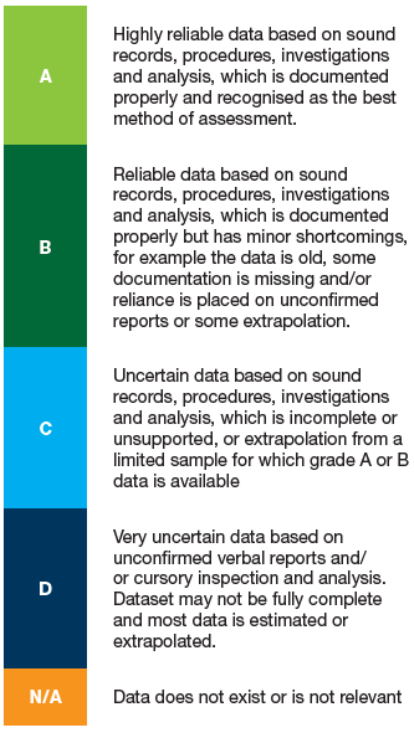


Figure 43: IIMM's Guidelines for Infrastructure Asset Grading Standards

Plan Attribute/ Quality Elements	Best Practice Requirements	Grade	Comments & Identified Gaps
Service levels	Community, technical and maintenance levels of service are defined for different solid waste classes.	B	Community service levels are the best defined and reported on. Recommended changes to LoS for this LTP will add in a technical measure. Maintenance levels of service per contract document but not reported on to public.
Demand forecast analysis	Community infrastructure planning processes are in place and implemented to provide accurate demand forecasts.	C	Demand forecasting is minimal. But growth and demand in region is low at present.
Performance data (asset functionality and capacity)	Solid waste performance including sustainable design is fully addressed and incorporated in future works.	C	Sustainable Environmental Design is not factored into future works programme.
Condition data	Condition information contains sufficient level of detail to allow potential rehabilitation options to be identified without site visits. Data accurately represents the lifecycle position of each asset and likely timeframe in which major refurbishment will be required. Ability to predict likely timings of asset decay.	B	Condition data is age-based with visual inspection commentary added as notes. Assumptions of expected life are cautious and assets tend to be outliving their book value.
Asset inventory data	Ability to identify, describe and locate assets down to major system/component levels (e.g. liners, road, drainage, pump and electrical systems) including valuations of each major component.	C	Most major system and component levels documented. Asset inventory data does not contain reliable valuations of each major component.
Cost histories	Asset based costing and activity based costings are in place to identify those assets with high maintenance costs and those activities that could be candidates for further optimisation.	D	Cost histories not formally tracked and optimisation pathways not investigated. Reliance on extrapolated, cursory data.
Lifecycle costing and programming	Ability to programme future renewal, maintenance and operational costs with full understanding of existing condition rating and costs through all phases of assets' lifecycle.	D	Not formally costed or programmed according to scientific methodology. Reliance on verbal reports, extrapolated/cursory data.
Overall assessment		**C**	

Table 44: Assessment of Solid Waste AM Practices against Best Practice Guidelines

12.4 Critical Assets

Knowing what assets are most important in order to effectively manage risk. This means Council can invest in what is most needed and make investment decisions at the appropriate level.

Council has defined criticality according to the International Infrastructure Management Manual (2011) which defines critical assets as “those that have a higher consequence of failure and can potentially have a more significant impact on the organisation’s objectives” (IIMM Quick Guide, 2011, p.11).

Therefore, critical assets are those assets that are deemed essential to providing critical services in times of emergency (albeit at a reduced level of service), or assets that have an unacceptable consequence of failure.

Although a criticality methodology has not been formally developed, the following solid waste assets are deemed to be critical:

- Operational landfills (Butlers and Haast);
- Transfer stations (due to the geographic spread of the District)
- Closed landfills (due to the consequence of failure i.e. erosion and resulting environmental impacts).

12.5 Quality Management

Council has not implemented a formal Quality Management System across the organisation. Audits, checks and reviews are carried out but on a case-by-case basis. Table 44 below lists the main Quality Management employed by Council. It also identifies gaps/deficiencies and proposed improvements:

Activity	Current Process	Gap/Deficiency	Proposed Improvements
Asset Creation	• Project is incepted based on either council officer identification or legislative requirement. Limited capital projects identified for solid waste. • Project is signed off by Council and budget identified in Annual Plan or Long Term Plan. • Contract prepared; Works listed for tender. Tenders evaluated by Tender Evaluation Team on both price and non-price attributes. Recommendation of preferred tender given to Capital Projects and Tenders Committee for final decision. • Resource consent applications prepared and physical works carried out once consents obtained.	• Written business case and options assessment of all available options sometimes missing (mostly followed for Solid Waste but not always). • Asset Creation and Project Forms not always used. • Assets seldom captured geospatially once physical works have been completed.	• Assets to be created geo-spatially. • Investigation of ways to improve flow of information between District Assets and Finance departments.
Asset Data Integrity	• Information in AssetFinda out of date. • No formal condition assessment process in place (default rated based on age).	• Low level of active use of AssetFinda among Engineering team and no specific AM team with delegation to carry out data tasks. • Assets not geo-mapped.	• Current system needs to be refreshed and brought up to best practice standard. • Asset Management resourcing to be obtained.
Asset Performance	• Contractors may pass on feedback regarding equipment failure.	• These reports are often verbal not in writing and are not updated against the asset record in AssetFinda.	• That all asset failures and asset maintenance records be uploaded against the asset in AssetFinda.
Asset Valuation	• Solid Waste assets were last revalued in 2016 by a consultant; the soundness of this valuation is hard to ascertain.	• Assets not revalued every 3 years to ensure updated information available and tied into each Long Term Planning cycle.	• Next asset valuation to be obtained as soon as practicable and a different consultant /more robust methodology to be employed.
Budgeting	• Budgets set based on best guess.	• Best guess of future operational costs not analysed by comparing with historical annual spend by solid waste category.	• Budgets to be fully prepared including project management, resource consent and contingency costs.
Demand Modelling	• Tourism and population data used to forecast demand.	• Knowledge of waste composition based on historical data (last captured in 2011). • No formal demand modelling methodology in place	• Updated waste composition study to be obtained • Low, medium and high waste demand projections to be calculated to identify scenarios for per capita waste generation over time.
Landfill monitoring and sampling	• Sampling requirements and frequencies contained within consent records in CS Vue and mapped in Excel spreadsheets. • Landfill inspection checklist created in 2019 to formalise process and cover all necessary checks. • Annual reports written by Operations Manager and filed with Regional Council. • Copy of report uploaded to CSVue against the consent record by Business Support Officer. • Butlers sampling undertaken by external consultants	• Sporadic, infrequent visual monitoring of closed landfills	• Potential to investigate whether cost savings could be made by bringing Butlers sampling in-house subject to staff having sufficient training and time.
Levels of Service	• LOS determined within the current contracts. • LoS reviewed each LTP cycle. • Resident survey carried out every 2 years. • Formal reporting of LOS annually via Annual Report. This document is audited by Audit New Zealand.	• KPIs minimal – Community, technical and maintenance levels of service are not defined for each different solid waste class. • Increased consultation needed for recycling options based on community feedback.	• Present public with a range of recycling options and show financial impacts of each.
Operations	• Maintenance of major facilities under formal contract with contractor. • Contracts reviewed thoroughly when up for renewal; contract documentation has been improved in last 12 months. • Contractor auditing schedule recently created.	• Last residents' survey revealed some issues with Southern Ward transfer stations not always being open during their advertised hours and/or being messy. • Improve reporting from contractors.	• Contracts to be reviewed and updated as necessary.
Process Documentation	• Gaps in some processes and resource consent matters due to staff vacancies over years prior. • Operations Manager has improved a number of processes and caught up on a backlog of resource consent reporting requirements.	• These processes will likely improve with time now that staff stability has mostly been achieved.	• Formal documentation of processes (e.g. using Bizagi flow chart documentation) and staff succession planning to avoid future loss of institutional knowledge.
Programme Delivery & Project Management	• Few capital projects in this area. Main capital project will be new cell creation at Butlers Landfill. • Project management software has been purchased to create gantt charts and track delivery of projects	• Project management software not currently in use.	• Staff training in project management and use of PM software.
Reports to Council	• Staff reports on topical issues (when key decisions needed) presented to Council. Reports approved by Group Manager: District Assets (or Operations Manager in absence) and CEO prior to release.	• Some Councillors have poor knowledge level of solid waste. • Some staff present Council with limited options in Council reports rather than the full range of probable options.	• More frequent reporting to Council subcommittee could be an option for boosting Councillor knowledge for future decision-making. • Staff training in report writing.

Table 45: Quality Management Approaches

Section 13: Improvement Planning

Activity management plans require continual updating and improvements to ensure Council achieves the appropriate planning to manage assets on behalf of the community, deliver agreed levels of service and identify the expenditure and funding requirements of each activity.

13.1 Assessment of AMP Maturity

A self-assessment of WDC's asset management maturity for solid waste based on IIMM definitions is shown in the spider map below:

Figure 44: Solid Waste Asset Management Planning Maturity Index

Section 12.1 outlines the aspirational level for solid waste asset management planning. It is noted that as an activity as a whole, Solid Waste scores highest across the organisation in terms of asset maturity. The average score of all individual markers is 62.4.

Solid Waste shares many of the same gaps as other activity areas. Key maturity gaps organisation-wide are:

- Asset management processes and data
- Organisational capability and people skills
- AMP production capability
- Integration of technology and IT systems
- Quality and risk management processes

13.2 Peer Review

Westland District Council's draft Quality Assurance Plan for the 2021-2031 Long Term Plan recommends consideration of an external review for Asset Management Plans. Given the comparatively low value of solid waste assets in our District, it is not believed to be the best investment of Council resources to get this particular AMP peer reviewed.

13.3 Improvement Plan

A list of Solid Waste improvement items for next 10 years is detailed in table below:

No.	AM Area	Project no	Improvement Action	Responsibility	Priority (High/Medium /Low)	Status (underway / completed/deferred / no progress)	Indicative Timeframe				
							2020/21	2021/22	2022/23	2023/24	2024/25
1	AM Policy and Strategy	1.1	Implement Carbon Policy	GMDA		Underway		✓			
		1.2	Implement Climate Change Adaptation Strategy	Executive Team		No progress		✓			
		1.3	Update Regional Waste Minimisation and Management Plan in accordance with 6-yearly statutory timeframe.	Operations Manager, other West Coast District Councils and consultant as needed.	Medium	Underway				✓	
2	Levels of Service and Performance Management	2.1	Conduct updated Water And Sanitary Assessment which covers Solid Waste	Operations Manager/ Asset Manager		No progress		✓			
		2.2	Undertake performance audits on contractors according to defined schedule	Operations Manager		Completed and ongoing	✓	✓	✓	✓	✓
3	Forecasting Demand	3.1	Undertake updated waste composition study	Operations Manager to engage consultant		No progress			✓		
		3.2	Calculate updated total mass to landfill in tonnes per capita per year and continue to track annually to identify trends	Asset Management Consultant		Completed and ongoing	✓	✓	✓	✓	✓
		3.3	Prepare low, medium and high demand projections to account for potential growth and diversion rates	Asset Manager		No progress		✓			
4	Asset Register Data	4.1	All existing assets to be geo-linked in AssetFinda	3 Waters Engineer Assistant (updating asset register in lieu of Asset Manager on staff)		Underway		✓			
5	Asset Performance & Condition	5.1	Conduct field inspection to assess the condition of each asset and update/record in asset register	Operations Manager / Asset Management Consultant and 3 Waters Engineer Assistant (who is updating asset register in lieu of Asset Manager on staff)		Underway	✓				
		5.2	Define process and frequency for regular condition assessment programme	Operations Manager & new Asset Manager		No progress	✓				
6	Decision Making	6.1	Project prioritisation matrix to be introduced to rank project priority across all infrastructure areas	GMDA & Asset Manager		No progress	✓				
7	Managing Risk	7.1	Update Quantate Risk Register to align with risks identified in this AMP.	GMDA	High	Underway	✓				
		7.2	Ensure all closed landfills have updated aftercare management plans in place and are regularly monitored to mitigate risks e.g. erosion	Operations Manager	High	Underway	✓				
		7.3	Review legislation and new reporting requirements in light of new Acts of Parliament and Regulations introduced in 2019/20	GMDA	High	Underway	✓				
8	Operational Planning	8.1	Investigate costs and create options assessment for glass recycling and organics processing for public engagement and consultation	Operations Manager	Medium	Underway		✓			
		8.2	Investigate options and costs for transparent clear recycling bins and bin identification chips	Operations Manager	Medium	Underway		✓			
9	Capital Works Planning	9.1	Implement Project Management software as gatekeeping and tracking system for Capital Projects	GMDA & Project Manager (latter position being recruited for at time of writing)		Underway	✓				
		9.2	Investigate costs and options for potential future South Westland landfill if required subject to demand changes	Project Manager		No progress			✓		
		9.3	Obtain necessary resource consents for moving Fox Landfill materials and creation of new cell at Butlers Landfill.	Operations Manager and consultants	High	Underway	✓				
10	Financial Planning	10.1	Undertake updated Asset Valuation to comply with Accounting Standards	Operations Manager to organise (could use consultant or Asset		No progress		✓			

No.	AM Area	Project no	Improvement Action	Responsibility	Priority (High/Medium /Low)	Status (underway / completed/deferred / no progress)	Indicative Timeframe				
							2020/21	2021/22	2022/23	2023/24	2024/25
				Valuation skills of Transportation Manager - peer review by consultant)							
		10.2	Employ formal methodology for forecasting 10-year operational expenditure & generate updated opex budget	Operations Manager & Finance Manager	Medium	No progress	✓				
		10.3	Apply annually for external funding under Waste Minimisation Fund	Operations Manager & Engineering Assistant in collaboration with other West Coast District Councils	Medium	Ongoing		✓	✓	✓	✓
11	Asset Management Leadership and Teams	11.1	Recruitment and appointment of in-house Asset Manager & Project Manager	GMDA & HR	High	Underway	✓				
		11.2	Creation of Asset Management Government Steering Group at Regional Level	GMDA/CE in collaboration with other West Coast District Councils	Medium	No progress		✓			
		11.3	In-house training for selected staff in landfill sampling and reporting, writing resource consent applications, project management software, formal report writing and asset management microskills to reduce consultancy costs and increase staff skills and succession planning.	GMDA	Medium	Underway		✓	✓	✓	
12	Asset Management Plans	12.1	Review the optimisation between reactive and proactive maintenance	Asset Manager		No progress		✓			
13	Business Continuity & Emergency Management	13.1	Development of organisation-wide Business Continuity & Emergency Management Plan	Executive Team		No progress		✓			
		13.2	Expand LIDAR knowledge and mapping across District	IT and WCRC		No progress		✓	✓	✓	
		13.3	West Coast Lifelines Vulnerability and Interdependency Assessment be revised to include assessment of open and closed landfills in District	GMDA, and other West Coast Councils, Lifelines Group Members		No progress		✓			
14	Asset Management Information Systems	14.1	Upload Wheelie and recycling bins IDs and import into field in Property Maps system	Business Support Officer + IT team		Underway	✓				
		14.2	Improve synergy and integration of Finance & District Assets IT asset/budgeting systems and tools and manual flow of information between departments	Corporate Services & District Assets departments & GMs.		Ongoing		✓	✓	✓	
15	Service Delivery Mechanisms	15.1	Continue to evaluate service delivery mechanisms and identify possible improvements	Operations Manager	Medium	Ongoing	✓	✓	✓	✓	✓
16	Audit and Improvement	16.1	Critically evaluate WDC's ETS reporting and claiming forestry credits to offset emissions	Operations Manager/GMDA/consultant	Medium	No progress		✓			

Table 46: Improvement Plan

13.4 Improvement Plan Monitoring

FREQUENCY	REVIEW TASK	ACTION	KPI	REPORT NAME	AUDIENCE
Three yearly	AMP Development	Formal adoption of the plan by Council	100% Achievement	Council AMP Report	Executive Team, Council & Audit New Zealand
	AMP Peer Review	The plan will be formally reviewed three yearly to assess adequacy and effectiveness.	100% Achievement	External Consultant Report	Executive Team, LTP Steering Group and Audit New Zealand
Annually	AMP review (internal)	Revise plan annually to incorporate new knowledge from the AM improvement programme	100% Achievement	Internal Report	Asset Manager, Operations Manager & District Assets Group Manager
	Monitoring and Reporting	The KPIs identified in this table will be monitored and reported on annually through Annual Report	100% Achievement	Annual Report	Council, Audit New Zealand, General public
Quarterly	Implementation of the Improvement Programme	Tracking the progress of implementing the improvement programme quarterly particularly of projects in the short term improvement programme.	100% Achievement	Quarterly Reports	Asset Manager, Operations Manager & District Assets Group Manager

Table 47: Improvement Plan Monitoring