



Asset Management Plan

Solid waste

2021



GREAT LAKE TAUPŌ
Taupō District Council



Solid Waste Summary

Taupō District Council manages solid waste to reduce the likelihood of harm to people and the environment. This asset management plan enables Council to manage and demonstrate its stewardship of solid waste assets on behalf of its communities in order to provide services cost-effectively, both now and into the future.

Strategy

From a strategic perspective, there are two major issues for Council to consider volume and cost. Finding the optimal combination of these factors is the policy challenge for all Councils.

1. Volume

The Waste Act 2008 requires Councils to manage waste and efficiently and effectively, and to reduce the volume of waste going into landfills. The volume of waste sent to landfills can be reduced by any of these methods: create less rubbish; reuse products; recycle materials for new products; recover materials or energy from waste for further use; treat the waste to change its volume or character. Waste tonnages have averaged 21,000 tonnes over the last 11 years, with waste tonnages recently moving to around 25500 annually.

2. Cost

Council operates the Broadlands road Landfill and five refuse transfer station sites, kerbside refuse and recycling collection and street litterbins as well as providing a raft of waste minimisation initiatives. The challenge is to provide these services while keeping the cost of waste disposal at a level where waste flight is avoided (waste taken and disposed at alternative disposal sites other than the Broadlands Rd Landfill) as waste flight would reduce the revenue streams that fund the minimisation programs. Higher waste disposal costs also increase the amount of illegal dumping but if waste disposal prices fall, this can also undermine waste minimisation initiatives.

Council has already implemented the easy to achieve low cost solutions to waste minimisation and to achieve significant waste reduction going forward Council will have to provide significant additional funding.

Overarching Issues for Solid Waste

Kerbside service delivery / contract renewal

Broadlands RD Landfill consent renewal

ETS emission costs / gas flare

Resource recovery / recycling and changes to legislation / policy

Operational efficiency and Health and Safety

Waste Management & Minimisation Plan

Kerbside service delivery / contract renewal

Council has recently renewed the current Kerbside collection contract for an additional two years. This contract extension will enable Council to review the current service. Staff will present several options to elected members that will consider funding mechanism's (rates vs user pay) as well as bags vs bins and implications of recovered materials markets.

Staff are currently awaiting the policy announcement from central government regarding product stewardship for drink containers which could change the funding dynamics of any future program before presenting options.

Broadlands RD Landfill consent renewal

The operational consent to operate the landfill expires in 2027, but the implications of the ETS costs on operations means that Council when considering mitigation options to reduce exposure to the ETS need to consider the consent time lines.

An investment into emission reductions will need consent certainty, thus staff have started compiling data to start the consent renewal process early. If council can obtain a new consent, then Council can invest in emission reduction infrastructure earlier knowing that it has a timeline to depreciate any new infrastructure.

If Council can renew the consent, the NES (National Environmental Standards) will require council to install gas destruction infrastructure as the landfill will receive more than 1 million tonnes over its lifetime.

If Council is unable to obtain a new consent, then council will need to alter the current footprint of the drop off area (transfer station) to facilitate bulk loading of material to an alternative disposal site. Any new transfers station facility will be designed to enable loads to be inspected and material recovered/ recycled prior to transport to disposal.

ETS emission costs / gas flare

Emission credits need to be surrendered for every tonne of waste deposited to landfill, with council's current exposure to the ETS being around 1 million annually.

To reduce council's exposure to the ETS, a gas flare and gas wells could be installed at the landfill to burn the methane produced. Staff are currently analysing the actual gas production versus what a gas model suggests the site should be producing to make sure that any new infrastructure would provide the required methane burn and thus cost reduction.

Emission costs are calculated on tonnage to landfill over a year, multiplied by an emission factor (currently 1.19) emission credits must then be purchased to cover this liability.

Current annual tonnage = 25500 x emission factor 1.19 = 30,345 tonnes. Emission credits are currently selling at \$35. So, 30,345 x \$35 = \$1,062,075 per annum.

Resource recovery / recycling and changes to legislation / policy

The end market for recovered materials from the NZ market has predominantly been China, which has been the main recovered materials market for the worlds recovered materials. Over the last three years, since China has enforced their policy of not taking recovered materials, the overall world market for recovered materials has collapsed. This has resulted in council reducing the number of plastic items recovered from the waste stream and has dramatically reduced the value of other recovered products due to a world glut.

World markets are slowly recovering, but this will take some time, and will require recovered materials exports to be free of contamination.

Markets have now placed contamination levels on all products exported, and the NZ government has enacted policy around banning the export of some materials if contaminated.

Product quality should be a main driver when selecting any new collection service at kerbside, with studies identify that glass should be collected separately from other material to eliminate glass breakage.

Product stewardship policy development will change what is collected at the kerb and may also provide support funding for the collection service.

Operational efficiency and Health and Safety

Council operates five transfers stations along with the Broadlands Rd landfill, with these facilities run under two different operational contracts and one site being run by council. The

medium-term objective is to combine all these facilities into one overall operational contract to provide efficiencies for the operators and savings to council.

Part of the process of looking to combine the operational contracts is undertaking upgrades to the sites, to enable bulk loading of recovered materials as well as removing any manual handling of materials to reduce the health and safety risk to the operators and users of the facilities.

Waste Management & Minimisation Plan

Council has set a waste reduction target for the district being:

By 2028, increase the quantity of material (tonnes) diverted from landfill from 46% to 51%”

The production of waste is directly linked to GDP so Council has limited control over waste to landfill tonnages. A large percentage of the current waste to landfill is controlled by the commercial market service provision

Council should look to increase the current waste diversion rate of 46% relative to the tonnes disposed to landfill.

Council is on track to achieve the waste reduction target, but the collapse of the recovered materials market has had some impact.

Central Government will also have an impact on waste reduction with the price to dispose of waste set to increase due to both the waste levy and the ETS. The higher the disposal price the more opportunity there is to divert waste.

Asset data

Council provides a landfill and resource recovery centre, transfer stations, and street litter and recycling bins for its communities. The facilities, listed in order of size, are located as follows:

- Broadlands’s Rd landfill and resource recovery centre - the hub of Council’s solid waste operations
- Turangi transfer station
- Mangakino transfer station
- Kinloch transfer station
- Omori transfer station
- Whareroa transfer station
- Closed landfills at Taupō, Mangakino and Turangi. Closed landfills have closure consents, which require Council to monitor to ensure there, are no adverse environmental effects from these sites.
- 350 plus litter and recycling bins, 51 Big Belly solar waste compactors.

Collectively the solid waste assets are valued at \$2.120 million (June 20). In order to manage waste for its many communities, Council has the additional assets given below:

Figure 1 Solid waste assets

Asset type	Number
Buildings	16
Plant (compactors)	2
Fencing and gates	5kms
Roading	3kms
Hard stand areas	10,000sq
Utilities – street lights reticulation etc	18
Street litter & recycling bins	551
Bulk Haulage Bins	12

Levels of Service

Council provides solid waste primarily for public health, safety and environmental protection. Waste services also enable the District to retain its attractive appearance for residents and visitors. Council provides a level of service that meets all of these measures:

- refuse disposal and recycling / recovery services are available throughout the district
- kerbside refuse and recycling collection is provided in urban areas
- customers are satisfied with the function and appearance of the solid waste facilities
- facilities are safe for current and future users
- Council encourages waste minimisation
- Street litter & Recycling bins do not overflow
- The landfill is operated within its consent requirements
- Reuse sheds are provided at all district waste facilities

State of the assets

Consents

The Broadlands Rd landfill operational consent expires in 2027. As there is additional space on site to extend the landfill after the expiry date, Council will look to renew the operational consent.

If Council is able to renew the operating consent then the requirements of the National Environmental Standards (NES) require that the Landfill operates gas destruction infrastructure, in this case this would be a gas flare.

Council is currently compiling information to enable consultation to commence, as the earlier the consent can be renewed the earlier Council could fund the gas flare and depreciate it over a longer period thus reducing operating cost.

Council holds three closed landfill consents, which cover, Stage 1 Broadlands Rd, Turangi and Mangakino closed landfills.

Physical assets

Overall the solid waste assets are in good condition and provide the desired level of service, but some of the sites need improvements to be able to cope with the peak summer period. All facilities will continue to require renewal expenditure to keep them operating to their optimum.

Forecast

Council's growth model projects that waste tonnages will be less than an additional 200 tonnes per annum to the landfill which can easily be processed at the landfill, with the limited increase not impacting landfill cell development. This is projected growth is to occur in the Taupō area with a majority of the new development in and around the Taupō Township.

Lifecycle Management Tactics

New works

New works are planned for the Broadlands Rd landfill so that the landfill can continue to meet the demand for solid waste disposal and the requirements of the Resource consent.

Apart from new cells to take waste over the consent period, the largest capital project, if the consent is renewed, will be the installation of gas wells, pipes and a gas flare. The flare will burn the methane and reduce council's exposure to the costs of the ETS.

Works are also planned for a number of the transfer station sites to enable them to cope with the summer peak periods, as well as remove Health and safety risks and prepare the sites to be included into a district waste facility management contract.

Council will continue to invest in smart technology refuse bins to provide capacity in high usage areas.

Kerbside waste & recycling service delivery is also going to be considered with a raft options prepared for council and ultimately the community to consider.

Renewal

Council replaces assets when performance is unacceptable, based on criteria of: age, condition, service breaks and complaint volumes as well as health and safety impacts.

Operations and maintenance

The operational services team has a preventive maintenance programme to optimise the life of assets and reduce renewal costs.

Disposal strategy

The Mangakino landfill is privately owned and operated as a farm. With the landowner's agreement, Council has obtained a resource consent that allows Council to rehabilitate the site if any adverse environmental impacts were detected through the monitoring program.

A portion of Stage one of the Broadlands Road Landfill is to be handed over to the Tauhara Mountain Trust, but to date Council has not been able to achieve hand over due to Trust complications in the Maori land court.

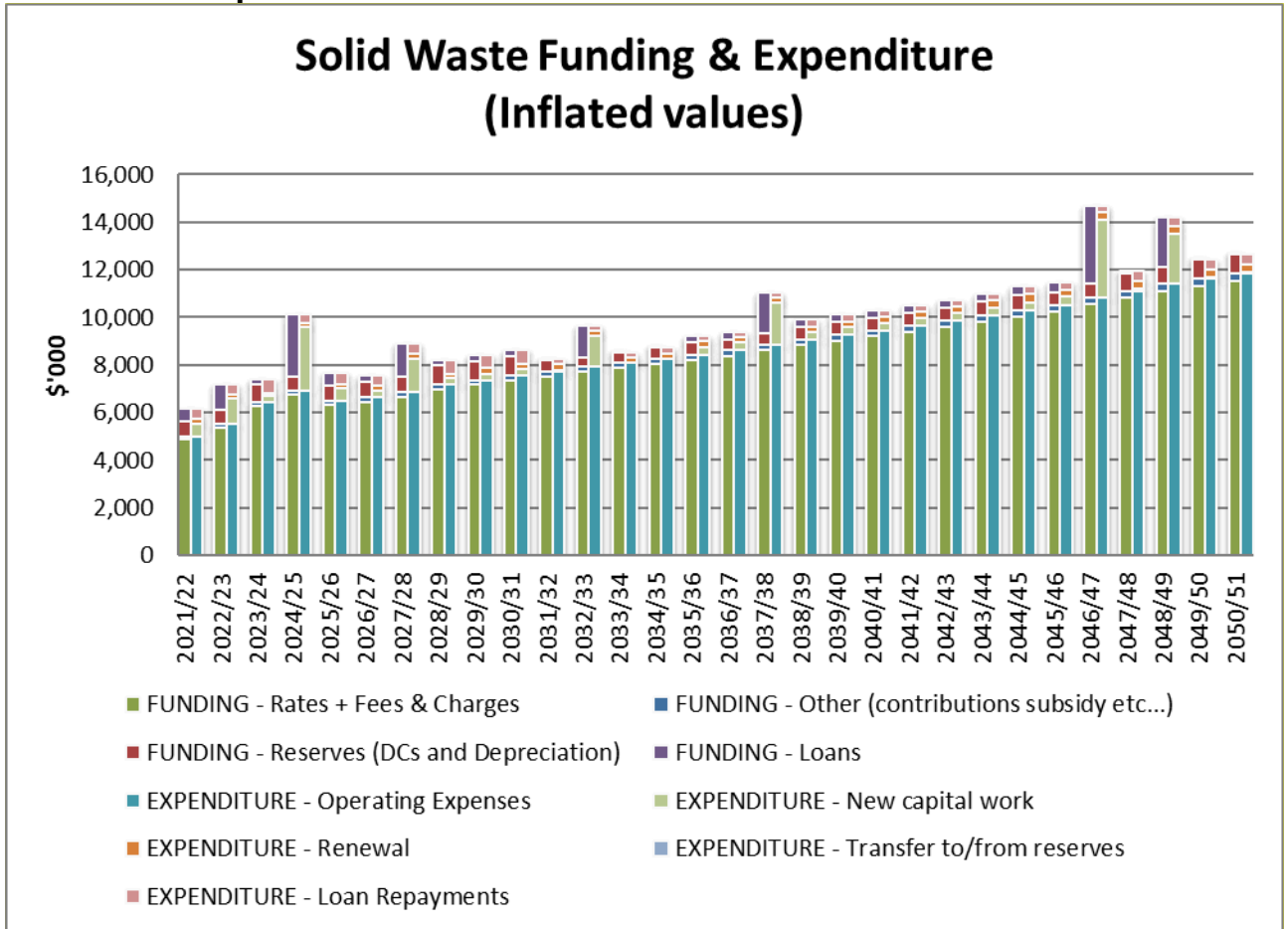
Disposal

The steel green 60L street litter bins have reached their disposal date and will be progressively updated and removed and as they are steel, they will be recycled once removed

Financials

The thirty-year financial forecast for solid waste assets and services was determined by evaluating current maintenance and renewal plans for each set of components (pavements, sheds, barrier arms, etc), and identification of new works.

Solid Waste Expenditure 2021 – 2031



New works

Capital expenditure spikes are due to new lined disposal cells being constructed at the Broadlands Rd landfill and the provision of a gas flare in year 4.

Renewal

Renewal costs vary due to disposal sites needing differing amounts of funding due to size, usage and the age and performance of the plant. As facility usage increases due to increases in population and visitors, so will the renewal funding requirements. The average renewal expenditure is budgeted at around \$100,000 per year.

Operations and maintenance

Operation and maintenance costs are budgeted at \$4.5 million per year for the next ten years. This is an increase from previous years due to an increase in ETS costs, but this increase is offset a little by sharper contract rates. ETS costs have moved from \$4-\$5 per tonne to currently \$35 per tonne of waste disposed to landfill.

Operational costs budgeted for kerbside collection services reflect the existing service delivery, these costs may change if alternative service delivery is delivered.

Changes Post Consultation

There were no changes made to the Solid Waste AMP following the public consultation process and subsequent Council deliberations.

Technical Notes

Risk management

Risk management is essential for management of Council assets so that solid waste services can be provided safely and consistently. Using a likelihood and consequence matrix to assess risks, the following high risks have been identified:

- Fire at the landfill
- Tomos - Damage to the reticulation system due to pipe fracture, disconnection of joints and/or pump failure , Damage to liner system
- External contractor failure, leading to range of other failures (for example, liner failure, failure to meet consent conditions)
- Liner failure, causing leachate to flow to ground, due to maintenance and capacity issues
- Failure to comply with resource consents, including acceptance of hazardous materials or illegal disposal of contaminants into landfill
- Unexpectedly high costs to maintain, renew or create assets, leading to failure to comply with resource consents
- Competition - Commercial operators divert waste, limiting Councils waste minimisation opportunities, and reducing revenue.
- Public safety due to access to contaminated sites, and recycling areas that are hazardous, heavy machinery movements.
- Volcanic eruption – facilities being covered with ash would hinder there operation, ash would affect operational vehicles and could affect kerbside collection operations.

All of these risks have potentially serious consequences for people in the District and for the District's economic wellbeing because they jeopardise the District's reputation and potentially, its visitor industry.

Asset management practices

Council uses a range of decision-making tools to establish its maintenance, renewal and new works expenditure, including process, analysis and evaluation techniques for life cycle asset management; information systems to store and manipulate data; and data and information from a number of sources (technical, financial, customer service).

Asset management practises for waste facilities are highly dependent of facility use and peak demand requirements.

Plan improvement programme

Councils are required to have plan improvement programmes to improve their asset management planning, and we will continue to implement our improvement plan.

International infrastructure management

The plan is an intermediate plan based on the requirements of the International Infrastructure Management Manual.

Document Control Record

Project Asset Management Planning

File No

Document Asset Management Plan Solid Waste

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1.0 INTRODUCTION

1.1 Background

1.1.1 ASSET MANAGEMENT POLICY

PURPOSE

The Asset Management Policy supports Council's long term strategic goals found in the 2021 LTP of:

- Ensure that the Taupo District remains a great place to live
- Promote economic development
- Protect our water resources and use them wisely
- Maintain the quality infrastructure that we have
- Keep rates and debt affordable

OBJECTIVE

The objective of Council's Asset Management Policy is to:

- ensure service delivery is optimized to deliver agreed community outcomes and levels of service for both residents, visitors and the environment
- optimise expenditure over the life cycle of the assets
- risks are managed appropriately
- provide a service delivery that is sustainable

PRINCIPLES

The following principles will be used by Council to guide asset management planning and decision making:

- effective consultation to determine appropriate levels of service
- Integration of asset management within Council's strategic, tactical and operational planning frameworks including corporate, financial, and business planning
- Informed decision making using a lifecycle and risk management and inter-generational approach
- Transparent and accountable asset management decision making
- Sustainable management of assets for present and future needs

CORPORATE FRAMEWORK

This Asset Management Policy links to Council's LTP, Infrastructure and Financial Strategy and Asset Management Plans. It builds on Council's strategic goals by promoting an integrated approach to the management of service delivery and across all asset classes.

STRUCTURED ASSESSMENT of ASSET MANAGEMENT PRACTICE

Council has undertaken a structured assessment of the appropriate level of asset management practice for each of the asset classes. This structured assessment follows the guidelines provided in Section 2.1.3 of the International Infrastructure Manual (IIMM 2011v4).

1.1.2 PURPOSE OF THE PLAN

Taupō District Council is responsible for managing a range of community owned assets such as the Solid Waste assets and services. To ensure assets and services are managed in an efficient and affordable way, asset management plans are required.

The size of the Solid Waste investment and importance of Solid Waste services to the community demands excellence in the management of these assets these as assets are essential to the community as we have seen through the pandemic. The community expects

the Solid Waste Assets and Services are to be managed in such a way that costs are minimised while providing the levels of service the community desires.

The overall purpose of asset management (AM) planning is:

“To meet a required level of service in the most cost-effective way (through the creation, operation, maintenance, renewal and disposal of assets) to provide for existing and future customers”.

This asset management plan (AMP) is the tool for combining management, financial, engineering and technical practices to ensure that the level of service required by customers is provided at the lowest long-term cost to the community. The plan is intended to demonstrate that Council is managing the assets responsibly and that customers will be regularly consulted over the price/quality trade-offs resulting from alternative levels of service.

AMP's are therefore concerned with outlining optimal life cycle management strategies and providing details of the associated costs. This identification of future needs, management options and cash flows provide the ability to even out peak funding demands and account for asset depreciation loss of service potential.

The main benefits derived from AM planning are:

- Improved understanding of service level options and standards.
- Minimum lifecycle (long term) costs are identified for an agreed level of service.
- Better understanding and forecasting of asset related management options and costs.
- Managed risk of asset failure.
- Improved decision making based on costs and benefits of alternatives.
- Clear justification of forward works programmes and funding requirements.
- Improved accountability over the use of public resources.
- Improved customer satisfaction and organisational image.
- A fundamental objective throughout the preparation (and future review) of this plan will be to identify potential opportunities for reductions in asset lifecycle costs.

This Asset Management Plan has been updated internally by the Solid Waste / Stormwater Asset Manager building on the existing 2018 AMP document. Data has been collated and updated by Councils maintenance engineers using the asset data system and recent asset valuation data. Contributions for this plan have also been made from relevant asset managers/engineering officers within Infrastructure Services and financial updates via the Management Accountants.

1.1.3 LEGISLATIVE REQUIREMENTS FOR ASSET MANAGEMENT PLANNING

The recent focus on AM planning, results from the Local Government Amendment Act December 2014. This Act places an emphasis on strategic financial planning and requires local authorities to:

Prepare and adopt a Ten-Year Plan (TYP) with a 10-year planning horizon every three years, taking into account asset creation, realisation, and loss of asset service potential.

In determining their long-term financial strategy, consider all relevant information and assess the cost/benefit of options.

Manage assets prudently, in the interests of the district and its inhabitants and ratepayers.

Clearly identify significant forecasting assumptions and risks underlying financial estimates.

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

The preparation and implementation of an AMP from which long-term financial strategies will be developed, is a means of TDC complying with these requirements.

Section 10 Purpose of Local Government

(1) The purpose of local government is-

- a) To enable democratic local decision-making and action by, and on behalf of, communities; and
- b) To meet 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.

(2) In this Act, good-quality, in relation to local infrastructure, local public services, and performance of regulatory functions, means infrastructure, services, and performance that are-

- a) Efficient; and
- b) Effective; and
- c) Appropriate to present and anticipated future circumstances.

1.1.4 LEGISLATIVE DOCUMENTS

There is a variety of legislation affecting Council's responsibilities with respect to Solid Waste management. In some cases, the legislation sets the standards required for the provision of Solid Waste service delivery.

Legislation / Bylaw / Policy	Key Areas of Application
Waste Minimisation Act 2008	<p>This new legislation sets out the responsibilities of territorial authorities in relation to waste management and minimisation. And sets a levy cost per tonne that must be paid to the government. (currently \$10 and set to increase).</p> <p>The Act also give power to the Govt to put in place product stewardship schemes for things such as Tyres, E-waste, beverage containers, farm plastic's, and batteries, all of which are in planning phase currently.</p> <p>Govt are flagging that the Waste Act may be reviewed in the medium term.</p> <p>Container deposit legislation will impact on what will be collected from the Kerb as well as the value of those commodities.</p>
Local Government Act 2002 (LGA) and Amendments	<p>The LGA requires: Council to periodically assess the provision of Solid Waste services in the district (Water and Sanitary Services Assessment).</p>

Legislation / Bylaw / Policy	Key Areas of Application
	<p>The planning and community consultation for future demand and consequential health and environmental impacts of Solid Waste discharges.</p> <p>Councils can set Bylaws to license waste activities to ensure that there is no harm to the environment from Solid Waste practices.</p> <p>Section 17A(1) A local authority must review the cost effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services, and performance of regulatory functions.</p> <p>Under Section 17A(4) you must consider as minimum.</p> <p>-Method of delivery:</p> <ul style="list-style-type: none"> • In house • Council CCO • Multi party CCO • Another local authority • Another person or agency <p>-Method of governance and funding</p> <ul style="list-style-type: none"> • Council • Joint committee or shared service <p>A 17A review of waste services will be undertaken between 21-23 as council considers kerbside refuse and recycling collection options</p>
Resource Management Act 1991 (RMA)	<p>Requires Councils to:</p> <ul style="list-style-type: none"> ▪ sustain the potential of natural and physical resources to meet the reasonable foreseeable needs of future generation ▪ comply with District and Regional Plans ▪ avoid, remedy or mitigate any adverse effect on the environment ▪ take into account the principles of the Treaty of Waitangi in exercising functions and powers under the Act relating to the use, development, and protection of natural and physical resources <p>The RMA establishes the functions of territorial authorities in relationship to the management of and effects of the use of land, subdivision, hazardous substances management and the management of natural hazards as matters relevant to solid Waste management.</p> <p>The District Council also acts as an asset manager and undertakes works that require compliance with the RMA. Council must comply fully with the requirements of the Act, particularly in relationship to the discharge of waste to ground, Leachate to ground and discharges to air.</p>
Regional Policy Statement (RPS) – Environment Waikato	<p>The current Regional policy statement supports regional facilitation of waste minimisation projects within the district.</p>

Legislation / Bylaw / Policy	Key Areas of Application
Health and Safety in Employment Act 1992 (HASIEA)	Responsibilities with respect to Solid Waste management include evaluating the hazards and assessing the levels of risk associated with Council assets and places of work, and taking all practicable steps to either (in this order) eliminate, isolate or minimise the hazard (s8, s9 and s10). Council needs to assess what level of risk it feels is appropriate, and what measures it considers as practicable for hazard mitigation in the context of the Act. Council has responsibilities under the HASIEA not only as a Principal (owner of Solid Waste assets and property), and Employer (of staff), but also in respect of its engagement of contractors (including consultants) and as a person in control of a place of work (a statutory concept from which Council cannot escape by contracting out)
Emissions trading (climate change legislation)	Requires waste disposal sites to purchase emission credits based on tonnes of waste disposed to landfill. With cost of credits increasing over time, Council is considering the cost impact relative to cost of a gas flare.
NES	Requires a landfill that take more than 1 million tonnes of waste to have gas destruction
Basel Convention	Is placing rules around what products can be exported overseas, such as mixed plastic, which then impact the recovered materials market.

Table 1.2 - Legislative Documents

1.1.5 WASTE MANAGEMENT & MINIMISATION PLAN

The Waste Minimisation Act 2008 requires that all local authorities have a Waste Management and Minimisation Plan.

This Document was adopted in May 2018 and included a waste diversion target of, “By 2028 increase the quantity of material (tonnes) diverted from landfill from 46% to 51%” and a number of new waste minimisation initiatives such as:

- Investigate increasing the diversion food waste from going to landfill
- Provide a community grant program for Community waste minimisation initiatives
- Continue to extend the street recycling bin coverage
- Provide E-waste recycling at the Broadlands Rd Landfill
- Advocating for product stewardship / producer responsibility for the recovery and recycling of products
- Develop a community litter awareness program (own a section of beach) and work in with National Litter programs
- Develop a best practise guide for waste handling for event managers
- Work with Industry to support the diversion of C & D Wastes
- Introduce education / awareness programs to support Council waste minimisation initiatives
- Facilitate and support the reduction of single use plastic bags in the district

The waste assessment undertaken as part of the development of the WMMP identified that Council was providing adequate service provision for handling recycling and for the disposing of refuse in the district and is protecting public health.

The Waste minimisation Act 2008, section 50.1 b requires that territorial authorities must review their Waste Management and Minimisation Plans at intervals not more than 6 years after the last review.

The date for the next review of this plan will be 2024.

1.1.6 RELATIONSHIP WITH PLANNING AND STRATEGIC DOCUMENTS

The way in which AM planning links the Strategic planning process with operations and annual plans is illustrated below.

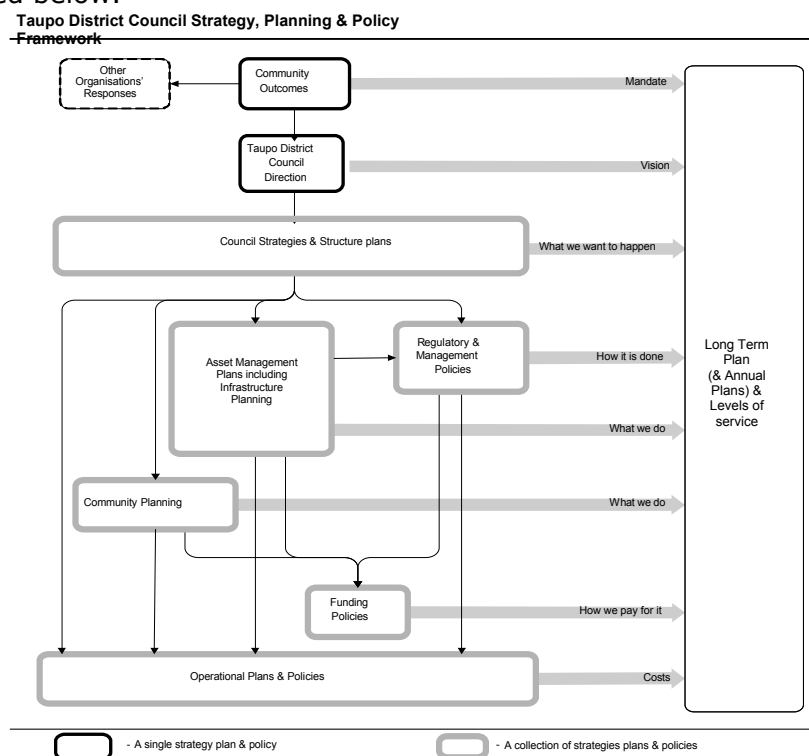


Figure 1.1: Council Planning

AMP's are tactical plans for achieving strategies resulting from the strategic planning process. AMP's are a key component of the council planning process linking with the following documents.

TYP: TYP sets the strategic direction for the Council and is the overarching planning tool which describes the activities the Council will undertake to deliver. It identifies the outcomes the community would like to achieve. It also contains the financial forecast for the next 10 years. This financial forecast is drawn from the AMP.

Annual Plan: This sets out how Council will undertake its strategic goals and details the specific activities, functions for the first three years of the LTP. The works identified in the AMP should automatically become the basis on which future LTP's and annual plans are prepared.

District Plan: The District plan is an implementation tool used to protect values and outcomes important to the community.

Legislation: The AMP must comply with all relevant legislation and provide the means of meeting legislative requirements, there has recently been new legislation introduced through the "Waste Minimisation Act 2008", this legislation comes with a raft of regulatory requirements.

Bylaws, standards and policies: These tools for asset creation and subsequent management are needed to support AM tactics.

Environment Waikato Regional Policy Statement Solid Waste: These references give the policy framework and give effect to the preferred strategic direction and a vision of what kind of Assets and services the region wants, a set of desired outcomes the region wants to achieve and a specific direction to focus the region's efforts in meeting these objectives.

Waste Management & Minimisation Plan: This plan is the guiding document in regard to the future provision of Assets and services for the Solid Waste function. The Waste Minimisation Act requires that this document is reviewed every 6 years.

Infrastructure Strategy: As required by the amendment to the local government Act, the Infrastructure strategy provides a thirty-year overarching strategy for the provision of infrastructure within the district.

Growth Management Strategy 2050: At the core of Taupō District 2050 are 12 Strategic directions. These provide the framework of interrelated policies that guide decision making and growth-related issues.

Structure Plans: Adopted and proposed structure plans outline how growth is to be managed within areas - Taupō Urban Structure Plan (TUSP), Taupō Town Centre Structure Plan (TTCSP), Kinloch Community Structure Plan (KCSP), Mapara Valley Structure Plan, Turangi and Southern lakeshore Settlements Structure Plan and the (CISP) Commercial and Industrial structure plan.

Contracts: The service levels, strategies and information requirements contained in AMPs are translated into contract specifications and reporting requirements.

1.2 Key Stakeholders

This AMP recognises the following as key stakeholders:

A stakeholder is any person or group having an **interest in the service** provided by the asset. The stakeholders in this AMP are divided into internal and external stakeholders and are shown in Table below.

Stakeholders - External & National stakeholders	Stakeholders main interest	Engagement Methods/Touch points
Audit New Zealand	Legislative responsibilities as defined in Legislation.	As per audit processes.
Local Government New Zealand/Central Government	To ensure Local Government Act is complied with (via Auditor-General). Enhance value of decision-making process.	Occasional correspondence
Ministry for the Environment	Waste levy payment and spend Best practise service delivery Product stewardship development	Monthly reporting Included in focus groups

Ministry of Health	Safety of workers in the industry That public health is being protected	Occasional correspondence Submissions if required
Wasteminz	Undertake national performance measurement Assist lobbying Best practise	Regional and national collaboration
Global recycling markets	Value of recovered materials	Monthly to understand the implications for different recycled materials

Stakeholders – External and Regional	Stakeholders main interest	Engagement Methods
Bay of Plenty District Health Board (includes Lake District Board area)	Sanitary assessments	Survey of service provision
Neighbouring Councils – Waikato & Hawkes Bay	Information sharing and best practise coordination of regional and national programs	Ongoing contact with waste staff looking at best practise
Waikato Regional Council	consenting and monitoring Regional collaboration	Ongoing contact with relevant staff. Regular contact

Stakeholders – External and Local	Stakeholders main interest	Engagement Methods
Taupo District Council ratepayers, residents, customers and visitors	Recognised as large & significant stakeholders. Reliable Waste network services at an affordable cost that have minimal environmental effects on environment.	Broad methods such as phone, service requests, general correspondence, email, meetings, face book, social media, face to face, meetings (informal) service requests.
Consultants and Contractors	Commercial opportunities Project development Maintenance contracts Project designs	Formal and informal meetings Occasional correspondence Short term agreements Offer of service.
Emergency services	Waste disposal options and routing Fire prevention and support	Contact with civil defence Training activities
Local contractors	Service provision	Day to day contact

Stakeholders – Internal	Stakeholders main interest	Engagement Methods
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Asset Managers	Implementation of infrastructure and service management activities (eg operations, demand management, maintenance, construction). Effective decision making, finance, communications, IT etc	Continual discussion via informal meetings, face to face, regular asset manager meetings.
Infrastructure Asset Management	Operation of Asset Data function for waste services	Day to day collaboration
Chief Executive	Compliance with regulations, service reliability, quality and economy	Updates when required
Communication team	Project updates, event updates	Councillor weekly update, communication plans, emails, phone, meetings etc
Community engagement team	Litter collection/ clean-up	Informal meetings, phone, email
Contract Managers	Responsible for implementation of infrastructure and service management activities	Continual discussion via informal meetings, face to face
Council committees	As per delegated authority	Regular meetings Review of service delivery

Stakeholders – Internal continued.	Stakeholders main interest	Engagement Methods
Customer services	Customer service request systems which minimise and resolve complaints/enquiries relating to the activity.	Broad methods such as phone, service requests, general correspondence, email, meetings, Facebook, social media, face to face, meetings (informal).
Elected members	Owner of assets, responsible for sustaining service levels under the LGA 2000.	Councillor weekly updates, regular meetings, email, occasional correspondence Work with Environmental portfolio members.
Financial team	Budget requirements (income and expenditure) including forecasting, annual plan, Long term planning	Spreadsheets updated regularly, phone, email, meetings, Council reporting.
Infrastructure team and manager	Input into the AMP/Activity plan, AMP policy development and Infrastructure 30-year policy	Regular meetings, open plan office discussions
Parks & Reserves team	Litter bin maintenance and illegal dumping clean-up	Regular meetings
Planners & Policy team	AMP support for Long term plans, infrastructure support for current/future district activities	Regular meetings

Table 1.3 Stakeholders

1.2.1 Large or significant Users

There are two large commercial waste companies that bring the bulk of the commercial waste to the Broadlands Rd landfill, these being Envirowaste Services and Waste Management. Both companies compete with council in the kerbside waste collection market and both offer additional waste collection over and above the Council service.

Council is aware of the potential for waste flight so keeps the disposal price at a level which maintains the revenue stream to the landfill.

There is also a benefit to the community to have these additional waste related services as this is the commercial sectors core business to provide. Council can also price incentivise diversion to assist if possible.

Council is reviewing Kerbside refuse and recycling collection service and Council may choose to rate fund the service delivery going forward. This would have a major impact on these two operators in regard to sustaining a kerbside collection service through a user pays platform.

1.3 Purpose of Ownership

Uncontrolled waste and litter has the potential to cause significant damage to property and the environment, as well as threaten the safety of sections of the community at risk. TDC has historically developed and taken ownership of Solid Waste assets to help meet the economic, safety, environmental and health outcomes desired by the community.

The Waste Minimisation Act 2008, section 42 states:

A territorial authority must promote effective and efficient waste management and minimisation within its district.

Section 43 of the Act outlines what must be considered when Councils adopt their waste plan, inclusive of collection, recovery, recycling, treatment and disposal services.

The purpose of solid waste assets is to provide a sustainable, safe, convenient, and cost-effective solid waste system for the disposal and handling of refuse and recyclables throughout the District to ensure public health.

By local authorities retaining control of disposal sites such as landfills and transfer stations, as well as collection services and education provision, Councils can continue to directly influence waste streams and take advantage of waste minimisation opportunities and ensure public health.

Councils ownership of waste facilities and contracted service delivery enabled Council to have input into how services and facilities operated during Covid-19 lockdown. Council was able to negotiate directly with its service providers to maintain the appropriate service delivery in line with Covid-rules and regulations.

Some Council's in NZ have lost control of their local waste streams and are no longer able to influence how waste minimisation programs are implemented. Diversion of material is now solely dependent on the cost of the service compared to landfill disposal with services provided with user pays, giving the community the ability to opt out.

Currently Council has control over the waste stream as the price to dispose of waste at Broadlands Rd is such that it would be uneconomic to collect and haul waste to alternatives sites. Council must continue to be aware of market forces and disposal costs to ensure that competition for waste does not undermine Council's revenue streams and intern service delivery.

By rate funding recycling Council can incentivise diversion and continue to influence behaviours around waste.

Section 17A Review

Due to the two significant operational contracts coming up to their expiry dates, Council will undertake a section 17A review between the years 21/23.

1.3.1 LINKS OR ORGANISATIONS VISION, MISSION, OBJECTIVES, GOALS

"The solid Waste AMP aims to meet the following Community Outcomes.

Economy – our communities prosper in a thriving local economy with a diverse range of rewarding employment opportunities.

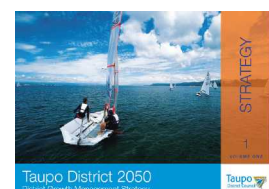
Environment - A shared responsibility for places we are proud of.

Engagement - Council is connected with its communities, advocating for their social and cultural well-being.

Community Outcomes are considered when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050. TD2050 provides a policy framework to guide where and how future growth should occur and identifies a series of actions to achieve this desired pattern of urban growth. At the core of TD2050 are the 12 Strategic Directions. These provide the framework of interrelated policies that guide decision making on growth related issues. Over time they will be achieved by putting into effect identified policies and undertaking the specific actions identified in TD2050.

The Strategic Directions, policies and actions out of TD2050 that are specifically relevant to the Stormwater activity are:



Strong Communities - Strategic Direction 5:

- Identify and plan for social and community infrastructure needs in advance of development (Policy 5.2).

Sustainable Economy – Strategic Direction 7:

- Ensure that economic activities reflect the need to preserve the natural environment that sustains the district's economy (Policy 7.1).

Integrating Land Use, Infrastructure & Funding – Strategic Direction 8:

- Manage the sequence of development in growth areas so that services are available from inception of new or expanding communities (Policy 8.1).

Leadership, Partnership and Collaboration – Strategic Direction 12

- Develop collaborative working relationships with other key stakeholders to achieve effective implementation (Policy 12.1)

Action – A 8.2

Include agreed growth assumptions in all Asset Management Plans.

Action – A 8.3

Ensure Asset Management Plans support the patterns of development defined by TD2050 are aligned with the LTCCP, proposed District Plan and funding policies.

The objectives of this AMP are to:

Demonstrate responsible stewardship of solid waste assets by TDC on behalf of its customers and stakeholders

Act as a vehicle for communication with all parties with an interest in TDC asset management planning practices

Provide detailed financial information and forecasts based on best available information and manage environmental and financial risk of any asset failure.

Set out the minimum legislative and health requirements to be met by the assets

Identify issues, weaknesses, and deficiencies in asset management data, systems and processes relating to solid waste

Provide a structural framework on which subsequent versions of the plan can be developed

Provide detailed improvement tasks to improve the confidence in the outputs and quality of the asset information.

Manage the assets in terms with the amendments to the local government Act.

Reduction in the volume of waste to Landfill can be achieved by:

Reduction	"making less rubbish"
Reuse	"using products in their existing form for their original purpose or a similar purpose"
Recycling	"reprocessing waste materials to produce new products"
Recovery	"extraction of materials or energy from waste for further use or processing"
Treatment	"subjecting the waste to any physical, biological or chemical process to change the volume or character of that waste so that it may be disposed of with no or reduced significant adverse effect on the environment"
Disposal	"final deposit of waste on land set apart for that purpose"

TDC has already identified several important requirements, performance measures and targets for its solid waste assets. These have been included in the following documents:

Long Term Council Community Plan (LTP) 2021 – 2031, Waste Management and Minimisation Plan 2021, TDC District Plan, Annual Plan and other Council documents including 'Vibrant and Sustainable Taupō Report and the TDC Economic Development Strategy', TDC Infrastructure strategy.

1.3.2 ASSET MANAGEMENT'S CONTRIBUTION TO CORPORATE OBJECTIVES

Council's goal, as set out in the TYP relating to Solid Waste Assets and Services is:

To protect and safeguard the Taupō District environment by ensuring refuse is managed and disposed of in a safe, efficient and sustainable manner that maintains natural and aesthetic values.

1.4 Assumptions

1.4.1 FINANCIAL

The following financial assumptions have been made. Further information can be found in the TYP document.

Assumption	Potential risk	Mitigation measure
Asset Revaluations completed June 2021 have been used as the basis for asset values.	Time between AMP completion and last revaluation	Council undertakes an annual price variance assumption report
1. Investment Returns eventuate as predicted.	Not the required funds to undertake capital works	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
2. Interest Rate on borrowings remains as predicted within the financial model.	Not the required funds to undertake capital works	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
Expenditure of capital projects occurs and estimated debt levels are as predicted	Potential under performance in capital spend reflected in Council revenue	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
3. No allowance has been made for inflation adjustment within this AMP. The source of funds for the future replacement of significant assets is stated in the revenue and Financing Policy.	Under funding of cost centre	Finance team make allowances for GST in funding plan and policy
4. The useful lives of significant assets are as per the accounting policies documented in the TYP. Depreciation is charged at 50% for the first year and 100% in subsequent years.	Asset lives have been incorrectly calculated meaning a funding shortfall	Council has asset depreciation checked externally. Asset lives are compared to the latest asset information nationally
5. Levels of service and funding has been based on historic data	The community desires change to level of service which are not reflected in this document.	Council undertakes three yearly satisfaction surveys. Council undertakes pre LTP consultation to gauge the community for different service level needs. Council undertakes consultation with the community as part of the development of this LTP document
6. Allowance has	The level of allowance for	Councils LTP and annual

Assumption	Potential risk	Mitigation measure
been made for vested assets	vested assets is incorrect.	plan spend can be adjusted annually to meet Councils revenue and finance policy
9. Assume that the revenue received from Rates is as per expected.	A shortfall in rates funding	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
10. Assume revenue from recovered materials stays the same	An increase in unbudgeted operational cost	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy.
The current cost of ETS credits remain at current levels	ETS cost change requiring additional funding through gate charges and or rates	Council does have the ability to increase gate charges to cover increases in operational costs at district facilities or install a gas flare to reduce emission exposure
Kerbside and facility operators don't agree to role-over clauses in current operational contracts	Increase in operational costs of service provision	Council does have the ability to increase gate charges to cover increases in operational costs at district facilities and bag prices at Kerbside
Council decides to provide kerbside services funded by rates to remove the ability for the commercial market to undermine service delivery	An increase in rates that may be politically unpalatable	Need to provide elected members with comprehensive understanding of market drivers and reasons for a funding recommendation
Product stewardship programs reduce councils funding requirements for service delivery	Programs are not implemented	Council does have the ability to increase gate charges and rate charges to cover increases in operational costs at district facilities and bag prices at Kerbside
The current landfill operational consent expires in 2027, it is assumed that a new operational consent to operate the site after this time will be granted	The consent is not granted, requiring upgrading of the site to enable bulk loading of material to a landfill out of the district	Costs of retrofitting the Broadlands Rd site have been included in the AMP, as well as the cost of transport and disposal of waste to another facility. Negotiations regarding extending the site are ongoing

- NON FINANCIAL

Assumption	Potential risk	Mitigation measure
1. Assume that growth is going to occur as per the Growth Model predictions.	Changes in growth will impact capital and operational spending	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
2. The Broadlands Rd operational consent requirements will remain constant.	Changes to disposal requirements through the resource consent will require an increase in operational and capital expenditure	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy. Operational contracts can be updated to reflect consent conditions
3. Contractors will be available for development and construction of projects.	A shortage on contractors for project completion will mean an increase in project cost	Council can extend tender periods to enable contractors more time to schedule in works.
4. There will be continued growth in public participation in the democratic process and Council will need to respond to this growth.	Increased growth in participation could result in changes in levels of service delivery.	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
5. There will be no unforeseen legislative changes or central government policy changes that will affect this asset.	Changes in legislation could impact on the funding levels	Changes in legislation have an implementation period to enable Councils to plan.
6. Economic and labour market constraints may have a direct effect on recruitment.	If Council is unable to recruit to the required level to complete the works program for the year this could have impact on Councils credibility	Council may have to hire consultants to provide support; this could increase the cost of service delivery which will need to be funded through the annual plan process.
7. That Councils resource consents for its activities will be renewed as required.	The renewal of resource consents will depend on Councils prior performance in meeting the conditions of the existing consent and any changes in legislation	Council works closely with the Regional council to achieve consent compliance. Compliance is also a staff performance criterion, so Council is focused on consent compliance and it is considered that any consent related issues can be resolved.
There are ongoing markets	Recovered materials	Collection contracts would

Assumption	Potential risk	Mitigation measure
for recovered materials	markets collapse meaning current collected materials go to landfill. Changes to collection contracts and public unhappiness	need to be renegotiated. And consultation with the community around recovered materials would need to be undertaken.
Covid -19 impacts to waste volumes	A reduction to waste to landfill resulting in a reduction of operating revenue	Council has estimated a 10% reduction of waste to landfill, due to drop in economic activity, operating revenue shortfalls can be mitigated through gate and rate increases, or reduction in service levels

1.5 Significant Negative Effects to Providing the Solid Waste Service

In general, providing Solid Waste services to the community has both public health and environmental benefits.

There is however negative effects in providing this service, these include;

- The cost of providing the service on rate payers, especially smaller communities. (cost would still apply if provided by commercial services providers).
- The cost of keeping up with ever increasing environmental standards requiring significant capital investment. (Gas flare, ETS costs)
- The potential for commercial competitors undermining the financial structure thus viability of the service provision
- Potential negative environmental outcomes from owning a landfill or providing collection services.

Mitigating Measures

- By Council staying in the provision of waste services, Council can continue to influence the price charged to the community and thus keep waste disposal affordable
- Cost of adhering to changes to environmental services would still need to be passed on to the consumer whether the service was provided by Council or the commercial market, with Council provided service Council can chose the payment option, rates or user charges.
- In a Pandemic situation Council can play a leadership role in making sure services cater for essential needs.
- Council funds the cost centre partially through gate charges and partially through rates so that the cost of the service delivery is spread through to non-resident rate payers and by partial rate funding, thus Council reduces the opportunities for commercial competition.
- The landfill has been engineered to incorporate a three-layer liner system to prevent harmful leachate escaping and entering the ground water. Regular inspections are also undertaken to monitor for leachate springs or breakouts. The refuse collection contractor is required to cover all loads that are not collected in compaction vehicles to prevent spillage of materials.

- Council is investigating the viability of flaring the methane produced from the site to limit Councils ETS exposure, Council would have to pay for residual ETS exposure to dispose of waste at an alternative disposal site.

1.6 Asset Management Plan Complexity

1.6.1 OUTLINE OF APPROACH

Basic asset management functions are those which produce an AMP based on providing current levels of service and meet minimum legislative requirements by supporting a long term (10 year plus) cash flow forecast and accounting for changes in the service potential of assets. Basic AMPs define existing levels of service and identify costs based on renewal accounting principles.

Advanced AMP's identify processes to optimise lifecycle AM strategies and provide a greater degree of confidence in the resulting cash flow predictions. Advanced AM functions include predictive modelling, risk management, optimised renewal decision making (ORDM) and service level reviews.

The Solid Waste Asset Management Plan 2021 follows the IIMM framework and it has been developed and collated internally by the Solid Waste / Stormwater Asset Manager. It is considered that this iteration of the Solid Waste Asset Management Plan reflects a "intermediate" level of development.

The development of this Amp considers the requirements of the amended Local Government Act.

1.6.1.1 AMP REVIEW BY COUNCIL

The involvement by councillors, including the reviewing and approving of the AMPs is briefly outlined below:

Workshops are held with the council for group of activities including AMPs which gives them following information

- What we do
- Key issues
- The service(s) we provide
- Levels of service, performance measures and targets
- Key projects over the next three years
- Who pays
- Fees and charges
- Financials
- Capital expenditure (including renewals)
- Operating expenditure
- Draft AMPs are provided to councillors to view
- Council finally adopts the AMP

1.6.2 LIMITATIONS OF THIS AMP

As it currently stands, this AM Plan has limitations in the following areas:

- Asset data for the Solid Waste assets needs to be incorporated into the Three Waters Asset Finda database to allow for more robust renewal planning.

1.7 Organisational Structure

Taupō District Council has a flat organisational structure and is structured in order to deliver the key strategic directions of the Ten-Year Plan.

Solid Waste service provision is provided by the Infrastructure Services Group.

Asset Management Planning is undertaken by the Asset Manager Storm Water / Solid Waste, who is also responsible for updating the Solid Waste Asset Management Plan and Resource Consent requirements and this position reports to the Infrastructure Manager. Asset management planning is undertaken as part of the asset management team made up of the Asset managers for Water and Wastewater, Storm Water, Solid Waste Transportation, Parks and Property.

Day to day Maintenance is undertaken by the contracts Engineer who is responsible for the administration of the solid waste contracts and reports to the Asset Manager Storm Water / Solid Waste

Capital works identified in the AMP are undertaken by the Asset Manager or Network engineer or passed on to the Special Projects team in cooperation with the Asset manager depending on work priorities.

These staff members are located on the same floor of the Council office building and work closely together to make sure that there is a coordinated approach to the provision of Solid Waste services throughout the district.

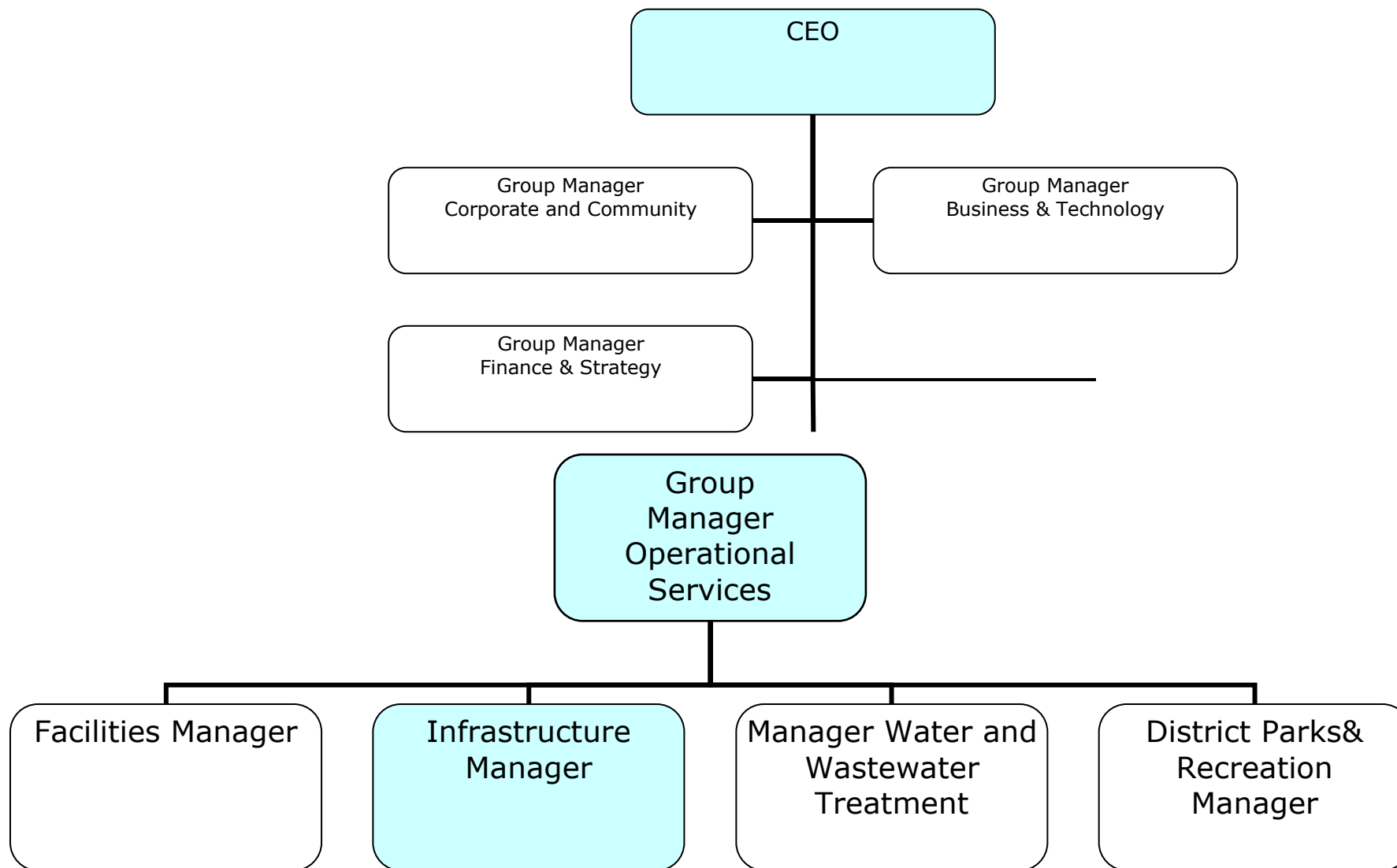
Consultants are employed to assist by providing professional services as necessary. The organisational structure of the Infrastructure Services Group is illustrated in the following figures.

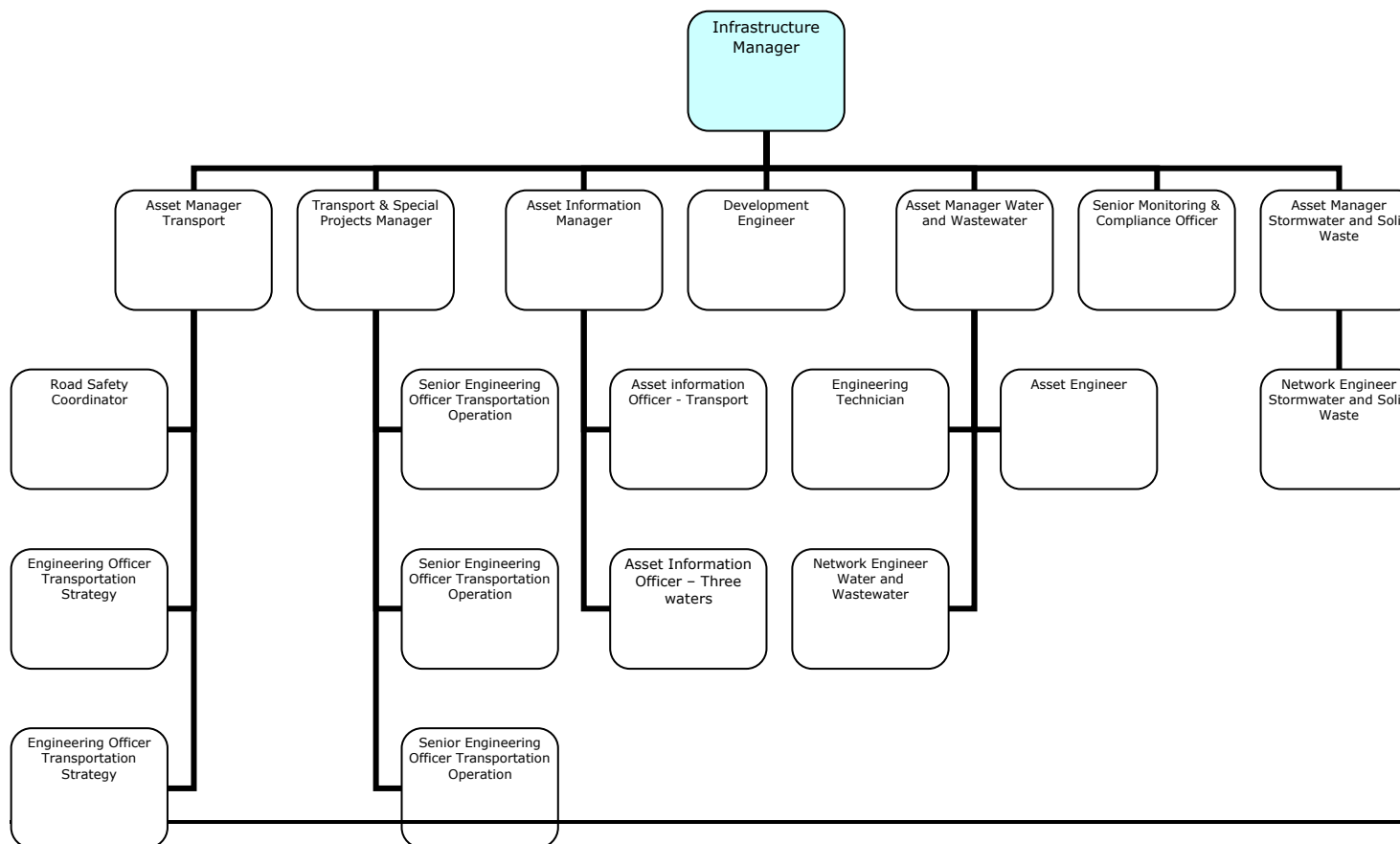
In addition, the Solid Waste services activity is able to draw on the following in-house resources from the Corporate & Infrastructure Group:

- The Finance & Administration Team who is responsible for the development of the Asset Management System and Asset Management Plan financials; and
- The Environmental scientist for Resource consent support

The organisational structure is illustrated in the following figures.

TDC Management Structure





Infrastructure Team Organisational Structure as at May 2021 (Who does what & How is it managed)

2.0 DEFINITIONS

Accredited Product Stewardship Scheme	An accredited product stewardship scheme is a scheme has been assessed against criteria in the Waste Minimisation Act and has been accredited by the Minister for the Environment under section 15 of the Act. Those running these schemes may apply to the Minister to have the scheme accredited.
As-built	Refers to a survey or drawing of the actual assets that have been constructed, recognising that they can sometimes vary from what was planned before work started on site. As-built drawings are needed to ensure that asset information systems contain data on the asset as it has been constructed, not how it was planned in theory.
Biosolids	Biosolids are a by-product of sewage collection and treatment processes, which can be beneficially reused as a soil conditioner.
Critical Assets	Those assets with a high consequence of failure. They are often found as part of a network, in which, for example, their failure would compromise the performance of the entire network. (Landfill)
Development Contributions	Funds paid, typically by developers, to local authorities to help with the cost of growth. These contributions are authorised by Part 8 of the Local Government Act 2002.
Diverted material	Diverted material means any thing that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Extended Producer Responsibility	Producer responsibility puts the onus on businesses to look for, and capitalise on, opportunities for resource conservation and pollution prevention throughout a product's life cycle.
Green Sword	Is the Policy China has made regarding the flow of recyclable materials into the country, and setting limits for contamination
Hazardous waste	Hazardous waste refers to materials that are flammable, explosive, oxidising, corrosive, toxic ecotoxic, radioactive or infectious. Examples include unused agricultural chemicals, solvents and cleaning fluids, medical waste and many industrial wastes.
Landfill	A landfill is an area used for the controlled disposal of solid waste.
Organic waste	Organic waste includes garden, kitchen waste, food process wastes, and sewage sludge.

Product Stewardship	Product stewardship requires producers, brand owners, importers, retailers, consumers and other parties to accept responsibility for the environmental effects of products – from the beginning of the production process through to, and including, disposal at the end of the product’s life. It moves some responsibility for waste to those involved in the production and supply of the product, and indirectly to the consumer by ensuring any residual waste costs are reflected in the purchase price. It therefore provides incentives for better product design and other measures to reduce waste and resource costs.
RTS	Refuse Transfer Station, Taupō District Council has five RTS, located at Mangakino, Kinloch, Turangi, Kuratau and Whareroa.
Solid waste	Solid waste is all waste generated as a solid or converted to a solid for disposal. It includes wastes like paper, plastic, glass, metal, electronic goods, furnishings, garden and other organic wastes.
Special wastes	Special wastes are those wastes that cause particular problems at disposal and which may need special management to effectively recover material or ensure proper disposal. Examples of wastes include used oil, used tyres, end-of-life vehicles, batteries, end-of-life electronic goods and good with specific materials such as some plastics.
TDC	Taupō District Council.
Trade waste	Trade waste refers to liquid wastes generated by business and disposed of through the trade waste system. Trade waste includes a range of hazardous materials resulting from industrial and manufacturing processes.
User Pays	Places the cost of the service provision onto those that use the service i.e. one pays for the refuse sticker to place on the rubbish bag for it to be collected or having a gate charge at waste disposal sites.
Vested Assets	Assets that are transferred to a public entity at nominal or zero cost. Typically, this might result from a situation where a developer has installed assets as part of developing a site and passes them to a public entity to manage, maintain, and deliver services through. The fair value of these assets has to be determined as they are integrated into the organisation's asset information system so that they can be appropriately managed.
Waste Flight	Where waste moves from one Landfill or transfer station to another due to pricing incentives.
Waste hierarchy	The waste hierarchy orders preferred waste minimisation and

management methods (listed in descending order of importance):

- reduction
- reuse
- recycling
- recovery
- treatment
- disposal.

Waste minimisation Waste minimisation refers inclusively to the reduction of waste and the reuse, recycling of waste and diverted material.

Waste reduction Means lessening waste generation, including by using products more efficiently or by redesigning products; and, in relation to a product, lessening waste generation in relation to the product.

3.0 ACRONYMS / ABBREVIATIONS

AM	Asset Manager
AMP	Asset Management Plan
AMS	Asset Management System
Audit	Audit New Zealand
CAPEX	Capital Expenditure
CCTV	Closed circuit television – common method of inspecting pipes
CEO	Chief Executive Officer
Council	Taupō District Council
CSA	Control Self Assessment (Risk Management)
DC	Development Contribution
ES	Environmental Services Group at Taupō District Council
GIS	Geographical Information System
GMS	Growth Management Strategy
IPG	Infrastructure and Parks Group at Taupō District Council
LDS	Land Disposal Site
LGA	Local Government Act
LoS	Level of Service
LTP	Long Term Plan (Council’s ten year planning document formerly the Long Term Council Community Plan – LTP)
OPEX	Operational Expenditure
PRAMP	Property Asset Management Plan
RMA	Resource Management Act
RPS	Environment Waikato Regional Policy Statement
SAMP	Solid Waste Asset Management Plan
SLG	Senior Leadership Group (CEO, 2 nd Tier Managers and selected 3 rd Tier Managers)

SMP	Stormwater Management Plan
SWAMP	Stormwater Asset Management Plan
SWAP T24	Solid Waste analysis protocol Track 24
TDC	Taupō District Council
TRAMP	Transportation Asset Management Plan
WMMP WRC	Waste Minimisation and Management Plan Waikato Regional Council
WW	Wastewater
WWAMP	Wastewater Asset Management Plan
WWTP	Wastewater Treatment Plant

4.0 ASSET DATA

4.1 Asset Summary and Valuation

Taupō District Council (TDC) is responsible for the management of Solid Waste assets with a replacement value of approximately \$3.895 million (June 2017). The Solid Waste asset consists of a number of components:

Councils Finance system has a list of Solid Waste assets which is used for valuation purposes, this list is site specific and can be manipulated to identify assets of greatest value. The value of assets is then considered as part of the maintenance and renewal strategy.

Council is currently compiling a more detailed data base of Solid Waste assets to store condition and performance data and this is one of the improvement tasks. Currently age and value information is kept in the Finance system and maintenance and renewal expenditure is identified through on site condition assessments.

The data held can be manipulated down to facility level, so council can determine costs down to each transfer station.

The asset lives are also held and this information is utilised for valuation purposes. On site condition assessments of assets are undertaken to update asset life data.

Renewal expenditure is analysed along with onsite condition assessments to determine remaining useful life of assets.

Council has Asset Finda for the three waters data needs and to date only the Litter Bin asset data has been included. Solid Waste data is programmed to be included into this data base once the back log of three waters information has been uploaded.

	Solid Waste Facilities and Assets of TDC
Facilities	<ul style="list-style-type: none"> • Broadlands Road Landfill & Resource Recovery Centre • Broadlands Road Closed Landfill • Turangi closed landfill • Mangakino closed landfill (not Council owned) • Kinloch Transfer Station • Mangakino Transfer Station • Omori Transfer Station • Turangi Transfer Station • Whareroa Transfer Station • Street Litter & Recycling Bins • Big Belly Solar compaction bins

Assets within the Facilities	<ul style="list-style-type: none"> • Buildings • Plant • Equipment • Fencing and gates • Roothing • Hard stand areas • Utilities • Wheelie bins • Landfill cells • Haulage Bins • Barrier arms • Weighbridges / program software • printers • Lighting • Pit barriers • Stormwater pipes • Leachate pipes, pump, telemetry
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All recorded components have been valued in terms of their replacement and depreciated replacement value. The valuation process has been performed in accordance with generally accepting accounting standards (NZ IAS16 Property, Plant and Equipment) and with NZ local authority asset valuation practices (NZ Infrastructure Valuation and Depreciation Guidelines).

The basic approach has involved:

- a) Preparation of the valuation databases from the various sources of information supplied by TDC.
- b) Adjustment of asset quantities, materials and techniques to reflect an optimum (least cost) modern equivalent replacement that offers the same level of service as that currently provided.
- c) Calculation of optimum replacement cost (ORC) by multiplying asset quantities by appropriate unit construction cost rates and including an allowance for other costs (site establishment, professional fees and financial charges).
- d) Prediction and assignment of economic and remaining lives.
- e) Calculation of Optimised Depreciated Replacement Costs (ODRC) by deducting an allowance for depreciation, taking into account age, remaining life and residual value.

4.2 Asset Component

4.2.1 WASTE DISPOSAL AND RECOVERY SITES

4.2.1.1 Description

Taupō District Council manages 5 Refuse Transfer Stations and the Broadlands Rd landfill.

Waste disposal / Recovery site	Total Value
Broadlands Rd Landfill	\$3,459,830.33
Turangi	\$188,811.46
Kinloch	\$69,209.72

Mangakino	\$90,731.22
Omori	\$55,460.00
Whareroa	\$30,791.99
TOTAL	\$ 3.895 mil

Council also manage three closed landfills, at Broadlands Rd, at Turangi RTS site and on private land in Mangakino.

Council finance system holds assets data on all 6 refuse facilities and data can be disaggregated to reflect each location. The asset data is reviewed annually with condition surveys to determine future renewal and maintenance requirements

Asset Finda holds the street litter and recycling bin data and can be componentise the data, it holds all maintenance and renewal data and can provide renewal dates based on a number of factors such as age, condition and criticality.

4.2.1.2 Capacity/Performance

The performance of the refuse disposal and recovery sites is generally assessed via resource consent compliance, but also by their ability to handle daily refuse and recovery operations. An annual report is prepared for the Broadlands Rd Landfill as a requirement of the resource consent which also has a peer review requirement under the consent.

The Broadlands Rd Landfill is governed by an upper resource consent limit of refuse to be disposed of per year being 50,000 tonnes of refuse as measured over the weighbridge. The current annual refuse tonnage is in the vicinity of 25,000 tonnes. The operating consent for the site expires in 2027, but there is another 20 years filling available, so negotiations are under way to determine consent conditions as well as consultation with the neighbours. One of the neighbours is Tauhara Middle 15 trust.

Site capacity will also be impacted by the need to flare gas from the site as the ETS costs are forecast to climb, (currently emission cost is \$35) but Council should not invest in a flare until we have some certainty around the consent renewal.

The cost of infrastructure to flare gas within the time frame of the current operational consent which expires in 2027 is not cost effective, although Council would be able to reduce the impact of the landfill on the environment. The recommendation to council regarding the gas flare will be to renew the consent as soon as possible to make sure that any gas expenditure can be depreciated over a longer consent period. Currently the ETS legislation does not provide any financial compensation for gas flared after the site stops receiving waste.

If council is able to obtain a new operational consent, then there is other legislation (the NES) that imposes a condition, that if the site will take more than 1 million tonnes of waste then it must incorporate emission reductions in the form of a flare.

Council is considering the impact of that legislation, as the current capping material on the landfill makes the gas infrastructure less efficient which impacts the amount of emission costs long term. This issue must be considered when determining the future viability of the site compared to trucking waste to an alternative site.

If Council is unable to obtain a new consent, or the economics determine that it is cheaper to truck waste out of the district, then the site will be retrofitted to allow for bulk haulage of material to an alternative disposal site.

Capacity of the peripheral recovery operations at Broadlands Road is based around the ability to handle daily volumes of different materials. The landfill footprint does have some flexibility to store or move site operations to suit volumes. Operational contracts are set up to enable material volume flexibility.

Transfer station capacity and performance is based around the ability of the sites to handle daily refuse and recovery volumes. Refuse is being placed into transfer skips so capacity for refuse at district sites can easily be adjusted by increasing the frequency of empties at the sites by the transfer truck.

A number of the district Transfer stations have not been upgraded for some twenty years and are struggling to cope with the peak holiday period. The main issues are recycling volumes and handling, the provision of running water at two sites and vehicle movements around the sites. Contractor and public health and safety are also two major drivers with the sites still incorporating the use of 44-gallon drums for the storage of materials which must be then manhandled on site. The aim is to incorporate large bins which could be transported to either straight to the market or a bulking station.

Council has recently made improvements to the Kinloch RTS where the recycling disposal area has been upgraded and the site has moved to bulk loading of recyclables as materials slide down chutes into large skips, meaning fewer vehicle movements and the elimination of manual handling of recyclables.

Council varies the opening hours at district facilities to cater for the increase volumes over holiday periods and in the summer. Council incentivises recycling by making waste disposal user pays, and recycling rate funded (so perceived free) to enable the community to divert material from the waste stream.

Works orders and service requests are analysed to identify if maintenance issues are determining the need for future renewal or capex expenditure, contract reports provide details of works as well as preventative maintenance. Expenditure is then compared with renewal and condition assessments which then form planned expenditure and projects.

As the waste facilities cater for large numbers of public and commercial vehicle movements, and the sites operate in harsh environments due to refuse dust, monthly site checks are undertaken to determine if maintenance or renewal is needed. Site contractors keep the Asset Manager informed regarding maintenance requirements during the monthly contract meetings.

The impact of the China green sword initiative has meant that Council is currently unable to recycle plastics with a recycling symbol, from 3-7 as there is currently limited market for these materials.

Fibre is the next commodity to be impacted with \$\$ returns for material now turning into costs for the collector. In fact, most materials have been impacted with the price of commodities plummeting.

Government have reviewed Kerbside service delivery and have identified that plastic's numbered 1,2 and 5 currently have a viable market. Council has been negotiating a two-year contract extension of the kerbside collection contract and have been successful in extending the collection of plastic to incorporate number 5.

Health and Safety of staff and the public is also a major driver for asset renewals at the districts waste facilities. Monthly Health and safety meetings are held, and sites are analysed for compliance.

The three closed landfills are assessed against each site closure consent conditions which may require remedial works in certain circumstances.

Council also undertakes satisfaction surveys where the community is asked to provide feedback on the services and facilities that Council provides.

The operational consent for the Broadlands Rd Landfill expires in 2027, so planning around remaining capacity at the site has been undertaken to guide cell development. By undertaking site surveys, it has been determined that there is an additional 20 years of landfill space available at the south of the site after the expiry of the consent.

Based on Cell 2D tender, the rough order development cost for the landfill south of 2D and 2C1 would be 6.8M (including 20% contingency). This equates to around \$11.30/m³ of void.

While the development cost is higher than the average from previous cells of around \$6.20, it is still highly economic compared to the landfill charges or cost of transferring waste out of the district. Primarily the higher unit cost arises from the very large cut to waste required in the southern ridge, so any strategy that can use this material elsewhere will aid the overall economics.

The impact of gas infrastructure and the cost of ETS emissions will impact the above void space cost.

4.2.1.3 Condition

The condition of the Solid Waste facilities is assessed as required or at a minimum of every three years but in general terms condition of assets at facilities can be assessed on a monthly basis as the network engineer and the asset manager undertake regular site inspections during contract and site meetings.

The condition of the Solid Waste assets relates to their ability to perform to their required levels of service.

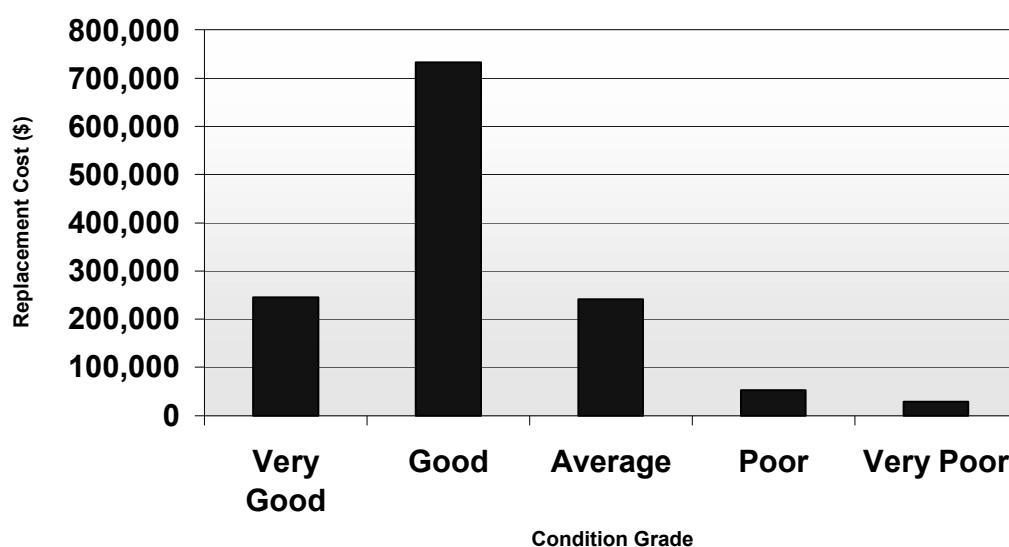
The assets are inspected to:

- Identify the individual elements as defined in the proposed National Guidelines.
- Determine the quantity of each element.
- Assign a condition grade to each element based on a visual condition assessment;
 - Grade 1 = very good
 - Grade 2 = good
 - Grade 3 = average
 - Grade 4 = poor
 - Grade 5 = very poor
- Assign a remaining life to each assessed element.
- Determine a replacement cost for each element.

Results from the analysis show that the solid waste assets are generally in good condition. Approximately 75% of the elements are in very good or good condition. The remaining 25% are in average to poor condition.

Asset condition can change rapidly and seasonally due to the change in facility usage over the summer period. The landfill and RTS sites can suffer varying amounts of "Wear and tear" from use by the public and hence monthly condition assessments are undertaken. The weather can also play a significant part on Solid waste asset conditions.

Figure 2:1



4.3 Asset Confidence Rating

The asset valuation assigns confidence ratings to the source data and unit cost rates and to other items as appropriate. The overall confidence rating for the Solid Waste Asset is **B**.

Grade	Label	Description	Accuracy
A	Accurate	Data based on reliable documents	±5%
B	Minor inaccuracies	Data based on some supporting documentation	±10%
C	Significant data estimated	Data based on local knowledge	±15%
D	All data estimated	Data based on best estimate of experienced person	±30%

Table 1: Key to Asset Confidence Rating

Attribute		Confidence Grade	
	D	C	B
			A

Asset data								
Physical properties								
Location								
Age								
Condition								
Performance								
Deterioration rate								
Financial data								
<u>Opex</u>								
Operation costs								
Maintenance costs								
Asset management costs								
Interest rates								
Depreciation								
<u>Renewals</u>								
Unit rates								
Project scope								
Cost estimates								
<u>Capital works</u>								
Demand forecast								
Project timing								
Project scope								
Project costs								
Project prioritisation								

Table 2: Summary of Asset Confidence Ratings

Quality Assurance Process for Asset Data

Assetfinda will be utilised for the storage of asset data for the Solid Waste cost centre once the Three Waters data update has been finalised.

Asset data will be recorded for each individual facility, landfill and RTS sites. The uploaded data will be compared with data stored in the NCS data base currently with any differences confirmed in the field.

Ongoing site assessments undertaken by site operators and the Solid waste contracts manager and asset manager will continually upgrade condition data in Assetfinda.

Once Council upgrades Assetfinda to version four, Council will be able to undertake and make condition changes in the field using Assetfinda Mobile.

5.0 LEVELS OF SERVICE

5.1 Introduction

A key objective of this Asset Management (AM) plan is to match the level of service provided by the asset with the expectations of customers. This requires a clear understanding of customers' needs, expectations and preferences. The levels of service defined in this section will be used:

- to inform customers of the proposed type and level of service to be offered
- to enable customers to assess suitability, affordability and equity of the services offered
- as a focus for the AM tactics proposed to deliver the required level of service
- to measure the effectiveness of this AM plan
- to identify the costs and benefits of the services offered

Service life Of Network and Services

The RTS sites throughout the district are not governed by resource consents but they along with the landfill operate in a commercial marketplace. The market could choose to operate similar facilities in the district and compete on price for the handling of waste related materials which may then have an impact on the service life of Councils waste facilities outside of the service life of the actual assets.

The Landfill does have the capacity on site to operate for longer than the current consent term which expires in 2027. Council is currently working on a consent renewal to provide certainty around the term that Council will operate the site. This then will determine if the requirement to have gas destruction in the form of a Flare will make the site cost effective to operate. The provision of a gas flare would also assist Council in reducing the cost of ETS emission credits.

It is estimated that there is opportunity to provide an additional twenty years filling if the site was excavated appropriately and consent was obtained to do so. The Leachate pipe from the landfill to the sewer network is currently under sized and will need to be upgraded.

The Landfill contract has recently been rolled for a term of two additional years with 1 further year roll over available. A new contract to operate the site will be dependent on getting a new landfill consent. If no consent is obtained, then Council will need to retro fit the transfer station area to enable bulk loading of trucks to an alternative disposal site out of the district, and the operational contract will be aligned to achieve this outcome.

As every tonne of waste transported out of the district will come at an additional cost council will need to focus on reducing and recycling as much of the material as possible.

The five transfer stations have an unlimited service life if the required renewal works are undertaken. But the Whareroa, Omori and Mangakino sites need an upgrade as very little has been done to these sites over the last twenty-five years. Upgrades will be focused on health and safety regarding handling of recovered materials, as well s providing a water supply and power to the Omori site.

Council has recently upgraded the Kinloch and Turangi facilities to allow for bulk loading thus reducing the manual handling of drums full of glass and other recovered materials.

Refuse and recycling collection services can easily be extended as urban development expands around the district.

The kerbside collection contract is also up for renewal, with any new contract having to consider, developments in the recycling market, waste levy implications, product stewardship outcomes as well as consider how waste will be contained, such as bins or bags.

It has been invaluable over the time of Covid-19 that council employed a bag collection service as it meant that there was minimal handling of materials and the community did not have to change to another service delivery model to get rid of their waste. Waste disposal at district facilities was only permitted if it was in a pre-paid bag or a bag with a council sticker on it, meaning a contactless process was enabled without a change in operational procedures.

Refuse service delivery contracts are tendered on a measure and value basis which allows flexibility for Council and contractors to cater for changes in material volumes. It is envisaged that any new collection contract will incorporate Council sharing more of the risk of changes in the recovered materials markets.

Contractors are required to get recovered/recycled materials to market and not able to dispose these materials to landfill. Currently the contractor is required to cover the risk of market fluctuation of recycled and recovered material prices. This section of the contract may have to change with the common practise now being a risk sharing process where council and the contractor are both impacted by rises and falls in the return values of commodities.

The options available under a review of kerbside services is wide and varied with different receptacles to collect different commodities as well as possible changes to collection frequencies available.

Central government have recently undertaken a review of kerbside service across the country and are looking to local government for consistency across the country. They have come up with a preferred methodology, which incorporates a three-bin system, food collected weekly, recycling fortnightly and waste fortnightly. It is considered appropriate to collect material fortnightly if the smelly food material has been removed.

A raft of service delivery options will be put to council as part of the review process.

Community waste education programmes are flexible to enable them to focus on the current issues facing the community while supporting waste minimisation and reflecting current services.

LGA Compliance

Efficiency, effectiveness, appropriateness and cost effectiveness are analysed by comparing services with like Councils, contracting out service delivery in a competitive market environment and determining if there are any adverse effects from the current mix of service level delivery.

As Council operates within a competitive market environment and runs a network of disposal facilities the cost effectiveness of the overall service delivery must be related to keeping the waste stream going to the disposal sites and avoiding waste flight. Council has achieved this with a mix of rate and user charges.

Councils satisfaction survey results have continued to be at a high level and illegal dumping of refuse while present, is at a low level throughout the district.

Community Outcomes: Provide guidelines for the scope of current and future services offered and manner of service delivery and define general levels of service which the community wishes to receive.

Customer Expectations: Information gained from customers on expected quality and price of services.

Statutory Requirements: Legislation, regulations, environmental standards and Council By-laws that impact on the way assets are managed (i.e.: resource consents, building regulations,

health and safety legislation). These requirements set the minimum level of service to be provided.

The service provided by the solid waste assets is obligated to meet legal requirements defined in statute, regulation or other statutory process. This is primarily focussed on the requirements of the Waste Minimisation Act 2008 and the Emissions trading legislation 2010, the RMA defines the rules around environmental impact of operating landfills and closed landfills.

The New Zealand Waste Strategy

The New Zealand Waste Strategy has been developed by Central Government as the primary tool for management of waste. It incorporates strategic planning, business and public education and linkages between Central, Regional and Local Government responsibilities. This document is more than likely going to be reviewed as part of the parcel of works being undertaken by MFE in the waste field.

Waste Minimisation Act 2008

Section 42

"A territorial authority must promote effective and efficient waste management and minimisation within its district".

The Waste Act legislation also requires Landfill operators to pay \$10 for every tonne of waste disposed to landfill, thus providing an economic incentive for diversion from the waste stream as well as providing funds for waste minimisation initiatives. (levy cost currently under review)

Central Government is currently reviewing the levy cost and Council has provided feedback suggesting that the levy should apply to disposal facilities Class 1 to Class 4 to avoid waste flight to non-levied sites.

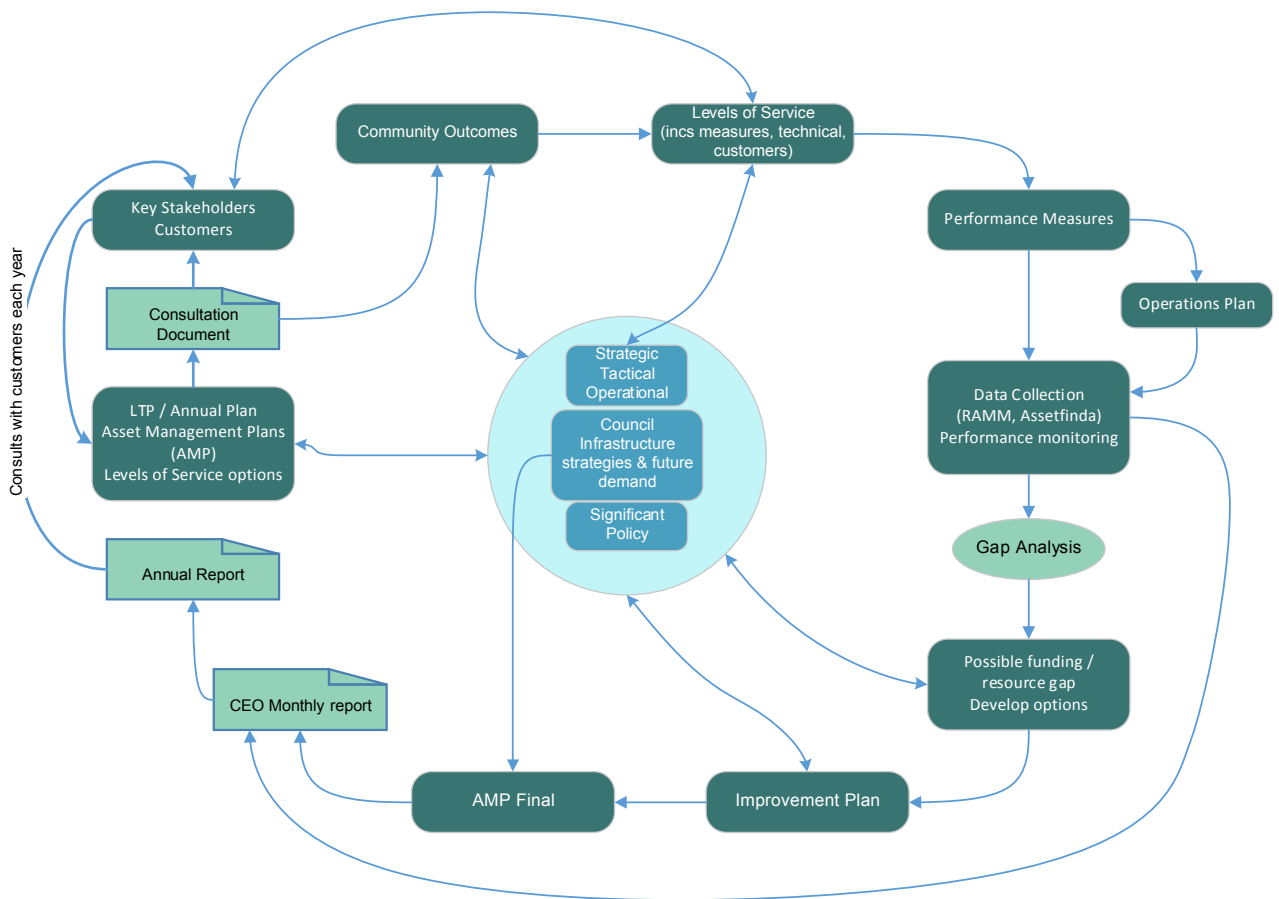
Government are signalling an increase to the disposal levy, with the resulting revenue being targeted at major infrastructure that supports the onshore recovery of products and reduces NZs reliance on overseas markets.

Emissions trading legislation

The Emissions trading legislation 2010 began impacting Landfill operators from January 2013 onwards as emissions were reported on for the 2013 calendar year, with credits needing to be surrendered in May of 2014. Landfill operators need to surrender landfill credits based on a per tonne calculation. The cost of emission credits was \$3.5-\$5, but cost has now moved to \$30 - \$38+ which has meant a significant increase in operational cost for disposal sites across NZ.

This increase has meant that council has had to increase gate charges to cover this cost. Council will continue to evaluate the provision of Gas destruction on site, but this will be driven by the reduction in cost to operate the site due to emission cost reduction verses the cost to install and operate gas reduction infrastructure and the renewal or not of the site operating consent.

Strategic and Corporate Goals: Provide guidelines for the scope of current and future services offered and manner of service delivery and define specific levels of service which the organisation wishes to achieve.



Consultation Process and Linkages

The above diagram identifies the consultation process and reporting requirements for levels of service. It also incorporates the links to strategic documents and gap analysis and how this links into the Annual Plan and Long-Term Plan.

5.2 Types of Levels of Service

5.2.1 OPERATIONAL

Current operational levels of service for Solid waste are scheduled in Table 5.3. The levels of service are “how we maintain our existing assets” for our customers.

Operational levels of service fall into two categories:

Technical (asset/product related) measures, which relate to the outputs the customer receives in terms of:

- Quality
- Capacity
- Quantity
- Environmental impacts
- Availability
- Cost/ affordability
- Legislative requirements
- Comfort
- Maintainability
- Safety
- Reliability and performance
- Public Health

Service Quality (service process related) measures, which relate to how the customer receives the service in terms of:

- Tangibles (information sheets etc)
- Responsiveness
- Courtesy
- Empathy (understanding, individual attention)
- Assurance (knowledge, courtesy, trust, confidence)
- Health & Safety

5.2.2 TACTICAL

The levels of service stated within Table 5-1 are “why we build new assets”. These are thresholds which warrant the creation of a new asset in order to maintain an optimum level of service for the asset.

5.2.3 IMPLEMENTATION

The implementation levels of service stated within Table 5-2 are “the standard we build a Solid waste asset to”.

5.2.4 NATIONAL

There are no national levels of service associated with the Solid Waste Assets, but some guidelines have been produced by MfE regarding Landfill and transfer station / resource recovery centre design and best practice. MfE are also working on a Kerbside waste and recycling collection best practise guide, to try and raise the bar in NZ as well as try to provide common service delivery.

Government is currently reviewing the guidelines for landfill classification, but this review is unlikely to impact on the Broadlands Rd Landfill until Council applies for a new consent to operate the site.

There is a requirement that councils provide for public health outcomes, this can be achieved by Councils fully providing all services or buy a mix of council and commercial market service provision. Councils Waste Assessment identifies that public health is currently being adequately catered for through the mix of service provided in the district.

5.2.5 SIGNIFICANT SERVICES

The significant services provided by Council are the safe collection and disposal of residual refuse and the provision of waste minimisation initiatives. This is underlined by the provision and operation of the transfer station sites and the Landfill for residual refuse disposal as well as the kerbside collection service in urban areas.

Waste collection and disposal is classed as an essential service during the Covid-19 outbreak, meaning waste collection services and disposal facilities need to be able to operate, although services may be in a limited form depending on the situation.

Solid Waste Objective –To protect public health and safeguard the Taupō district environment by ensuring refuse and recycling is managed in a safe, efficient and sustainable manner that maintains natural and aesthetic values. Current Levels of Service

A * identifies that the level of service or measure is included in the LTP

Number	Core Value / Key Service Criteria	Level of Service	How we measure it (customer)	How we measure it (technical)	Current LoS Performance	How We Monitor Performance	Target LoS Medium Term (1-3 years)	Target LoS Long Term (4-10 Years)
T1	Economy	<p>We provide recycling and waste collections across the District. We own and operate the Broadlands Rd landfill in Taupō. We will ensure waste is disposed of safely and that effects on the environment are minimised.*</p> <p>We will provide a weekly collection service for the approximately 6,000 tonnes of non-recycled rubbish produced in the District each year. We will transport this waste for disposal to Council’s landfill at Broadlands Rd, Taupō.*</p> <p>We will provide a weekly collection for disposal of paper, glass, plastic and aluminium that is sorted for recycling *</p> <p>For the CBD we will provide a twice weekly kerbside collection for recycling and daily litter collection*</p> <p>Ensure that refuse disposal and recycling / recovery facilities and services are available throughout the district</p>	<p>Service requests identifies community is satisfied with the availability of refuse and Recycling / recovery services district wide</p>	<p>Kerbside service delivery is available in urban areas</p> <p>Landfill tonnages are measured over the weighbridge</p> <p>District facilities are within similar distances for most members of the community</p>	<p>80% of service users are satisfied with our recycling and refuse services</p> <p>Refuse facilities are available throughout the district except on the Eastern lakeshore and Atiamuri.</p>	<p>Service requests</p> <p>Identifying areas of urban growth to determine the need for extension of service delivery to make sure that distances remain similar throughout the district</p>	<p>80% of service users are satisfied with our recycling and refuse services*</p> <p>80% of the District is satisfied with our recycling and refuse services*</p> <p>To retain the existing district facilities.</p>	<p>80% of service users are satisfied with our recycling and refuse services*</p> <p>80% of the District is satisfied with our recycling and refuse services*</p> <p>To retain the existing district facilities.</p>

Table 5-1: Tactical Levels of Service

O1	Economy	We will divert suitable waste from landfill.	The quantity of material (tonnes) diverted from landfill as a percentage of the total waste stream.	43 per cent. 19/20	47.5 per cent 20/21	48 per cent 22/23	48.5 percent 23/24	2024/25 – 49 per cent increasing to 52 per cent by 2030/31
O2	Environment	Customers are satisfied with the function and appearance of the transfer stations and Landfill and litter service	Less than 5 complaints regarding facilities are received per mon less than 5 reports of street litter bins overflowing are received per month	No resource Consent breaches Less than 5 bins per month are reported as overflowing	No Complaints have been received. No resource consent breaches	Service requests Satisfaction survey Consent reports	We will comply with all resource consent conditions for our landfills* Less than 5 complaints per month regarding overflowing litter and recycling bins	We will comply with all resource consent conditions for our landfills* Less than 5 complaints per month regarding over flowing litter and recycling bins
		Our residents are satisfied with the waste and recycling services.	Percentage of service requests relating to waste and recycling that are responded to.	Service requests	New measure.	At least 90 per cent responded to within 2 working days	At least 90 per cent responded to within 2 working days	At least 90 per cent responded to within 2 working days

		We comply with the resource consent conditions for our landfills.	Percentage of resource consent conditions for our landfills that are complied with	WRC consent review	100 per cent.	100 per cent.	100 per cent.	100 per cent.
O3	Health & Safety	Facilities will provide a safe environment for users	No health and safety breaches recorded	Contract reviews Service requests	No health and safety breaches recorded	Site audits	No health and safety breaches recorded	No health and safety breaches recorded

Table 5-2: Operational Levels of Service

5.2.6 LINK TO PROJECT

The following table show the links between the levels of service adopted and the current projects. Everything we do, we do in order to provide a level of service to the community.

Solid Waste Projects	Link to LOS
NEW WORKS	
Cell Developments	T1, 01, 02, 03
Mangakino / Omori site upgrades	T1, 01, 02, 03
Site Capping	T1, 01, 02, 03
Street Recycling bins	T1, 01, 03
Gas flare	T1, 01, 02
Big Belly Refuse Bins	01, 02, 03
OPERATIONS AND MAINTENANCE	
SWAPs	T1, 01
Bylaw Review	T1, 01, 02,
RENEWALS	
Bin Renewals	T1, 01, 02,03
Facility Renewals	T1, 01, 02,03

Table 5-3: Link between Level of Service and Project

5.3 Consultation

The list of community outcomes for the 2021 TYP are as listed below.

- Economy
- Environment
- Financial prudence

At present resident contact is generally on a one on one situation in the handling of customer complaints or in council and community board meetings. Regular advertised public forums are held to encourage and provide for ratepayer opinions and concerns to be heard. Submissions and suggestions for desired project and improvement work for Council consideration and inclusion into the TYP are called for during consultation.

Council undertakes consultation when developing the WMMP and will also undertake consultation with the community during the LTP development.

Council is also in the process of reviewing the Kerbside service delivery and will consult with the community on options going forward.

Levels of service for Solid waste will be signed off by Council prior to the LTP consultation process.

The commercial waste service providers have been consulted as part of the development of the WMMP as well as the public health sector.

Customer Groups

The Solid waste service provision has a number of customers, all properties and businesses need to dispose of refuse, and most will participate in the diversion of waste if there is the incentive to do so.

Council's kerbside collection service provides waste and recycling service to the urban centres and central CBDs. Rural property owners are serviced by the provision of district transfer stations. The commercial market also provides some rural service delivery and provides for larger commercial waste needs.

The current kerbside waste collection contract piggybacks on the commercial service provided by Envirowaste. Envirowaste operate pre-paid bags and bins and compete directly with Council for market share. Council bags are collected at the same time as these private collections. This arrangement will change if council decides to rate fund the service delivery.

Council has provided the disposal point for waste at the Broadlands Rd landfill which enables the community to dispose of mostly non-kerbside waste, and the site provides a mix of recovery options as do the district transfer stations.

Litter and recycling bins are provided throughout the district to cater for waste and recyclable disposal when people are out and about and for the tourist and visitor market.

Overall, the solid waste customer group is covered with a mix of Council and commercial market service provision. Council has incentivised diversion of materials from landfill by setting a pricing mix that diverts waste.

5.4 Changes to Level of Service

The Waste Management and Minimisation Plan provided several changes to levels of service.

Operational increases in the plan include:

- Investigate increasing the diversion food waste from going to landfill
- Provide a community grant program for Community waste minimisation initiatives
- Continue to extend the street recycling bin coverage
- Provide E-waste recycling at the Broadlands Rd Landfill
- Advocating for product stewardship / producer responsibility for the recovery and recycling of products
- Develop a community litter awareness program (take care of a section of beach/ road) and work in with National Litter programs
- Develop a best practise guide for waste handling for event managers/ education program
- Work with Industry to support the diversion of C & D Wastes
- Introduce education / awareness programs to support Council waste minimisation initiatives
- Support local Marae and iwi groups to minimise waste
- Work with local businesses to reduce waste
- Investigate working with the department of corrections to refurbish bicycles
- Support local schools with a school's organic program
- Support national Love Food Hate Waste program
- Utilise waste pricing structures to incentivise waste reduction
- Support and facilitate the reduction of single use plastic bags

All of the above service outcomes are being worked on or are in operation.

Capital expenditure to maintain the level of service includes;

- Increasing recycling capacity at district facilities
- Cell developments
- Site capping (possible alternative cover)
- Gas flare
- Gas wells
- Leachate pipes
- Fire prevention / control
- Leachate pipe capacity
- Big Belly waste compaction Bins
- Weighbridge and associated infrastructure

Budgets will be revised between draft and final AMP's to ensure a financially sustainable budget Council wide. The level of service implication of these budget changes is shown in table 9-1 within the Financial Summary section.

5.5 Service Level Measurement

Service level achievement is measured by way of service request performance and information gleaned from monthly contract meetings with contractors and satisfaction surveys. The community is also able to submit to Council during annual and Long-Term Plan development.

Resource consent compliance is reported yearly by the Waikato Regional Council after they undertake onsite audits and reply to complaints if any. (The Broadlands Rd Landfill has never had a complaint related to the operating consent). The landfill consent also requires a peer review overseer for the site who also compiles a yearly report on the site which covers both capex and operational matters.

Refuse tonnages are measured over the weighbridge and reported to the Ministry of the Environment on a monthly basis, with these tonnages passed on to Council in the monthly Council performance report.

Key performance indicators are reported to council on a monthly basis and overall asset performance is provided in the annual performance report.

As part of the consultation process the WMMP has been signed off by the medical officer of health who makes sure that the services provided adequately provides for public Health.

Council may have to undertake a section 17a review when we look to renew the two major operating contracts, those being the kerbside service delivery as well as the landfill operational contract.

SOLID WASTE & SUSTAINABILITY

Council has a focus under the Solid Waste asset cost centre to reduce the impact of waste on the environment. This has led to a raft of services and assets that assist Council in achieving this goal.

Council has implemented a raft of service delivery in the form of materials identified for recycling, all of which are listed on council's web page as well as at district facilities.

Council also uses pricing incentives to drive these outcomes, with waste a pay as throw and recycling covered within the rates component, so the communities view the offloading of recyclables as free.

Pricing differentials also incentivise the community to off load materials in different locations that are free of other materials or contamination. This allows council to deal with a clean product and prepare these for market. Case in point is the low cost for concrete disposal, which commercial operators bring to the facilities without contamination, allowing council to crush this material and provide it back for sale to the community at a low rate, thus avoiding landfilling this material.

Council also provides a low disposal cost for green waste disposal, again to get the community to sort this material which eliminates contamination. Green waste is then shredded and offered back to the community as mulch.

Council offices have all had their refuse bins removed and food waste reuse implemented, resulting in a reduction in office waste.

Council has invested in Big Belly refuse bins for street litter. The bins are compaction bins which increase capacity. They compact using a solar panel to charge the battery, the bins also send a message to the collection contractor when they are full reducing transportation cost for this service and also reducing the number of bins required due to the extra capacity.

Council undertakes a raft of waste education programs focused on waste reduction and reducing the impact of the environment. Council has recently partnered with a local Iwi school who are then empowered to teach waste education to district Marae.

Council also supports the community in running litter collection days and food waste composting and has developed a district waste minimisation fund to increase the input from the community regarding waste minimisation and sustainability.

Council joins with other Councils to lobby central government on waste policy and have been successful in getting government to introduce product stewardship for several hard to deal with wastes.

Overall, the solid waste cost centre has large sustainability focus with all services having a reuse, reduce, recycle component.

6.0 FUTURE DEMAND

6.1 Factors Affecting Demand

There are several factors that influence demand for the Solid Waste assets and services within the Taupō District. These are described below and include:

- Transfer Station location
- Refuse Collection area boundaries
- Expanded recycling options
- Tourism
- Out of district home ownership
- Service provision by the private sector
- Growth in development and therefore population / economic activity
- Community expectations
- Changes in levels of service through primary drivers such as legislation
- Lifestyle trends
- Economic instruments and the economy
- Council policy and plans
- Product Stewardship schemes
- Changes in legislation and National direction
- Solid Waste Bylaw
- Waste levy
- Education
- Commercial competition
- Events
- Public holidays
- New products and product development
- Pandemic
- Green sword

6.2 Demand Management

Demand management is:

".....the modification customer demands for services in order to maximise use of existing assets or to reduce or defer the need for new assets."

A unique feature of demand management in Taupō District is the managing of the fluctuating demand. Taupō has a large percentage of unoccupied dwellings which means that the base demand as compared to dwelling numbers is low. However, this demand increases significantly during peak holiday periods, tourist seasons and when there are large events in town.

One of the key objectives of demand management is to seek non-asset solutions (such as reduction, reuse and recycling) as alternatives to constructing new asset-based solutions.

The use of economic instruments is playing an ever-increasing roll in the modification of customer demands. By applying or not applying a charge, Council can provide the incentive or disincentive that will promote the objectives of its Waste Management and Minimisation Plan.

An example of this is the pricing of green waste less than waste disposal, which results in the community separating this material to achieve a saving, and results in a usable material for Council and the diversion of green waste to tip face and the reduction of greenhouse gases.

The overall service provision cost must be funded, but by using the correct combination of rates and fees and charges to create the correct cost differential, waste diversion can be achieved, and behaviours changed for the better.

Central Govt are also using pricing to influence change in the waste sector, with firstly the waste levy which will rise to up to \$60 per tonne, thus making anything that costs less than that, a viable waste reduction option. And secondly the ETS, which places cost on emissions, which is a mechanism to reduce emissions from landfill, ultimately pushing the cost of waste disposal higher.

With the waste levy rising to \$60 central government will be receiving a vast amount of revenue and have stated that will develop an investment strategy focused on investment in processing recovered material within the country as apposed to relying on overseas markets.

Council will receive funds from the Levy based on district population and can make extra applications to a consolidated fund (WMF) outside of the Population criteria. The introduction of a waste levy has had cost implications for Council in regard to reporting of information, handling of monies for the Levy and the making of applications for funding of waste minimisation programs. This extra cost has been factored into the operational budgets for the cost centre.

The Local Government view on the waste levy is that the levy should apply to a greater range of disposal facilities first, as currently the levy falls on Landfills as classified under the act (that receive household waste) which then drives waste to cheaper and less environmentally controlled disposal sites. Government have heard this issue and will look to expand the levy as it increases.

The increase in cost at the gate will have some negative outcomes with an increase in illegal dumping projected. Previously increases in disposal rates have seen a short-lived increase but this has flattered out once the price gained acceptance. With increases to disposal costs spanning several years, there is a chance that the spike in illegal dumping could become prolonged, with the resulting increase in clean up costs.

It is acknowledged that we cannot recycle our way to a waste free country as globally we only actually recycle a small proportion of the total waste stream, hence the need for Govt to intervene and provide policy that diverts waste, as well as places the responsibility in some cases back on the producer of that waste.

Council will continue to try and identify material in the waste stream that can be recycled and or reused such as the crushed concrete, currently being sold from the Broadlands Rd Landfill.

During the identification of new waste minimisation opportunities Council must analyse whether the service is sustainable environmentally and economically. Waste that has no residual value and thus needs a high level of financial support from Council must be thoroughly investigated as to its suitability for extra funding.

Criteria for extra funding are, cost, volume of material per cubic metre or tonne diverted from Landfill and the amount of public good as well as long term sustainability issues and current legislation. Most opportunities will pass or fail on the cost factor, but opportunities to divert more waste become more economical and sustainable the higher the cost to dispose to landfill. Council's current policy of charging for waste going to disposal and allowing a free (Rate Funded) recycling drop off has kept a high level of recycling participation.

Council as a landfill owner must also keep in mind that waste diverted from landfill will influence the revenue from the site which may need to be funded elsewhere.

Waste legislation is set to further drive waste minimisation in NZ with central government able to identify priority products that must then come under a product stewardship program, this may in the future reduce the cost to rate payers and place the cost of recovery on the purchaser of products.

Taupo District Council, along with the majority of other Council's will continue to lobby government regarding product stewardship, and recently passed a remit with 90% support that supported Container Deposit legislation for containers.

Govt have recently produced a list of priority products and product stewardship programs are now required for all of these materials. Plastic packaging, Tyres, Electrical and electronic products (e-waste), Agrichemicals and their containers, refrigerants and farm plastic's.

The main savings for Council will be if drink containers become a priority product, this will mean that the value of drink containers will increase, with the obvious litter prevention benefits, as well as the value of products collected from kerbside paying for a portion of the collection costs thus reducing cost to the rate payer.

Council is awaiting to see if they do become a priority product as this will influence what services are provided at Kerbside.

Peak Demand

Asset based solutions include:

- Increasing the size of current facilities to cater for increases in peak demand
- Construction of additional cells at the Broadlands Road landfill
- Provision of compacting street refuse bins in high use areas
- Upgrading recycling facilities to enable bulk loading to market or a bulking station
- Combing operational contracts to make the most of operational capacity at district facilities

The Broadlands Rd Landfill resource consent conditions require that Council has an independent peer reviewer that undertakes inspections of capital works such as new cell developments but also provides guidance on day to day operations. The reports provided by the peer reviewer can affect maintenance requirements. Asbuilts from capital works are kept on file as well as forwarded to the Regional Council.

Council has one disposal site for residual waste in the district being the Broadlands Rd landfill. This site can easily cope with increased waste volumes, but Council does have the discretion to "ring fence" the site for the district and stop waste coming into the district from other areas that may have higher residual waste charges. Council's landfill consent allows for 50,000 tonnes of waste per year with the current tonnage being half that amount. Currently the landfill does not take waste from out of the district.

The Broadlands Rd landfill enables Council to avoid the cost of transporting waste to other facilities and Council utilises a portion of the disposal fee to support waste minimisation programs. (See landfill viability spreadsheet)

The consent for the Broadlands Rd landfill expires in 2027 so council is in the process of gathering information to enable council to consult over a consent renewal now as apposed in a few years, as council needs certainty regarding the consent period to enable council to invest in gas destruction infrastructure.

In 2017 Opus International produced a development plan for the landfill that identified an additional 600,000 landfill fill volume, but this will require 354,000 cubic metres of cut volume to be removed, some of which will be used as fill material as the site develops.

Based on the Cell 2D tender the rough order development cost for the landfill south of 2D and 2C1 would be \$6.8M (including 20% contingency). This equates to around \$11.30m/3 of void. While higher than the average from previous cells of around \$6.20, it is still highly economic compared to the landfill charges or the cost of transferring waste out of district. Primarily the higher the unit cost arises from the very large cut to waste required in the southern ridge, so any strategy that can use this material elsewhere will aid the overall economics.

Council is utilising additional fill in Council projects around the district that are close enough to negate transport costs. The solid waste cost centre is not charging for this material as it is seen as win, as council ultimately has less material to remove for future cells.

Council owns and operates 5 RTS sites that ring the lake that cater for the smaller urban areas as well as rural members of the community. Changes in refuse disposal demand can be managed by the increasing or decreasing the numbers of refuse haulage bins taken to landfill and hours of operation for the individual sites. Amalgamating district facility contracts will enable operational continuity as well as, it is hoped, realise management savings.

Due to cost, Council only services urban areas with its kerbside collection contract but all district transfer station facilities can handle the full suite of recyclables as well as additional items.

The Kerbside refuse and recycling contractor has the ability to off load and stockpile waste and recyclables at district facilities to enable him to cater for increases in demand caused by seasonal population increases. Council also incentivises waste minimisation practises by rate funding services where waste disposal is predominantly user pays funded.

The market for recovered materials can impact the service levels that Council and the commercial market provides as the demand for material fluctuates which impacts the return value. Due to the China green sword the recycling of plastic's numbered 3-7 has now ceased and these materials are now going to landfill. Negotiations regarding the acceptability of number 5 plastic could mean the collection of these materials is resumed as there is now on shore processing capacity.

Recovered product quality is a major factor in being able to support the collection and sale of product.

Council's current kerbside service relies on the community to sort material into selected products so that they can easily deposited into the collection vehicle. This process provides a high-quality end product with virtually zero contamination. Low contamination rates mean easier access to overseas markets and higher return values. Comingled collection methodologies require intensive post collection sorting and comingled collection models have contamination rates of around 18%, which is now unacceptable to overseas markets.

Govt are looking to invest into new onshore processing of recovered materials, but this investment is still at least two years away from providing support to the market.

By having a rate portion in the solid waste cost centre, Council achieves several outcomes:

- Lessens the ability for competitors to compete with service delivery which would undermine Councils ability to provide services.
- Council acquires funding for the district facilities from out of district homeowners
- Allows council to manipulate pricing to incentivise diversion

With a review of the current kerbside collection contract council will consider as one of the options, a fully rate funded kerbside collection service. Fully rate funding will eliminate the price incentive to recycle but could provide a cheaper service to the community than the current mix of commercial and council service delivery.

A fully rate funded service will mostly eliminate commercial kerbside competition unless there are service gaps in the service delivery such as fortnightly collections where people are prepared to pay additional cost for weekly services.

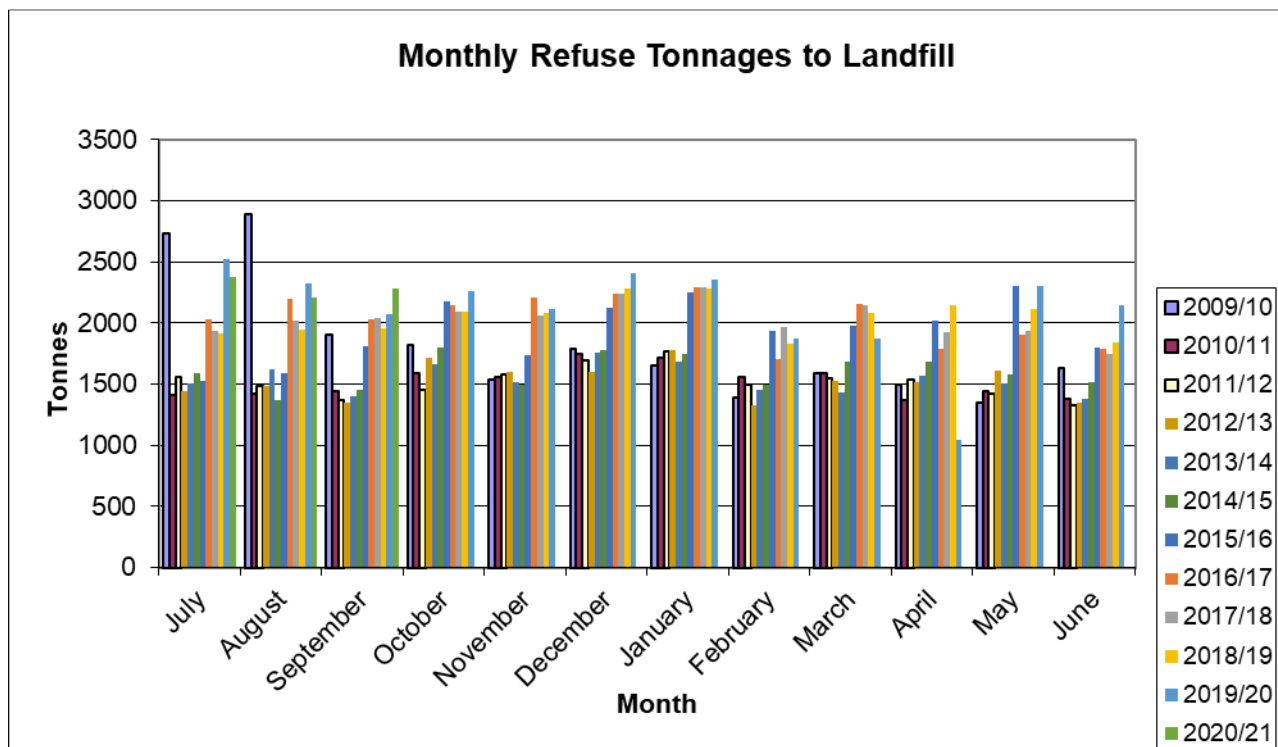
Council has incorporated smart technology into the provision of street litter bins in the district. Council currently has 51 Big Belly compactor bins located in Turangi, Taupo and Kinloch. These bins have the capacity of ten conventional 60L bins as they compact the refuse once it reaches a certain level. The bins are also powered by solar energy and let the collection contractor know when they are full, thus reducing vehicle movements.

Bins have been deployed in high use areas and have greatly reduced the incidences of overflowing refuse bins and windblown litter. Another benefit is the reduction in the number of refuse bins scattered around.

Waste Volumes

Over the past 5 years Council has seen an increase in waste volume from the average 18500 tonnes per year to now around 25000 tonnes per year. This sharp increase is directly linked to an increase in economic activity after the economic lull over the last period. It will be interesting to see the impact the waste stream from Covid-19, it is assumed that waste volumes will fall dramatically. Waste volumes are an excellent indicator of economic activity as people tend to spend more when they feel good about the economy.

To date a dramatic fall off or reduction in waste to landfill has not eventuated with tonnages reflecting previous years.



Recycling volumes had also increased proportionally but the main contributor to the increase is the construction and development sector.

This is a difficult market to deal with as construction sites have multiple parties accessing the site at different times with no one party being responsible for the diversion of waste materials or implementing recycling systems.

Most construction site operators compare the time and cost and energy of diverting material to the amount and cost savings and quickly abandon the option.

This coupled with cheap large-scale waste disposal options in the form of skips makes waste reduction a difficult proposition.

If material is diverted there is still a lack of local markets that are prepared to utilise this type of material.

6.3 Plans Related to Growth

In addition to the general Council planning documents such as the District Plan there are other planning documents that relate to demand in relation to the Solid Waste assets and services. These include:

Growth Management Taupō 2050 - The Council's asset management plans need to be aligned with the strategy to ensure more efficient and affordable provision of infrastructure for the identified growth areas.

- Infrastructure Strategy
- Taupō Urban Structure Plan
- Taupō Town Structure Plan
- Kinloch Structure Plan
- Taupō West Structure Plan

6.4 Growth

6.4.1 GROWTH MANAGEMENT STRATEGY

In June 2006 the Council adopted Taupō District 2050 (TD2050), the Growth Management Strategy for the District. The growth management strategy identifies where urban growth is anticipated so that land use and infrastructure planning can be aligned. TD2050 has been incorporated into the District Plan by way of plan changes, particularly Plan Change 21 which identifies the future urban growth areas.

This strategic approach to integrating land use and infrastructure is intended to be supported by subsequent structure planning of the urban growth areas to identify the detailed settlement pattern and infrastructure servicing. Council has prepared structure plans for:

- Kinloch
- Mapara Valley
- South-western Bays Settlements (including Turangi); and
- Commercial and industrial areas within Taupō Township

A growth model was developed based on the anticipated population increase and associated residential lot increases in TD2050. The growth model is reviewed and updated every three years prior to the review of the asset management plans and development of the long-term plan. The review of the growth model is based on census data estimates, feedback from developers and analysis of resource consents.

Recent Census Data	2013	2018
Population	32,907	37,203
Occupied dwelling	13,395	14,094
Unoccupied dwelling	6,171	6,588
Dwelling under construction	78	159
Total private dwellings	19,644	20,844

NEW LOTS TO BE CREATED

Consideration has been given to the optimistic discussions with developers, actual consent numbers over the past three years, demographic considerations¹ and officers' estimates when estimating the potential lot numbers outlined in the *DC Policy* and the *Growth Model*.

The table below outlines those estimates for the next ten years. The areas that are not predicted to have any growth due to current capacity levels, such as, Hatepe, Motuoapa, Whareroa, and Five Mile Bay/Waitahanui have been removed.

¹ Jackson, N., "Taupō District, Demographic Trends and Projections, National Institute of Demographic and Economic Analysis", June 2014.

All Growth	2009/17 actuals	Taupo District Growth									
		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Financial Year Starting	2009/2010										
Total Residential properties per year	88	151	122	126	122	134	97	94	66	66	66
Running Total for LTP		609	731	857	979	1113	1210	1304	1370	1436	1502
Building Consents	168	151	122	126	122	134	97	94	66	66	66
Cumulative		1624	1746	1872	1994	2128	2225	2319	2385	2451	2517
RESIDENTIAL AREA		2018-2028 LTP									
Taupo South	0	55	55	55	55	55	30	30	0	20	0
Taupo North West	2	35	30	30	30	30	30	30	23	0	23
Taupo Town	55	20	20	20	20	20	20	20	17	20	17
Total Lots Created	57	110	105	105	105	105	80	80	40	40	40
Building Consents Issued	78	110	105	105	105	105	80	80	40	40	40
Acacia Bay (including lower Mapara Rd)											
Total Lots Created	0	2	2	2	2	2	2	2	2	2	2
Building Consents Issued	9	2	2	2	2	2	2	2	2	2	2
Kinloch Area											
Total Lots Created	3	12	0	7	0	0	0	0	10	10	10
Building Consents Issued	22	12	0	7	0	0	0	0	10	10	10
Mapara/Blue Ridge Area											
Total Lots Created	3	5	5	5	5	5	5	5	2	2	2
Building Consents Issued	12	5	5	5	5	5	5	5	2	2	2
Five Mile Bay/Waitahanui											
Total Lots Created	0	0	0	0	0	0	0	0	0	0	0
Building Consents Issued	0	0	0	0	0	0	0	0	0	0	0
Turangi											
Total Lots Created	2	2	2	2	2	2	2	2	2	2	2
Building Consents Issued	8	2	2	2	2	2	2	2	2	2	2
Hatepe											
Total Lots Created	0	0	0	0	0	0	0	0	0	0	0
Motuoapa											
Total Lots Created	0	0	0	0	0	0	0	0	0	0	0
Building Consents Issued	6	0	0	0	0	0	0	0	0	0	0
Pukawa/Omori/Kuratau											
Total Lots Created	0	0	3	0	3	0	3	0	0	0	0
Building Consents Issued	8	0	3	0	3	0	3	0	0	0	0
Whareroa											
Total Lots Created	0	15	0	0	0	15	0	0	0	0	0
Building Consents Issued		15	0	0	0	15	0	0	0	0	0
Rural Other											
Total Lots Created	23	5	5	5	5	5	5	5	10	10	10
Building Consents Issued	25	5	5	5	5	5	5	5	10	10	10
Commercial Accommodation HEU											
TKMP		4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
TT		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Industrial/ Retail / Commercial (Gross Floor Area - m²)											
Taupo											
Industrial		1,362	1,716	1,629	1,319	3,302	2,431	2,517	2,517	2,259	2,345
Commercial		242	305	290	235	588	433	448	448	402	417
Retail		349	439	417	338	846	623	645	645	578	601
Kinloch											
Commercial		-	-	-	-	20	20	20	20	20	20
Retail		18	23	22	18	18	18	18	18	18	18
Mapara Valley											
Commercial		-	-	-	-	-	-	-	-	-	-
Turangi											
Industrial		15	15	15	15	15	15	15	15	15	15
Commercial		10	10	10	10	78	58	60	60	53	56
Retail		10	10	10	10	78	58	60	60	53	56

Table: Estimated lots created over the period 2021-31 from the Taupō Growth Model

- OCCUPANCY PER DWELLING

The long-term trend for more than fifty years has been for a decrease in the number of people per dwelling. This is true across all ages. Occupancy among aging populations is especially low, with widowed partners typically living alone.

Council uses a Household Unit Equivalent (HUE) to convert between population figures and the number of dwellings. In Taupō District, this figure is complicated by holiday homes which form approximately 30%² of the district's dwellings. This figure is difficult to fully determine due to the difference between out-of-town ratepayers and what is likely to be deemed a holiday home.

However, as a consequence of this high number of possibly empty homes for a significant part of the year Council needs to consider peak usage and populations when determining demand.

Council's original policy for district refuse facilities locations suggested that sites should be located at maximum distance of 15 Km from urban settlements. This philosophy was based upon the idea that all travel distances should be comparable for all communities and so that a constant level of service was provided. The advent of more commercial operators providing services in the market have meant that Council has to date not had to invest in the provision of extra disposal sites, so this policy has now been discarded.

Council's review of the Waste Minimisation Plan has identified that the status quo in regards to additional infrastructure, in the form of new transfer stations, for the next ten years is the best direction for Council as it allows for a mix of Council and commercial service delivery and enables the community to choose what best suits their needs.

Several commercial waste collection service providers are now operating in the market and residents can contract to these service providers and thus potentially negate the need for capital investment by Council in new infrastructure. Council needs to be flexible and be ready to adjust service provision depending on the market.

With the review of Kerbside collections services, Council may choose to rate fund service delivery going forward, and we must understand the implications of this on the commercial market and their ability to offer alternative services going forward. Council must also be mindful of not supporting any monopoly situation regarding waste services in the district.

Any increase growth in the rural areas can be catered for by the existing transfer stations located around the district. These facilities transport waste back to the Broadlands Road Landfill. Any increase in volume of waste due to growth would mean an increase in operational cost as transfer Station skip bins will be emptied more often but this increase in cost will be offset by the extra revenue gained from the increased refuse volumes.

With Govt looking to provide support for the rural sector through product stewardship schemes for farm plastic's etc, there will be opportunity where a truck will be going on farm to collect this material and this opens up the opportunity to collect additional materials.

Covid-19

Previously, prior to Covid-19s the economy had seen an upturn in activity that resulted in waste tonnages trending upwards, with an overall 20% increase in tonnages reflected across the country. Post covid-19 it is assumed that volumes will dip in the short term. It has been estimated that commercial tonnages will reduce by 20% in the short term or approximately 4000 tonnes per year. This reduction in tonnage does not greatly impact the site development plans but does have impact on revenue. To date this estimate has proven to be high and actual waste tonnage are slightly reduced but similar to previous years.

Council will continue to review operational opening hours at district facilities to ensure that the community continues to have access to refuse and recycling opportunities, these opening hours will be determined based on cost of service provision versus service delivery to the community.

² Statistics NZ data

6.4 Meeting increased/changing demand

Increased/changing demand can be met by using a number of methods including;

- Non-Asset
- Capital
- Operational

6.4.1 NON-ASSET SOLUTIONS

- Product stewardship i.e. others undertaking recovery of products
- Landfill bans for some products (stumps, Haz waste E-Waste Tyres etc.)
- Education programs
- New Waste minimisation initiatives
- Operating hours
- Commercial Market
- Waste levy

6.4.2 CAPITAL EXPENDITURE DUE TO CHANGES IN DEMAND

Projected growth in the district will require new infrastructure, (see table 6-2 below) council already has a network of facilities around the district to cater for refuse disposal and recycling service provision, but Council will of course have to continue to extend the cell footprint at the Broadlands Rd landfill but this extension has been planned and was not been bought about by growth requirements.

Table 6-1: Capital Projects Required to Service Taupo District Growth

Project	Project Cost	Construction timing
Big Belly refuse compaction bins	52,000	2021/22
Cell development	4,100,000	21/22 26/27 31/32 36/37
Omori site upgrade	230,000	2021/22
Mangakino site upgrade	98,000	2024/25
Turangi Weighbridge	166,000	2024/25
Broadlands Rd sewer pipe upgrade	188,000	2023/24

6.4.3 OPERATIONAL EXPENDITURE DUE TO CHANGES IN DEMAND

Growth in the district will increase operational costs but these costs will be offset by fees and charges revenue. The service delivery cost for urban kerbside waste collection is totally user pays with the fee cost covering the collection and disposal costs of the waste, as the urban area grows properties contribute to will be some additional rate funding needed to cover the cost of recyclable recovery.

Funding of this expenditure is discussed in the financial section of this asset management plan (section 9) and strategies for operation and maintenance of assets in section 4.

- Increase of Kerbside Collection area to cater for extension of urban areas.
- Additional recycling services

In 2017 Council undertook a Swapp survey that identified waste volumes and composition. This has enabled Council to understand the types of waste that are being disposed of and thus plan service delivery to help minimise the amount that goes to landfill. As Council operates the only municipal landfill, Council's weighbridge system, "Landfill Three Thousand", can identify changes in waste tonnages on a daily basis. Data from the weighbridge is downloaded each night. Council's kerbside service is also monitored by way of tonnage over the weighbridge and bag stickers sold. In peak kerbside collection times in Turangi and Mangakino the contractor can utilise the transfer stations to off load refuse and recyclables allowing them extra capacity to complete collection runs.

Table 6.2 - Primary composition of overall waste to Broadlands Road landfill - 19 February-18 March 2017

Overall waste to landfill - Primary composition 19 February-18 March 2017	% of weight	Tonnes/week	Tonnes per annum (indicative only)
Paper	10.2%	50 T/week	2,532 T/annum
Plastics	12.3%	61 T/week	3,065 T/annum
Organics	24.0%	119 T/week	5,974 T/annum
Ferrous metals	2.9%	15 T/week	730 T/annum
Non-ferrous metals	0.8%	4 T/week	193 T/annum
Glass	2.4%	12 T/week	589 T/annum
Textiles	7.5%	37 T/week	1,868 T/annum
Sanitary paper	6.0%	30 T/week	1,504 T/annum
Rubble	10.9%	54 T/week	2,717 T/annum
Timber	20.0%	99 T/week	4,988 T/annum
Rubber	1.3%	6 T/week	316 T/annum
Potentially hazardous	1.7%	8 T/week	425 T/annum
TOTAL	100.0%	496 T/week	24,901 T/annum

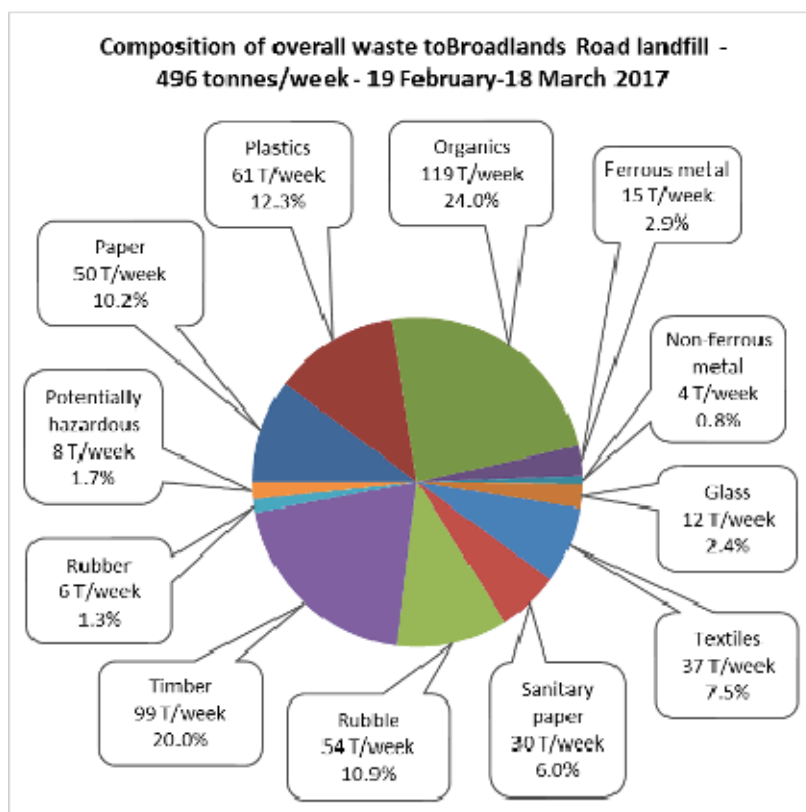


Figure 6.1 - Primary composition of overall waste to Broadlands Road landfill - 19 February-18 March 2017

Organics and timber are the biggest waste streams currently entering the Landfill.

Timber is predominantly treated and arrives in mixed loads and in large skip bins from construction sites.

Currently the markets for treated timber off cuts locally is low as material usually comes with nails and large portion is older material. It is difficult to determine if waste wood is treated, as there is currently no market for treated wood. The issue of identification has undermined the reuse of wood locally. Council will continue to work with construction companies and the commercial market, to look at ways of incentivising diversion of this material. Council’s main ability to impact this waste stream is by way of differential pricing incentives. But a market for materials must also be developed otherwise the outcome will be a stockpile of treated wood, as we had at Turangi, which ended up being a cost to dispose.

Central government increasing the waste levy will open up waste reduction opportunities in the future as the price to dispose to landfill increases.

COMPOSTABLE MATERIALS			
Organics - Kitchen/food	14.2%	70 T/week	3,528 T/annum
Organics - Comp. Greenwaste	6.3%	31 T/week	1,575 T/annum
Organics - Multi/other	1.3%	6 T/week	322 T/annum
Subtotal	21.8%	108 T/week	5,425 T/annum
DIVERTABLE MATERIALS			
	44.2%	220 T/week	11,018 T/annum

Organic material was the single largest component of the overall waste stream being disposed of at Broadlands Road landfill during the survey period. Organic materials comprised about 24% of the total, approximately 60% of which was kitchen/food waste, mostly from kerbside waste collections. Timber was the second largest component, comprising 20% of the total weight. Rubble, plastics, and paper all comprised similar proportions of the overall waste stream, about 10-12%.

Council has in place a home composting subsidy program with also has a home composting education program provided by the local community gardens team.

3528 tonnes is kitchen and food waste which has the potential to be diverted but the results from food collection service delivery from other centres identifies that collection services will only collect around 40% of the available material.

This would equate to around 1411 tonnes that could be successful diverted from the waste stream if there was a district wide kerbside service. The cost of service provision versus amount possibly diverted puts this service option at the high end.

A study conducted by Wasteminz funded by Govt, identified the there should be consistency across councils in what can be recovered at the kerbside. The study identified that a kerbside food collection service should be rolled out by Councils and that number 5 plastic also has a viable local market in NZ and should be included. Council is looking to review kerbside collection service delivery over the next year.

Council will also look to work with commercial operators to investigate ways of diverting additional material.

Concrete and rubble diversion

Council has been successfully stockpiling and crushing concrete over the past twenty years, with a good local market that has taken this material for a number of uses. Unfortunately, in 2019 Asbestos was found in the concrete stockpiles at both Turangi and Mangakino transfer stations. It became apparent that material was being offloaded that was contaminated, this may have been purposely done or was a result of not being able to determine if Asbestos was present. This has resulted in only Broadlands Rd landfill accepting concrete, due to the strict inspection procedures of incoming loads.

6.4.4 EFFICIENCY OF SERVICE

Council service delivery is measured by customer satisfaction surveys which need to match or better the levels identified in the service levels tables. Council also monitor environmental performance and customer complaints.

Facility hours for district transfer stations were negotiated with the local communities to make sure that operating times are supported the majority of users.

The level of fly tipping (illegal dumping) while a nuisance, is at a low level. Council has set a goal of the cleanest district from a litter perspective and Council will continue to monitor litter levels throughout the district. The provision of the Big Belly refuse compaction bins has provided extra capacity to cope with peak demands.

With central government progressively increasing the waste levy to \$60 over four years this will have push the district disposal rate to \$180 per tonne, which will, it is suggested, increase the amount of illegal dumping across the district. The minimum charge at the land will move to \$18. It is currently unknown to what extent (volume) illegal dumping will increase by, but costs incurred are currently coming from the roading department budget under environmental clean-up.

6.5 Infrastructure Acquired from Developers

Council will not acquire any Solid Waste assets from developers

6.6 Community Expectations

Customers are primarily concerned with expansion of existing network services such as:

- Recycling and recovery options
- Facility operating hours
- Litter bin locations and serviceability
- Site safety
- Environmental protection
- Waste disposal affordability
- Environmental controls
- Public health

6.7 Tourism

The Taupo district sees a massive increase in visitor numbers over the summer peak period, and when holding major sporting events such as the round the lake challenge and the Ironman.

This is considered, as we design assets for peak demand rather than permanent population.

Covid-19 has impacted on the number of events being held, with a number of major events being cancelled. The ability of overseas visitors to attend local events has put some in jeopardy, and thus waste volumes from these events has not eventuated. The ability for New Zealanders not to be able to travel has seen visitor number to the district stay relevantly high with increased kerbside collection volumes. It is likely while borders remain closed that more New Zealanders will be looking to holiday locally, which will result in prolonged peak waste and recovered materials volumes during the summer months.

For kerbside refuse and recycling collection, peak demands are dealt with by the contractor by having additional resources available. These peaks have been identified during the time of contract tender but are now being adjusted.

During the summer peak landfill and transfer stations show an increase in recyclable and recoverable items as well as an increase in refuse, district facilities change operational hours and increased volumes are dealt with by Councils contractors providing additional staff and equipment.

Council also increases its education campaign regarding services available so that visitors to the district are made aware of what is available to them.

Overall Waste is dependent on population as people create waste, but services still need to be provided to cater for the peak. Services such as the kerbside collection service still also need to drive all the streets in the urban areas as it can never be determined if the houses are occupied or not.

It is currently unknown as to the impact of Covid-19 on Tourism numbers in the district, obviously in the short term there will be no overseas visitors, but this reduction may well be supplemented by Kiwi's exploring their country as they are also unable to undertake overseas travel.

■ **Per capita disposal of waste - comparison with 2008 and 2013**

The per capita disposal of waste to landfill by residents of Taupō District in 2017 is calculated in **Error! Reference source not found.** and compared to the same figures for 2008 and 2013.

The per capita figure is calculated, first, for all waste to landfill and, then, for all waste to landfill with special wastes excluded. The annual figures for special waste tonnages have also been provided by Council. For 2017, a total of 154 tonnes of special wastes were recorded by the weighbridge at Broadlands Road RRC.

Per capita disposal of waste to landfill - 2008, 2013, and 2017

Per capita disposal of waste to landfill	2017	2013	2008
Usually resident population Taupō District	37,000	34,300	32,148
T/annum to landfill – including special wastes	24,901 T/annum	18,118 T/annum	19,700 T/annum
Per capita disposal of waste to landfill – including special wastes	0.673 T/capita/annum	0.528 T/capita/annum	0.613 T/capita/annum
T/annum to landfill – excluding special wastes	24,747 T/annum	17,612 T/annum	18,913 T/annum
Per capita disposal of waste to landfill – excluding special wastes	0.669 T/capita/annum	0.513 T/capita/annum	0.588 T/capita/annum

Based on tonnage data, per capita disposal of waste to landfill (including special wastes) has increased by 27% between 2013 and 2017, from 0.528 T/capita/annum to 0.673 T/capita/annum.

■ **Per capita disposal of waste - comparison with other areas**

The Taupō District per capita figure for landfilled waste, including special wastes, is compared to disposal figures from other local authorities previously surveyed by Waste Not Consulting in **Error! Reference source not found.** The figures in **Error! Reference source not found.** do not include cover materials. The national average has been calculated using MfE's waste levy data³ and Stats NZ usually resident population estimates⁴.

Taupō District disposal rates compared to other areas

Overall waste to landfill including special wastes (excluding cover materials)	Tonnes per capita per annum
Gisborne District 2010	0.305
Waimakariri District 2012	0.311
Westland District 2011	0.331
Ashburton District 2015	0.366
Napier/Hastings 2016	0.495
Southland region 2011	0.500
Tauranga and WBOP District 2014/15	0.524

³ <http://www.mfe.govt.nz/waste/waste-disposal-levy/monthly-levy-graph>

⁴ http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalPopulationEstimates_HO_TPA30Jun16.aspx

Christchurch City 2012	0.524
Taupō District 2013	0.528
Napier/Hastings 2016	0.548
Wellington region 2016	0.608
Hamilton City 2013	0.668
Taupō District 2017	0.673
New Zealand 2016	0.713
Queenstown Lakes District 2012	0.735
Rotorua District 2009	0.736
Auckland region 2012	0.803

The per capita disposal rate for Taupō District in 2017 was marginally lower than the New Zealand average for 2016 but higher than most other provincial centres. Areas with high tourism activity, such as Taupō, Queenstown, and Rotorua, tend to have higher per capita disposal rates than areas with lower levels of tourism activity. Tourism activity generates waste but tourists are not counted as usually resident by the census.

Higher disposal rates are also associated with areas with high numbers of holiday homes. This affects the per capita disposal rates, as non-permanent residents are not counted in the census as being usually resident. Approximately 40% of dwellings in Taupō District are not permanently occupied.⁵ Users of holiday homes generate waste, but the occupants are not included in the population statistics.

⁵ Taupo District Growth Model 2015-2025LTP

7.0 7.0 RISK MANAGEMENT

7.1 Introduction

Risk management is an important element in the development and management of assets. For asset management planning to be robust it must be integrated with other corporate risk management processes and that this encompasses strategies for Council's most critical assets, provide for the effects of asset failure and be integrated with disaster recovery plans and business continuity plans. Currently asset management planning is listed as a Top 50 Risk in the Council Risk Register.

7.1.1 BACKGROUND

Council has reviewed and adopted in 1999 a Risk Management Charter. In 2013 Council's Audit & Risk Committee reviewed and adopted a revised Risk Management Charter. Council determined its overall policy would be to continually develop a Risk Management System that reflects best practice. Key objectives are:

- "to provide a logical and systematic method for identifying and managing risk within the organisation that will assist the organisation to meet its goals and objectives efficiently and effectively. This achieved by aligning key organisational objectives, risks and mitigating controls,
- to minimise losses and maximise opportunities – Risk Management is an much about defining opportunities as avoiding and mitigating losses
- to improve the decision-making capabilities of staff recognising that the greatest knowledge and capacity for management of risks often rests with those"

Overarching strategies for managing risk within Council are:

Council's Chief Executive Officer will establish and implement a Risk Management system that is relevant to the organisation and which reflects the provisions of Council's Charter. The overarching objective of that Risk Management system will be to identify, and where feasible, mitigate risk factors that might prevent Council achieving its objectives. Risk Management systems established within Council will reflect prevailing best practice including relevant industry standards – especially AS/NZS Risk Management Standard 4360 and AS/NZS ISO 31000.

The ongoing effectiveness of Councils Risk Management systems and compliance with them by employees will be demonstrated by appropriate reporting to Council and its appropriate Committees. Currently this is achieved by programed reporting to Council's Audit & Risk Committee who meet 3-4 times per annum.

7.1.1.2 Current Risk Management Status

Council has an Audit & Risk Committee which oversees the governance of a Risk Management Programme within the Taupō District Council. Risk Management is continuously being integrated into Councils culture, philosophy, practices, activities and plans rather than being viewed or practised as a separate programme.

The accountability for the management of risk is not removed from the specific activity managers and the Senior Leadership Group or those responsible for the management of assets and this is viewed as a collaborative process between governance and management.

The high-level assessment of critical assets is done and now needs to be coordinated with the other assets to determine true criticality, this work is an improvement task and is ongoing.

Waikato Regional Council audits the compliance with consent conditions annually, which may affect the environment. The non-compliance with any of the conditions are either modified by WRC and or capital / operational improvement activity is planned to meet those conditions, if they are achievable cost efficiently. These processes have identified components within the TDC Solid Waste network that may be vulnerable to seismic, flood or volcanic events and the impact of failure of these assets. The critical assets include the Landfill and all district Transfer stations.

TDC is also a member of the Waikato Utility Lifelines group and the wider Waikato Civil Defence and Emergency Management Group.

The Broadlands Rd operational contract includes an after-hours emergency response for site issues. After hours staff (the Tauranga call centre) receives calls and forward emergency calls directly to the contractor who are required to respond in a certain time.

Asset managers are also informed of emergency calls

3 TDC Risk Management Framework

GREAT LAKE TAUPŌ
Taupō District Council

Risk Assessment Criteria

		Low Criticality		Moderate Criticality		High Criticality	
				Consequence		Major	Extreme
		Adverts Not Resulting Medical Treatment	Minor Injury	1 Serious Injury Causing Hospitalisation or Multiple Minor Injuries	1 Life Threatening Injury or Multiple Serious Injuries Causing Hospitalisation	1 Death or Multiple Life Threatening Injuries	
		Self-improvement review required	Scrutiny required by internal committees or internal audit to prevent escalation	Scrutiny required by external committees or the OAG	Intense public, political and media scrutiny evidenced by front page headlines and/or television coverage	Royal Commissions/Parliamentary Enquiries	
		1% of Budget	2-4% of Budget	> 8% of Budget	> 10% of Budget	> 20% of Budget	
		Very little consequence to achievement of plan	Would require some adjustment to achieve plan	Would require significant adjustment to achieve plan	Would threaten achievement of objectives	Would also achievement of strategic plan	
		1	2	3	4	5	
		Insignificant	Minor	Moderate	Major	Catastrophic	
Likelihood	A Almost Certain	L	M	H	E	E	
	B Likely	L	M	H	H	E	
	C Possible	L	M	M	H	H	
	D Unlikely	L	L	M	M	H	
	E Rare	L	L	L	M	M	

Extreme	Deceptible	Must be given immediate senior management attention.	Detailed Action Plan	SLG responsibility
High	Active Management	Must have considerable management to reduce to as low as reasonably practicable (ALARP)	Detailed Action Plan	Activity managers
Moderate	Tolerable	Risks should be managed and monitored to reduce to as low as reasonably practicable (ALARP)	Specific procedures to manage and monitor	
Low	No Action Required	Manage and monitor with normal operational management practices	Manage by routine procedures	

*Risks are recorded in and monitored using Promapp Risk Module the ratings recorded above are used to calculate the inherent and residual risk scores

7.2 Risk Management Process

The risk management process is an integral part of good management practice. It is an iterative process of continuous improvement that is embedded into existing practices or business improvement.

The main elements of the risk management process to be used at the Taupō District Council are as follows and reflect the risk management standards ISO 31000.2009 and AS/NZS 4360:2004.

a) Communicate and consult

Communicate and consult with internal and external stakeholders of Council as appropriate at each stage of the risk management process and concerning the process as a whole.

b) Establish the context

Establish the external, internal and risk management context in which the rest of the process will be undertaken. Criteria against which risk will be evaluated should be established and the structure of the analysis defined.

c) Identify risks

Identify where, when, why and how events could prevent, degrade, delay or enhance the achievement of asset's objectives.

d) Analyse risks

Identify and evaluate existing controls. Determine consequences and likelihood and hence the level of risk. This analysis should consider the range of potential consequences and how these could occur.

e) Evaluate risks

Compare estimated levels of risk against pre – established criteria and consider the Balances between potential benefits and adverse outcomes. This enables decisions to be made about the extent and nature of treatments required and about priorities.

f) Treat risks

Develop and implement specific cost-effective strategies and action plans for increasing potential benefits and reducing potential costs

g) Monitor and review

It is necessary to monitor the effectiveness of all steps of the risk management process. This is important for continuous improvement. Risks and the effectiveness of treatment measures need to be monitored to ensure changing circumstances do not alter priorities. Council staff are involved in a continuous program of risk assessment at district facilities due to the high level of public interface.

7.3 Council Funding for Risk

Council looks to provide funding for disaster recovery through a separate reserve. It appropriates funding each year to a Disaster Recovery Fund reserve to enable access to ready cash in the event of a natural disaster. This is intended to assist reinstatement and to finance any short term needs in the time between any disaster and the recommencement of services. As at June 2020, the reserve fund had a balance of approximately \$2.0 million. Council has chosen not to insure its below ground assets given the position of its reserves.

Secondly the TEL Fund was established in September 1995 when TDC sold its investments in Taupō Electricity Ltd and Taupō Generation Ltd. The use of that sale capital and subsequent investment income generated each year are included in Council's Treasury Management Policy. One requirement of that policy is that the portfolio and funds are managed in a manner that reflects their potential utilisation as a disaster recovery fund in the event of a natural disaster within the Taupō district. The value of the fund as at 30 June 2020 is approximately \$61.3 million.

With these two funding mechanisms in place Council considers it is prudently but effectively managing the risk of being able to fund both short and long term needs with respect to potential natural disaster and subsequent recovery operations in the district.

7.4 Lifelines Risk Assessment

TDC is a member of Waikato utility Lifelines Group. This process aims to identify components within the TDC Solid Waste network that may be vulnerable to seismic, flood or volcanic events and the impact of failure of these assets.

7.5 Risk Register

The specific asset risk register (see following) identifies risks, the consequence of the risk, the existing controls in place, treatment options and the level of risk to the asset as assessed and updated by Council Officers. A possible improvement to the register is to provide each treatment options with an associated cost and added to the risk register; however, these are yet to be costed by TDC.

7.6 Risk Classification Matrices

7.6.1 LIKELIHOOD

Likelihood scale for consideration based on **ANZS 4360** is as follows.

Level	Descriptor	Damage / Failure Indicative Frequency
A	Almost Certain	Once per year or more frequently
B	Likely	Once every three years
C	Possible	Once every ten years
D	Unlikely	Once every thirty years
E	Rare	Once every 100 years
N	Almost Impossible	Once in 10,000 years

Table 1: Risk Likelihood

7.6.2 CONSEQUENCE

A **consequence** scale as a result of a risk event occurring based on **ANZS 3460** is shown for consideration as follows.

Level	Descriptor	Description
5	Catastrophic	Extreme Impact of damage or failure
4	Major	High impact of damage or failure
3	Moderate	Medium impact of damage or failure
2	Minor	Low impact of damage or failure
1	Insignificant	Very little impact of damage or failure
N	Negligible / Nil	Assessment is Nil

Table 2: Risk Consequence

7.6.3 RISK RATING MATRIX

With both likelihood and consequence scales in place a qualitative risk analysis matrix/level of risk can be determined.

Likelihood	Consequences					
	N	1	2	3	4	5
A	N	L	M	H	E	E
B	N	L	M	M	H	E
C	N	L	L	M	M	H
D	N	L	L	L	M	H
E	N	L	L	L	L	M
N	N	N	N	N	N	N

Table 3: Risk Matrix

The rating legend for the matrix, in this example, can be summarized as follows

E = Extreme risk

H = High risk

M = Moderate risk

L = Low risk

N = Negligible risk approaching nil / no risk

7.6.4 RISK MITIGATION MEASURES

High to Extreme risk would normally involve more detailed studies, action plans and management responsibility specifically assigned.

Moderate risk would be managed by monitoring or response procedures and management responsibility specified.

7.6.4.1 Summary of Identified High Risks

This is a summary of the high risks; the complete list is included as table 7-5.

Asset Risk	The Risk	Mitigation Measures
-------------------	-----------------	----------------------------

Asset Risk	The Risk	Mitigation Measures
Commercial competition	Commercial operators take control of waste stream and divert waste (Gate Revenue) away from the Broadlands Rd landfill. Contractors focused on tonnes to landfill thus negating Councils Waste minimisation and management plan objectives.	Contract monitoring, performance measures, possible commercial agreement Budget reviews Pricing levels set to make sure that is not viable for competitors to compete
Public safety non-compliance / occupational health and safety non-compliance	Health risk due to access to contaminated sites, heavy machinery movements, access to recycling areas that are hazardous (steel pile, conc pile, waste wood pile and glass area), potential for acceptance of hazardous materials (Bombs, Haz waste , Flammable material)	Appropriate signage on hazard areas, appropriate signage as to what can be dropped off adequate training provided, adequate PPE for staff)
Volcanic eruption	We have active volcanoes at the end of the lake with recent eruptions. Ash could affect the operation of facilities and collection vehicles	Suspend collections and close facilities until ash is removed or it is safe to operate. Schedule additional collections runs and extend operating hours of facilities after the event. If the landfill was closed then we could truck material to an alternative disposal site

Table 0-4: Identified High Risks

7.7 Critical Assets

The Solid Waste cost centre not only provides assets such as the Broadlands Rd landfill and district transfer stations it also provides a number of non-asset-based services, the most important being the district refuse and recycling contract that provides kerbside collection to urban areas in the district.

The risk assessment has identified a number of scenarios that could possibly mean that the landfill and or RTS sites may be unable to receive material.

The solid Waste facilities and the Broadlands Rd landfill can act as stockpile points if an emergency failure was to occur. The Broadlands Rd transfer pit can be utilised to transport waste out of the district to other landfills in the short term. The refuse and recycling collection can be altered to alternative days and the materials collected can also be changed to cater for whatever the failure might be. In a recent flooding incident, residents were notified of a drop off point that materials would be collected from which enabled the service to continue.

Refuse and Recycling collection can be changed to twice weekly depending on access issues and all material could be collected in the one truck, i.e. postponing recycling in the short term if the nature of the event meant that service delivery was severely compromised.

In the recent Covid-19 outbreak, waste collection and disposal were identified as essential services to maintain public health. The service delivery was altered to only collect waste from the kerbside and district facilities only accepted waste in pre-paid bags to reduce the handling of waste materials. All recycling and other waste related services were stopped until it was deemed safe enough for them to resume.

Council's facility and service delivery contractors do have additional resources available on call to provide for collection and site operations.

The Broadlands Rd landfill has a water cart and a water reservoir in case of fire and has a capital project to transform an old septage pond into a water reservoir along with the provision of an infrared camera which will be monitored remotely, as a recent fire exposed the issue of getting water to the fire in a timely manner.

The liner system providing containment at the landfill has been designed to allow for some movement. The repair of any liner damage would need to be worked through with Council's peer reviewer for the site and the regional Council.

If there was volcanic ash covering facilities, we may have to close them until after the event or work to remove the ash so that facilities could continue to operate. Collection operations would be dependent on level of ash and whether it was safe for the operators.

Households may have to stockpile waste until facilities can reopen, then Council could organise additional collection runs to deal with the volumes.

Large volumes of ash could be stockpiled, preferably on farmland as it would not need to go to landfill, Council would have to negotiate with landowners.

During the tender process for any Council contract all contractors must show that they have become an approved contractor in regard to health and safety which requires them to have Site Safe or equivalent accreditation.

Council currently employ Envirowaste Services for the two main operating contracts for solid waste which enables council to draw on national health and safety procedures and processes. All contractors are required to report monthly on health and safety.

Landfill fires

Landfill fires are a common risk for disposal facilities especially in the winter months where people are looking to dispose of fire ash. This material can come to facilities on the back of trailers or in refuse bags. Staff are trained to look for hot materials and council undertakes regular landfill fire training. The other cause of landfill fires that has arisen over the last couple of years is Lithium-ion batteries as they tend to explode if compressed or damaged. Council is providing a drop off area at the landfill, where batteries are encased in concrete prior to disposal.

A fire at the Broadlands Rd landfill may require that refuse is not able to be disposed at the site while the fire is being handled. The onsite tipping pit can be used to load out bigger vehicles for bulk load transfer to an alternative disposal site. Waste from the five transfer sites can also be transported to an alternative site. The closest alternative site would be the Rotorua landfill and council would have to negotiate a short-term disposal agreement.

7.7 Legislation requirements

The waste minimisation Act requires that a Waste Assessment is completed prior to the development of Council's WMMP. The Waste assessment provides the background data to the strategy and the strategy will provide details as to how Council will spend Waste minimisation levy funds, reporting on this spend is an annual requirement. Reporting on resource consents for closed and operating landfills is scheduled through a consultancy firm who provides monitoring and analysis services.

Waste Minimisation Act also requires that waste tonnages are reported to Mfe on a monthly basis as this details forms the basis of the waste levy payment.

The landfill operational consent requires that site operations and new cell builds are overseen by a peer reviewer who makes sure that best practise is being implemented. The peer reviewer also provides advice on problems arising.

The consent also requires a contingency plan for site operations, and this document can be found in Objective.

Illegal dumping could potentially increase with the increase in the governments waste minimisation levy as the price to dispose of waste at district rises by \$60 over the next 4 years. Council has put additional funds aside in anticipation of an increase in material to be collected.

Taupo District Council

Asset Management Plan

Risk Register

Division:	Works	Compiled by:	Brent Aitken	Date:	6/9/5
Asset:	Solid Waste	Reviewed by:		Date:	

NATURAL RISKS

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
Earthquake	Landfill or Transfer Station structures damaged due to earthquake due to:							
	Fill Slumping	Moderate	Unlikely	PE (see Note 1)	3	D	L	
	Liner Failure	Major	Unlikely	PE (see Note 1)	4	D	M	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Major	Unlikely	PE (see Note 2)	4	D	M	
	Surrounding environment polluted due to Leachate loss from pond or lined landfill cell	Major	Unlikely	PE (see Note 3)	4	D	M	
	Compaction Plant at RTS damaged	Moderate	Unlikely	E	3	D	L	
	Weighbridge damaged and unable to weigh	Moderate	Unlikely	E	3	D	L	
	Computer system damaged and unable to record transactions	Minor	Unlikely	E	2	D	L	
	Refuse collection unable to proceed	Major	Unlikely	E (see note 2)	4	D	M	
Damage to Closed landfills	Moderate	Unlikely	E (see note 4)	3	D	L		
Volcanic Eruption	Refuse collection unable to proceed	Major	Unlikely	E (see note 2)	4	D	M	
	Potential for structural damage to RTS and Landfill buildings	Moderate	Unlikely	E	3	D	L	
Ash fall	Refuse collection unable to proceed	Minor	Rare	E (see Note 2)	2	E	L	
	Potential for structural damage to RTS and Landfill Buildings	Moderate	Rare	E	3	E	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Moderate	Rare	E	3	E	L	
	Weighbridge damaged and unable to weigh	Moderate	Rare	E	3	E	L	

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
	Compaction Plant at RTS damaged	Moderate	Rare	E (see note 5)	3	E	L	
Lahar	Refuse collection unable to proceed	Minor	Rare	E	2	E	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Minor	Rare	E	2	E	L	
Flooding	Refuse collection unable to proceed	Moderate	Unlikely	E	3	D	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Moderate	Unlikely	E	3	D	L	
	Surrounding environment polluted due to Leachate loss from pond or lined landfill cell	Major	Unlikely		4	D	M	
	Fill Slumping	Moderate	Unlikely	E	3	D	L	
	Liner Failure	Major	Unlikely	E	4	D	M	
	Compaction Plant at RTS damaged	Moderate	Unlikely	E	3	D	L	
	Weighbridge damaged and unable to weigh	Minor	Unlikely	E	2	D	L	
	Computer system damaged and unable to record transactions	Minor	Unlikely	E	2	D	L	
	Damage to closed Landfills	Moderate	Unlikely	E	3	D	L	
Tsunami	Potential for structural damage to RTS and Landfill buildings	Moderate	Rare	E	3	E	L	
Fire	Landfill fire would restrict dumping and close landfill	Major	Possible	PE (see note 6)	4	C	M	
	Potential for structural damage to RTS and Landfill buildings	Moderate	Possible	E	3	C	M	
	Fill Slumping	Moderate	Possible	E	3	C	M	
	Liner Failure	Major	Unlikely	E	4	D	M	
Lightening	Compaction Plant at RTS damaged	Minor	Rare	E	2	E	L	
	Weighbridge damaged and unable to weigh	Minor	Rare	E	2	E	L	
	Computer system damaged and unable to record transactions	Minor	Rare	E	2	E	L	
High winds	Potential for structural damage to RTS and Landfill buildings	Minor	Unlikely	E	2	D	L	
	Litter strewn across a wide area	Minor	Almost Certain	E (see note 7)	2	A	M	
Land slide/slip	Fill Slumping	Moderate	Possible	E	3	C	M	
				E	4	C		

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
	Liner Failure	Major	Possible	E	2	C	M	
	Refuse collection unable to proceed	Minor	Rare	E	3	E	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Moderate	Rare				L	
Tomo's	Fill Slumping	Moderate	Unlikely	NC	3	D	L	
	Liner Failure	Major	Unlikely	NC	4	D	M	
	Potential for structural damage to RTS and Landfill buildings	Minor	Unlikely	NC	2	D	L	
Geothermal activity	Fill Slumping	Moderate	Possible	NC	3	C	M	
	Liner Failure	Major	Possible	NC	4	C	M	
	Potential for structural damage to RTS and Landfill buildings	Minor	Unlikely	NC	2	D	L	
Pandemic	Service impeded	Major	Possible	C	3	C	M	

EXTERNAL RISKS

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
War	Potential for structural damage to RTS and Landfill buildings	Moderate	Almost Impossible	NC	3	N	N	
	Refuse collection unable to proceed	Major	Almost Impossible	NC	4	N	N	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Major	Almost Impossible	NC	4	N	N	
Terrorism	Potential for structural damage to RTS and Landfill buildings	Minor	Rare	NC	2	E	L	
	Refuse collection unable to proceed	Moderate	Rare	NC	3	E	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Moderate	Rare	NC	3	E	L	
Protests/Riots	Refuse collection unable to proceed	Moderate	Rare	NC	3	E	L	
	Access to disposal sites blocked, refuse unable to get to disposal sites	Moderate	Rare	PE	3	E	L	
Vehicle accident	Refuse collection unable to proceed	Moderate	Likely	E	3	B	M	
Contractual obligations not fulfilled	Delayed works programme potentially resulting in:		Almost					

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
by external parties	Refuse being left in streets	Minor	Certain	E	2	A	M	
	Landfill cells not being built in time for refuse disposal	Major	Unlikely	E	4	D	M	
Excessive costs to maintain, renew or create assets	Excessively high maintenance and construction costs due to having to import material (Clay liners, HDPE plastics drainage aggregate) from outside the district resulting in less work achievable within budget	Moderate	Unlikely	PE (see note 8)	3	D	L	
Lack of contractors to carry out works	Loss of competitive contract rates and increased contract rates due to having to import contractors from outside the district	Moderate	Unlikely	E	3	D	L	

PHYSICAL RISKS

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
Inadequate design, construction or maintenance of asset	Damage to landfill or RTS buildings and or compactors with possible Health and safety issues	Major	Possible	E	4	C	M	
	Major failure of landfill liner resulting in pollutants entering the surrounding environment	Major	Possible	E	4	C	M	
Premature asset failure	Failure due to not predicting growth rates accurately and refuse fill rates	Major	Unlikely	E	4	D	M	

OPERATIONAL RISKS

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
Commercial Competition	Privately run landfill or RTS opened in the district or close by taking refuse from Broadlands and thus revenue	Major	Possible	NC	4	C	M	
	Privately run landfill subsidising transport costs for waste to go out of the district, thus loss of revenue	Major	Possible	NC	4	C	M	
	Kerbside refuse collectors obtaining a monopoly in the collection market thus controlling prices to the community	Moderate	Likely	PE (see note 9)	3	B	M	
	Kerbside refuse collection contractors focused on tonnes to landfill and thus making Council recycling targets	Moderate	Almost Certain	PE (see note 9)	3	A	H	

Asset Risks	The risk: What can happen and how it can happen	The consequences of an event happening		Adequacy of existing controls	Consequence rating	Likelihood rating	Level of risk	Risk priority
		Consequences	Likelihood					
	unachievable							
Gas extraction not meeting required levels to enable reduction in emissions cost	Due to the landfill cover, the site does not produce enough gas as it is venting, and this impacts the amount of emission credits that Council has to pay for.	Major	Possible	PE (see note 15)	3	B	H	
Legislative non-compliance	E.g. Not obtaining Resource Consent, not abiding by LGA. Major Resource Consent Breach.	Major	Unlikely	E	4	D	M	
	Not achieving targets set in MFE guidelines or Council	Major	Possible	E	4	C	M	
	Waste strategy	Moderate	Possible	PE (note 10)	3	C	M	
	Not achieving annual plan and or LTCCP objectives	Moderate	Possible	E	3	C	M	
Failure to identify all assets condition and value	Won't have in place an optimum maintenance or renewal programme and budget. Rating for renewal incorrect	Moderate	Possible	PE	3	C	M	
Incorrect assessment of financing required to renew or create assets	Over spent budget and/or delayed project completion	Minor	Likely	E	2	B	M	
Community expectation not met	Communities faith and trust of Council lost	Moderate	Likely	PE	3	B	M	
Loss of Council reputation	Communities faith and trust of Council lost	Moderate	Likely	PE	3	B	B	
Public safety non-compliance	Public safety put at risk	Major	Likely	PE (see note 11)	4	B	H	
	Health Risk due to access to contaminated sites	Major	Likely	PE	4	B	H	
	Heavy machinery movements	Major	Likely	PE	4	B	H	
	Access to recycling areas that are hazardous (steel pile, conc pile, waste wood pile, glass area)	Major	Likely	PE (see note 12)	4	B	H	
	Potential for acceptance of Hazardous materials (bombs, Haz waste, flammable materials)	Major	Likely	PE	4	B	H	
Loss of electronic data/information on assets	No access to data – potential for work to be delayed	Minor	Possible	PE (see note 13)	2	B	M	
	Loss of data– data will have to be recollected and work significantly delayed	Minor	Rare	PE (see note 13)	2	E	L	
Loss of Council employees from high staff turnover	Loss of local knowledge both present and historical	Moderate	Likely	PE (see note 14)	3	B	M	

Notes:

1. Landfill Liner designed for base movement
2. Refuse can be held at local RTS or moved to site that is not affected, community notified not to place refuse out for collection and alternative disposal sites used

3. Depending on severity, Leachate could be contained within bunding and piped, Ground Water in the vicinity of the landfill is not potable due to geothermal influence
4. Closed landfills have operating closure consents requiring mitigation and repair of damage, funding coming from TEL fund.
5. Transfer stations can still operate by placing uncompacted refuse into trucks and transporting to disposal site.
6. Have a water truck on site, site has an emergency evacuation procedure, will monitor potential harmful effects of smoke for the surrounding area and evacuate if necessary, firefighting water storage pond and infrared camera listed as projects in the LTP.
7. Contractor employs litter fences and has staff available for litter clean up.
8. Review budgets annually, although can not allow for things like petrol increases during the year, which could affect product use choices.
9. Potentially controlled by bylaw or licensing provisions
10. Commercial operators may not be aligned with waste strategy and thus Council may not be able to achieve targets set
11. Sites are kept up with best practise for operational health and safety
12. Council still wants to encourage reuse of materials at disposal sites and thus will run the risk of injury to the public when they are among this material, signage identify that they do so at their own risk is displayed.
13. Daily computer back-ups, virus protection software, some data in hard copy
14. Asset Management Plans, documentation
15. Council currently has an exposure to the ETS, which increase or diminishes due to the cost of emissions and the amount of waste disposed to landfill. The ETS was not envisaged as an issue in the development of the landfill, but the pumice cover does allow venting of Methane due to its porous nature. If Council invests in a gas flare it will be imperative that we are able to meet certain gas emission reduction targets otherwise we have invested in destruction of emissions but won't be able to reduce the operational costs. Council will have to ensure that any design of the gas wells and extraction system take into account these factors as part of the overall design.
16. The current waste collection contract incorporates both bagged waste and wheelie bin waste and this allowed for waste to be collected and removed at kerbside which also removed the public health risk. Council also allowed waste that was in pre-paid bags to be dropped off at disposal facilities. As the bags were pre-paid, it meant that there was no transaction process as bags were counted only, which resulted in rural properties and urban properties having the ability to get rid of waste. Initially under Level 4, residents were asked to stockpile recyclables, but in hindsight, due to the length of Level 4, any new advice would be to dispose of any recyclables in the waste stream to avoid the build up of materials at properties which could in the long term impact public health.

Council's asset management working group have gone through a process where critical assets have been identified and documented, the main critical asset for Solid waste is the Broadlands Rd landfill. If the landfill were to become compromised Council could use the domestic disposal pit to load trucks to enable waste to be transported to an alternative disposal site, the closest being either the Envirowaste site north of Hamilton or HG Leach's landfill in the Coromandel.

Commercial competition

As Council has a mixed funding model for the provision of waste services (rates and user charges) council does compete in the market to provide waste services such as landfill disposal and kerbside collection of refuse.

Currently waste collected by council or commercial market provider's ends up for disposal at the Broadlands Rd landfill. Council uses part of the revenue from gate charges to fund waste minimisation activities in the district. There are alternative disposal sites in New Zealand which could take the waste disposed at Broadlands Rd. Council must use the mix of rate funds and user charges to keep the disposal fee below the level where a competitor could, handle, transport and dispose at an alternative site. If the market considered that they could achieve this outcome and charge a lower price for disposal as a gate fee then there is the potential that Council would be left running a disposal facility but with no waste to cover the operational costs. Rotorua Council put themselves in this predicament recently which has meant that had to close their landfill and now the waste stream is dominated by commercial operators, reducing their council's ability to influence waste minimisation.

To safeguard the revenue stream into the Broadland Rd Landfill, Council has had to enter into a commercial arrangement with the biggest operator in the district, which gives them a differential pricing arrangement for waste disposal. As they are also the contract providers for landfill operation and kerbside collection Council has been able to lock in this agreement for the term of their contracts.

As the Broadlands Rd landfill has an additional twenty years of disposal space after the 2027 consent expiry date Council will again have to negotiate with the market at the end of these contract terms.

Council does have the ability to go to fully rates funded service delivery, for the kerbside collection service and this would secure 5000 tonnes of waste. Commercial operators are not going to compete with the district transfer stations as the waste volumes are too small to warrant the capital investment, so the main risk is the Broadlands Rd site and the revenue stream it creates.

Due to the geographical isolation of Taupo and the distance to the nearest large disposal facility (North of Hamilton) and Council's ability to alter fees with the support of partial rate funds it is considered that as long as Council continues to monitor the cost of transport and disposal costs at alternative facilities council will be able to avoid waste flight.

INADEQUATE RESOURCING Short term focus and long term uncertainty due to political swings in strategy and objectives				
TREATED RISK Moderate (Risks to be actively managed and monitored with specific procedures)		NEGATIVE IMPACTS ON ORGANISATION <ul style="list-style-type: none"> • Potential to impact of long term financial sustainability • May cause result in on compliance with legal and regulatory obligations • Potential to fail to meet customer & ratepayer commitments 	TREATMENT MC00102 Modification of the risk by way reduction of the likelihood of the risk occurring by the completion of Long Term and Annual Planning in accordance with sections 93 & 95 of the Local Government Act 2002.	TREATMENT/RISK STATUS Long term planning id being undertaken as per the requirements of the Local Government Act and these are expected to ensure that adequate resources are available to deliver the policies and outcomes required by the community and is nearing completion Within Council's risk appetite with no breaches of legal compliance and strategic goals are being achieved and no incidents of reputational damage recorded.
UNTREATED RISK High (Untolerable. Requires management over and above standard operational procedures to reduce the risk)				
UNTREATED LIKELIHOOD	Likely			
UNTREATED SEVERITY	Catastrophic			
TREATED LIKELIHOOD	Unlikely			
TREATED SEVERITY	Catastrophic			

HEALTH AND SAFETY AT WORK ACT 2015 Potential liabilities for elected representatives if all reasonably practical steps are not taken to manage health and safety risks				
TREATED RISK Moderate (Tolerable but requires risks to be actively managed And monitored with specific procedures)		NEGATIVE IMPACTS ON ORGANISATION <ul style="list-style-type: none"> • Risk of compromising peoples safety & welfare • Potential for non compliance with legal and regulatory obligations. • Penalties for non compliance could have a significant impact of long term financial performance. • Seen as a failure to meet customer & ratepayer commitments 	TREATMENT The risk is being modified to reduce the likelihood of it occurring by ensuring that the Chief Executive Officer has appropriate processes and procedures in place to reduce and this is managed with specific KPIs in their individual employment agreement.	TREATMENT/RISK STATUS Delegated authority to the Chief Executive Officer and specific KPIs are in their individual employment agreement. Act comes into effect on 4 April 2016. Health and Safety reviews of departments to commence to ensure that the Council is meeting its obligations under the Act. Council has no appetite for anything that compromises safety, welfare and legal non compliance. No non compliances recorded but 36 minor injuries recorded and 3 moderate injuries that required medical attention. No serious harm incidents.
UNTREATED RISK High (Untolerable. Requires management over and above standard operational procedures to reduce the risk)				
UNTREATED LIKELIHOOD	Possible			
UNTREATED SEVERITY	Major			
TREATED LIKELIHOOD	Unlikely			
TREATED SEVERITY	Moderate			

8.0 LIFECYCLE MANAGEMENT PLAN

8.1.1 OUR DISTRICT

Our district is located in the centre of the North Island of New Zealand and within the Waikato Region. Sitting at the heart of our district is the biggest freshwater lake in New Zealand, which is surrounded by mountains, forests, rivers and national parks. Complementing our natural environment are the vibrant and diverse communities that make up our urban places.

Taupo has become a key visitor and event destination possessing many unique attributes such as its panoramic stunning lake and volcanic landscape.

Lake Taupo is the biggest lake in the southern hemisphere, and it is rated by the district as our most important asset



The Taupō District occupies a large proportion of the Central North Island Volcanic Plateau together with the complete catchment area of Lake Taupō and Upper Waikato River areas.

Whilst the majority of the District is situated within the Waikato Region, a small proportion also intrudes into the Bay of Plenty, Hawkes Bay and Manawatu-Wanganui regions. The District comprises 6354sqkm of land and 616sqkm of lake.

Prior to 1950, the District was largely undeveloped and sparsely populated. Since that time, population has increased rapidly to approximately 37,200 (2017/18). Urban growth has focused on Taupō Township and various lakeshore settlements, whilst rural land development has been dramatic with the conversion of scrub wastelands to productive farmlands and vast exotic forest plantations and future conversion to lifestyle properties.

Lake Taupō and its surrounds have also become an important national and international tourist destination, renowned for its scenic attractions and wide-ranging recreational activities.

Taupō District Council provides urban kerbside refuse and recycling collection throughout the district as well as five refuse transfer stations and the Broadlands Rd landfill for waste disposal and material recovery and recycling. Litter and recycling bins are located in the central CBDs, high use areas and some parks and reserves.

Council also has three closed landfills at Taupō, Turangi and Mangakino.

The Broadlands Rd landfill is seen as the most critical asset, along with the kerbside collection service where failure would have a dramatic impact. This has been discussed in further detail in the Risk Management section.

Background data for the asset type including asset description, capacity, performance, condition and valuations is included in the Asset Data section.

This section contains the general *management strategies*, to achieve the levels of service defined in Level of Service section. These strategies are divided into four main work categories (routine maintenance, renewal, capital and disposal) as illustrated in the following figure.

Performance assessment

Kerbside Collection

The kerbside refuse collection performance is monitored by analysing service requests. The disposal facilities are under contract and the contract performance is monitored by the Network Operations Engineer, each site is regularly inspected to confirm maintenance and renewal requirements as well as making sure that sites are operated within their resource consent requirements.

The community's main interaction with Council provided waste service is the Council's kerbside service. The service request system logs all calls and Council staff monitors this to determine contractor performance or service performance. Council also measures community satisfaction with the service through its satisfaction survey.

Bag numbers and recycling quantities are also analysed to determine market trends. All of the operational contracts for service delivery for solid waste have service performance requirements which are monitored as part of contract management responsibilities.

Service requests for the kerbside collection are passed directly to the contractor, where these are actioned, and feedback is provided once the issue has been resolved. If the issue cannot be actioned immediately then further discussion ensues with the contractor until a solution is determined. The contractor can also leave a service note for the homeowner either on the bag due to non-conformance or in the recycling bin to identify non-recyclable material.

Council allow the kerbside contractor to utilise the district RTS sites to temporarily store recyclables. This option is very useful in peak times and reduces the times trucks have to spend between urban areas as well as builds efficiency around the time material can be collected.

Where gaps are identified in service delivery a quick response can be made. The kerbside collection service can easily be extended as new demand occurs. Collection days and areas can also be altered as well as vehicle numbers to make sure that collection vehicles are off the road by a certain time of the day.

Collection times around schools have recently been altered so that trucks avoid the peak drop off and collection times for children.

Council is currently in the process of reviewing the kerbside service delivery options to determine things like waste and recyclables containment (Bins vs Bags), and additional materials to collect, i.e. food waste.

Central govt are also currently reviewing the best methodology of kerbside collection of recyclables to assist councils in this decision-making process and to try and obtain uniformity of service delivery across the country. This review is also focused on contamination levels as export markets continue to refuse contaminated material.

Waste Facilities

Maintenance to facilities is prioritised depending on its impact to operations and the effect on the public's use of the site.

Management processes around service performance are based around regular inspections with notices to contractors and the development of service requests. Both notices and service requests are discussed at monthly meetings.

Differed maintenance is documented and analysed depending on service levels and funding capability. Where emergency maintenance is required and there is a funding limitation then this is reported to the senior leadership group for support.

Differed maintenance is funded by way of changes to annual plan funding requirements for the cost centre.

Council is looking to remove the manual handling of recyclables at its district facilities and provide upgraded recycling disposal areas for the public to use and move to bulk loading of recycles at all facilities. This will reduce truck trips to the sites and eliminate the Health and safety risk of staff manually handling recyclables in drums etc. it will also allow Council to run all of the district waste facilities under one operational contract which should enable council to make savings regarding overheads and management costs from the individual contracts currently operating.

Street Litter & Recycling

The Street Litter and Recycling Bins service level is set so that refuse and recycling bins should not overflow, and Council analysis's service requests and undertakes routine inspections.

Council is gradually updating its litter bin stock, and the Big Belly bins have allowed Council to reduce the number of bins but maintain the same capacity.

The predominant refuse bin has been the square steel green 60L refuse variety, and these are slowly being removed and replaced when required with either Big Belly bins depending on the location and usage or the wood slat variety. Recycling bins will be the Love NZ bins with district motif on the side.

Maintenance requirements for litter and recycling bins are predominately reported by the contractor. The public also uses Councils service request system.

Bins are maintained by Councils park and reserves maintenance staff when faults are reported. The collection contractor is now performing cleaning of bins as when required or requested by Council.

Asset useful lives

Council undertakes a revaluation of assets every three years with a combined team made up of an external auditor, a finance team member and the asset manager responsible for the asset. At this time the remaining lives of assets are compared with the condition assessments and the renewal programs are reviewed.

Landfill cell useful life is determined by the fill volume and the time taken to construct a new cell. The landfill cell development will progress where the cell will be filled to a certain level and room will be left for a final overall lift over the site. This historical fill methodology may alter to enable gas capture, where the cell is built to final level and then capped off.

The Broadlands Rd landfill site has residual capacity after the current consent expires with an additional 20 years of filling capacity if the proposed fill area is mined for cover. This potential filling area will be the basis for a new operational consent and will mean that the current waste drop off pit can continue without modification to a tip and haul facility. The tip and haul facility will be implemented if the consent is not able to be renewed and will also be required at the end of term of any new consent

To date no refuse facilities have been built or provided by developers, but the Broadlands Rd landfill has been contracted under an alternative tender where the contractor is making alterations and improvements to the site at their cost (authorised by Council) but Council will own the improvements at the end of the contract term.

As long as the renewal expenditure and maintenance is undertaken the refuse transfer stations will continue to operate indefinitely as they are strategically located around the district to service not only the local urban centre but the also the surrounding rural communities.

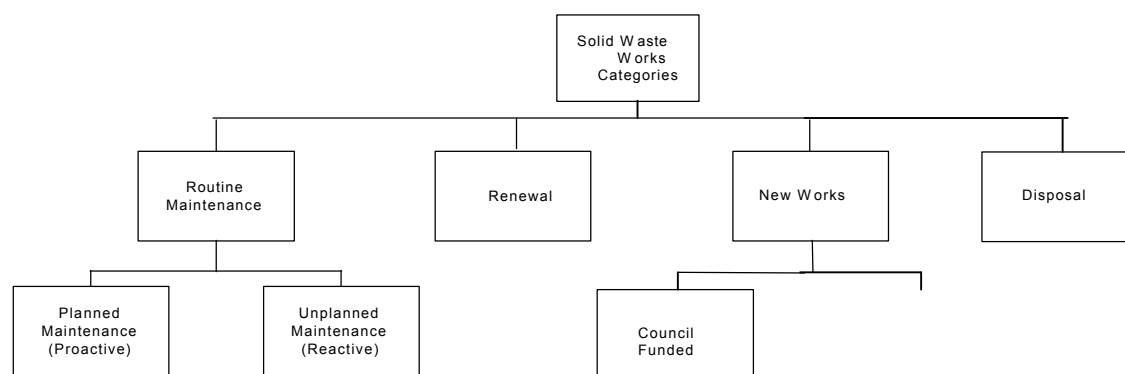


Figure 8-1: Asset Works Categories

The work categories are defined as follows:

Routine Maintenance

Routine maintenance falls into two broad categories as follows:

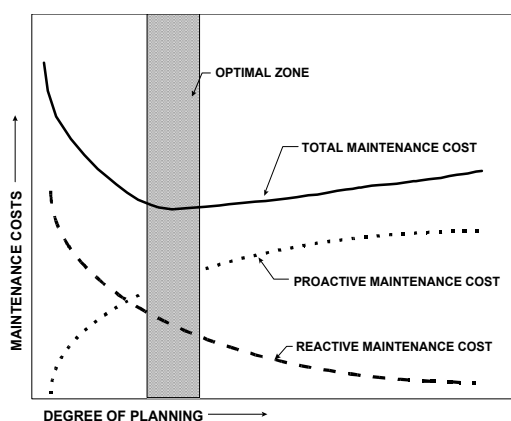
- **Planned (Proactive) Maintenance:** Proactive inspection and maintenance works planned to prevent asset failure.

- Unplanned (Reactive) Maintenance: Reactive action to correct asset malfunctions and failures on an as required basis (i.e. emergency repairs).

Council’s electronic service request system links directly with the various solid waste operational contracts especially kerbside collection. The public can access this system through Councils fix my street application, on the website, and phone caller’s information is placed directly into the service request. Service requests have response times and ramp through the Council hierarchy if not completed on time.

Routine and unplanned maintenance for the waste facilities is most often reported by the facility operator as they are on site and can identify the issue and bring it to the asset manager’s attention. Emergency works are reported immediately as this can often impact on the sites on going operation.

A key element of asset management planning is determining the most cost-effective blend of planned and unplanned maintenance as illustrated in the following figure.



Council’s strategy around routine maintenance is, “if the level of service is affected then maintenance should be undertaken”.

Figure 8-2: Balancing Proactive and Reactive Maintenance

Council has appointed contractors to operate all of the district waste facilities and kerbside collection service except the Mangakino RTS which is run in house.

Facility contracts incorporate the overall site appearance and necessary works to undertake the disposal and recovery operations, these contracts are at a fixed monthly cost.

Operational contracts do not include maintenance to the facilities themselves unless caused by the contractor and this is where any additional Council expenditure outside of the fixed contract rates is expended.

Money is spent to maintain the current levels of service at the district sites, as Council has found that if sites are allowed to become rundown then the community treats them as such.

Operation and Maintenance procedures

The Broadlands Rd landfill and the five transfer stations have financial (cash handling) controls that have been set by the Asset Manager as well as the Finance manager. These controls dictate how revenue is handled on sites and brought back to council, as well as internal revenue handling requirements.

Due to Covid-19, cash was not being accepted at facilities, and Council implemented PayWave. This has meant that all transactions have been electronic which has eliminated the issue with cash handling and possible fraudulent activities.

The site financial controls are detailed in individual operational contract documents which are reviewed regularly to make sure they are best practise.

The Broadlands Rd landfill operates two weighbridges, which must adhere to weights and measures legislation, and both weighbridges are calibrated yearly by qualified staff external to Council. Kiosk staff are trained in operation of the weighbridge program and council provides IT backup. Weighbridge program problems are worked through by liaising with the program developer.

A new weighbridge is planned to be installed at Turangi which is in part being requested by central govt due to the increase in the waste levy. Central government want to see more data coming from waste facilities. A weighbridge will also reduce the complaints arising from volume-based assessment. Council will look to apply to the waste minimisation fund to assist with the cost of the infrastructure.

Council has a rule that where commercial vehicles bring in waste, Council will charge the truck or vehicle owner, no on charging the cost of disposal to second entities will be undertaken. This makes sure that drivers take ownership of the loads they are transporting and are fully aware of the costs associated with each load and load type at the time of disposal.

Maintenance requirements and procedures for the three closed and one operating landfill are detailed in individual resource consent documents which are appended to operational contracts. Contractors are detailed specific tasks which make sure that resource consent requirements are adhered to.

Broadlands Rd landfill stage 1 and consecutive stages have peer review clauses, where a peer reviewer provides an independent report to the regional council.

Landfilling in the current operative cell is to be done to best practise and to achieve a certain level of compaction as detailed in the operational contract. Cover is placed to minimise windblown litter as well as keep bird numbers down and all facilities are required to operate bait stations to eradicate vermin.

Incidental maintenance such as keeping the gutters clean and lawn mowing is the responsibility of the onsite contractor. A repair to damage done by the community and wear and tear is undertaken by Council after identification and prioritisation.

Renewals

This includes replacement and rehabilitation of existing assets to their original condition and capacity. Council strategy for renewals is to look at age, but more importantly consider results from condition assessments to make sure levels of service and customer satisfaction is maintained. Condition assessments are undertaken on a regular basis but usually quarterly.

Renewal works are packaged per site based on regular condition assessments and the age of the assets. District facilities have high usage over the summer months so renewal works are programmed outside of this period so that sites can run smoothly.

Due to the impact of high public use on facilities, renewal works are prioritised around unplanned maintenance and possible unplanned renewal works.

New Works

Creation Works: New works which extend or upsize assets, which are required to cater for new development and growth. Creation of new works is entirely by Council with no developer funded solid waste assets vested in Council.

New Capital works are influenced by growth but also can be influenced by changes in the waste market, which could include things such as new products, commercial competition, changes in recycling markets, all of which may mean that Council needs to tweak its service delivery. Changes to legislation such as the Waste Minimisation Act and the Emissions Trading legislation will also drive new capital works.

Asset disposal: Retirement or sale of surplus assets, does not usually occur with the waste facilities. Unless the market starts operating in competition and undermines the revenue stream or need for the Council service. Council will then determine if Council's service is still required.

Waste Disposal and recovery facility disposal

At this time none of the facilities owned by Council are intended to be disposed except for the old landfill (Stage 1) area at Broadlands road that has been gifted to the Tauhara Mountain Trust. (Tauhara Middle 15 Trust)

Council has an agreement with the Trust to handover a portion of the Stage 1 Landfill at Broadlands Rd. As the site is still classed as a hazardous site, Council will retain the Resource Consent obligations. Specific conditions will apply to land in regard to damage to the landfill Cap which the new owners will need to abide by. Further disposal of Council facilities will need to be agreed by Council and a business case will need to be provided in support.

Council currently has three closed landfills that have closure consents as well as a number of older closed landfills that do not require ongoing upkeep or monitoring. The current consented landfills were closed so that the district could utilise one fully engineered lined district landfill at Broadlands Rd.

The current Broadlands Rd landfill site consent expires in 2027, so council is currently compiling data to enable council to apply for a new resource consent for Broadlands Rd as there a further 20 years of filling space to be developed.

Council staff have undertaken a feasibility study into the long-term viability of operating a landfill versus the option of trucking material to an alternative disposal facility. The cost of trucking material out of the district outweighs the cost of renewing the consent and operating Broadlands Rd for another 20 years after the current consent expires. Consultation with affected parties can now commence.

The Closed Landfill at Mangakino is on land owned by an Iwi trust and Council has a lease over the site and are responsible for the closure consent.

Council also has the closed landfill at Turangi on the Transfer station site, with monitoring ongoing for the next 20 years.

Funds to maintain the closed landfills are under the individual facility budgets.

Council is gradually upgrading its litter bin stock as the old green steel 60L bins come up for renewal. As these bins are steel, they can be recycled at the landfill and once this is done adjustments are then made to the Litter Bin register.

8.2 Overarching Issues/Strategies for Solid Waste

The five overarching issues regarding solid waste service delivery for council over the next few years are.

1. Kerbside Refuse and Recycling collection contract renewal, and what a new service might look like
2. A new operating consent for Broadlands Road Landfill
3. ETS costs and ability to reduce them going forward
4. Waste levy
5. Recovered materials markets

KERBSIDE REFUSE AND RECYCLING COLLECTION CONTRACT AND SERVICE OPTIONS

Council has recently confirmed a 2-year contract extension to the kerbside collection contract through to July 2023. This will enable Council to await government policy announcements regarding container product stewardship as well as give Council time to look at and confirm the desired kerbside service going forward.

The collection contract does have an additional 1-year term extension if required, making it a 10-year contract term.

Council has an agreement that EnviroWaste, would continue to bring "their" controlled waste to the site.

It is debateable if they could cost effectively take waste out of the district, but by council agreeing to the contract term Council has protected future revenue streams into the landfill for the term of the contract and extensions.

All service delivery options will be considered going forward, but Council will wait out the current market uncertainties, and in the meantime prepare for the roll out of any new contract in two years.

Please see

Kerbside collections options document (objective Link number)

Council's ongoing presence in the refuse collection market allows Council to firstly control the price of the service, and thus have an impact on the ability of the commercial operators to transport out of the district, and secondly provides Council with the ability to incentivise waste minimisation practises and provide alternative services at a competitive price.

Going forward, there are several options Council has, to stay competitive in kerbside waste market.

Council could choose to actively compete by providing a marked bag or stay with the sticker or decide to rate fund the service.

Rate funding the service, while eliminating competitors, would not incentivise waste minimisation as the service would be perceived over time to be free and thus would jeopardise the current recycling recovery rates, but it is a path a number of Councils have gone down recently.

Council will be presented with an options document that will provide a raft of service delivery options at different costings. It is suggested that Council will consult with the public regarding a narrowed down set of options that will include food collection as well as wheelie bins as options.

FOOD WASTE

Makes up a high proportion of waste stream but is expensive to collect and process and markets are not always available. The cost of diversion from the waste stream for food waste

compared to landfilling is expensive, but central government is looking to try and support food waste diversion.

Auckland Council are about to roll out a food waste collection from households and this material is going to be transported to Reporoa, where it will be treated (Biogas). This provides a local market for collected food waste in the Taupo district. The viability of collecting and treating food waste will depend on the gate price at Reporoa, the transport cost to get there and the collection cost.

There are three other possible markets for food waste, one being Verma composting, so add food in with the Bio solids and worms, the biogas plant in Reporoa and the other option is to windrow compost the food waste on site at the landfill.

Ways to reduce operational collection costs is to trade off other service levels, and by removing the odour of food from the refuse bag, refuse can then be collected fortnightly as opposed to weekly. A common practise is to collect food waste weekly and refuse and recycling biweekly thus reducing overall transport costs. Thought must also be given as to how to contain the refuse and recycling (bags or bins).

Any reduction of the current service to bi-weekly does give the commercial market a opportunity to compete.

Markets are now wanting uncontaminated materials, and one of the major problems with comingled recycling collection is that glass has to date been included, which has resulted in glass shards in the product, resulting in this material being landfilled.

Recent service contracts have provided both wheelie bins and separate crates for glass to avoid this issue.

BROADLANDS RD LANDFILL CONSENT RENEWAL

The Broadlands Rd landfill operating consent expires in 2027, but there is additional space for landfilling for another 20years so it would be prudent to look at the cost associated with gas infrastructure and the term of the consent and the possibility that Council could obtain a new consent to cover the additional 20years of filling operations.

Opus consultants have been working on a fill profile and have determined that a considerable amount of fill will need to be removed from the site over the extended renewal period. Council has been to date allowing contractors to remove pumice from the site at no cost to expediate this fill removal.

Firstly, council needed to determine if the site was viable from a cost perspective going forward as apposed to closing the site and trucking waste to an alternative site, such as Hampton Downs Landfill north of Hamilton. The addition of a gas flare was added to the cost model as the NES will require gas destruction if the site takes more than 1 million tonnes over its life which Broadlands will if the consent is renewed.

Council determined that operating the site is viable over a new consent period, if the same amount of waste was being disposed to the site.

Another issue could impact the site viability and that is if the commercial sector starts diverting waste to an alternative site and undermines the revenue stream. It will be important that council is aware of this financial tipping point and adjusts gate prices to being under this point. The current mix of rate and gate charges can be utilised to achieve this outcome.

Obtaining a new consent could also be difficult, due to the location of the landfill next to Mount Tauhara, which is significant to the local Iwi. The existing consent was appealed by the Trust responsible for the mountain and council has promised the land that encompassed stage 1, unfortunately for a number of reasons this land is not currently in the hands of the Trust but it is being currently been worked on as a priority. If council is unable to gain a new consent,

then an upgraded transfer station at the site has been costed to enable bulk loading of waste to alternative site.

(See object file) for the operational model.

ETS REGULATIONS

The Emissions Trading scheme impacts the cost of refuse disposal at the Broadlands Rd landfill, as Council must purchase emission credits for every tonne emitted. Currently emission credit values are trading at around \$38 (Council exposure \$1+ million) and Government has taken away the 2 for 1 deal and is also tweaking how emission credits are purchased. It is unlikely that emission credit costs will revert to the \$3 cost of several years ago, and all indications are that the price will gradually increase as more demand comes online from other emitters in the market.

ETS Exposure Reduction

The ETS legislation is designed to reduce emissions through penalising emitters financially. Council does have the ability reduce this exposure by reducing the amount of emissions from the site, by way of flaring the gas.

When considering the provision of gas flaring at the site, Council must also consider the term of the current operating consent.

The ETS payments relate to every tonne disposed, so if Council was unable to renew the consent then any gas infrastructure on site after closure would not provide any financial benefit but would destroy any methane generated.

Methane generation dramatically drops off once filling operations cease. So, we do run the risk of over capitalisation of the site if no new consent is granted.

If Council was granted a new consent, the total tonnage of waste being disposed to the site will be over the 1 million tonne mark and so NES (National Environmental standards) require that the site operates gas destruction infrastructure.

If Council can obtain a new consent earlier than 2027 Council will have certainty regarding depreciating the infrastructure over a longer period and could install the infrastructure sooner to enable the cost of the ETS to be reduced.

(see Financial data in appendix).

Well performing gas destruction networks can destroy between 60-80% and possibly higher of the methane produced.

Opus consultants are currently analysing the performance of a pumice cap compared to an alternative plastic liner which would come at a higher capital cost. The current pumice cap allows gas to vent, unlike Clay caps used in other parts of the country, so additional depth of material in the cap may be required.

It is uncertain as to where the costs of emission credits will go in the future, as the currently the USA is not participating. Council has had to increase the cost of waste disposal (gate fee) to fund any increase.

WASTE LEVY

Government has recently undertaking a review of the waste levy, with the review covering cost and which landfills are included.

Currently the levy only applies to Landfills as designated under the waste minimisation Act 2008, which leaves a vast array of other disposal sites not being captured. Government have determined that the levy will be expanded to cover additional landfill types as well as increase to different levels depending on the class of the landfill.

The waste levy is set to rise to \$60 per tonne (currently \$20 per tonne) over the next four years, resulting in the price to dispose at Broadlands road moving to \$180 per tonne without any increase from council for any operational costs. Council does have the ability rate fund some of this increase to keep the gate price lower for the community.

RECOVERED MATERIALS MARKETS

The value of recovered materials is fluctuating due to the Chinese economy and Green Sword policy they have enacted. This has resulted in Council no longer being able to recycle plastic recycling numbers 3-7 and seen the value of other recovered materials plummeting.

Government is looking to invest in onshore recycling of collected materials by using the WMF (Waste Minimisation Fund) to develop local infrastructure. This infrastructure will know doubt be located close to the larger urban areas / product volumes. Government are going to have to try and work out a way the Local government can support any national investments.

Taupo District Council have picked off all the "low hanging fruit" regarding easy to divert from landfill material, due to markets and cost. The next level of waste reduction becomes more expensive and requires more financial commitment from across government. Making sure that the investment continues to obtain enough product locally will be the challenge.

As part of the contract renewal negotiations with Envirowaste, council has determined that there is currently an onshore market for number five plastic and are working to include these products back into the materials collected.

CONSTRUCTION & DEMOLITION WASTE

Is a waste stream that rises in times of good economic activity, but is a difficult waste stream to divert, as many councils are not involved in the service delivery (Councils don't provide skip bin services) and can only rely on the cost of waste disposal to act as an incentive.

There is also a reluctance from government to implement waste policy that would aid diversion with the government's stance being that the market should be allowed to develop without interference. Unfortunately, there are numerous waste products that have no value at their end of life so need funding support to allow them to be recovered from the waste stream.

RURAL WASTE

Govt are looking to support rural communities by implementing product stewardship programs for different types of farm waste. Farm waste has always been about the transport logistics about getting trucks on site when they are needed to collect material. A product stewardship program will mean that trucks will be going to rural sites as part of the programs so there will be an opportunity in the future to get other materials on to the trucks.

Currently farmers are faced with a decision to pay for someone to collect material or burn and or bury on site, which in most cases is the least cost option. The government program if implemented will eliminate that decision as the collection of end of use materials will have already been paid for through the purchase price.

WMMP Outputs

Council has reviewed its Waste Management and Minimisation plan as required by the waste Act and will look to implement the following indicatives.

- Investigate increasing the diversion food waste from going to landfill
- Provide a community grant program for Community waste minimisation initiatives
- Continue to extend the street recycling bin coverage
- Provide E-waste recycling at the Broadlands Rd Landfill
- Advocating for product stewardship / producer responsibility for the recovery and recycling of products

- Develop a community litter awareness program (care for a section of beach/road) and work in with National Litter programs
- Develop a best practise guide for waste handling for event managers
- Work with Industry to support the diversion of C & D Wastes
- Introduce education / awareness programs to support Council waste minimisation initiatives
- Support local Iwi to divert food waste from Marae

COUNCILS MAIN CONTRACTS

Council has recently rolled over the landfill operational contact and the kerbside collection for 2 more years, with both contracts having a further 1-year extension available. Both contracts have a term of 7 years with potential extensions to both for 3 additional years making them 10-year contracts, with both contracts being awarded to Envirowaste Services. While the short to medium service delivery has been set in place, the longer term service delivery will have to be carefully planned, as with only one major player providing services in the district it places them in a powerful position in future contract tenders, as other operators will struggle to compete in a market dominated environment.

This market domination resulted in only one tenderer for the last kerbside collection contract, and while Envirowaste sharpened their pencil considerably to retain this contract this may not be the case when it comes time to renew it.

Envirowaste may also look to renegotiate disposal rates into the landfill, which Council has previously had in place to avoid waste leaving the district and undermining the cost effectiveness of the landfill operation. Any negotiated rate would be based around the disposal costs at Envirowaste's closest disposal site (or any site that they have negotiated a gate rate at) and the transport cost to get it there and an allowance for handling.

The Broadlands Rd landfill consent expires in 2027, and Council will need to consider the implications of losing parts of the waste stream to commercial operators. Council should look to renew the landfill consent as there is potentially an additionally 20yrs of void space available for filling operations.

Envirowaste Services currently provide a commercial kerbside refuse collection as well as skip bins and Waste Management provide a skip bin service. Both businesses could potentially look to divert waste to a cheaper disposal site if our gate rate is set too high.

Rotorua Council, who run their own landfill has recently had Waste Management open a transfer station in Rotorua and they have undercut the gate rate by a few dollars, any waste they collect is taken to Tirohia landfill as they have negotiated a lower gate rate there.

There is a saying in the waste industry "he who controls the waste stream wins", as the waste stream also has the revenue stream for the collection handling and disposal of the waste.

The Waste Minimisation Act, Section 42, requires Territorial Authorities to promote effective and efficient waste management and minimisation within its district, to achieve this Councils need to have some control of the service provision otherwise commercial service providers will not price incentivise minimisation initiatives.

The disposal rate at the gate is the governing factor influencing the ongoing viability of the landfill after the current service contracts expire. Council currently funds the cost centre 51% through rates and 49% through gate fees.

Council's mix of rate funds and user charges allows council to alter prices to incentivise diversion. Council can also use this funding mix to avoid competition by keeping the price structure low enough that it is uneconomical for competitors to compete, and or truck material to an alternative site due to the transport costs.

Council always has the full rates funding service model to fall back on if revenue streams were undermined. But the full rates model eliminates the ability to reward those that divert waste from landfill. At the kerbside this can only be done by the size of the receptacle, where Council has already eliminated the 240L wheelie bin for domestic use.

Council must continue to negotiate commercial disposal rate agreements for large customers and potential competitors so that waste flight is negated.

Loss of waste volume / revenue from Broadlands Rd landfill would mean that the current service funding mix would have to be altered and more of the cost of waste services would have to be rate funded, with the resulting rate impact.

Competitors are unlikely to compete with district transfer stations due to their location and the small size of the waste market in the areas.

As Council has negotiated long term commercial disposal rates it is considered that undermining of Councils waste volume and revenue stream is unlikely in the short and medium term.

Technology may also play a part in changing the playing field going forward, there has been a significant amount of discussion recently around waste to energy plants, and as both the major waste companies operating in New Zealand are now Chinese owned there is now the capital available to pursue this option. With any new technology, the governing factor will again come back to the gate rate being competitive plus the transport cost to get it there.

COVID-19

Level 4 meant that refuse at kerbside was collected but not recycling, facilities were open but only taking pre-paid bags, which enabled site staff to count bags with no close interaction. The ability to recycle material during the Covid lock down was very limited, as staff on the sort line could not operate due to the physical closeness to other staff.

The impact of Covid -19 may take years to unravel from an economic perspective but waste tonnes to landfill has been, up to date, a good indicator of economic activity. That would suggest that a reduction in waste will correspond to the potential economic downturn. The initial estimate for the 20/21 year was a 20% reduction in commercial waste tonnes to landfill, this was to reflect the reduction in new builds, as construction waste makes up a large percentage of commercial waste to landfill.

Council increased the gate fee for waste disposal, in the 20/21 year which will reduce the impact, but at the time of writing, trying to forecast the outcome (revenue return through fees) was challenging. Recent waste tonnage to landfill has reflected previous years so potentially the perceived downturn in the economy and thus tonnes to landfill has yet to eventuate.

During the Covid-19 lockdown, Council was able to control outputs and service delivery as council was in control of the waste contracts. Service delivery was ultimately provided after considering the limitations of each level of lock down and the ability to operate services when reflecting on the H&S impacts to workers and the community.

STOCKPILE OR NOT

Recycling stopped under level 4, and the community were asked to stockpile material. The stockpiling was at first thought to be a good idea, and something that the community could do to support the environment.

But at some stage stockpiled recycling could become a Health issue for some, so at a point in time, the message has to change (dispose of stockpile) to eliminate this issue.

Looking back in hindsight, the advice would change to, do not stockpile. As having to deal with a massive pile could overwhelm facilities and collectors as well as the Health implications for the public, Public Health must always come first.

PRODUCT STEWARDSHIP

Local Government has lobbied Central Government on numerous products local government considers that need to be declared mandatory products (for product stewardship schemes) under the Waste Minimisation Act 2008 and have identified,

- Electrical and electronic equipment
- Tyres
- Agricultural chemicals and farm plastics
- Refrigerants and other synthetic greenhouse gases
- Plastic and glass containers

The mandatory process will take at least two years to be enacted and won't result in a large diversion of tonnes to landfill in the short term but will remove Councils from being the ambulance at the bottom of the cliff in trying to dispose of these materials.

The main product stewardship declaration that all councils across NZ are awaiting is the announcement regarding drink containers as this will dramatically alter what is to be collected at kerbside. With value being added to drink containers, less of them will appear in the crates at kerbside due to their value and any residual material left will assist to fund the service delivery.

The announcement regarding containers, and glass being included or not will greatly influence the roll out of any kerbside service delivery New Zealand wide.

STREET LITTER & RECYCLING BINS

The emptying of bins is contracted out, with Total Industrial Solutions currently contracted. The provision of Big Belly Solar Compacting Bins has seen a reduction in litter, a reduction in the number of litter bins but disposal capacity has remained the same, if not slightly increased.

Big Belly bins, due to their compacting ability provide the capacity of ten 60L bins. The Solar panel powers the compactor and powers the telemetry which notifies the contractor when the bins are full. This has seen a reduction in truck movements as well as a reduction in service requests for overflowing bins.

Council will continue to increase the number of recycling bins in the high use areas, with the end service level having a recycling bin and refuse bin placed together.

Contract performance is set so that no bins are allowed to overflow, and this allows flexibility for the contractor to focus on high use areas. Previously the contract was structured around scheduled runs.

FACILITY OPERATIONS

Council upgraded the Broadlands Rd and Kinloch RTS to remove Manual handling of recycling materials and give the community a better facility to assist recycling. The Kinloch upgrade mirrored the Broadlands Rd landfill facility which has a wall with holes that the community can place mainly glass through (but can take other materials). The bottles then slide down chutes into skip bins.

The provision of skips for recyclable materials then removes the need to manual handle the drums, (44 gallon) which are heavy and are a risk to the site operators.

These site upgrades are also planned for the Omori, Mangakino and Turangi transfer stations. Council will look at the viability to include all district facilities into one operational contract which will include the haulage of waste between facilities. This will enable bulk haulage of recovered materials to the sorting facility in Taupo as well as optimisation of bulk loading of waste to landfill.

(business cases provided)

8.3 Service Delivery and Rationale

The Solid Waste service is carried out by a number of providers as shown in Table 8.1.

Service	Provider	Rationale
Asset Management	Council	To maintain the knowledge of the asset in house
Management of Maintenance Contracts	Council	To maintain control of the costs of the services.
Minor Design	Council	In house knowledge and resource available
Major Design such as Landfill development and Gas technology	Tendered	To capitalise on external expertise resource/ experience and take advantage of competitive pricing/competition.
Bylaw development	Council	To capitalise on internal expertise resource/ experience.
Strategy Development	Council	To capitalise on internal expertise resource/ experience

Table 8.1: TDC Service and Providers

The following table shows a summary of all TDC maintenance and renewals contracts

Council currently carries out the following operations by way of contracts and or service agreements to approved service providers as specified in their respective agreements.

Name of Contract	Contract Number	Contractor	Duration	First Expiry Date	Comments
Broadlands Rd Landfill Operations	TDC1213/088	Envirowaste	2+1	Jul-22	Mostly maintenance but some renewal works
Greenwaste Composting & District Shredding	TDC1213/088	Envirowaste	ongoing	Jul-22	maintenance

Name of Contract	Contract Number	Contractor	Duration	First Expiry Date	Comments
Concrete crushing		Materials Processing Ltd	ongoing		maintenance Service Agreement
Southern transfer station operation	TDC/1718/208	Metallic Sweepings Contractors	3+1+1	July-21	Mostly maintenance but some renewal works
Refuse Haulage Transfer stations	TDC/1819/208	Envirowaste	3+1+1	July-21	maintenance
District Refuse/Recycling Collection	TDC/1314/105	Envirowaste	7+2+1	July -21	maintenance
Litter Enforcement Litter & Recycling Bin Collection CBD street sweeping	TDC/1819/255 TDC/1920?295	Infrastructure Services Total Industrial Solutions Intergroup	3+1+1 3+1+1	March -21 2022	Internal Staff Mostly maintenance but some renewal works maintenance

Table 8-2: TDC Maintenance and Renewal Contracts

8.2.1 Contract types

Lump sum contract and measure and value contracts are the two types of contract procurement Taupō District Council utilise for project tendering. Where the estimated cost of the project is less than \$50,000, a lump sum contract is generally used. If greater than \$50,000, a schedule of quantities is provided to enable a measure and value contract to be tendered.

Lump sum contract: More than one contractor is asked to supply a fixed price quote for the project. The contractor is responsible for the measurement of quantities.

Measure and value contract: The quantities in the Schedule of Prices are measured by the Engineer, which is provided for the purpose of evaluating tenders. Each item of work is carried out at the fixed rate set out in the Schedule of Prices. The sum shall be adjusted by any additions or deductions under the contract.

Methods for tendering and evaluation

Tender Evaluation Method	Contract \$ Value		
	\$0-50,000	\$50,001-\$100,000	\$100,000+

Expedited Procedures (Negotiation)	√	×	×
Expedited Procedures (Limited Invitation to Tender)	√	√	×
Lowest Price Confirming Tender	√	√	√
Quality-Price Trade Off Method	√	√	√
Weighted Attribute Method	√	√	√

Table 8-3: Physical Works - Method Selection Matrix

Key (×) = not permitted (√) = permitted

Note: For projects with a dollar value of less than \$50,000 the expedited procedures are generally the most appropriate methods because administration costs will be less and hence a more reasonable proportion of total contact value.

8.2.1.1 ETS Legislation

Central Government has passed ETS legislation which requires Councils to fund these ongoing costs, the costs relate to a levy on every tonne of waste disposed of to landfill.

The provision of a Gas flare, while destroying harmful gas emissions will not reduce the overall costs to council from the ETS regulations as the additional cost of purchasing and maintaining the flare are comparable to the emission costs at this time.

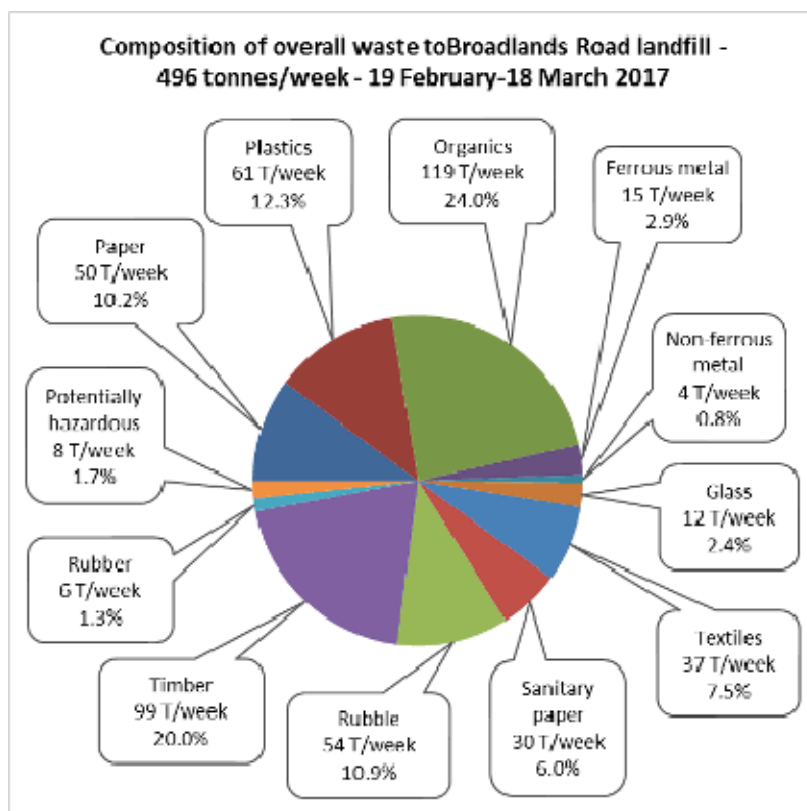
Council will continue to review the need for Gas destruction and the related cost of ETS emissions to determine the most sustainable approach.

Emission credit requirements are determined by multiplying the tonnes in a calendar year disposed of to landfill by the default emission factor of 1.19, so for a waste tonnage of 25,000 tonnes the emissions would be 29,750 tonnes, emission credits would now have to be purchased and surrendered for that volume. (current value \$1,041,250.00) Council has forward purchased credits and will need to obtain financial advice on future purchases.

WASTE ANALYSIS

In March 2017 Council, contracted Waste Not Consulting, to provide a report on the composition of the Waste disposed of to the Broadlands Rd landfill. This report provides valuable baseline data for the review of Councils Waste Minimisation Plan as it enables Council to identify priority products to focus waste minimisation efforts.

The report analysis both domestic and Commercial waste streams.



Organics was the largest primary category of waste disposed of at the transfer pit, comprising 24% of the total. Timber was the second largest category, comprising 20% of the total weight. Paper, plastics, and rubble all comprised 33% of the total.

There is currently no market for treated wood so this material must go to landfill. Untreated wood can be diverted but it is difficult for the site staff to determine the difference.

Councils waste levy supported home composting subsidy program is aimed at reducing organic waste to landfill, to date it is estimated to divert over 190 tonnes per annum.

During the waste assessment phase of the WMMP it was found that the cost of collection and processing organic waste is significant and long-term markets are difficult to secure. Council does have a worm farm operation currently processing Bio Solids and this process could be option for processing food waste going forward, but there still needs to be further market development.

Council will watch the development of the Reporoa Biogas facility with interest as this may provide a cost-effective solution to the collected food if Council was to initiate a collection service.

8.4 Asset Type

8.4.1 REFUSE DISPOSAL AND RECOVERY SITES

Overall Asset Objective:	To protect and safeguard the Taupō District environment by ensuring refuse is managed and disposed of in a safe, efficient and sustainable manner that maintains natural and aesthetic values.
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Key facility issues are:

- Containment of leachate within the lined landfill cell
- Full compliance of WRC resource consents.
- Resource recovery and recycling options and operations
- Full compliance for Closed landfill WRC resource consents

8.4.1.1 Historical Expenditure

Historical expenditure for the Solid Waste assets is shown below. The 16/17 new works expenditure is for a new disposal cell at the Broadlands Rd landfill.

	2014 2015	2015- 2016	2016- 2017	2017- 2018	2018 2019	2019 2020
Operations and Maintenance	4,212	4,142	4,098	4,478	4,801	4,880
New Works	78	90	1,010	10	230	171
Renewals ¹	75	114	87	60	136	138
Total	4,365	4,346	5,195	4,548	5,167	5,189

Table 8-1: Historical Solid Waste Expenditure (\$,000)

Broadlands Rd landfill needs a new consent as the current consent expires in 2027, but as there is additional space for the landfill to expand, a \$100,000 has been allowed from starting from 23/24 to plan and apply for this new consent. Due to the need for obtaining certainty around the consent renewal and the provision of gas flare this expenditure has been bought forward to the 21/22 financial year.

8.4.1.2 Waste disposal and recovery facility Operations and Maintenance

Maintenance is carried out at district facilities to ensure that the levels of service outlined in the Level of Service section of this document are met. A summary of the future needs is included in Section 6, with a full financial summary in Section 9.

Performance standards for Contractors operating Councils facilities are included in the operational contract documents. In some cases, such as the Broadlands Rd landfill these performance standards are linked to the Resource Consents.

Resource consents can also require things such as site management plans as well as operational management plans i.e. green waste composting management plan. (Operational plans are kept in objective).

Closed landfills are also covered by resource consent, and the consents set conditions around the future maintenance requirements as well as contaminant level monitoring and site refreshment if necessary.

The provision of kerbside service delivery is managed through the operational contract for performance standards as well as the Solid Waste Bylaw that sets certain conditions around the provision of this type of service, the conditions in the Bylaw are there to protect the community and the environment.

The Bylaw provides conditions for operators such as

- Collection days and times
- Receptacle types and sizes
- Clean up after collections
- Ownership of materials placed at kerbside

If Central Govt initiate a product stewardship program for drink containers, we may well get people looking to remove material from recycling crates as these items will be worth money.

8.4.1.3 Waste Disposal & Recovery Facility Renewal

Renewal expenditure is major work that restores an existing asset to its original capacity or the required condition. By renewing plant equipment as required the quality level of service is met.

Undertaking renewals at the identified time will ultimately reduce the reactive maintenance and renewal spending enabling better budget planning with reduced unbudgeted spending.

The Solid Waste renewal program applies packaged renewal programs for each individual waste disposal / recovery facility around the district. Business cases for these works are included in the appendices. If an unexpected renewal is required, the lesser prioritised renewal (or renewals) is deferred till the next year. Some allowance has been provided for expenditure for between the packaged timeframes for unplanned works.

The renewal program has been formulated by ongoing condition assessment of site facilities, where both the asset manager and the network engineer are assessing site facilities on at least a fortnightly basis.

As these sites are in continued use by the community, unplanned renewals is a constant issue, as sites tend to wear and tare more frequently with high public usage.

8.4.1.3.1 Future Renewals

	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Broadlands rd Landfill	\$ 75,000.00	\$ 28,000.00	\$ 18,000.00	\$ 15,000.00	\$ 7,000.00	\$ 4,000.00	\$ 4,500.00	\$ 17,500.00	\$ 20,500.00	\$ 21,500.00
Kinloch RTS	\$ 5,000.00		\$ 18,000.00		\$ 5,000.00		\$ 18,200.00			\$ 6,500.00
Turangi RTS	\$ 23,000.00	\$ 5,000.00		\$ 30,000.00				\$ 20,000.00		
Mangakino RTS	\$ 6,000.00		\$ 10,000.00			\$ 50,000.00	\$ -			
Whareroa RTS		\$ 4,000.00					\$ 4,000.00			
Omori RTS	\$ 5,000.00			\$ 5,000.00			\$ 5,000.00			
District recycling bins	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
District litter bins	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Big Belly Bins	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 70,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00
District haulage bins	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
Plant Renewals				\$ 36,000.00						
Vehicle Renewals				\$ 29,000.00	\$ 7,500.00					
Total	\$ 200,000.00	\$ 123,000.00	\$ 132,000.00	\$ 201,000.00	\$ 140,500.00	\$ 188,000.00	\$ 165,700.00	\$ 171,500.00	\$ 154,500.00	\$ 162,000.00
	140000	123000	132000	201000	105500	140000	117700	123500	106500	114000

Table 8-2: Future Solid Waste Facility Renewal Expenditure

8.1.1.4 Waste Disposal & Recovery Facility Creation

The Capex program below maintains the ability of the Broadlands Rd landfill to continue to accept refuse from the district. It is considered that the outlying transfer Station sites have adequate capacity but the Whareroa, Omori and Mangakino sites need upgrading to eliminate as much as possible the manual handling of recovered materials.

Business cases for each of these projects detailing reason for the projects are included in the Appendices.

CAPITAL PROJECTS

	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Big Belly Bins	\$ 35,000.00	\$ 17,000.00						\$ 10,000.00		
Street recycling bins	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 5,000.00
Bulk Haulage Broadlands Rd landfill										
Final capping Broadlands RD landfill										
Broadlands intermediate capping				\$ 70,000.00						
Broadlands Landfill Cell 2E	\$ 25,000.00	\$ 1,000,000.00								
Broadlands Landfill Cell 2F and design						\$ 25,000.00	\$ 1,000,000.00			
Broadlands Landfill Cell 2G and design										
Broadlands Landfill Cell 2H and design										
Fire Prevention pond	\$ 118,000.00									
Infrared Camera Broadlands Rd Landfill	\$ 71,000.00									
Broadlands Sewer pipe upgrade			\$ 195,000.00							
Gas flare and liner cover	\$ 25,000.00	\$ 25,000.00	\$ 40,000.00	\$ 3,500,000.00	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00	\$400,000.00
Mangakino RTS upgrade				\$ 10,000.00	\$ 88,000.00					
Omori Site Upgrade	\$ 230,000.00									
landfill capping Turangi					\$ 30,000.00					
Turangi weighbridge				\$ 10,000.00	\$ 155,000.00					
Totals	\$ 514,000.00	\$ 1,052,000.00	\$ 245,000.00	\$ 3,600,000.00	\$ 683,000.00	\$ 435,000.00	\$ 1,410,000.00	\$ 420,000.00	\$ 410,000.00	\$405,000.00

Table 8-6: Future Solid Waste facility capex Expenditure

Capital Project validation

Landfill Cells

The creation and timing of the new landfill cells are based around the infill tonnage which has been predominantly stable over the last 10 years, and the cost of liner which is placed for Leachate collection. The aim is to not invest in liner that is not being used as this could be deferred until the next cell development. The other issue that has a bearing on the amount of liner being placed is the side slopes and finished slopes which affect the length of time the cell will take to fill.

The design philosophy for the landfill cell builds is to build to the optimum height, slightly less than consented so that there is enough space for another lift on top. This filling practise may have to change now due to optimising the cell filling for gas production. Some changes or movement of future cell developed can be expected as further optimisation analysis is undertaken.

Driver is service level.

Gas Flare

This will be required by the NES if a landfill takes more than 1 million tonnes of waste and will be required if council is successful in achieving a new operating consent for Broadlands Rd.

Driver is Economic and consent condition

Site Capping Works

The resource consent requires that finished cells are capped with either temporary Capps or finished Capps to minimise the amount of infiltration into the landfill. Capping layers will be further optimised depending on consent renewal

Driver is Resource Consent

Big Belly Bin Purchase

Council has invested in Big Belly solar compacting bins to increase the levels of service around litter disposal in the high use areas such as the Taupo Lake front. This asset provision has both increased the litter bin capacity as well as reduced the number of bins and achieved the performance standard of no overflowing bins. A limited number of Big Belly bins are still needed for other high use areas such as the Kinloch beach area, the Turangi Town centre and the Mangakino beach front as well as the Nukuhau marina and for the community shops.

Driver is service level

Omori & Mangakino Site Upgrade

These transfer stations have not been altered in 20 years and there is a need to reduce the H&S impact of manual handling drums of recycling. Currently recycled materials are stored and drums which are then man handled onto trucks to be processed. Having to handle heavy drums of glass places risks on the site operators, which can be reduced by moving to bulk handling using skip bins and a different public interface which mirrors the Kinloch and Broadlands Rd facilities.

These projects will increase the recycling capacity and provide more room for vehicle accessing the sites. These upgrades will enable these sites to be included in an overall district operational contract.

The Driver is service level

Street Recycling Bins

The 10 K per year would allow for an additional 4 Recycling bins per year to be placed within the Taupō district. To achieve recycling participation Council needs to continue to provide recycling options for tourists and the local community by providing recycling bins next to refuse bins in high use areas.

Council continues to receive calls asking for additional recycling bins and with the provision of additional bins Council can look to reduce the amount of refuse bins as additional capacity will have been provided. Asset staff will continue to liaise with both the collection contractor and the parks staff to optimise bin placement and numbers.

Driver is service level

Broadlands Rd Sewer Pipe

This item would increase the size of the Broadlands Rd sewer pipe from the Landfill to Miro Street and would be the second stage of increasing the capacity of the current system. The pipe would be upgraded to a size that could provide for additional connections.

The reason to increase the pipe size is that the resource consent limits the amount of head over the landfill liner and by 23/24 Council will have constructed an additional two stages that will collect Leachate and thus the outlets pipe will need to be increased.

Driver is service level and resource consent

Turangi Weighbridge

The Turangi RTS currently handles \$170,000 of revenue annually which is all visually assessed by the site operator. The provision of a weighbridge would provide an accurate charging regime for the Turangi town ship and would eliminate the need to undertake load assessments. Council would also be able to analyse the local waste stream and provide automated billing services for the site.

Automated billing would reduce the risk that currently exists with billing and cash handling. It is possible that Council could apply to the waste minimisation fund to support the cost of this installation as Govt are looking for increased data from disposal sites and have flagged the use of more weighbridges in the future.

Driver is service level and risk.

Omori site Upgrade

Currently there is no power to the Omori transfer station, so they can't operate lights, eftpos or a water pump. The site must rely on cash for all transaction which makes it inconvenient for the public using the facility. Once power is supplied the site can be lit and the roof water can go into a larger tank with a small pump for water pressure for cleaning the site and infrastructure.

The access road to the green waste drop off area is continually requiring maintenance due to the number of vehicles so it would be more economical and better for the uses if it was sealed. Covid-19 exposed this sites limitations with the operator on site with very little amenities to support its operation.

Driver is service level

Part of the upgrade required for this site, is the reduction in the amount of manual handing of recyclables on site to eliminate the H&S impacts on the operators. The recycling interface with the community would reflect what has been done in Kinloch and Broadlands Rd and Turangi.

Bulk Haulage loadout

If Council is unable to renew the Landfill operational consent past the 2027 current expiry period, then council will need to undertake works to enable the site to undertake bulk loading of transport trucks on site. This upgrade will also incorporate additional waste sorting platform, which may need to be covered. It will be important for council to reduce the size of any waste stream prior to transporting.

Fire Prevention ponds

The fire of January 2020 identified the need for a close water source to enable water to be rapidly placed on the landfill fire. The time taken to get water on to the fire can have serious implications for a landfill, as the fire burns downwards and becomes difficult to extinguish, thus placing the operation of the whole site in jeopardy and increasing the cost of disposal for the community.

Infrared Camera

Most operating landfills incorporate a camera that identifies possible fires after hours and informs site operators so that they can get to any fire promptly.

Council was lucky that the rescue helicopter sighted the fire and was able to inform the fire department, if they were not flying on this night the outcome could have been considerably different.



BROADLANDS ROAD LANDFILL /RESOURCE RECOVERY CENTRE

Landfill Facility

The purpose of the landfill facilities is to provide controlled disposal of Solid waste (including disposal or collection and handling of specified hazardous waste and household waste) generated within the Taupō District and environs.

By accepting household waste, the Waste Minimisation Levy (Waste Minimisation Act 2008) will apply to the site. The Waste minimisation levy is currently \$20 exclusive per tonne of waste disposed to landfill. The waste levy will increase to \$60 per tonne over the next four years.

The Key issues of Landfill Management (Broadlands Rd) are:

Resource Consent renewal
Achievement of Resource Consent standards
On-going development of new cells
Day to day landfill filling operations
Capping of completed cells
Resource Recovery and sale
Recycling
Collection of Fees and Charges
Investigation of Gas Flare Infrastructure
Leachate control

Documents that relate to this site include:

- Broadlands Rd Site Management Plan
- Current Waste Management and Minimisation Plan
- Technical Guidelines for the Disposal to Land
- Solid Waste Analysis protocol SWAP (Waste survey) completed March 2017
- Current Operational Contracts
- Green Waste Management plan
- Leachate contingency plan
- Resource Consents

The Broadlands Rd Landfill has resource consent (expires 31 December 2027) to place up to 50,000 tonnes of Municipal solid waste and 27,000 cubic meters of Leachate p.a. onto land in the vicinity of Broadlands Rd. The current annual tonnage is in the vicinity of 25,500 tonnes.

The site also undertakes green waste composting and clean fill is disposed as extra cover over part of the stage 1 site.

A lined pond located on top of the landfill footprint houses a number of Geo Bags that receive fats oils and greases from the district. The Geo bags allow water to evaporate through the pours in the bag while fat and grease is retained. A number of bags can be stacked in the pond, once these are filled the pond will be covered over, and a new pond and bags will be constructed. The life of the existing pond with bags is 15 years. A review of the bags efficiency is currently being undertaken as the bags are not holding the grease and fat as required and it is now fouling the leachate pond and pipe infrastructure.

While the site has consent to operate to 2027 it is important to use the available capacity in a sustainable way by diverting recyclables from the landfill through implementation of all available waste minimisation tools.

Envirowaste Services have a 7+2+1 term contract. The first term of the contract has been completed with EnviroWaste being awarded the 2-year rollover. This contract term has resulted in

reduced operational costs relating to green waste shredding and landfill maintenance and included a \$30 per tonne incentive for waste diversion. The term of the contract has also meant that Envirowaste could spend their own capital on making site improvements such as:

- Increased compactor size to 37 tonnes (previously 25 tonne)
- A new greenwaste drop off area
- A new steel drop off area
- A cover over the glass drop off area
- New seal and signage
- Barriers to avoid trip hazards at drop off pits

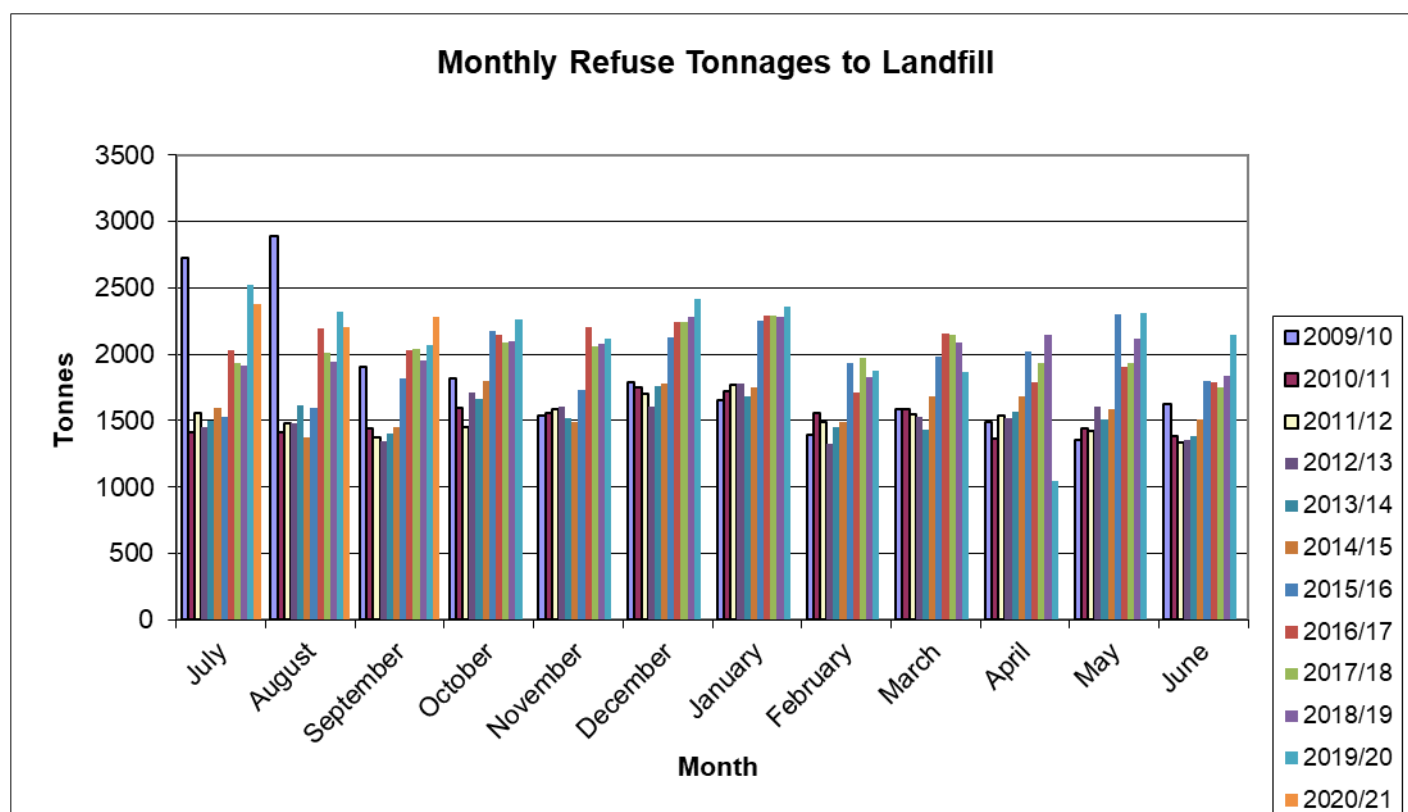
Council has invested in a new paper shed for bulk storage of paper and other recyclables on site.

The Broadlands Rd Landfill site has been designed in three distinct areas to enable filling over the next 9 years. Those areas have been subsequently broken down into smaller filling cells that take advantage of the physical constraints of the sites while considering project costs and the need not to over capitalise the cell development. The construction of new Cells has been budgeted using calculations on volume of existing operating cell, incoming volume, and the time it takes to construct a new cell.

The costs of new cells in predominantly influenced by liner costs with cell sizes around 1600 to 1800 square metres. Soil for the compacted base material has been to date sourced on site and re-compacted. Cell development has averaged around \$1,000,000 funded by loan and is depreciated by the full life of the cell to finished level.

There is a further twenty years of filling after the consent expires if an area at the back of the Council owned land is progressively mined.

Landfill operations commenced on site in 1977 and a comparison of contour surveys in March 1993 and February 1993 suggested an annual filling rate of 11,400m³ p.a. Following the closure of the district smaller disposal sites, the fill rate increased to 30,000 m³ p.a. in 1997.



Fill tonnages over last 11 years average around 21,000 tonnes per annum

In 2000, land filling ceased on the stage 1 unlined cell and a new fully engineered 2 ha cell was commissioned. The new cell (and all subsequent cells) are fully lined and incorporate Leachate and Stormwater control which enables the Broadlands Rd site to be classified as a Class 1 Landfill under the new Technical guidelines. At the same time as the new stage 2 was being developed, a new recycling area was constructed as well as a larger area for green waste composting; both of these operations are on the footprint of the stage 2 landfill development.

Council installed an additional weighbridge in 2008 to enable Council to more accurately measure weights of waste to Landfill. Council can now better analyse the waste stream and identify priority products that Council needs to focus on to achieve its waste minimisation goals and those set by central government. The second Weighbridge has also enabled Council to move to a "weigh all" methodology and weight-based charging for all vehicles.

The weighbridge operates under 'Landfill 3000' a software program that allows for automated billing transactions for all users.

Council is also in the process of discussing regional opportunities with other Councils in the Waikato to best determine the most effective spend of the Levy funds.

Landfill Fire

In January of 2020, there was a fire at Broadlands Rd, which took two days to extinguish and placed the operation of the site in jeopardy. It is surmised that the fire was started from Lithium-ion batteries that have caused fires at waste facilities right across the country over the last couple of years. Business cases have been developed for both a water reservoir and an infrared camera.

Flare and Cover Requirements

A new operating consent would require the operational contract to be amended to allow for, the operation of gas flare, the installation of gas wells, to maximise gas capture. The current operational contract has three years to run, and so any new operational requirements can be included in this document, and new operational contract.

Use of Waste Minimisation Levy Funds

Council has, through development of its Waste Minimisation plan identified a number of opportunities for use of the revenue coming from the Waste Minimisation Levy. The funds will equate to around 130k based on population but is finally determined by the total tonnage of waste disposed to landfill across the country that the levy applies to.

The levy is currently set at \$20 per tonne, but this is set to increase over the coming years to further incentivise diversion of waste and fund minimisation opportunities.

Endorsed options for expenditure of the Levy are:

- Funding of existing service delivery in the district
- Street recycling bin purchases and operational costs
- Subsidisation of Compost bins to reduce organic waste volumes to landfill
- Cross boundary waste minimisation opportunities with other Councils.
- Investigate increasing the diversion food waste from going to landfill
- Provide a community grant program for Community waste minimisation initiatives
- Continue to extend the street recycling bin coverage
- Provide E-waste recycling at the Broadlands Rd Landfill
- Advocating for product stewardship / producer responsibility for the recovery and recycling of products
- Develop a community litter awareness program (care for a section of beach/road) and work in with National Litter programs
- Develop a best practise guide for waste handling for event managers
- Work with Industry to support the diversion of C & D Wastes

- Introduce education / awareness programs to support Council
- Diverting of tyres from Landfill

RESOUCCE RECOVERY CENTRE

Council has reconfigured the site since the installation of the second weighbridge so that free (rates funded) recycling opportunities are prior to the Weighbridge. This has also been coupled with the provision of a Reuse Shed and the naming of this area as the Broadlands Rd Resource Recovery Centre. Habitat for Humanity are currently running the reuse operation for Council under contract to Envirowaste.

Domestic customers no longer visit the tipface, which has reduced the health and safety risks on site as well as enabled the onsite contractor to better manage the tip head. Domestic customers now offload materials into the transfer pit where the contractor sorts and recovers recyclable and reusable items prior to final disposal.

Commercial operators and commercial customers now also must wear the appropriate PPE gear when on the tip face which includes a hard hat.

Council pays the contractor on a per tonne rate for waste diverted from final disposal and measures this by comparing weights in and out of the transfer pit (diversion incentive currently \$30 per tonne).

Domestic green waste users also use a tipping location near the transfer pit so now no longer go to the tip head. Green waste stockpiled is then trucked to the shredding and windrowing operation. Again this has reduced the health and safety risk at the site.



TRANSFER PIT

The funding split for the Solid Waste cost centre is split 49% gate and 51% rate funding. This allows Council to gather funding from out of district rate payers that need to pay for the opportunity cost of having services, refuse collection is fully user charges.

Disposal Charges from July 2021 are.

SOLID WASTE

A weighbridge at the Broadlands Road Resource Recovery and Transfer Station enables charging based on weight. At other transfer stations around the District the fees will continue to be determined based on the size of the load as they have in the past.

Fee	2020/2021
Broadlands Road Landfill	
Residential refuse collection (per bag up to 60L)	\$1.50
Refuse (per tonne) (\$10.00 minimum charge)	\$130.00
Green waste (per tonne) (\$5 minimum charge)	\$50.00
Clean Fill (per tonne)	\$20.00
Tyre disposal charges	\$2.30 - \$11.80
Concrete Disposal (per tonne)	\$20.00
Crushed Concrete Sale (per tonne)	\$12.00
Special waste – immediate burial (per tonne)	\$132.00
Septage disposal	\$35.00
District Transfer Stations	
Small loads (<100kg) (e.g. cars) (per load) – minimum charge	\$13.00
Medium loads (<250kg) (e.g. small vans, utilities, trailers) (per load)	\$32.00
Large loads (<400kg) (e.g. large vans, utilities, trailers) (per load)	\$52.00
All loads (>400kg) per tonne	\$130.00
Tyre disposal charges	\$2.30 - \$11.80
Concrete Disposal (per tonne)	\$20.00
Green waste loads less than 100kg nett (e.g. cars) (per load) minimum charge	\$5.00
Green waste loads less than 250kg nett (e.g. small vans, utilities, trailers) (per load)	\$12.00
Green waste loads less than 400kg nett (e.g. large vans, utilities, trailers) (per load)	\$19.00
Green waste rate for loads over 400kg nett, per tonne	\$50.00

Fees are GST Inclusive

Recycling is free of charge (rate funded) and the site currently recycles.

- Glass bottles and jars
- Paper & cardboard
- Tin & aluminium cans
- Plastic numbered 1 – 2 - 5
- Steel/ fridges/washing machines/cars

Wastes that are accepted at the landfill are:

Domestic

Kerbside bag refuse collection

Transfer

Refuse collected at transfer stations carrying mainly domestic/Residential refuse

Public

Cars, trailers and utilities carrying mainly domestic/residential refuse and greenwaste

Commercial

Self-hauled refuse from commercial activities and private refuse collection contractors (refuse collected from domestic/residential sources by private contractors is included in this category)

Construction

Mixed concrete and demolition timber & some fill material plus potential reusable items from works sites

Cleanfill

Clean earth from construction sites (commercial only)

Greenwaste

Garden waste accepted for composting

Special waste

Hazardous waste or wastes requiring special consideration upon disposal (Must be allowed under site management plan) Asbestos currently not taken due to agreement with Iwi.



Stage 2D Broadlands Rd Landfill

Landfill Capacity / Compliance

Landfill performance relates to available capacity and compliance with Resource consents.

Capacity. The Broadlands Rd current design footprint has been designed into multiple cells to be developed over time while avoiding over capitalising cell development by having unused liner.

Compliance with Resource Consents

The resource consents currently held for the Broadlands Rd landfill are:

- 960384 to place 50,000 tonnes of waste per year
- 940583 to discharge up to 27,000 cubic metres of Leachate per year into or onto land
- 960386 to divert stormwater
- 960387 to discharge stormwater

Performance is measured by six monthly inspections of the landfill by a representative of Environment Waikato and a peer reviewer as required by the operating consent and quarterly bore sample analysis of water taken from the boreholes around the landfill.

The Landfill has not had any breach in operating consent for over 20 years of operation.

Operations Plan

Old waste disposal methods meant always tipping undesired refuse in some remote and easily accessible area. Health issues related with uncontrolled dumps and growth of environmental awareness make modern disposal options complex and costly. Currently land filling is carried out at the lined area with Leachate collection and reticulation system. There are less 50 Class 1 landfills currently operating in New Zealand.

Landfill operation includes.

- Spreading of refuse into layers not exceeding 0.5m
- Compacting of refuse by 3 to 5 passes of the compactor
- Covering of refuse by cover material (150mm compacted depth)
- Tip face should not be steeper than 1 in 3
- Litter and vermin control bait stations and gull shooting)
- Lifts of compacted refuse are not more than 5m in vertical compacted depth.
- Green Waste composting of material no more than 150mm in diameter
- Concrete crushing of clean concrete into 40mm and below chip for resale
- Clean fill disposal over a portion of the stage 1 landfill site
- Leachate pond control and stormwater control
- On site recycling
- Operation of the Reuse shed
- Recovery of recyclables from the public drop off pit

CLOSED LANDFILLS

Closed landfills are still recorded as part of the Solid Waste network as they require regular monitoring, analysis and maintenance.

The closed landfills at Mangakino, Turangi and Stage 1 of Broadlands Road are included in the assets covered by this AMP.



Broadlands Road – Stage 1

Stage 1 of the Broadlands Road landfill has been closed and capped and TDC is required to monitor this landfill and carry out remediation work where necessary.

The stage one area is an unlined landfill and received refuse from the mid seventies to the year 2000. The current footprint is also receiving extra cover from Council operating a Cleanfill on the site, but this is restricted to a small portion to the east of the overall foot print. There are a number of monitoring bores situated around the site that are used to analyse the condition of stage one and stage two sites.

Council has negotiated with the Tauhara Mountain Trust as part of the stage two Resource Consent process for a portion of the stage one site to be handed over to the Trust. Council will retain its responsibilities under the resource consent for monitoring and remediation if needed.

The hand-over of this land has been delayed as council has been unable to complete the process due to uncertainties with the trust named to receive the land but negotiations are ongoing.

Results from the monitoring data are as expected from a closed and capped landfill and no change to the surface structure has been observed over the last 20 years.

Storm water from the site is captured in an on-site storm water pond and then piped to two detention ponds where water then finds its way under the Landfill access road and into the gully below the stage two landfill, where all onsite storm water from stage 2 also dissipates.

Council staff undertake regular walk over inspections to determine the quality of the grass cover and inspect for possible damage to the cap.



Turangi Closed Landfill

The Turangi Transfer Station footprint also incorporates the Closed Turangi Landfill under Resource Consent numbers 940721 for Leachate discharge and Consent number 940724 for discharge to air.

Adjoining land use is rough pasture / scrub to the south and industrial properties to the north and east. The site is bordered by the Kahurau Stream.

The closed landfill received mostly domestic type waste from the surrounding township and was operated with open trenches which were regularly fired to burn residual waste which was the accepted practice at the time.

A Resource Consent application was prepared and lodged for this site in September 2003 and consent was granted in August 2005. The application report concluded that capping and restoration of this landfill is the preferred course of action. A portion of the site has already been buried under

approximately 2m of clean fill and it is proposed that continued deposition of clean fill over coming years will ensure a large capping depth across all areas of the site. The application proposed an on-going monitoring programme for the site, concentrating on the effects of leachate on water quality in the Kahurau Stream.

The consent can be reviewed by both parties (WRC & Council) with a three-yearly review, which would summarise the results of the water quality monitoring and would increase or decrease the amount of monitoring needed based on the data.

Regular monitoring of the adjacent Kahurau stream and the on site storm water drainage trenches has resulted in Council applying for a change to the consents to allow monitoring to be pushed out to three yearly (which has been approved by WRC), as results have shown that there are no adverse effects from the closed Landfill.

Green waste shredding operations are undertaken on top of this site and the cap and over time this has resulted in a build-up of topsoil which has created ponding leading to damage to the overall cap. Ponding on top of the old landfill leads to ingress of Stormwater and a subsequent increase in leachate production.

A capital program has been included the LTP to undertake additional capping works in 25/26 to make sure that green waste operations don't impact the closed landfill.



Mangakino Landfill

The Mangakino landfill is located off Lake Road on the northern outskirts of Mangakino. The 100 m x 170 m site is on a terrace some 24m above Lake Maraetai and is bounded to the north by a steep gully. Adjoining land use to the east and west is grazed pasture. The residential area of Mangakino is 450m to the east. The nearest residence is 100m west of the fill area.

A resource consent application was prepared and lodged in May 2003 for a 20-year discharge of leachate to groundwater and landfill gas to air from the closed site. The site has been capped, top soiled and grassed. The consent application notes that there is no need to excavate the landfill and remove it to a secure (properly designated) land or to install groundwater control. The application proposes that water quality bores be monitored and that the results are reported to the Regional Council.

Waikato regional Council issued Consent Number 940593 which is the closure consent for the site, the Closure consent allows for the discharge of Leachate to Ground and expires 1 June 2046.

Ongoing monitoring of the site shows a declining waste impact, and WRC have allowed the on-site monitoring to be extended to three yearly.

Monitoring and site inspections have now been moved to three yearly as the site has shown no changes since the site was capped. Regular inspections have shown that there has been a good vegetation cover over the site and stock numbers have been kept low.

This site is not Council owned but is under Lease from the Iwi owners for the term of the Closure Consent.

If there were to be any adverse environmental impacts from the site, it is Council's view that Central Government should share a portion of the risk of negative effects from the site as this Landfill was originally used by Government when building the local dam infrastructure.

Central Government's response was that Council would be able to apply to their remediation fund if works were identified.

The Landowners of the site have requested that Council provides legal indemnity to them for anything that may need remedying on the site such as subsidence, leachate leak; fire Etc. (Council declined). Council and the landowner have now negotiated a lease term.

Transfer Stations

The purpose of a Transfer Station is to provide controlled and conveniently located refuse disposal facilities for the public and cater for the rural sector.

A refuse transfer station is a receiving facility for collecting waste before it is transported to a disposal site and is a non-offensive easy to use amenity for handling household waste materials

Assets at these stations consist of various site improvements including recycling bins, signage, canopies, fencing, Kiosks, reuse sheds, haulage bins. All sites are fenced and manned (not Whareroa) and charge for the disposal of refuse, recycling being free to drop off (rate funded).

The Re-use sheds at all of the district transfer stations provide local communities the opportunity to reuse material that would have otherwise gone to landfill, these facilities have received considerable support from the community and are well utilised.

The Reuse sheds negate the need for an inorganic collection seen in some other districts as the community has the ability to either pass on or purchase preloved goods at all of Councils waste facilities.

The current operational contracts are split between the south and north of the district and the Mangakino site is currently being run in house by Council.

Operational efficiencies can be gained by combining the operation of the landfill with all the district transfer stations, with the bulk haulage contract also included. This will allow the operational contractor more flexibility regarding operation of the district waste facilities and it is hoped will result in operational savings for council.

Site improvements at the district facilities are aimed at reducing health and safety risks in regard to handling recovered materials as well as enabling bulk handling of materials to be loaded out to a district or out of district sorting facility prior to going to the market.



Kinloch Transfer Station

The Transfer Station established at Kinloch includes recycling areas for green waste, cans, bottles, plastics and paper. Refuse is transported in a loose bin to Broadlands Road. There is room on the site to expand the bin disposal area to hold another bin thus allows for growth in the area and summer peaks in the future.

The Kinloch Transfer Station services the Kinloch Township as well as the surrounding farming community, which has a high percentage of lifestyle blocks. There is no commercial type waste received at the site.

The operation of the site is under two distinct contracts, with Envirowaste responsible for the day to day running of the site which includes green waste shredding and the operation of the Kiosk for the handling of fees and charges, and Envirowaste operate the District Waste Haulage Contract.

Growth of the surrounding area can be catered for by increasing the service levels from the refuse haulage contract that services the district facilities and by the addition of another haulage bay for an additional bin to the site. It is not envisaged that the extra bay for the holding of an additional bin will be needed during the next ten years as the increase in service level can be provided by way of the operational contracts.

In 2010 Council provided covered containment at all of the district waste facilities to enable the recovery and reuse of preloved goods, in Kinloch this has seen a vast amount of material recovered which would have previously gone into the waste skip.

Green waste at the site is mulched to make sure the material is a good quality and this material is provided to the community at no cost. Council then does not have the job of finding a disposal site for the material and it provides good will in the community.

Recently the site has been upgraded, with additional seal for vehicle movements, we have moved to bulk storage of recyclables in skips and we have extended the site footprint to allow for growth in the area. The extension of the site footprint has allowed for additional storage of green waste which in turn has reduced the amount of times the pile needs to be pushed up. The moving to bulk storage has reduced the health and safety risk of handling full containers and reduced the truck movements needed to empty full containers to Taupo.



Turangi Transfer Station

Turangi Transfer station serves a population of approximately 5,000 residents. This modern facility is managed and operated under contract and has full recycling facilities. The station handles refuse from Turangi as well as from bin loads from Omori and Whareroa Transfer Stations. On average 10 x 28m³ containers per week (approximately 40 tonnes) of refuse is transported to the Broadlands Road landfill.

Metallic Sweepings Ltd operate all three transfer stations located at the Southern end of Lake Taupō and are responsible for waste reception and handling as well as on site recycling and sale and transport to market. They have also recently taken on gate keeping and fee handling responsibilities at all three Southern transfer Stations.

Council has in 2010 provided covered containment for preloved goods at the site and this site has a regular clientele.

Green waste is currently shredded on site (on top of the Closed Landfill) and left to break down, members of the community can access the shredded material free of charge, with any residual build up of shredded material trucked off site when site constraints require. There has been an ongoing demand for the good quality material.

The site also receives a large quantity of wood waste from domestic construction and demolition which in the past has been burnt, due to the operational consents for the site this practise has ceased, with all wood now going into the pit for disposal.

The site needs upgrading, and this has been funded in the annual plan, with the development of further bulk storage of materials and the removal of manual handling of recovered materials.

Council has also recently increased the size of the glass storage bays, as the size of the bays were not sufficient to store the amount of glass recycled over the peak summer months.

Council are in the process of upgrading the recycling facility to mirror the Kinloch and Broadlands Rd sites, and at the same time move to bulk handling of recyclables and remove the manual handling of full bins of recovered material.

The Turangi transfer station is one of two sites in the district that have refuse compaction plant, in this instance it is a Carepak 314 stationary Compactor. The compaction plant was installed to allow for compacted loads to be transport to the Taupō landfill, and thus minimise transport costs. Waste composition is mainly domestic in nature as large commercial waste is directed straight to the Broadlands Rd landfill.

Waste Not consulting, surveyed the waste composition in March 2017.

Council has allowed Councils kerbside refuse and recycling contractor the ability to temporarily store recyclable material at the Turangi RTS in peak times such as over the Xmas holidays.

Turangi Waste Composition

During the survey period at Turangi RTS, data were gathered on a total of 190 vehicles. The activity source and the estimated total weight for each activity source are shown in Table 5.1.

Types of waste at Turangi transfer station - 19 February-18 March 2017

Turangi transfer station waste - Types of waste - 19 February-18 March 2017	# of vehicles in survey	% of vehicles in survey	% of weight	Tonnes/week
Construction and demolition	0	0%	0%	0.0 T/week
Domestic bags only	168	77%	36%	6.5 T/week
Industrial/commercial/institutional	14	6%	21%	3.7 T/week
Litter	4	2%	11%	1.9 T/week
Residential	33	15%	33%	6.0 T/week
TOTAL	219	100%	100%	18.1 T/week

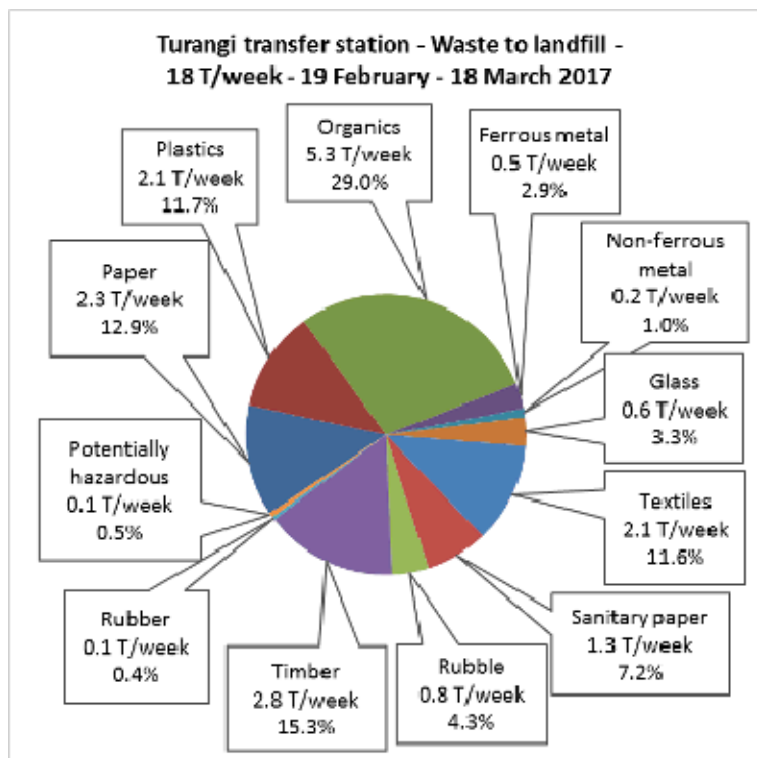
There were no loads of construction and demolition waste disposed of during the survey. A majority (77%) of the vehicles disposing of residual waste at the facility disposed of domestic bags only. ICI waste was disposed of by 6% of vehicles and these loads comprised 21% of the total weight. Residential waste accounted for 15% of vehicle loads and these loads comprised 33% of the total weight.

To estimate the composition of residual waste at Turangi RTS, it has been assumed that the composition of domestic waste was the same as calculated for the 2013 audit.

Primary composition of Turangi RTS waste - 19 February-18 March 2017

Turangi transfer station waste - Composition of waste - 19 February-18 March 2017	% of weight	Tonnes/week
Paper	12.9%	2.3 T/week
Plastics	11.7%	2.1 T/week
Organics	29.0%	5.3 T/week
Ferrous metals	2.9%	0.5 T/week
Non-ferrous metals	1.0%	0.2 T/week
Glass	3.3%	0.6 T/week
Textiles	11.6%	2.1 T/week
Sanitary paper	7.2%	1.3 T/week
Rubble	4.3%	0.8 T/week
Timber	15.3%	2.8 T/week
Rubber	0.4%	0.1 T/week
Potentially hazardous	0.5%	0.1 T/week
TOTAL	100.0%	18.1 T/week

Organics was the largest component of waste disposed of at Turangi transfer station, comprising 29% of the total waste stream. Timber was the second largest component, comprising 15%.



Turangi transfer station waste to landfill - 19 February-18 March 2017

The Turangi Transfer station currently handles around \$160K of revenue annually which is all charged by load based estimation.

The provision of weigh Bridge will eliminate the need for load assessment and will provide for automated transaction based on the weight of loads. The Taupō Weighbridge program will be extended to include the Turangi site and commercial operators currently using the site would receive monthly bills based on the current tonne rate.

Cash handling risks will also be eliminated as all transactions will be recorded with receipts issued to all users. The inclusion of a weighbridge and weight-based charging regime at the site is funded in the 25/26 year.

There are 3 compactor bins, 7 full size open top bins and 2 half sized open top bins that service the district transfer stations. All these bins require ongoing maintenance and renewal. It is not envisaged in the short term that additional bins will be required.



Omori Transfer Station

Commissioned in 1995, Omori Transfer Station serves the settlements of Omori, Pukawa and Kurataua, and is located 15-19 kilometres from Turangi. This area has a small resident population that peaks to approximately 4,000 over the summer period. The facility caters for a recycling and a green vegetation shredding area. All refuse is transported to Turangi, processed through the transfer station compactor and relocated to Broadlands Road. This site had a reuse shed (covered containment) built in 2009 and see's good volumes of material being recovered.

Green waste can also be double mulched to make sure of good product quality and thus demand from locals, this enables Council to avoid the need to truck material off site.

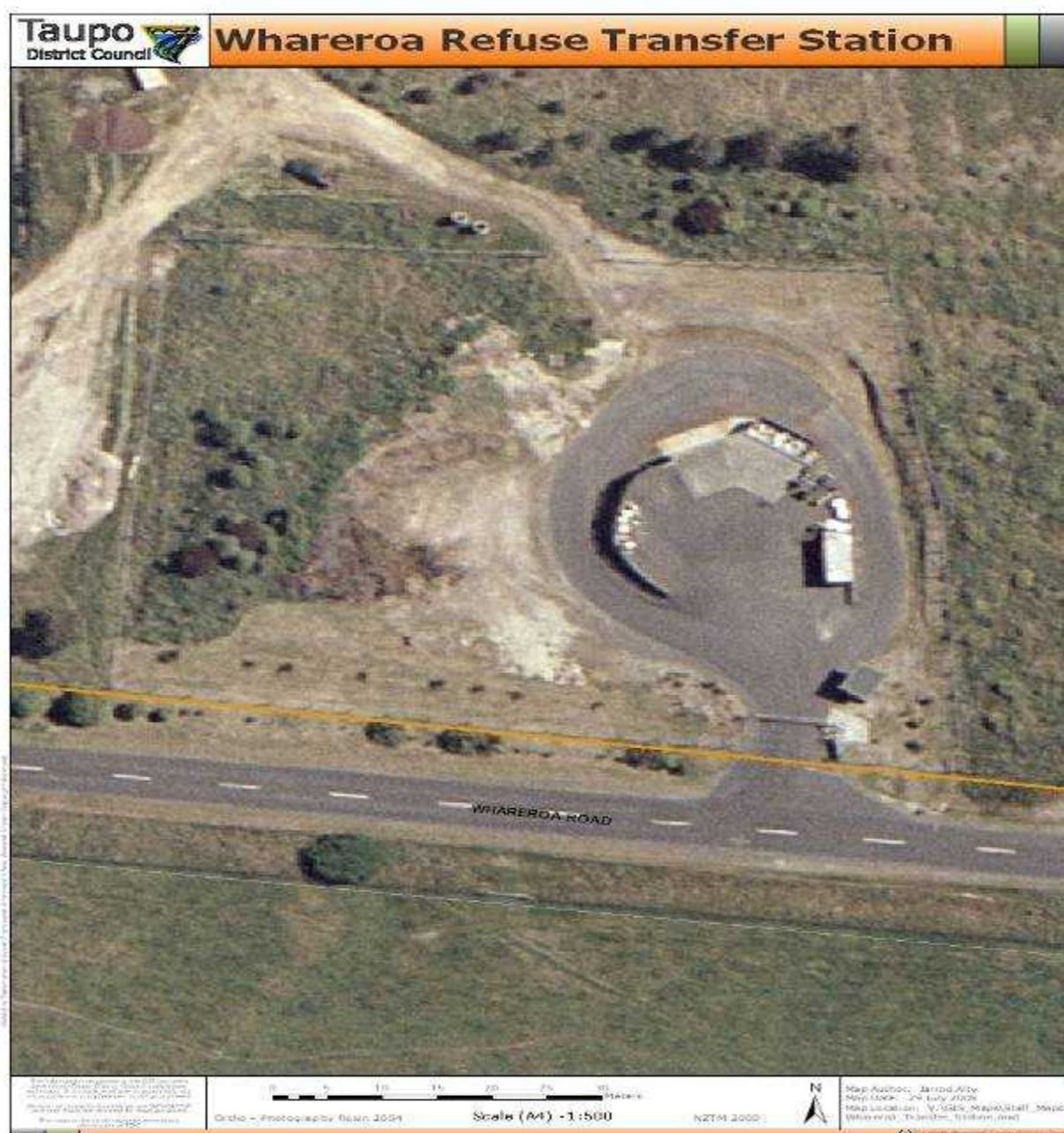
The Omori site has opening hours that allow the local community to drop of refuse bags and other waste prior to leaving the district, as a large proportion of the local houses are not occupied during the winter months.

The site does not have any power which means that all financial transactions have to be cash, which is a constraint when dealing with the public. The provision of power which would be brought up the road by way of overhead lines would allow the site to have a water tank and pump to provide pressurised water and lighting.

The road around the green waste drop off area also needs to be sealed as the green waste shredding vehicle as well as the community vehicles have difficulty using the current road due to it being unsealed.

This site also manual handles recovered materials and needs to be upgraded to a bulk handling facility. A business case has been provided to mirror the recycling interface at both Broadlands and Kinloch.

A project is listed in the LTP for 21/22 to provide power, water supply and upgrade the site to enable bulk loading of recovered materials.



Whareroa Transfer Station

The residents of Whareroa are currently serviced by a bulk refuse bin cleared on an as needed basis that is emptied at the Turangi transfer station. There is also an area for vegetation shredding.

Growth will be addressed by increasing the service level through the operational contracts, the site was provided with covered containment for the storage of reusable goods in 2010 which was largely built by the local community.

The Whareroa Transfer Station is the only site that does not strictly adhere to the district user charges policy in that the site is not manned and a turnstile has been installed that gives community member's 24/hr access for bagged refuse.

Due to its isolation and the small number of full-time residents, Council in conjunction with the local community has decided to rate users of the site so that Council can minimise the on going manning costs and provide a facility that is in tune with the community's needs.

This arrangement has seen vary little abuse regarding out of community dumping as the site is fare distance from the highway. It has also meant that the local community have taken ownership of the day to day operation of the site in a caretaker role.

The reuse shed on site is run by the community and serves as a focal point where people from the area assist in the operations and get compost etc.

Green waste is double mulched for the community and the community looks after site accessibility by opening the large swing gates in the weekends.

There is no onsite Kiosk as the local community is rated for access to the site based on estimated usage.

This site also manual handles recovered materials and needs to be upgraded to a bulk handling facility. A business case has been provided to mirror the recycling interface at both Broadlands and Kinloch.



Mangakino Transfer Station

A manned transfer station operates at the Mangakino Service Centre Depot site off Lake Road and has been in operation since May 1998. The station is paved, and signage directs users to the various areas, e.g. general recycling, green waste, car bodies, white-ware recyclables or the household refuse bay. Refuse is compacted and transported to Broadlands Road landfill.

The transfer station services the Mangakino, Whakamaru and Atiamuri communities as well as the surrounding farming community. The site does not accept any commercial waste, and large commercial loads are directed straight to the Broadlands Rd Landfill.

Recyclable items from the site are currently transported to the Tokaroa Achievement Centre Green waste stockpiled on the site is offered to the local community free of charge, and for a small charge Council will provide a truck for transport.

Growth in the area is limited, but growth can easily be handled within the existing operational contracts.

Covered storage for reusable goods was provided in 2010 and material collected in the shed is taken to a second hand operation that works out of the town centre.

Due to low employment in the area Council has chosen to currently run the site using Council staff, so that at times when the site is closed, they can be utilised in other areas of Councils operations. The site is also part of the Mangakino depot area so fits in nicely with Councils overall responsibilities in the community.

The current concrete pad that is used for the storage and load out of recovered material needs enlarging as the tractor must load out from uneven ground when stacking recycling bins onto the truck which has been identified as a health and safety issue by staff.

This site also manual handles recovered materials and needs to be upgraded to a bulk handling facility. A business case has been provided to mirror the recycling interface at both Broadlands and Kinloch. The project to upgrade the site is in the 24/25 year.

The Managkino site will be included in the overall contract the operates all of the district waste facilities.

Cleanest District in New Zealand

Council has set a vision of “the Cleanest District in NZ”

The litter and recycling bin service delivery is only one of the services that will underpin this vision statement.

Council also utilises “in house” tidy trucks to deal with the litter hot spots mainly within or close to the urban settlements. For the roading network, Council Contracts this service within the roading maintenance contract.

Council also has radio and educational material relating litter and employs staff to walk the streets with a vacuum machine to collect waste in the Taupo CBD.

Council’s service delivery for bin provision varies throughout the urban settlements. Whareroa, Omori, Kuratau and Pukawa do not have any refuse bins, but do not suffer from litter as the community is proactive in picking up any material and take material home. These communities also do not have any fast food outlets and thus litter that we see from these establishments in other areas is not present. The geographical isolation of these towns also means that most food is brought from supermarkets and consumed at home.

Other urban centres, Taupo and Turangi do have fast food outlets and are connected to the state highway, so see vast numbers of people passing through the district purchasing material and unfortunately discarding this material on occasion.

There is a high demand for Refuse and Recycling Bins in these two main urban centres and Councils current service delivery covers CBDs and some parks and reserves and high use areas such as the super Loo and Taupo Lakefront.

Litter is discarded in a number of ways; Council does have a problem with fast food containers thrown from vehicle windows after consumption, and this mainly impacts the rural roads and state highways around the district with eating distance of the purchase. Litter is also discarded after items have been unwrapped and the wrapping is discarded, and some litter is generated from windblown kerbside collection material.

To achieve Councils vision, there needs to be a cross organisational effort placed into, collecting discarded material, educating people around why not to litter and achieving some community ownership of the issue as well as some form of penalty if caught discarding material.

The Packaging forum has been successful in obtaining funding from the waste minimisation levy to fund a nationwide education campaign around litter, this campaign should roll out mid-2017. To engage with the local community, it is envisaged that additional community engagement will be needed based on the Taupo district and environs.

Possible solutions:

- Councils security firm to enforce litter outside normal hours for hot spots
- Warrant selected staff in the parks operation team or further to provide additional enforcement support.
- Own a beach / street etc program
- Have litter collection packs available for those that want to do the right thing, could be a bag plus sticker, we could arrange pick up.
- Have a waste minimisation fund in the waste plan so that we can further support community initiatives
- Approach people who do the right thing with a prize, a rubbish sticker possibly (open to other options could be a voucher from retail outlets)
- Collect the litter collected over a week and make public, we need to make the community aware of the issue plus our vision (cleanest district)

- Find out from roading contractor where most waste is discarded and increase the service level in these areas.
- Link in with local litter face book page / build relationship
- Target specific groups, back packer's / campervan folk/ locals
- Signage into town / litter free district
- Enforce \$400 fines

The above solutions will be included into the Waste Management and Minimisation Plan as well as developed further with the relevant divisions of Council.

Street Litter & Recycling Bins

Currently there are currently 4 different type of street litter bin and 1 Love NZ recycling bin provided in the central CBDs in some parks and outside satellite shops.

The green steel 60L refuse bins are passed their use by date and are being phased out as they reach the end of their useful lives. Most are in a poor to average condition with signs of rust and paint deterioration.

As they are steel they can be recycled once removed.

The bin stock has been condition assessed with help from the collection contractor and all the bins apart from the old steel bins are in excellent to good condition. The condition assessment also provided GPS locations and photos of all bins.



CBD stainless bin

The stainless round bin with the district motif is the main CBD bin being used and the condition of these bins is generally good. We have found that they do have a fault where the lids can twist which makes it difficult for them to close and lock. This issue is being worked on by the manufacturer.

The wood slat bins are being used to replace the steel 60L bins throughout the district. Their appearance is much better than the steel variety and the price for replacement is similar. To date there has been no problem with the functioning of these bins.

The Big Belly solar compacting bins use power from the solar unit to power the compaction plant as well as send messages to the contractor to advise them that the bin is full. Council and the current contractor have installed a total of 51 compactors in high use areas.

Big Belly bins have allowed council to reduce the overall bin numbers and bin clutter but retain the all-important bin capacity due to the compaction function. The bins have enabled the contractor to achieve the service level of no overflowing bins due to their ability to send messages.

Due to their size Big Belly bins are not suited to the CBD street but are suited to areas of high pedestrian numbers such as the Taupo Lake front and parks such as the Super Loo area and the South Domain in Taupo. The Bins are also useful when sited in remote locations that require the contractor to drive long distances to inspect as the telemetry allows the contractor to collect when full.

Funding has also been provided for increasing the stock of recycling bins with the final service level goal being a recycling bin next to each refuse bin.



Wood Slat bin



Love NZ recycling bin and Big belly solar compactor

To achieve the best results in waste diversion for street litter and recycling bins, the bins must be located next to each other as people are reluctant to walk a distance to recycle but will participate if the option is easy to use.

Contamination with items such as coffee cups is still an ongoing issue and Council will need to dovetail its litter education program with the national litter program being run by the packaging council in conjunction with government funding



Bin combinations



Old style 60L steel bin



Love NZ Recycling bin

A large percentage of the Love NZ bins have been supplied to Council through grants from central government as well as the packaging Council. By spreading the Love NZ bins around the country government are trying to provide a consistent level of service to our tourist industry.

Council will need to continue to educate the community and visitors to the district on what is and is not recyclable as contamination rates in street recycling bins is reasonably high as items such as coffee cups universally thought of as recyclable and sometime promoted as such currently are not.

Performance Contract

It is considered that the current contract service performance is appropriate and provides flexibility for the contractor to achieve the desired outcome of no overflowing bins.

Past contracts had the contractor undertaking set runs at set times which meant that bins full between collection runs were left to overflow.

The current contract has incorporated the Big Belly Bins in the remote locations and high use areas, which cuts down on unnecessary vehicle movements. These bins along with extra recycling bins have provided additional capacity.

The outcome of this is that the contractor has been able to learn where the high impact areas are depending on what type of day it is and focus on these without having to travel to areas where bins are not being used. There are a number of different conditions that impact on bins use, these being weather conditions, events, long weekends and the main holiday period.

Maintenance of the bin stock is currently undertaken in house and emptying and refuse, bag provision along with recyclable sorting and processing to market is undertaken under contract.

9.0 FINANCIAL SUMMARY

9.1 Process of Determining Financial Forecast

The provisional financial forecast for Solid Waste was determined by identifying new works, and the continuation/evaluation of current maintenance and renewal strategies within each of the components, i.e. service delivery and waste facilities. Changes to the operations (OPEX) and capital projects (CAPEX) expenditure for items within each of the asset types were generally due to maintaining current level of services and changes to contract rates.

Level of service consultation carried out in the previous LTP indicated that the community were generally satisfied with Councils current spending within the various asset groups. This feedback was also used when determining provisional budgets. Refer to table 9.4 for the 10 year financial forecasts for both OPEX and CAPEX budgets. A Council wide 10yr expenditure review is carried out. The strategy for this review is to:

- Assign realistic timing to projects given the resources available under Councils current funding sources and in relation to impacts in other Asset Management Plans.
- Optimise timing of projects.
- Generate consistent budgeting philosophies across all Council divisions.
- Align expenditure with growth predictions.

Consultation on the final 10yr financial forecast will be carried out via the 2018-2028 TYP process.

9.2 Funding of Expenditure

9.2.1 FUNDING STRATEGY

The focus of this AMP is to identify the optimum (lowest lifecycle) cost for Solid Waste and to identify the cost for each asset group necessary to produce the desired level of service. How this cash flow will be funded is outlined in Council's long term financial strategy.

Current funding sources available for Solid Waste include:

- Rates – income generated by the collection of general, separate and differential rates.
- Fees and charges (ref Web site for current Fees & Charges).
- Govt allocated funds under the Waste levy

Funding the Cost Centre

In order to provide for on-going operation of the Solid waste facilities and services Council will need to continue to invest Capital expenditure within the District.

Currently the existing services are funded through a split between user charges at facilities and a rating portion, the funding split being 51% to 49%. Kerbside refuse collection is funded fully by user pays while the kerbside recycling service is incorporated in the rating portion. The reason for a user pay and rating split is to enable a significant cost differential between refuse disposal and recycling services which are perceived as being free (rates funded) by the community. This policy has seen a marked increase in recycling participation through the whole community and continues to see participation rates in the service at over 90%.

Central Government, in terms of the NZ Waste Strategy have promoted the change to full cost accounting and full cost at facilities and for services, thus making the NZ community aware of the costs involved in the Waste sector. This not only allows Councils to charge the full cost but it also supports the recycling industry by increasing the cost to dispose and incentivising the market place to look for alternatives to disposal.

Councils current funding split is a reflection of the public good involved in keeping the price of Solid Waste services affordable to reduce the amount of illegal dumping experienced throughout the district and also in recognition of the amount of out of district home ownership and the responsibility of this set of rate payers to help fund the solid waste infrastructure and services.

The funding split also enables Council to set fees and charges at a level that avoids competition and waste flight away from the Broadlands Rd Landfill.

Costs for Solid Waste assets and services are forecast to remain static as Council has entered into long term contracts but there will be contract escalations, depreciation, and new landfill cells at the Broadlands Rd Landfill as well as new Legislation.

Emissions trading costs have increased to \$35 per emission credit, which has meant an increase in operational cost to around \$1 million per year. This cost has been funded by a mix of gate and rates. There is uncertainty as to the value of emission credits in the short and medium term.

Council is not considering the use of development contributions on new subdivisions as a funding option for solid waste assets as the cost is already partly recovered by fees and charges and the revenue recovered from development contributions would be minimal.

9.2.2 ALLOCATION OF FUNDS

The process of allocating funds is generally based on:

- Maintenance and operations are funded from General Rates and fees and charges.
- Renewal works are funded by Depreciation.
- New Works are funded by Loans.

The funding strategy can be found within the Long Term Plan.

9.3 Historical and Forecast Expenditure

Historic expenditure for each asset group is included within the lifecycle section for that asset.

Budgeted Solid Waste expenditure for the next 10 years is summarised on the following pages.

9.3.1 OPEX: OPERATING AND MAINTENANCE EXPENDITURE

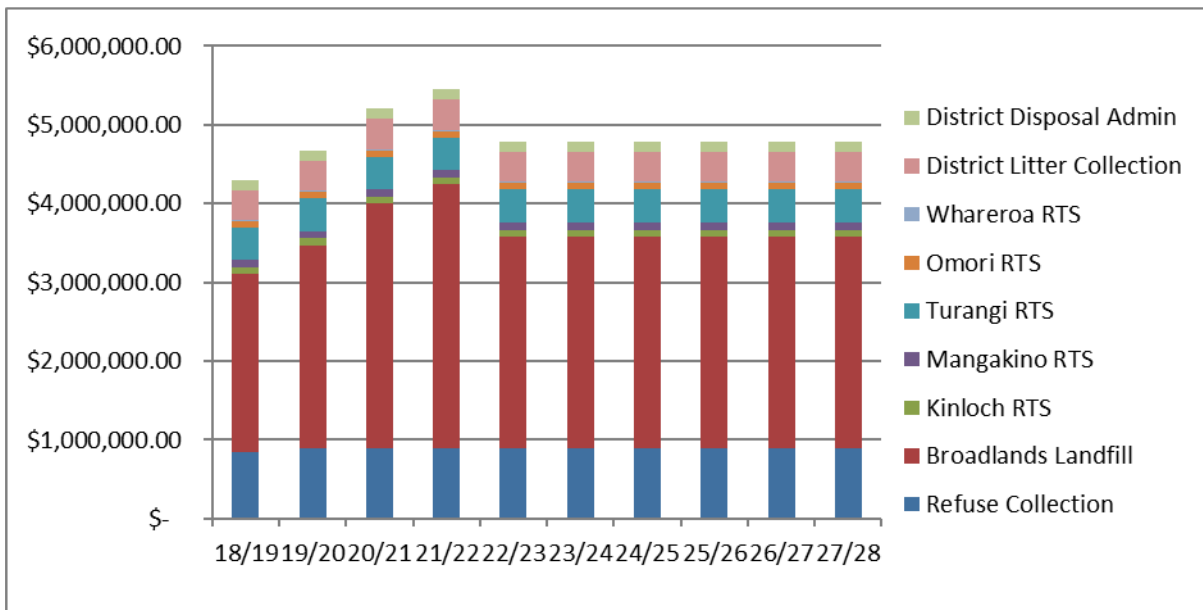


Figure 9-1: Operating and Maintenance Expenditure (\$,000)

Operation and maintenance costs average approximately \$4.5M/year for the next 10 years. Operational costs are set to increase due to the cost of the ETS, waste levy.

Maintenance requirements are carried out by contractors who are appointed in accordance with Council’s procurement policy.

Operational costs shown in the above graph do not include TDC administration and allocation of internal costs or Interest and depreciation.

The total cost breakdown is included in the Total Expenditure and funding section (see appendix for work papers showing how the Opex and maintenance costs have been determined).

9.3.2 OPEX: INCOME

Operational income is generated from the gate fees at district facilities and sticker and coupon sales for refuse collection.

Opex income will be adjusted to reflect the current funding policy for solid waste which has rates at 51% and gate revenue at 49%.

Income will show an increase due to the increase in gate price to cover the cost of the waste levy.

9.3.3 RENEWAL EXPENDITURE

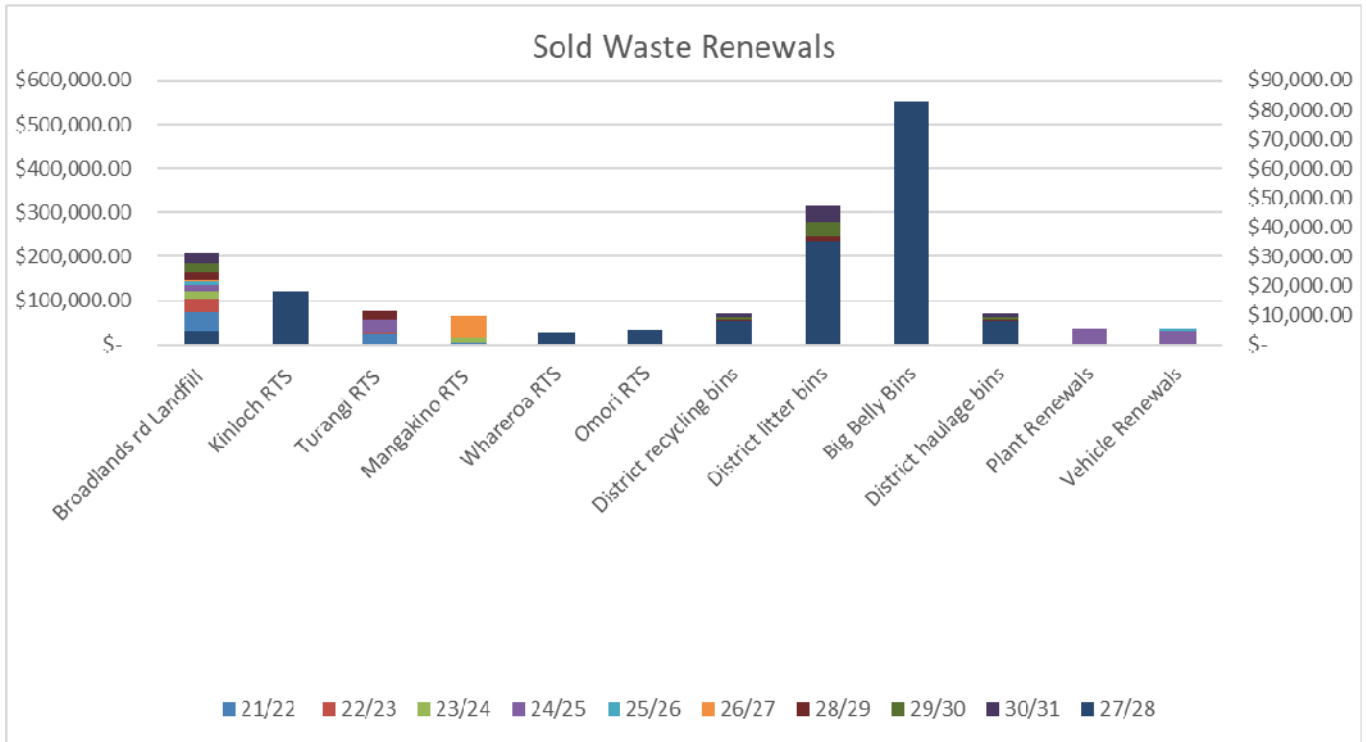


Figure 9-2: Renewals Expenditure (\$,000)

Renewals include any items where an existing asset is replaced for example pumps or compactor motors etc. Renewal costs are based on packaged renewal program for each district facility.

Generally, the timing of renewal for an asset is based on assessment as the asset is nearing the end of its useful life. Loss in service potential is calculated by straight-line depreciation with the exception of land which is not depreciated. The depreciation rates are applied at a component level and are dependent on the remaining useful life of each component.

Component	Useful Life (years)
Compactors	25
Barrier arms	7
pavement	10
Pumps	8
Buildings	50
Signage	4
Fencing	12
Kiosk Furnishings	4
Recycling containers	4
Cash registers	4

Table 9-1: Solid Waste Asset Useful Lives

A summary of the depreciation of Solid Waste assets is presented in the Taupō District Council Annual Report.

Project sheets for renewals are included in the appendix and table 8.5 in section 8 itemises the renewal projects.

9.3.4 CAPEX: NEW WORKS EXPENDITURE

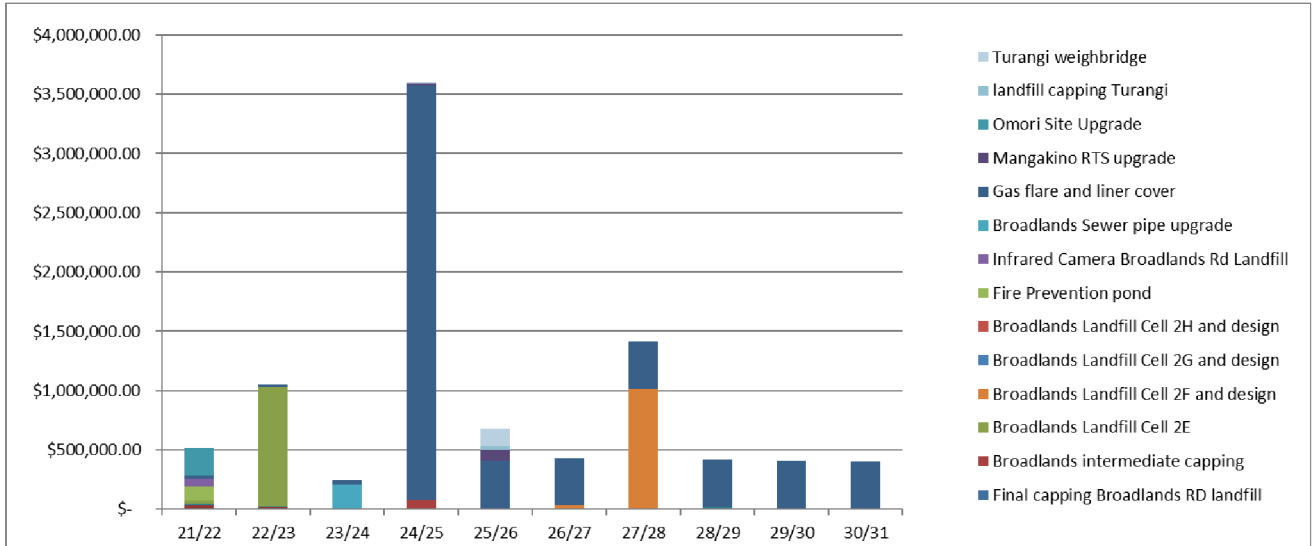
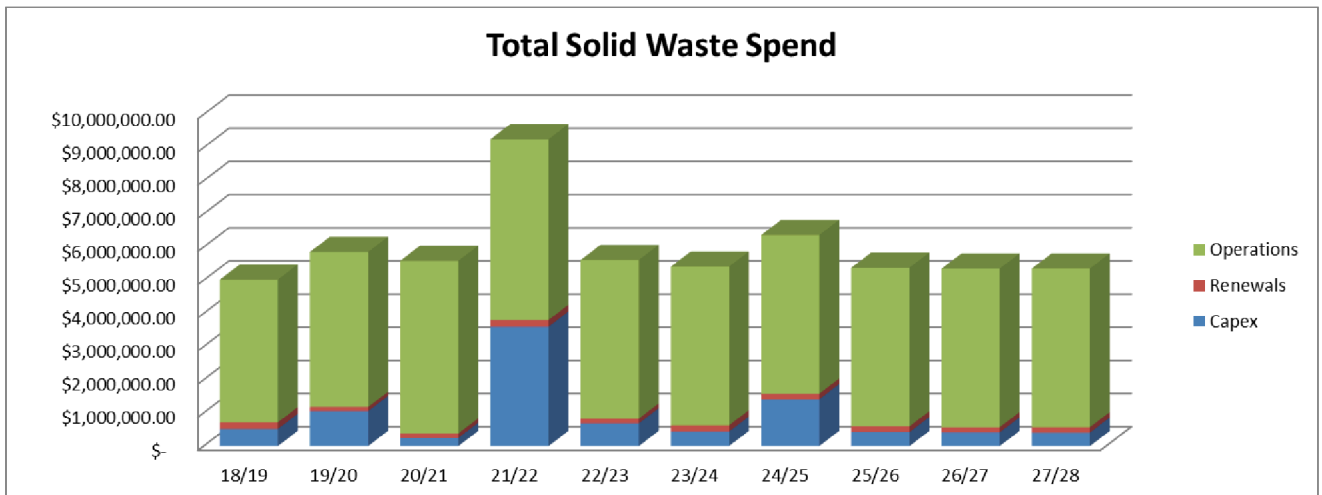


Figure 9-3: New Works Expenditure (\$,000)

New works expenditure is governed by works required to meet resource consent requirements and on-going cell development at the Broadlands Rd landfill.

Peaks in spending are due to the new cells being provided at the Broadlands Rd Landfill with the main expenditure being a gas flare and associated infrastructure in year 4.

Project sheets for each project are included in the appendix and table 8.6 and section 8 has the new works projects.



Total solid waste cost centre spend asset controlled expenses only average just over 5 million with peak showing for the installation of gas destruction infrastructure.

9.3.5 EXPENDITURE LINKAGES TO LEVEL OF SERVICE

Section 5 (LOS) outlines how each of the budgeted items relates back to the level of service being provided.

9.4 Total Expenditure and Funding

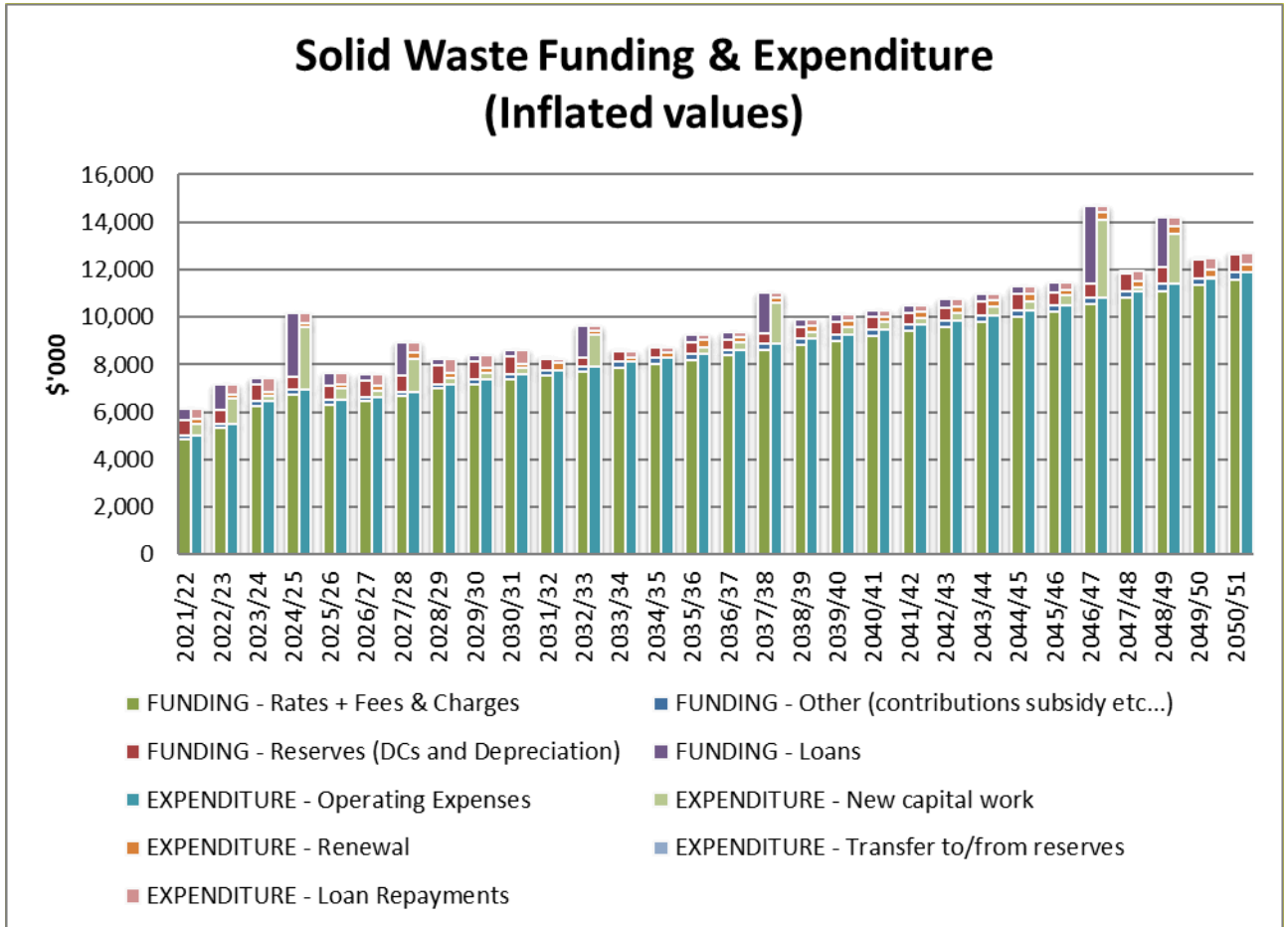


Figure 9-4: Total Funding & Expenditure (\$,000)

Overall, the total budget fluctuates depending on the capital projects, however the average spend over the 30 year LTP period is approximately \$8M per annum.

9.5 Valuation of Solid Waste Assets

Solid Waste assets provide a continuing service to the community and are not generally regarded as tradable. The cost to replace an asset with the Modern Equivalent Asset (MEA) is used as a basis to determine replacement value.

Refer to Section 4 (Asset Data), for a summary of the valuation of Solid Waste assets. A full valuation report is available on request.

Rates for renewal costs are taken from current operational contract rates. These rates are compared to like contracts in NZ. Rates for specific items are identified and compared from various suppliers

9.6 Financial Assumptions

The financial assumptions are included in the Introduction Section (section 1).

9.7 Financial Confidence Levels

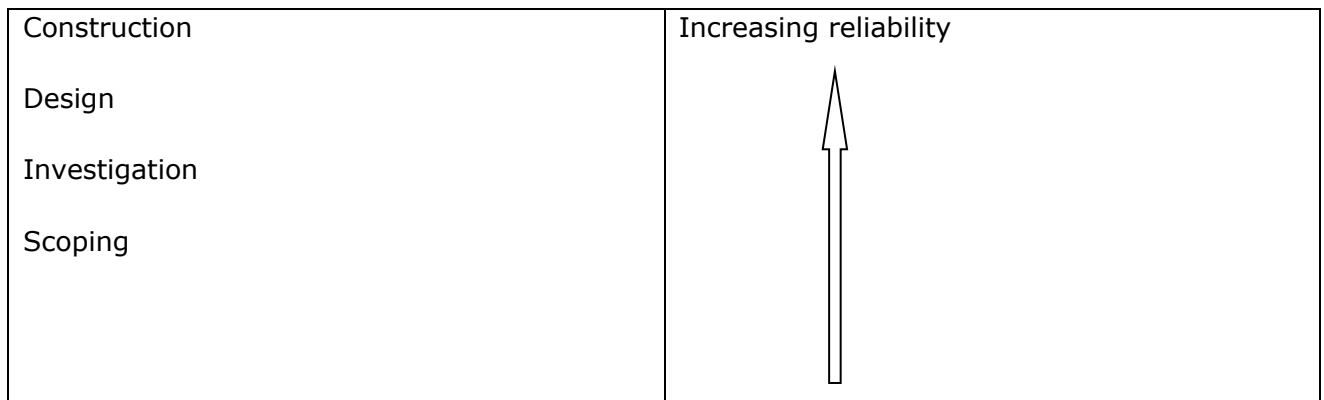
The confidence in the asset data used as a basis for the financial forecasts has been assessed using the following grading system from the International Infrastructure Management Manual – Australia/New Zealand Edition, April 2000.

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

Table 9-2: Confidence Grading Table

The confidence level is B+ overall.

Financial forecasts within the first three years are seen as reliable with the reliability decreasing with time. Also the reliability depends on the phase of the project, with reliability increasing as the project moves from scoping to construction.



Solid Waste Financial Summary For the 2021-51 Asset Management Plan		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	
Revenue																																
General Rates	-753	-771	-792	-815	-833	-856	-880	-904	-931	-952	-972	-992	-1,013	-1,034	-1,056	-1,078	-1,101	-1,124	-1,148	-1,172	-1,196	-1,221	-1,247	-1,273	-1,300	-1,327	-1,356	-1,384	-1,413	-1,442		
Targeted Rates	-1,499	-1,678	-2,162	-2,296	-1,712	-1,756	-1,837	-2,038	-2,091	-2,176	-2,212	-2,296	-2,354	-2,394	-2,444	-2,501	-2,609	-2,689	-2,748	-2,808	-2,870	-2,933	-2,998	-3,065	-3,134	-3,207	-3,414	-3,542	-3,629	-3,686		
Operating subsidies	-132	-144	-168	-183	-188	-192	-197	-202	-208	-213	-217	-222	-226	-231	-236	-241	-246	-251	-256	-262	-267	-273	-278	-284	-290	-296	-303	-309	-315	-322		
Fees and charges	-3,353	-3,654	-4,095	-4,456	-4,568	-4,680	-4,795	-4,919	-5,048	-5,168	-5,276	-5,387	-5,500	-5,615	-5,733	-5,854	-5,977	-6,102	-6,230	-6,361	-6,495	-6,631	-6,770	-6,913	-7,058	-7,206	-7,357	-7,512	-7,670	-7,831		
Total Revenue	-5,377	-6,246	-7,217	-7,720	-7,301	-7,483	-7,710	-8,063	-8,277	-8,507	-8,677	-8,897	-9,094	-9,274	-9,469	-9,673	-9,932	-10,166	-10,382	-10,602	-10,828	-11,058	-11,294	-11,535	-11,782	-12,137	-12,429	-12,747	-13,027	-13,281		
Operating Expenses																																
Maintenance Costs	60	68	89	71	78	80	82	84	87	89	91	93	94	96	98	101	103	105	107	109	112	114	116	119	121	124	126	129	132	134		
Operations Costs	4,659	5,124	5,938	6,362	5,784	5,926	6,078	6,239	6,403	6,566	6,693	6,834	6,978	7,124	7,274	7,426	7,582	7,742	7,904	8,070	8,240	8,413	8,589	8,770	8,954	9,142	9,334	9,530	9,730	9,934		
Interest on Borrowings	105	120	113	136	167	155	168	177	165	152	146	160	173	167	164	167	191	214	215	216	217	218	219	220	223	269	309	330	349	358		
Depreciation	393	426	563	581	686	712	744	910	934	997	1,019	1,066	1,089	1,112	1,141	1,171	1,231	1,263	1,295	1,329	1,363	1,398	1,434	1,471	1,510	1,607	1,643	1,720	1,757	1,794		
Overheads	520	509	534	570	586	610	638	655	689	714	729	744	760	776	792	808	825	843	860	879	897	916	935	955	975	995	1,016	1,037	1,059	1,081		
Total Operating Expenditure	5,737	6,246	7,217	7,720	7,301	7,483	7,710	8,063	8,277	8,507	8,677	8,897	9,094	9,274	9,469	9,673	9,932	10,166	10,382	10,602	10,828	11,058	11,294	11,535	11,782	12,137	12,429	12,747	13,027	13,281		
Net Deficit (Surplus) of Operations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Funded by:																																
Transfers to/from Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Renewals	200	162	139	184	144	215	233	205	233	203	290	194	192	223	294	211	223	235	252	237	242	255	282	366	246	286	297	303	310	316		
Capex																																
Street recycling bins new	10	10	11	11	11	11	12	12	12	13	6	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9	9	9		
Big Belly, refuse, recycling bins	35	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Broadlands Rd landfill Capping	0	0	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
New Landfill Cell Build	0	0	0	0	28	1,160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Broadlands Landfill Cell 2H and design	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	1,446	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
New Lined Cell build Broadlands Rd Landfill	25	1,027	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Broadlands Landfill Cell 2G and design	0	0	0	0	0	0	0	0	0	0	0	0	32	1,303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Final capping Broadlands Rd Landfill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89	2,090	0	0	
Mangakino concrete pad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Turangi Building extension	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Flare and Liner cover	25	26	42	2,633	221	226	232	238	244	250	0	0	0	0	277	283	289	295	301	308	314	321	328	334	341	0	0	0	0	0	0	
New Sewer Pipe Broadlands Rd Landfill	0	0	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Infrared camera for fire prevention Broadlands Rd Landfill	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lined pond provision for fire prevention	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bulk Haulage Broadlands Rd Transfer Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turangi landfill Capping	0	0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighbridge installation / Turangi RTS	0	0	0	22	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Omon Refuse Transfer station Upgrade	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mangakino site upgrade	0	0	0	11	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Capex	514	1,080	251	2,641	523	266	1,404	250	256	263	38	1,310	7	7	284	326	1,742	303	309	315	322	329	336	343	393	3,277	116	2,117	28	28		
Total Capex	714	1,243	390	2,825	666	479	1,637	455	490	465	328	1,504	198	230	578	537	1,965	537	561	553	564	584	618	709	638	3,563	413	2,420	338	345		
Funded by:																																
Loans raised	514	1,080	251	2,641	523	266	1,404	250	256	263	38	1,310	7	7	284	326	1,742	303	309	315	322	329	336	343	393	3,277	116	2,117	28	28		
Loan Repayments	-433	-445	-581	-391	-498	-444	-430	-589	-553	-562	-197	-191	-236	-227	-218	-220	-225	-285	-286	-287	-288	-289	-291	-293	-295	-299	-418	-406	-474	-456		
Transfer from reserve(s)	633	607	720	575	641	657	864	794	786	764	487	385	427	449	512	431	447	520	538	524	530	545	573	659	541	585	715	709	784	773		
Total	714	1,243	390	2,825	666	479	1,637	455	490	465	328	1,504	198	230	578	537	1,965	537	561	553	564	584	618	709	638	3,563	413	2,420	338	345		

10.0 ASSET MANAGEMENT PRACTICES

10.1 Current Asset Management Practices

This section outlines the decision-making tools Taupō District Council (TDC) currently uses to determine long term maintenance, renewal and creation expenditure for Solid Waste assets.

AM practices fall under three broad headings:

Processes: The necessary processes, analysis and evaluation techniques needed for life cycle asset management.

Information Systems: The information support systems used to store and manipulate the data.

Data: Data available for manipulation by information systems to produce the required outputs.

On-going NAMS training is provided to all staff involved in the production of the asset management plans to facilitate the best management of the assets.

Asset Management plans are compiled by individual asset managers responsible for their assets. Asset managers are also part of the Asset Management Team who work together to ensure quality outcomes. The team has key relationships with the policy division to make sure that customer expectations are understood as well as key outcomes are achieved. The Finance team also assist in the preparation of the finance section. Project information as well as overall budgeting is then passed to senior management to enable further analysis as well as support. Asset management plans are then presented to Council where further prioritisation occurs.

Due to an agreed financial strategy there is pressure on the amount of capex spend within the organisation. Asset managers are to prepare plans to operate and maintain their assets using best practise methods. Those plans will then be overlaid with other assets to determine if there are any synergies and to avoid "digging up the street twice".

The process from there will be to prioritise expenditure based around the financial constraints as well such things as Legislation, consent requirements and "nice to haves".

Any changes to plans will be documented and provided to the elected officials so that a complete record of the process is kept along with the decisions made.

10.2 Asset Management Processes

10.2.1 ATTRIBUTE DATA COLLECTION AND VALIDATION

Data collection is completed by:

- Councils network maintenance engineers providing updated asset information as maintenance works are completed.
- Facility operators alert Council of unplanned maintenance and renewal works
- Contractors supplying data where an asset is renewed or installed
- As built data from new works

Validation is completed by way of TDC auditing a number of contractor's work sheets as well as monthly contract meetings where asset performance and condition are assessed.

10.2.2 NEW DEVELOPMENT APPROVALS/AS-BUILT RECORDS

The Development Engineer approves completed works for new developments and ensures that the following people are issued a copy of all final documents, e.g. plans, pipe and manhole testing results.

- GIS – via the GIS help desk email address
- Asset Management Systems Officer (who will discuss any issues with the Asset Manager if required).

This process has little impact on the solid waste network as the facilities are stand alone and the infrastructure is usually not influenced by private developments apart from the need to service the urban lots for refuse and recycling collection.

10.2.3 PROCUREMENT

Councils have developed a procurement framework that requires differing process for differing expenditure values. The Procurement manure can be found in Objective database.

10.2.4 LEVEL OF SERVICE CONSULTATION

The level of service consultation provides feedback from residents and ratepayers of the Taupō District. The responses from this consultation provide input into how the asset is managed.

Levels of service will be consulted on as part of the Ten-Year Plan (TYP).

A level of service consultation has been undertaken for litter in the district with most submitters looking for a small increase in service levels.

The overall service delivery will also be consulted on as a part of the development of the Waste management and minimisation plan.

10.2.5 INFORMATION FROM CONTRACTORS

Processes for collection of data (maintenance, condition, new assets, renewals, performance etc) clearly defined and efficiently administered through asset maintenance contracts. Monthly performance meetings consider asset condition and effects on levels of service.

10.2.6 STANDARD OPERATING PROCEDURES

Standard Operating Procedures are being developed to assist in the operation and maintenance of assets. This process is ongoing with new procedures being developed as the need arises and updates being made as required. The Broadlands Rd landfill has a site management plan that identifies site operational issues that need to be managed, but most of these requirements are part of the facility operational contract documents and resource consent.

10.2.7 ASSET MANAGEMENT ACCOUNTING AND ECONOMICS

Infrastructure assets are those public facilities which provide for the delivery of services and sustained standard of living. They primarily comprise the Council's fixed utility systems including roads, streets and footpaths, the water and sewerage reticulation systems refuse / recycling facilities, the Stormwater system, bridges and culverts.

Infrastructure assets are deemed to have the following attributes:

- they are large networks constructed over several generations;
- they have very long useful economic lives;
- they have a high initial cost;
- they provide a benefit and/or a social service but can also provide a commercial service, i.e. the assets are used by or for the community as a whole, servicing all the town's residents and visitors. The assets are not usually capable of subdivision for ready disposal, because of legal or other restrictions, and consequently are not readily disposable within the commercial marketplace;
- Assets are not normally depleted as their service capability is fully maintained in perpetuity, i.e. they are expected to have an indefinite life if adequately maintained although portions of the network will be replaced from time to time. The Broadlands Rd Landfill will continue to be developed, as current cells fill new disposal cells need to be constructed.

Assets are systematically evaluated as required, approximately every three years.

Depreciated replacement cost is calculated having regard to an allowance for the expired portion of the expected useful economic life for each category of infrastructure asset.

TDC uses the principles of accrual accounting to measure costs of services provided and recognise revenues.

Renewal accounting treats all upgrading, reconstruction, renewal and renovation work which does not increase the capacity or service potential of assets as operating expenditure.

Operating expenditure can be divided into two broad categories; normal ongoing day to day routine maintenance works, and those other more infrequent larger projects that upgrade or renew the asset to its previous service potential.

Creation expenditure involves increases in an asset's service potential or the creation of new assets.

All expenditure on infrastructure assets will therefore fall into one of three categories:

10.2.7.1 Routine Maintenance Expenditure

Routine maintenance projects can be expected to display some or all of the following characteristics:

- regular and ongoing annual expenditure necessary to keep the assets at their required service potential,
- day to day and/or general upkeep works designed to keep the assets operating at required levels of service,
- works which provide for the normal care and attention of the asset including repairs and minor replacements,
- Minor response type remedial works i.e., isolated failures requiring immediate repair to make the asset operational again.

10.2.7.2 Renewal Expenditure

Work displaying one or more of the following attributes, can be classified as renewal expenditure.

- works which do not increase the capacity or service potential of the asset, i.e. works which upgrade and enhance the assets restoring them to their original size, condition, capacity etc,
- the replacement component of augmentation works which increase the capacity of the asset, i.e. that portion of the work which restores the assets to their original size, condition, capacity etc.,
- the replacement component of a new work which replaces the redundant element of an existing asset,
- reconstruction or rehabilitation components of works involving improvements, realignment and re-grading,
- renewal and/or renovation of existing assets, i.e., restoring the assets to a new or fresh condition.

10.2.7.3 New Works Expenditure

New works expenditure projects displaying one or more of the following characteristics:

- construction works which create a new asset that did not previously exist in any shape or form,
- expenditure which purchases or creates a new asset (not a replacement) or in any way improves an asset beyond its original design capacity,
- upgrade works which increase the capacity of the asset,
- construction works designed to produce an improvement in the standard and operation of the asset beyond its current capacity.

To the extent that a project results in replacement of an asset caused by physical deterioration, and also provides capacity for increased demand, proportions should be allocated to both creation and renewals on the basis of marginal cost.

It is recommended that the split between creation and renewal expenditure is based on marginal cost. This recognises the full cost of renewing the existing asset to its original service potential is an expense as this expenditure cost does not contribute to improving the asset beyond its original design capacity.

10.2.8 THE TEN YEAR PLAN PROCESS

The Ten Year Plan (TYP) formerly known as the Long Term Plan (LTP) process considers the community outcomes, statutory requirements, the headline indicators and external pressures to determine what Council can or should be doing to help the community work towards its desired future.

The TYP also contains an action plan that sets out how Council will undertake its strategic goals and details the specific activities, functions and initiatives undertaken in the short term (three years) and long term (10 years).

The TYP draws on information from other documents including the Asset Management Plans and models it in financial terms over a ten year horizon and is updated every three years.

10.2.9 THE ANNUAL PLAN PROCESS

The Annual Plan is an action plan that sets out how Council will undertake its strategic goals and details the specific activities, functions and initiatives undertaken. It is produced in the years when a LTP is not. It will also outline deviations from the LTP.

10.2.10 STANDARDS AND GUIDELINES

For landfill works there are standards and guidelines that are available to ensure that Council is following 'best practice'. This includes national standards on refuse compaction, Leachate handling, new cell build guidelines and on site transfer station set up.

Whereas Acts and Regulations determine minimum levels of service, standards and guidelines provide the means of compliance with specific levels of service.

10.3 Asset Management Information Systems

10.3.1 ASSET MANAGEMENT SYSTEM

Council is in the process of downloading all of the asset data for solid waste into Asset- Finda but this process has had to wait until council has finalised the Three Waters upgrade process. Litter and street recycling bin data has been uploaded into Asset Finda. Data includes location and condition.

Currently Solid Waste data is held on the financial database and is updated as capital and renewal expenditure works are undertaken.

10.3.2 GIS

Solid Waste data from asbuilt records are placed into GIS if they relevant, data such as cell design data is kept in objective.

10.3.3 SERVICE REQUEST SYSTEM

This is the system used by Council to record customer complaints, comments or compliments. The information is entered into the system when a customer calls and the call will be categorised depending the issue. Council Staff are tasked with completing these requests within a certain timeframe.

Service requests in some instances, such as the kerbside collection contract, can be straight to the contractor and signed off by them once the issue has been resolved.

10.3.4 ASSET VALIDATION BY CONTRACTORS

Data from any new works or renewal works undertaken at waste facilities is collected on a daily basis by maintenance and capital works contractors. This information is then updated in the NCS system.

10.3.5 SPM (DEVELOPMENT CONTRIBUTION CALCULATIONS)

The Solid waste cost centre does not collect development contributions as facility costs are funded by rates and fees and charges.

10.3.6 LABORATORY DATA

Council has recently changed the Lab services, and Urofin now collect bore data which is then sent to Opus consultants to provide analysis and recommendations based on the data. Data is kept in Councils document records system, and is also passed onto the Regional Council as required by the resource consents. Council and Opus International store all monitoring records from site monitoring.

10.3.7 PROMAPP

Promapp is a procedure development programme that is being used to develop standard operating procedures for all Council business.

10.3.8 OBJECTIVE

Objective is Council's electronic document management system. All information relating to Council business is saved in this system for easy retrieval when required. This includes incoming and outgoing correspondence especially emails and letters. Council now only holds electronic copies for the majority of correspondence.

Soon to be replaced with a new document management system.

10.4 Data

10.4.1 ACCOUNTING COST DATA

Cost data for the asset groups are identified in the accounting records.

The work category type (maintenance, renewals, and new works) is identified. Marginal costs are only separately identified for significant works. Minor asset expenditure may not be separately identified.

Visual inspection to verify quantities for payment for routine maintenance and renewal tasks is undertaken by the asset engineer along with the asset manager.

10.4.2 GROWTH MODEL

The growth model is updated on an annual basis to reflect changes in development patterns. This model predicts the spread and level of growth within the Taupō District Council Areas. This model assists Asset Managers in planning forward works for their respective assets. The growth model uses census data as well as demand figures from subdivisions and building consents to provide asset managers with numbers that may affect service delivery.

Asset Valuation

The asset valuation provides a three-yearly update of the value of the Solid Waste Assets. New assets or disposed of assets are taken into account at this time.

10.4.3 CONDITION ASSESSMENT

Condition assessments are carried out by both contractors and council staff. This process is both formal and informal, due to the high level of public interface with council facilities the condition assessment process is at least fortnightly.

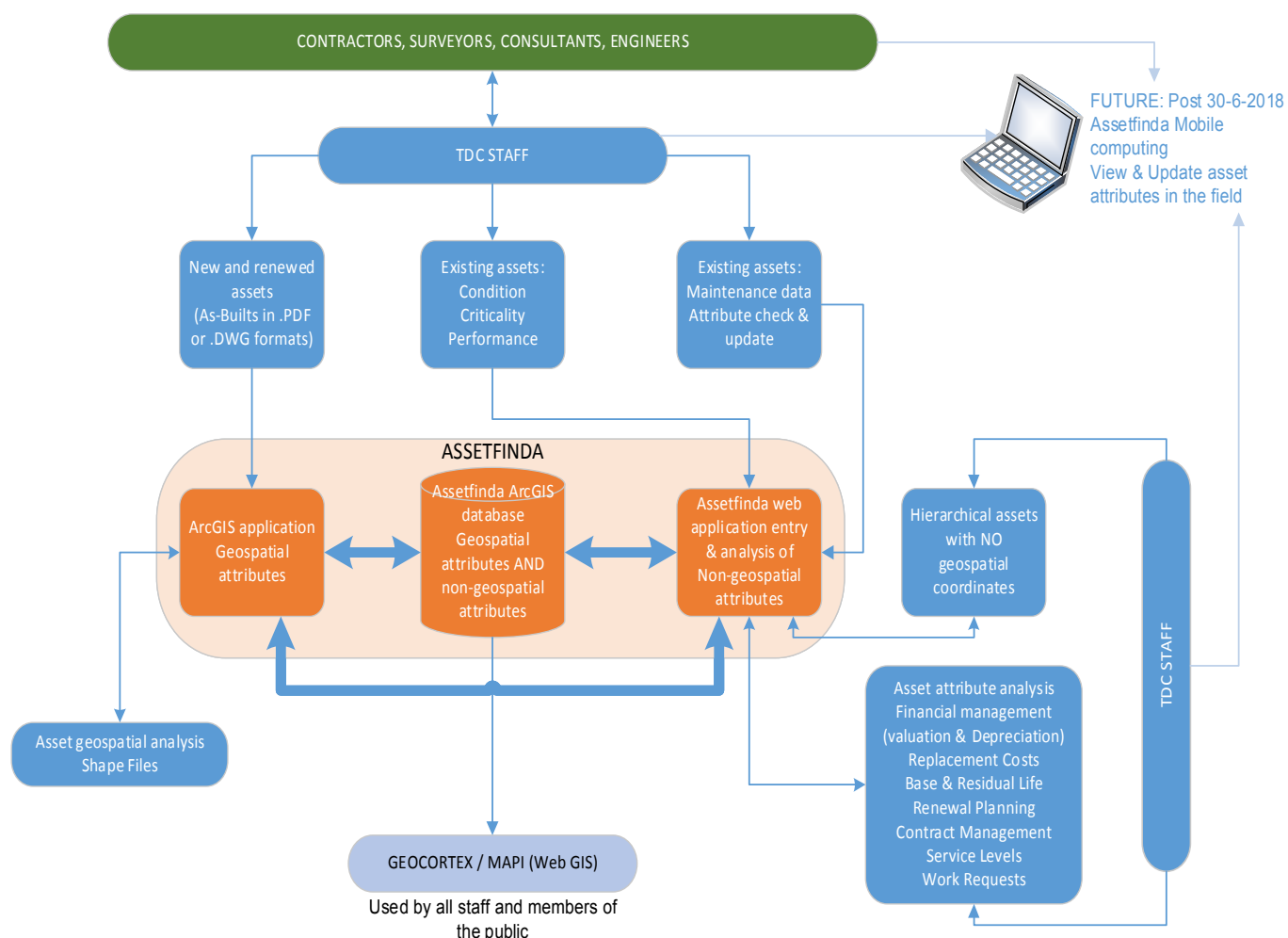


Figure 10-1: Asset Management System / GIS Data Recording Flow

10.4.4 DATA QUALITY ASSURANCE

The following are quality assurance regimes:

- Data Collection:
 - The contractor is responsible for GPS data collection following council standards (council doesn't accept any data with more than 0.3 m error in GPS coordinates).
 - TDC staff is continuously collecting data for historical assets which are updated after verification.
 - Project management team provides as built and field data and advise AMS team to update the information in asset register and or GIS.
- Data entry: Currently council is doing manual entry of the data using ArcGIS import capabilities CAD files and PDF files.
- Data maintenance: This is partially done by council staff whenever the contractor finds any variance in existing data and physical asset in the ground. As regards to the WWTP and pump stations operating staff and contractors staff are continuously validating and updating the conditions of the asset and informing the AMS team. In future it is envisaged that some efficiency will be developed with upgrade of AssetFinda and field staff will be

able to update asset attributes directly and it will be validated using quality assurance protocol developed at that time.

10.5 Asset Management Policy

Asset Management Policy

PURPOSE

The Asset Management Policy supports Council's long term strategic goals found in the 2021 LTP of:

- Ensure that the Taupo District remains a great place to live
- Promote economic development
- Protect our water resources and use them wisely
- Maintain the quality infrastructure that we have
- Keep rates and debt affordable

OBJECTIVE

The objective of Council's Asset Management Policy is to:

- ensure service delivery is optimized to deliver agreed community outcomes and levels of service for both residents, visitors and the environment
- optimize expenditure over the life cycle of the assets
- risks are managed appropriately
- provide a service delivery that is sustainable

PRINCIPLES

The following principles will be used by Council to guide asset management planning and decision making:

- effective consultation to determine appropriate levels of service
- Integration of asset management within Council's strategic, tactical and operational planning frameworks including corporate, financial, and business planning
- Informed decision making using a lifecycle and risk management and inter-generational approach
- Transparent and accountable asset management decision making
- Sustainable management of assets for present and future needs

CORPORATE FRAMEWORK

This Asset Management Policy links to Council's LTP, Infrastructure and Financial Strategy and Asset Management Plans. It builds on Council's strategic goals by promoting an integrated approach to the management of service delivery and across all asset classes.

STRUCTURED ASSESSMENT of ASSET MANAGEMENT PRACTICE

Council has undertaken a structured assessment of the appropriate level of asset management practice for each of the asset classes. This structured assessment follows the guidelines provided in Section 2.1.3 of the International Infrastructure Manual (IIMM 2011v4).

IMPLEMENTATION and REVIEW of POLICY

This Asset Management Policy has been implemented in 2015. The next full review of this Asset Management Policy shall be completed in June 2020 prior to completing asset management plan updates to support the 2021 LTP.

MATURITY ASSESSMENT

In the first quarter of 2021 the maturity level of each of the Asset Management Plans has been assessed through an external review process to determine the actual level of maturity. This review will form the basis for the further refinement of each of the AMP's Improvement plans.

11.0 IMPROVEMENT PLAN AND MONITORING

11.1 Improvement Plan

Improving the management of Taupō District Council's Solid Waste assets is a continual and ongoing process.

During the course of updating this plan, AMP improvement tasks have been noted for follow-up over the next three years in conjunction with reviewing and improving this plan. This programme reflects the overall aim of improving asset management practices, which is to deliver the right level of service at the lowest long-term cost to TDC's customers. The highest improvement tasks all focus on meeting that goal by:

- Ensuring the right level of funding is being allocated to maintain the asset service potential.
- Consulting with customers to ensure that their views are considered when selecting the best scenario.
- Providing on-going NAMs training for staff involved in the production of the asset management plans to facilitate best management of the assets.
- The Asset Managers participate in the Council's asset management planning group which facilitates improvements in planning for all categories of assets."

11.1.1 BACKGROUND

The Asset Management Plan (AMP) has been updated to reflect changes in national policy (Local Govt Act amendment) and local thinking.

The AMPs have been independently peer reviewed in 2012, 2015 and 2018 and the improvement plan section reflects comments made during these reviews. Details from the latest 2018 review can be found in the report from Waugh Infrastructure Management Ltd:

This independent peer review looked at all of the AMPs and a number of improvements were identified from this review to raise these AMPs from core to advanced, where appropriate.

A detailed assessment has been done, where all asset managers have met regularly to discuss the methodology, on how to implement and manage these recommendations. The methodology chosen to implement these improvements was to filter all individual scores from 0 to 5 and give a higher priority to those with a 0 or 1 score particularly where the consequence of not doing these is major.

Council now has an adopted AM policy or overarching strategy. A memo was presented at the SLG level which outlined the need for robust asset management planning in order to ensure the defensibility of the long term planning with TDC and provide SLT with a corporate framework and a direction sought from SLT. SLT decided to identify which AMPS would be Core or Advanced with the main difference between core and advanced being that at an advanced level future demand is predicted, high knowledge of assets owned, including condition assessment and performance etc.

On-going NAMS training is provided to all staff involved in the production of the asset management plans to facilitate the best management of the assets.

Asset Management plans are compiled by individual asset managers responsible for their assets. Asset managers are also part of the Asset Management Team who work together to ensure quality outcomes. The team has key relationships with the policy division to make sure that customer expectations are understood as well as key outcomes are achieved. The Finance team also assist in the preparation of finance section. Project information as well as overall budgeting is then passed to senior management to enable further analysis as well as support. Asset management plans are then presented to Council where further prioritisation occurs.

The Stormwater and Solid Waste Asset Manager is responsible for the production of this Asset Management Plan.

Note:

Internally funded reflects using staff time.

11.2 Improvement Programme

Resources (cost and time) have yet to be approved and are only estimates at the time of updating AMP. These may need to be reviewed when task is in progress to judge if timeframe and cost is realistic

AMP section	Area for improvement	Action/task description	Priority	Target date	Resources		Status	Infrastructure Manager signoff
4.0	Asset Data				Resource Whom	Progress/ comments Monitoring progress timeframe		
	Asset Data	Litter Bin / Recycling Bin assets to be included into Assetfinda with layer in Geo Cortex	1	2021 ongoing	TDC Internal / Asset Information team Internally funded	Progress monitored monthly to	Started, Bin locations have been collected Full bin list included now upkeep of data	
	Asset Data	Facility information collected and placed into Assetfinda	2	2022	Solid waste Asset manager / Asset Information team Internally funded	Progress monitored quarterly	Not started	
	Asset Data	Carry out asset inspections to determine condition	1	2021/2022/2023	Solid waste Asset manager Internally funded	Yearly	ongoing	
5.0	Level of Service							
	Level of service	Level of Service review and public consultation	2	2021	TDC Internal/ policy team / Asset management team Internally funded	WMMP and LTP development timeline when developed Progress monitored quarterly	Not started, decision on consultation process yet to be made. LTP to be consulted on during first part of 2021	
	Levels of service	Develop options and costings for Kerbside service delivery	1	2020	Asset Manger Internally funded	To be developed once govt policy announcement	Started, options awaiting govt policy	
	Levels of service	Link levels of service with non-financial outcomes	1	2021	Asset Management Team TDC Internally funded	Monitoring monthly 6	Not Started	
	Levels of service	Show customer satisfaction and service request trending shown and reported on	2	2021	Asset Management Team TDC Internally funded	Monitoring monthly 6	Not Started	
	Levels of service	Develop documentation for renewal of resource consent for Broadlands Rd Landfill	1	2021-23	Asset Management Team TDC Internally funded	Monthly monitoring	Started, awaiting direction from Council regarding landfill development and ongoing operation	

					funded, some requirement for consultant support			
6	Future Demand							
	Demand Management	Service capacity modelling to determine future upgrade timing	3	2020-2021	Asset Manager Internally funded	Monitoring monthly	6 th	Completed as part of kerbside service options development
7	Risk Management							
	Risk management	Further define Solid Waste critical assets	1	2021-23	Asset Manager Internally funded	Monitoring monthly	6 th	Initial project completed but now on-going
	Risk management	Review current risk Matrix, undertake internal audit	1	2022	Asset Manager / Quality assurance Manager	Monitored quarterly		Initial discussion around scope of review has been undertaken
	Risk Management	Disclosure of insurance cover	2	2021	Asset Manager Internally funded	Monitored yearly		Not started
	Risk Management	Implications of Health Act on services, identification of Councils policy on Dangerous, earthquake prone and insanitary buildings policy	2	2021	Asset Manager Internally funded	Monitored yearly		Not started
8	Life Cycle							
	Life Cycle	Asset Management system development and data population of Solid Waste assets	1	2021-23	Asset Manager Internally funded	Monitored monthly	6	On-going
	Life Cycle	H&S review of each facility	3	2021-23	Asset Manager Internally funded	Monitored yearly		Review of current contract requirements underway, new H&S requirement included in documents ongoing
	Life cycles	Document ongoing condition assessment program in Asset Finda	3	2021-23	Asset Manager Internally funded	Monitored yearly		Started for street litter and recycling bins only
	Life cycles	Maintenance program optimised	2	2021	Asset Manager Internally funded	Monitored yearly		Not Started
	Life cycles	Develop business cases for developing project lists	1	2021	Asset Manager Internally funded	Monitored quarterly		Completed awaiting council decisions
9	Finance							
	Finance	Annual plan project review	1	To review prior to each annual plan document release	Asset Manager Internally funded	Monitored quarterly		Will be ongoing
	Finance	Develop cost model for Landfill inclusive of gas Infrastructure	1	2020-2023	Asset Manager Internally funded	Monitored quarterly		Will be ongoing as gas analysis outcomes provide more costs
	Valuations	AMP is to be updated with data from the last asset valuation data.	2	2021/22	Consultant	As required		Not started
10	Asset Management							

	Practises							
	Asset Management Practises	Complete update from Waugh report	2	2021/23	Asset Manager Internally funded	To be developed in conjunction with Asset management team Asset Manager Internally funded	Improvement plan update is the first section to be updated. Other identified Waugh improvements will be ongoing	
	Asset Management Practises	Asset condition and asset performance data in addition to asset age and physical description to be included in an asset management data base. (Asset Finda)	3	2021-23	Asset Manager Asset Manager Internally funded	Monitored quarterly	Litter bin data has been loaded only	
11	Improvement Plan							
	Improvement Programme	To be monitored and updated regularly	2	2021-2023	Asset Manager Asset Team Internally funded	Monitored quarterly	On-going	
	Gap analysis	Update improvement plan to show the extent of the gap between existing practice and best practice.	2	2021-2023	Asset Manager Asset Team Internally funded	Monitored quarterly	on-going	
	Amp doc	Include improvements identified by audit and any subsequent internal audits	2	2021-2023	Asset Manager Asset Team Internally funded	Ongoing	Ongoing	
12	Sustainability	Either develop a sustainability policy or compile a list of sustainable actions undertaken already within the asset into a sustainability section of the Amp document	2	2021-2023	Asset Manager / Policy team Internally funded	Monitoring monthly 6	Initial discussions held with Policy team, a section added to the AMP	

11.2.1 COMPLETED IMPROVEMENT PLAN TASKS

Following is a list of Improvement Plan Tasks that have been completed since the development of the 2015 Asset Management Plan.

- Development of a renewals programme for district Facilities.
- A capital works program for the next 10 years has been compiled
- Criteria for grant funding developed
- A Waste Management and Minimisation Plan has been adopted
- Cost drivers for Capital development have been identified for the AMP
- Improvements from the Waugh report have been identified and planned for inclusion into new document with improvements ongoing
- The impact of legislation has been analysed and included
- Commercial competition drivers analysed
- Cost model for the landfill including ETS implications developed
- Options for kerbside service delivery developed
- A section on sustainability developed

11.2.2 MONITORING & REVIEW PROCEDURES

The most important review procedure is the 3-yearly review of the AMP that takes into account asset performance during the previous 3 years and identifies future trends and input into Council’s strategic planning process. The 3 yearly cycle of TDC strategic planning is as shown in below.

Year	2018	2019	2020	2021	2022	2023
Activity	Structure planning	Review of asset management plans	LTP amendment	Structure planning	Review of asset management plans	LTP amendment

Figure 1: TDC Three Yearly Planning Cycle

The framework for the 3-yearly review of the AMP in terms of the breadth of considerations is illustrated in the following figure.

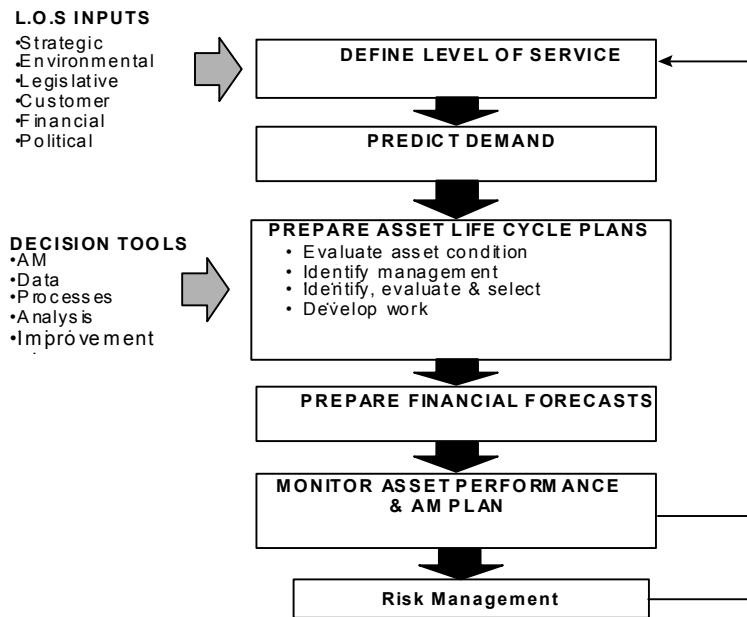



Figure 2: Asset Management Plan Review Procedure

LTP Business Case 1 to 3 years Renewals Litter & Recycling Bins

Project Name	Renewal of Big Belly refuse compaction bins and new district waste & recycling bins		
Description	<p>Council currently has refuse and recycling bins located in most of the urban centres across the district.</p> <p>The bins consist of Love NZ recycling bins, Big belly waste compaction bins for high use areas and a couple of different 60L waste bins, a fish motif bin and wooden slate bins.</p> <p>This business case is to provide annual renewal funding for this bin stock.</p> <p>Due to the location of the bins and the high use they get, bins can suffer from vehicle (being bumped) and high use damage. The bins are part of the street scape so damaged or older bins need to be constantly removed or upgraded to make sure that bins are looking satisfactory.</p> <p>The condition of bins is being assessed on a daily basis as the collection contractor reports any issues to Council, the renewal program is based on age and condition assessments.</p> <p>Bin numbers currently in use are:</p> <p>Big Belly 51 Refuse bins 289 Recycle bins 114 Total bins 454</p> 		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, bin purchase and installation program implemented over time
Programme	Street litter and recycling program renewals	Location	In various locations throughout the district

Strategic Objectives ([see appendix below](#) to help score Strategic Objectives)

		Score	Project Score Total
Primary	Maintaining levels of service	3	Total of both Scores 6
Secondary	placemaking	3	
Background	This project is part of an ongoing program of renewing council litter and recycling bin infrastructure over time		
Business Need	CEO has set the goal of having the cleanest district, the provision of these bins are a key attribute in achieving this goal.		
Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Process efficiency	Collection contractor informs Council regarding bin condition	Nice street scape with more users	Economic
Improved public Health	Collection contract has a service level of no overflowing bins, additional big belly bin capacity will assist in this outcome	Less litter	Social
Waste reduction	Recycling bins reduce waste to landfill Bins do not need to be emptied as often Bins inform the collector when full so save fuel use	More opportunities for the public and visitors to recycle when out and about	Environmental
Opportunity	To achieve the goal of the cleanest direct in the country		
Scope	In	Out	
	<ul style="list-style-type: none"> Ongoing review and condition assessment of high use area bins Installation / Construction Ongoing review of bin locations to determine high use areas Colour wrapping of bins with district photo's 		
Constraints	none	Assumptions	none
Dependencies	Street litter and recycling collection contract		
Stakeholders	Council, community, tourists, Taupo Tourist operators regarding our clean and green image		
Change Mgmt.	No change management		
Risk of Doing	Low	Commentary	These bins are already operating successfully across the district
Risk of Not Doing	Old and damaged bins would not get replaced Possible health and safety issues for collection contractors High use areas with increased levels of litter Compactor bin faults causing overflowing bins Increased operational cost due to bin break downs and damage	Commentary	Having a good condition waste and recycling bin feet enhances the vibrancy of the street scape

	Increased maintenance costs keeping old and poor condition bins in operation		
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Options Analysis *(add more options if applicable)*

	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Don't renew bad condition bins	Renew bin fleet as required	Investigate alternative bins for installation
Advantages	No capital renewal spend	Provides opportunity to recycle, and lessens the incidences of overflow waste bins in high use areas	Alternative bins may provide other advantages
Disadvantages	Old and damaged bin fleet will be an eyesore	Cost of installation	We are trying to have a uniform set of waste and recycling bins across the district, to reduce maintenance and renewal costs on multiple bin types.
Costs	Increased maintenance on older bins, plus cost of collection contract due to overflowing bins	Capital various see cost section below	unknown
Achievability	None	This is business as usual	Would require trials of new bin types, may not be nay reduction in cost, and would require additional administration time due to the different bin types
Recommendation	Renew bin fleet as required, reflecting regular condition assessments		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?

- Bins will be purchased from the supplier and installed by internal or contract staff

Project Outputs – the things the project is going to deliver

Output	Output Quality Details
Installation	Bins will be installed when required
	High quality easy to use waste and recycling bin fleet
	High capacity bins placed in areas of high demand reducing the incidences of litter
	Opportunity for the community to recycle when out and about

Key Risks – things that provide uncertainty in the project, focus on High risks if possible [\(see risk matrix in the appendix\)](#)

Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements

Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate

<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Asset Manager	Procurement / contractor liaison	Internal	5%	3 months
Asset Manager	Installation	Internal	5%	3 months
Contractor	Installation	External	20%	3 months

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Bin purchase and installation	\$45K yr1	
Bin Installations	Refuse bins at \$35K per year Recycling bins at 8K per year Big Belly Bins at 35K per year until yr 5	Capex
Total Estimated Capital Cost	Ten year cost of \$1,065,000K	Capex
Total Estimated Operational Cost/year		
Total Estimated cost	\$78K yr1	Capex
Estimates are made up of current bin and installation prices, so the estimate should be +/-10% \$45 K will cover the cost of 4 Big Belly bins / yr \$35 K will cover 14 refuse bins / yr \$8 K will cover 3 recycling bins / yr Bin replacement schedule based on an eight year asset life		
This project will be loan funded under the Solid Waste cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Recycling Bins	8K	8K	8K	8K	8K	8K	8K	8K	8K	8K
Big Belly Bins	35 K	35 K	35 K	35 K	35 K	35 K	35 K	35 K	35 K	35 K
Refuse Bins	35 K	35 K	35 K	35 K	70 K	86 K	86 K	86 K	86 K	86 K
Total cost per year	78 K	78 K	78 K	78 K	113 K	128 K	128 K	128 K	128 K	128 K

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	New Big Belly refuse compaction bins and new district recycling bins		
Description	<p>Council was the first council in New Zealand to utilise the smart technology that the Big Belly compacting bins bring to the street refuse collection service. This project carries on that program by adding additional bins in high use locations. The provision of smart technology bins enables savings to be made regarding collection as the bins alert the contractor, when they are full. The additional capacity as well as the compacting function mean the council can reduce the number of bins scattered about.</p> <p>The Love NZ recycling bins provide recycling opportunities to the community and visitors when that are out and about. The end service level for the recycling bins is to have at least one recycling bin per refuse bin. Currently there are a 340 refuse bins and only 114 recycling bins so less than half the refuse bins have a supporting recycling bin.</p>		
			
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, bin purchase and installation program implemented over time
Programme	Street litter and recycling program	Location	In various locations throughout the district

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Maintaining levels of service	3	Total of both Scores 6
Secondary	placemaking	3	

Background	This project is part of an ongoing program of upgrading council litter and recycling bin infrastructure over time		
Business Need	CEO has set the goal of having the cleanest district, the provision of these bins are a key attribute in achieving this goal.		
Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Process efficiency	Cost of provision of street litter and recycling contract and number of over flowing bin service requests	Big Belly Bins enable the contractor to work “just in time” as opposed to scheduled runs, thus saving time and resources	Economic
Improved public Health	Collection contract has a service level of no overflowing bins, additional big belly bin capacity will assist in this outcome	Less litter	Social
Waste reduction	Additional recycling bins will divert waste from landfill	More opportunities for the public and visitors to recycle when out and about	Environmental
Opportunity	To achieve the goal of the cleanest direct in the country		
Scope	In	Out	
	<ul style="list-style-type: none"> • Determination of location of high use areas • Installation / Construction • Removal of smaller 60L bins • Update of council records regarding bin locations and numbers • Update of operation contract to include new bin details / serial numbers / and bin full response details 		
Constraints	none	Assumptions	none
Dependencies	Street litter and recycling collection contract		
Stakeholders	Council, community, tourists, Taupo Tourist operators regarding our clean and green image		
Change Mgmt.	No change management		
Risk of Doing	Low	Commentary	These bins are already operating successfully across the district
Risk of Not Doing	Overflowing waste bins in high use area's	Commentary	Big Belly bins provide 10x the capacity of the smaller 60L green bins

Options Analysis (add more options if applicable)			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Don't install new bins	Install additional Big Belly and recycling bins across the district in high use areas.	Investigate alternative bins for installation
Advantages	No capital spend	Provides opportunity to recycle, and lessens the incidences of	Alternative bins may provide other advantages

		overflow waste bins in high use areas	
Disadvantages	No recycling opportunities in areas with no recycling bins, and the possibility of overflowing waste bins in high use areas	Cost of installation	We are trying to have a uniform set of waste and recycling bins across the district, to reduce maintenance costs on multiple bin types.
Costs	Increased maintenance on older bins, plus cost of collection contract due to overflowing bins	Capital = \$45K yr1	unknown
Achievability	None	Council already has several both types of bins in operation	Would require trials of new bin types, may not be nay reduction in cost, and would require additional administration time due to the different bin types
Recommendation	Install, additional Big Belly and recycling bins across the district		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<ul style="list-style-type: none"> Bins will be purchased from the supplier and installed in high use areas across the district

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Installation	Bins will be installed in high use areas throughout the district
	High quality easy to use waste and recycling bin fleet
	High capacity bins placed in areas of high demand reducing the incidences of litter
	Opportunity for the community to recycle when out and about

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Asset Manager	Procurement / contractor liaison	Internal	5%	3 months
Asset Manager	Installation	Internal	5%	3 months
Contractor	Installation	External	20%	3 months

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Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Bin purchase and installation	\$45K yr1	
Bin Installations	\$45K yr. 1 \$ 27K yr. 2 then on \$10K	Capex
Total Estimated Capital Cost	\$45K yr. 1 \$ 27K yr. 2 then on \$10K	Capex
Total Estimated Operational Cost/year		
Total Estimated cost	\$45K yr1	Capex
Estimates are made up of current bin and installation prices, so the estimate should be +/-10% \$45 K will cover the cost of 5 Big Belly bins in year one and 3		
This project will be loan funded under the Solid Waste cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Recycling Bins	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Big Belly Bins	35,000	17,000								
Total cost per year	45,000	27000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

LTP Business Case 7 to 10 years or moved out if landfill consent renewed

Project Name	Bulk Haulage Broadlands Rd Transfer Station		
Description	Construct a bulk load facility at Broadlands RD		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Paint by Numbers
Programme	Operation of the Broadlands RD Transfer Station	Location	Broadlands RD resource recovery centre

Strategic Objective (see appendix below to select primary and secondary)			
		Score	Project Score Total
Primary	Legislatively Compliant	5	Total of Both Scores 10
Secondary	Protecting our Environment	5	
Background	Council has owned and operated this lined landfill since the year 2000 with cells being built around every five years. This cell is the progression of that program to enable ongoing waste disposal operations		
Business Need	If Council is unable to obtain a new operating consent to run the landfill, then Council will have to transport waste out of the district to another disposal point. The current configuration at the site is designed to enable waste to be dumped in the pit and transported to the tip head. Works to enable larger trucks and additional sorting prior to disposal is required.		
Option/s	Turn the current transfer station into one that handle bulk loading of material out of the district Close the site altogether, let the market provide the option Find another landfill, but will still need some where to load material from		
Benefits and Wellbeings	Legislative compliance - Environmental		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design Installation / Construction	Additional landfill cells	Access Rd realignment
Potential Issues with preferred option	Project will depend on 2027 operational consent renewal		
Risk of Doing Nothing	There won't be any where we can dispose of waste, we would be forced to truck out of the district,		

Timescale/Cost – give a summary of how the project phases will be delivered.									
LTP 2021-2031					Y46	Y47			
Phase (Initiate, Plan, Execute)									
Cost of phase and year spent					25,000	1.875M			

Approval <i>This is the initial approval of the Business Case. It may be further prioritised against other projects</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

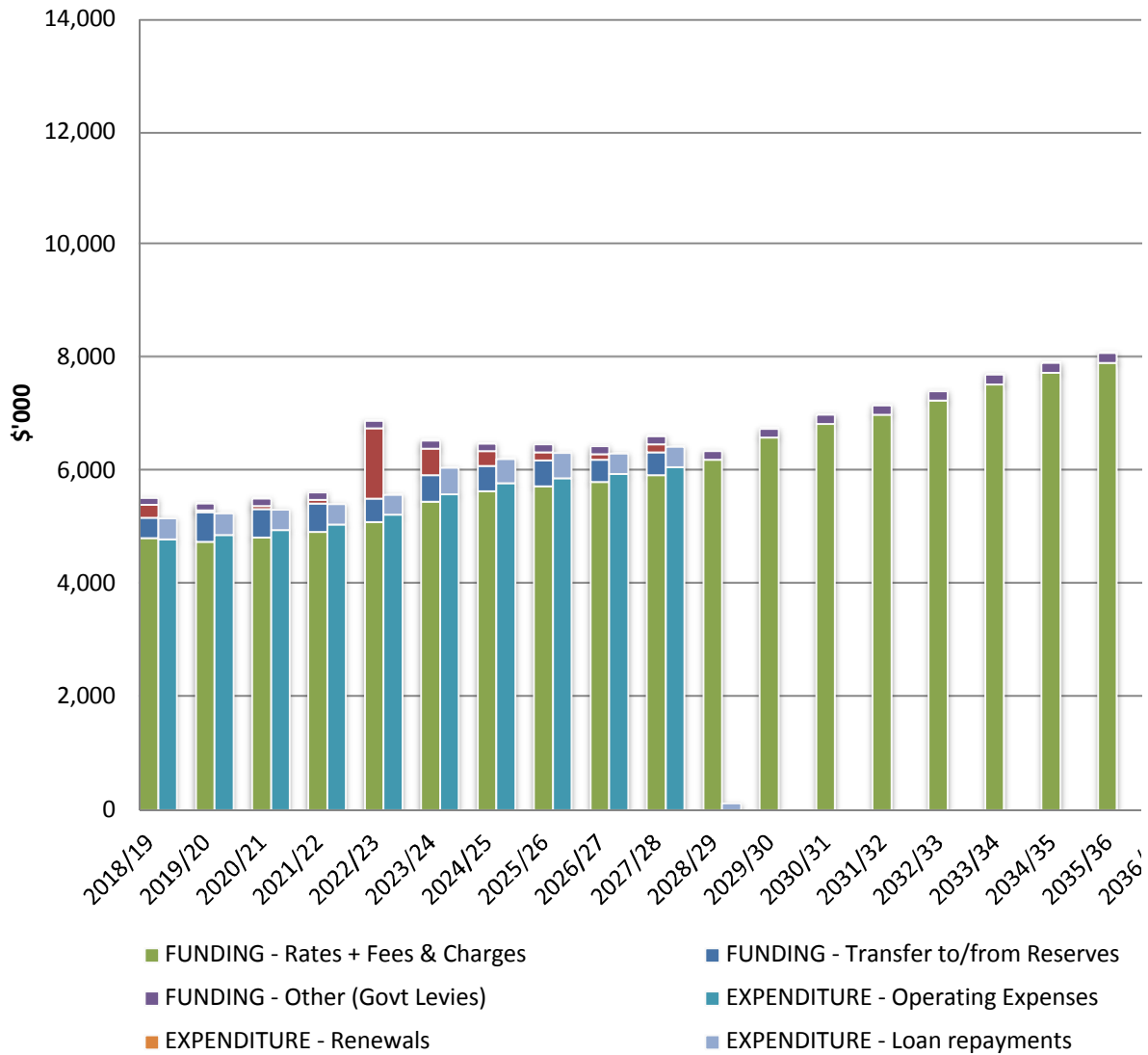
Placemaking

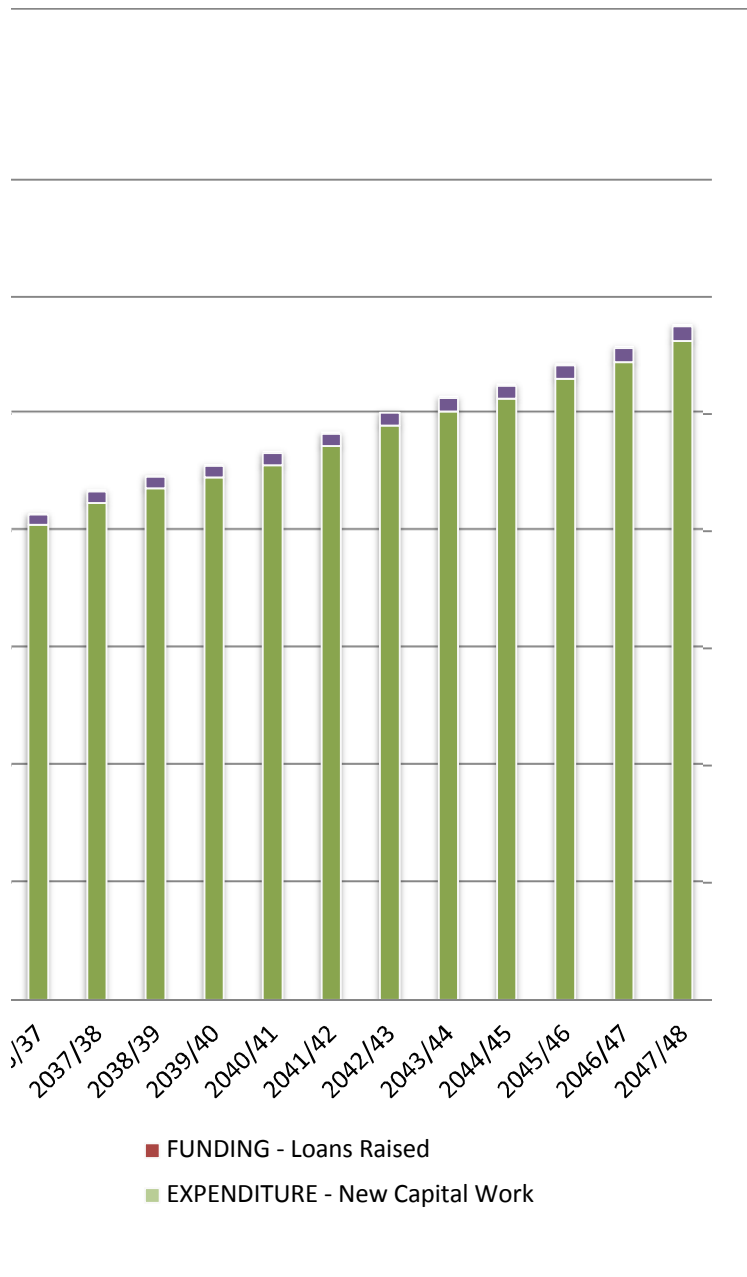
Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Solid Waste (Inflated values)





		2018/19	2019/20	2020/21	2021/22	2022/23
Funding -	Rates + Fees & Charges	4,826	4,758	4,837	4,930	5,101
	Loans Raised	230	33	62	69	1,247
	Other (Govt Levies)	120	122	125	128	130
	Transfer to/from Reserves	356	518	492	501	424
Total Funding		5,532	5,430	5,517	5,628	6,902
Expenditure -	Operating Expenses	4,801	4,880	4,962	5,058	5,232
	New Capital Work	#REF!	#REF!	#REF!	#REF!	#REF!
	Renewals	#REF!	#REF!	#REF!	#REF!	#REF!
	Loan repayments	365	379	367	367	352
		#REF!	#REF!	#REF!	#REF!	#REF!
		#REF!	#REF!	#REF!	#REF!	#REF!

FUNDING -				
	Rates + Fees & Charges	Transfer to/from Reserves	Loans Raised	
2018/19	4,826	356	230	
2019/20	4,758	518	33	
2020/21	4,837	492	62	
2021/22	4,930	501	69	
2022/23	5,101	424	1,247	
2023/24	5,464	472	474	
2024/25	5,652	447	260	
2025/26	5,736	465	137	
2026/27	5,810	398	102	
2027/28	5,935	405	142	

2028/29	6,207	#REF!	#REF!
2029/30	6,605	#REF!	#REF!
2030/31	6,844	#REF!	#REF!
2031/32	7,007	#REF!	#REF!
2032/33	7,258	#REF!	#REF!
2033/34	7,546	#REF!	#REF!
2034/35	7,749	#REF!	#REF!
2035/36	7,920	#REF!	#REF!
2036/37	8,105	#REF!	#REF!
2037/38	8,485	#REF!	#REF!
2038/39	8,736	#REF!	#REF!
2039/40	8,920	#REF!	#REF!
2040/41	9,126	#REF!	#REF!
2041/42	9,449	#REF!	#REF!
2042/43	9,804	#REF!	#REF!
2043/44	10,047	#REF!	#REF!
2044/45	10,258	#REF!	#REF!

2045/46	10,601	#REF!	#REF!
2046/47	10,886	#REF!	#REF!
2047/48	11,247	#REF!	#REF!

2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
5,464	5,652	5,736	5,810	5,935	6,207	6,605	6,844	7,007
474	260	137	102	142	#REF!	#REF!	#REF!	#REF!
133	136	140	143	147	151	154	159	163
472	447	465	398	405	#REF!	#REF!	#REF!	#REF!
6,543	6,496	6,477	6,453	6,629	#REF!	#REF!	#REF!	#REF!
5,598	5,789	5,877	5,953	6,081	#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
472	436	449	363	360	118	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

EXPENDITURE -

Other (Govt Levies)	Operating Expenses	New Capital Work	Renewals	Loan repayments
120	4,801	#REF!	#REF!	365
122	4,880	#REF!	#REF!	379
125	4,962	#REF!	#REF!	367
128	5,058	#REF!	#REF!	367
130	5,232	#REF!	#REF!	352
133	5,598	#REF!	#REF!	472
136	5,789	#REF!	#REF!	436
140	5,877	#REF!	#REF!	449
143	5,953	#REF!	#REF!	363
147	6,081	#REF!	#REF!	360

151	#REF!	#REF!	#REF!	118
154	#REF!	#REF!	#REF!	#REF!
159	#REF!	#REF!	#REF!	#REF!
163	#REF!	#REF!	#REF!	#REF!
167	#REF!	#REF!	#REF!	#REF!
171	#REF!	#REF!	#REF!	#REF!
176	#REF!	#REF!	#REF!	#REF!
180	#REF!	#REF!	#REF!	#REF!
185	#REF!	#REF!	#REF!	#REF!
190	#REF!	#REF!	#REF!	#REF!
195	#REF!	#REF!	#REF!	#REF!
200	#REF!	#REF!	#REF!	#REF!
205	#REF!	#REF!	#REF!	#REF!
210	#REF!	#REF!	#REF!	#REF!
216	#REF!	#REF!	#REF!	#REF!
221	#REF!	#REF!	#REF!	#REF!
227	#REF!	#REF!	#REF!	#REF!

233

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239

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245

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Adjustors

	2019	2020	2021	2022	2023	2024	2025
Roading	100.0%	102.2%	102.2%	102.3%	102.4%	102.4%	102.5%
Water	100.0%	102.5%	102.3%	102.4%	102.4%	102.5%	102.6%
Community Activities	100.0%	102.0%	102.1%	102.1%	102.2%	102.3%	102.3%

Cumulative Adjustors

	2019	2020	2021	2022	2023	2024	2025
Roading	100.0%	102.2%	104.4%	106.9%	109.4%	112.0%	114.8%
Water	100.0%	102.5%	104.9%	107.4%	110.0%	112.7%	115.6%
Community Activities	100.0%	102.0%	104.1%	106.3%	108.7%	111.2%	113.7%

30 year AMP Inflation (Commencing from Year 11)

2026	2027	2028	2029	2030	2031	2032	2033	2034
102.6%	102.7%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%
102.6%	102.7%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%
102.4%	102.4%	102.6%	102.6%	102.6%	102.6%	102.6%	102.6%	102.6%

2026	2027	2028	2029	2030	2031	2032	2033	2034
117.8%	121.0%	124.4%	127.9%	131.5%	135.1%	138.9%	142.8%	146.8%
118.6%	121.8%	125.3%	128.8%	132.4%	136.1%	139.9%	143.9%	147.9%
116.5%	119.2%	122.3%	125.5%	128.7%	132.1%	135.5%	139.0%	142.7%
			102.6%	105.3%	108.0%	110.8%	113.7%	116.6%

2035	2036	2037	2038	2039	2040	2041	2042	2043
102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%
102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%	102.8%
102.6%	102.6%	102.6%	102.6%	102.6%	102.6%	102.6%	102.6%	102.6%

2035	2036	2037	2038	2039	2040	2041	2042	2043
150.9%	155.2%	159.5%	164.0%	168.6%	173.3%	178.1%	183.1%	188.2%
152.0%	156.3%	160.7%	165.2%	169.8%	174.5%	179.4%	184.4%	189.6%
146.4%	150.2%	154.1%	158.1%	162.2%	166.4%	170.7%	175.2%	179.7%
119.7%	122.8%	126.0%	129.3%	132.6%	136.1%	139.6%	143.2%	147.0%

2044	2045	2046	2047	2048
102.8%	102.8%	102.8%	102.8%	102.8%
102.8%	102.8%	102.8%	102.8%	102.8%
102.6%	102.6%	102.6%	102.6%	102.6%

2044	2045	2046	2047	2048
193.5%	198.9%	204.5%	210.2%	216.1%
194.9%	200.4%	206.0%	211.7%	217.7%
184.4%	189.2%	194.1%	199.2%	204.3%
150.8%	154.7%	158.7%	162.9%	167.1%

2044/45	2045/46	2046/47	2047/48
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
4.43%	4.43%	4.43%	4.43%
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!

Description	Year 10 Closing Balance
Water leachate pipes Broadlands Rd	-
Landfill Water a leachate pipe	-
2nd Cell Broadlands Rd	38,474.00
Landfill Second Stage	-
Fencing manning existing Refuse Tnf Stn	-
Mangakino Transfer Station	-
Transfer Station - Whareroa	-
Motuoapa Transfer Station	-
Landfill Second Stage	-
Kinloch Transfer Station	-
Motuoapa Transfer Station	-
Turangi Transfer Station	-
Omori Transfer Station	-
0607 Broadlands Road RTS	18,646.00
0708 Cell 2C Broadlands Road	133,294.00
0708 Broadlands Road RTS	82,222.00
0910 Plant Replacement	-
1011 Broadlands Road Landfill Cell 2D	-
1213 Broadlands Rd L/F Cardboard/Paper Shed/Glass Bays	27,219.00
1415 Broadlands Road Landfill - Cell 2E design	-
1314 Broadlands Road Landfill - Capping Cell 2B	24,338.00
1516 CBD Recycling Bins	-
1516 Broadlands Landfill - weighbrodge sump and pump	1,696.00
1516 Broadlands Landfill - sewer pipe / pump works	19,539.00
1617 Broadlnds Landfill cell 2D	228,561.00
1617 New street recycling bins	3.00
1718 New street recycling bins	-
Existing Debt	573,992.00
Litter Control - Taupo	62,759.00
Litter Control Turangi	-
Taupo Solid Waste Disposal	1,490,278.50
Kinloch Solid Waste Disposal	43,950.00
Mangakino Solid Waste Disposal	20,877.00
Turangi Solid Waste Disposal	108,977.60
Omori Solid Waste Disposal	63,371.36
Whareroa Solid Waste Disposal	-
Forecast Debt	1,790,213.46
Total debt	2,364,205.46

	18/19	19/20	20/21	21/22	22/23
Revenue					
Govt Levy for waste minimisation	-120	-120	-120	-120	-120
Fees and Charges	-2,821	-2,754	-2,754	-2,754	-2,754
Total Revenue	-2,941	-2,874	-2,874	-2,874	-2,874
Operating Expenses					
Maintenance Costs	60	60	60	60	60
Operations Costs	3,707	3,706	3,707	3,706	3,707
Interest on Borrowings	212	195	175	160	172
Depreciation	374	386	389	393	455
Overheads					
Total Operating Expenditure	4,352	4,346	4,330	4,318	4,393
	1,411	1,472	1,457	1,444	1,520

23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
-120	-120	-120	-120	-120	-120	-120	-120
-2,754	-2,754	-2,754	-2,754	-2,754	-2,754	-2,754	-2,754
-2,874	-2,874	-2,874	-2,874	-2,874	-2,874	-2,874	-2,874
60	60	60	60	60	60	60	60
3,848	3,924	3,903	3,884	3,883	3,883	3,883	3,883
196	183	158	133	123			
535	544	563	570	577			
4,639	4,710	4,684	4,647	4,642	3,942	3,942	3,942
1,765	1,836	1,810	1,773	1,768	1,069	1,069	1,069

47/48
-120
-2,754
-2,874
60
3,883
3,942
1,069

Solid Waste Renewal Budgets 2021 AMP

Column1	Column9	Column10	Column11	Column12	Column13	Column14	Column15	Column16	Column2	Column3
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Broadlands rd Landfill	\$ 75,000.00	\$ 28,000.00	\$ 18,000.00	\$ 15,000.00	\$ 7,000.00	\$ 4,000.00	\$ 4,500.00	\$ 17,500.00	\$ 20,500.00	\$ 21,500.00
Kinloch RTS	\$ 5,000.00		\$ 18,000.00		\$ 5,000.00		\$ 18,200.00			\$ 6,500.00
Turangi RTS	\$ 23,000.00	\$ 5,000.00		\$ 30,000.00				\$ 20,000.00		
Mangakino RTS	\$ 6,000.00		\$ 10,000.00			\$ 50,000.00	\$ -			
Whareroa RTS		\$ 4,000.00					\$ 4,000.00			
Omori RTS	\$ 5,000.00			\$ 5,000.00			\$ 5,000.00			
District recycling bins	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
District litter bins	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Big Belly Bins	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 70,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00
District haulage bins	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
Plant Renewals				\$ 36,000.00						
Vehicle Renewals				\$ 29,000.00	\$ 7,500.00					
Total	\$ 200,000.00	\$ 123,000.00	\$ 132,000.00	\$ 201,000.00	\$ 140,500.00	\$ 188,000.00	\$ 165,700.00	\$ 171,500.00	\$ 154,500.00	\$ 162,000.00
	200000	162000	139000	184000	144000	213000	233000	205000	233000	203000

Kinloch Renewal items 23/24 yr

Reuse shed
furnishings \$ 1,500.00
signage \$ 3,000.00
Recycling containe \$ 1,500.00

asphalt \$ 12,000.00
Total \$ 18,000.00

Kinloch Renewal items 25/26yr

recycling container \$ 1,000.00
Kiosk fittings \$ 1,000.00
painting \$ 2,000.00
signage \$ 1,000.00

Total \$ 5,000.00

Kinloch Renewal items 27/28 yr

sandblasting /paint \$ 10,000.00
shed cladding \$ 4,000.00
Cash register \$ 1,200.00
signage \$ 3,000.00

Total \$ 18,200.00

Kinloch Renewal items 30/31 yr

Kiosk furnishings \$ 1,500.00

Kinloch Renewal items 35/36 yr

Kiosk furnishings \$ 1,500.00
signage \$ 3,000.00
Recycling contain \$ 1,500.00
sandblasting /pair \$ 10,000.00

Total \$ 16,000.00

Kinloch Renewal items 39/40 yr

Kiosk furnishings \$ 1,500.00
signage \$ 3,000.00
Recycling contain \$ 1,500.00
Haulage Bln \$ 10,000.00

Total \$ 16,000.00

Kinloch Renewal items 43/44 yr

Asphalt \$ 12,000.00
Kiosk furnishings \$ 1,500.00
signage \$ 3,000.00
Water tank teleme \$ 2,000.00

Total \$ 18,500.00

Turangi Renewal Items 21/22 yr

Mangakino RTS Renewals 18/19

kiosk renewal \$ 6,000.00
recycling containers 2000
Total \$ 8,000.00

Mangakino RTS Renewals 20/21

safety barrier around compac \$ 2,000.00
bump stops \$ 1,000.00
oil tank \$ 5,000.00

Total \$ 8,000.00

Mangakino RTS Renewals 21/22

compactor hoses 3000
leachate pump 3000

Total 6000

Mangakino RTS Renewals 23/24

signage 1500
painting 1500
recycling containers 1000
compactor motor 6000

Total \$ 10,000.00

Mangakino RTS Renewals 2 **50,000**

Omori RTS Ren

recycling contain
Kiosk furnishings
signage
sandblasting
Total

Omori RTS Ren

recycling contain
Kiosk fittings
painting
signage

Total

Omori RTS Ren

recycling contain
Kiosk fittings
painting
signage

Total

signage \$ 3,000.00
 Water tank teleme \$ 2,000.00

Total \$ 6,500.00

Turangi Renewal Items 22/23 yr

recycling container \$ 1,000.00

Kiosk fittings \$ 1,000.00
 painting \$ 2,000.00
 signage \$ 1,000.00

Total \$ 5,000.00

Kinloch Renewal items 21/22 yr

recycling containers \$ 1,000.00
 Kiosk fittings \$ 1,000.00
 painting \$ 2,000.00
 signage \$ 1,000.00

Total \$ 5,000.00

Turangi Renewal Items 20/21 yr

shed cladding \$ 4,000.00
 signage \$ 3,500.00
 Kiosk reuse shed
 furnishings \$ 1,500.00
 barrier arm \$ 1,000.00

Total \$ 10,000.00

painting \$ 3,000.00
 leachate pump \$ 6,000.00
 storm water flume \$ 2,000.00

compactor motor
 and bin slider \$ 12,000.00
Total \$ 23,000.00

Turangi Renewal Items 24/25 yr

sand blasting \$ 10,000.00
 compactor bin
 doors and floors \$ 10,000.00
 fire equipment \$ 6,000.00
 cash register \$ 1,000.00
 printer \$ 1,000.00
 glass bay backing \$ 2,000.00
Total \$ 30,000.00

Turangi Renewal Items 29/30 yr

Kiosk furnishings \$ 1,500.00
 signage \$ 3,500.00
 painting \$ 3,000.00
 barrier arm \$ 1,000.00
 shed cladding \$ 4,000.00
 Storm water pump \$ 8,000.00

Total \$ 21,000.00

Turangi Renewal Items 35/36 yr

Kiosk furnishings \$ 1,500.00
 signage \$ 3,500.00
 painting \$ 3,000.00
 Fencing \$ 6,000.00
 weighbridge renew 45,000

Total \$ 59,000.00

Turangi Renewal Items 41/42 yr

Kiosk furnishings \$ 1,500.00
 signage \$ 3,500.00

painting road \$ 3,000.00
 barrier arm \$ 1,000.00
 shed cladding \$ 4,000.00
 Storm water pump \$ 8,000.00
 compactor renew \$ 35,000.00
Total \$ 56,000.00

Mangakino RTS Renewals 28/29

Asphalt 15000

signage 1500
 kiosk 5000
Total \$ 21,500.00

Mangakino RTS Renewals 33/34

Fencing \$ 4,000.00

signage \$ 1,500.00
 painting \$ 1,200.00
 recycling containers \$ 1,000.00
 sandblasting \$ 2,300.00

Total \$ 10,000.00

Mangakino RTS Renewals 38/39

signage \$ 1,500.00
 painting \$ 1,200.00
 recycling containers \$ 1,000.00

Total \$ 3,700.00

Mangakino RTS Renewals 43/44

Fencing \$ 4,000.00
 signage \$ 1,500.00
 painting \$ 1,200.00
 recycling containers \$ 1,000.00
 sandblasting \$ 2,300.00

Total \$ 10,000.00

Big belly renewal program

total bins currently 35

8 purchased in 16/17 to be renewed 27/28 (10yrs) \$ 60,000.00
 18 bins from above 13/14 renewal date 24/25 \$ 140,000.00
 9 bins purchased 12/13 renewal date 23/24 \$ 70,000.00

CBD bins steel requires 10K per year \$ 8,000.00
 Park bins removal of green to slat wooden 10K per year \$ 8,000.00

Both of these \$\$ will provide for 4 bins per year
 8 new bins in total

Haulage Bins 25/26 yr

ongoing renewal of 15K first 2 yrs for rollers \$ 30,000.00 yrs 1 & 2
 ongoing renewal of 10K \$ 70,000.00 yrs 3 to 10
Total \$ 100,000.00

Omori RTS Renewals
 recycling container

Kiosk fittings
 painting
 signage

Total

Omori RTS Renewals

recycling container
 Kiosk furnishings
 signage

Total

Omori RTS Renewals

recycling container
 Kiosk furnishings
 signage
 haulage bin

Total

Omori RTS Renewals

Painting
 Sandblasting
 recycling container
 signage

Total

specific yr renewal

spread over two
 pr/yr renewal

District Recycling Bins

Street Recycling Bin Renewal from 18/19 on wards allows for
3 bins per year to be renewed

6,000 pr/yr

ewals 27/28
\$ 1,000.00

\$ 1,000.00
\$ 2,000.00
\$ 1,000.00
\$ 5,000.00

ewals31/32
\$ 1,000.00
\$ 1,500.00
\$ 1,500.00
\$ 4,000.00

ewals36/37
\$ 1,000.00
\$ 1,500.00
\$ 1,500.00
\$ 20,000.00
\$ 24,000.00

ewals 40/41
\$ 3,500.00
\$ 5,000.00
\$ 1,000.00
\$ 1,500.00
\$ 11,000.00

al

years

leachate pump \$ 3,000.00
Total \$ 15,000.00

Broadlands Rd Renewal items 25/26 yr
pit barrier wall \$ 4,000.00
reuse shop fittings \$ 3,000.00
Total \$ 7,000.00

Broadlands Rd Renewal items 26/27 yr
painting roads signs \$ 3,000.00
bump stops \$ 1,000.00
Total \$ 4,000.00

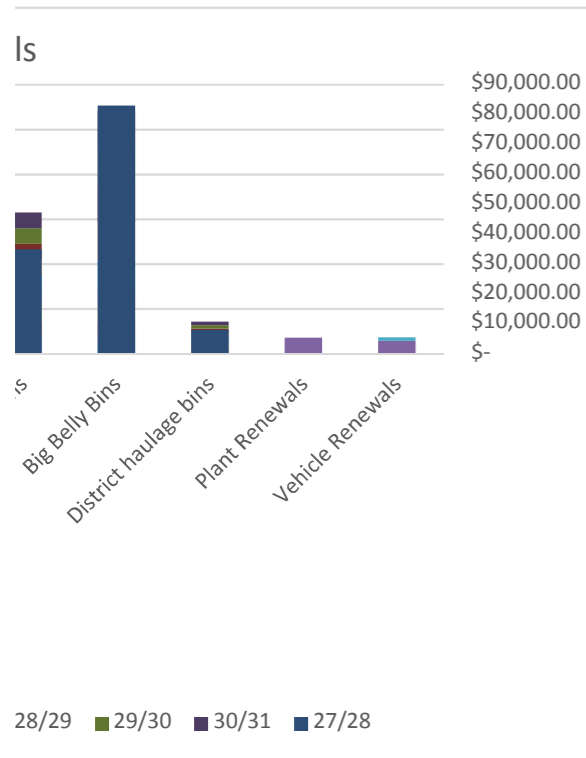
Broadlands Rd Renewal items 27/28 yr
recycling containers \$ 1,500.00
fog pump and screen \$ 3,000.00
Total \$ 4,500.00

Broadlands Rd Renewal items 28/29 yr
painting \$ 8,000.00
Signage \$ 1,500.00
fencing \$ 8,000.00
Total \$ 17,500.00

Broadlands Rd Renewal items 29/30 yr
Weighbridge mirrors/landfill 3000 \$ 11,000.00
Signage \$ 1,500.00
fencing \$ 8,000.00
Total \$ 20,500.00

Broadlands Rd Renewal items30/31 yr
reseal \$ 12,000.00
Signage \$ 1,500.00
fencing \$ 8,000.00
Total \$ 21,500.00

23	24	25	26	27			
Column27	Column28	Column29	Column30	Column31	Column32	Column33	Column34
43/44	44/45	45/46	46/47	47/48	47/49	47/50	47/51
\$ 10,000.00	\$ 85,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
\$ 10,000.00				\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
\$ 10,000.00			\$ 10,000.00				
			\$ 10,000.00				
				\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
\$ 8,000.00				\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00	\$ 83,000.00
\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
\$ 172,000.00	\$ 219,000.00	\$ 144,000.00	\$ 164,000.00	\$ 167,000.00	\$ 167,000.00	\$ 167,000.00	\$ 167,000.00



	18/19	19/20	20/21	21/22
Revenue				
Subsidies				
2551370. Govt levy income for waste minimisation	-120,000	-120,000	-120,000	-120,000
Fees & Charges				
24713604. Refuse Sticker Sales	-230,000	-220,000	-220,000	-220,000
25513601. Concrete Sales	-100,000	-70,000	-70,000	-70,000
2551360101. Refuse Cash Sales	-550,000	-550,000	-550,000	-550,000
25513602. Refuse Commerical Sales	-1,500,000	-1,500,000	-1,500,000	-1,500,000
25513606. Refuse Cash Sales	-6,000	-6,000	-6,000	-6,000
25513607. Green Waste fees	-180,000	-180,000	-180,000	-180,000
25513608. Cleanfill Income	-40,000	-20,000	-20,000	-20,000
25613601. Refuse Cash Sales	-30,000	-23,000	-23,000	-23,000
2571360. Sales	-38,000	-38,000	-38,000	-38,000
25713604. Sales - Recycling	-500	-500	-500	-500
259136011. Refuse Cash Sales	-100,000	-100,000	-100,000	-100,000
25913602. Refuse Commerical Sales	-30,000	-30,000	-30,000	-30,000
26113601. Sales	-16,000	-16,000	-16,000	-16,000
Total Revenue	-2,820,500	-2,753,500	-2,753,500	-2,753,500
Operating Expenses				
Maintenance Costs	59,500	59,500	59,500	59,500
Salaries and Wages	294,491	294,491	294,491	294,491
Indirect Employee Costs	2,475	2,475	2,475	2,475
General Administration Costs	33,019	33,019	33,019	33,019
Professional Fees	45,500	45,500	45,500	45,500
Operations Costs	3,331,428	3,330,428	3,331,428	3,330,428
Operating Costs	3,706,913	3,705,913	3,706,913	3,705,913
Total Expenses	3,766,413	3,765,413	3,766,413	3,765,413
2551370. Govt levy income for waste minimisation	-120,000	-120,000	-120,000	-120,000

22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
-120,000	-120,000	-120,000	-120,000	-120,000	-120,000	-120,000	-120,000	-120,000
-220,000	-220,000	-220,000	-220,000	-220,000	-220,000	-220,000	-220,000	-220,000
-70,000	-70,000	-70,000	-70,000	-70,000	-70,000	-70,000	-70,000	-70,000
-550,000	-550,000	-550,000	-550,000	-550,000	-550,000	-550,000	-550,000	-550,000
-1,500,000	-1,500,000	-1,500,000	-1,500,000	-1,500,000	-1,500,000	-1,500,000	-1,500,000	-1,500,000
-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000
-180,000	-180,000	-180,000	-180,000	-180,000	-180,000	-180,000	-180,000	-180,000
-20,000	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000
-23,000	-23,000	-23,000	-23,000	-23,000	-23,000	-23,000	-23,000	-23,000
-38,000	-38,000	-38,000	-38,000	-38,000	-38,000	-38,000	-38,000	-38,000
-500	-500	-500	-500	-500	-500	-500	-500	-500
-100,000	-100,000	-100,000	-100,000	-100,000	-100,000	-100,000	-100,000	-100,000
-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000
-16,000	-16,000	-16,000	-16,000	-16,000	-16,000	-16,000	-16,000	-16,000
-2,753,500	-2,753,500	-2,753,500	-2,753,500	-2,753,500	-2,753,500	-2,753,500	-2,753,500	-2,753,500

59,500	59,500	59,500	59,500	59,500	59,500	59,500	59,500	59,500
294,491	294,491	294,491	294,491	294,491	294,491	294,491	294,491	294,491
2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475	2,475
33,019	33,019	33,019	33,019	33,019	33,019	33,019	33,019	33,019
45,500	85,500	85,500	65,500	45,500	45,500	45,500	45,500	45,500
3,331,428	3,432,428	3,508,428	3,507,428	3,508,428	3,507,428	3,507,428	3,507,428	3,507,428
3,706,913	3,847,913	3,923,913	3,902,913	3,883,913	3,882,913	3,882,913	3,882,913	3,882,913
3,766,413	3,907,413	3,983,413	3,962,413	3,943,413	3,942,413	3,942,413	3,942,413	3,942,413

-120,000 -120,000 -120,000 -120,000 -120,000 -120,000

Column1	Column5	Column6	Column7	Column8	Column9	Column10	Column11	Column12	Column13	Column14
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
1 Big Belly Bins	\$ 35,000.00	\$ 17,000.00								
2 Street recycling bins	\$ 10,000.00	\$ 10,000.00	\$ 11,000.00	\$ 10,000.00	\$ 11,000.00	\$ 11,000.00	\$ 12,000.00	\$ 12,000.00	\$ 12,000.00	\$ 13,000.00
3 Bulk Haulage Broadlands Rd landfill										
4 Final capping Broadlands RD landfill										
5 Broadlands intermediate capping				\$ 65,000.00						
6 Broadlands Landfill Cell 2E	\$ 25,000.00	\$ 1,027,000.00								
Broadlands Landfill Cell 2F and design						\$ 28,000.00	\$ 1,160,000.00			
Broadlands Landfill Cell 2G and design										
Broadlands Landfill Cell 2H and design										
8 Fire Prevention pond	\$ 118,000.00									
9 Infrared Camera Broadlands Rd Landfill	\$ 71,000.00									
Broadlands Sewer pipe upgrade			\$ 198,000.00							
10 Gas flare and liner cover	\$ 25,000.00	\$ 26,000.00	\$ 42,000.00	\$ 2,533,000.00	\$ 221,000.00	\$ 226,000.00	\$ 232,000.00	\$ 238,000.00	\$ 244,000.00	\$ 250,000.00
11 Mangakino RTS upgrade				\$ 11,000.00	\$ 97,000.00					
Omori Site Upgrade	\$ 230,000.00									
12 landfill capping Turangi					\$ 33,000.00					
17 Turangi weighbridge				\$ 22,000.00	\$ 160,000.00					
Totals	\$ 514,000.00	\$ 1,080,000.00	\$ 251,000.00	\$ 2,641,000.00	\$ 522,000.00	\$ 265,000.00	\$ 1,404,000.00	\$ 250,000.00	\$ 256,000.00	\$ 263,000.00

Capital Works Projects for Solid Waste Facilities

Projects	Cost	Year
1 Big Belly Bins	\$ 52,000	21/22
2 Street recycling bins	\$ 10,000	per year
3 Bulk Haulage Broadlands Rd landfill	\$ 1,900,000	45/46
4 Final capping Broadlands RD landfill	\$ 1,281,000	47/48
5 Broadlands intermediate capping	\$ 70,000	24/25
6 Broadlands Landfill Cell 2E	\$ 1,025,000	21/22
7 Broadlands Landfill Cell 2F and design	\$ 1,025,000	26/27
8 Broadlands Landfill Cell 2G and design	\$ 1,025,000	31/32
9 Broadlands Landfill Cell 2H and design	\$ 1,025,000	36/37
10 Fire Prevention pond	\$ 118,000	21/22
11 Infrared Camera Broadlands Rd Landfill	\$ 71,000	21/22
12 Broadlands Sewer pipe upgrade	\$ 188,000	23/24
13 Gas flare and liner cover	\$ 3,540,000	21/22
14 Mangakino RTS upgrade	\$ 98,000	24/25
15 Omori Site Upgrade	\$ 230,000	21/22
16 landfill capping Turangi	\$ 30,000	25/26
17 Turangi weighbridge	\$ 166,000	24/25

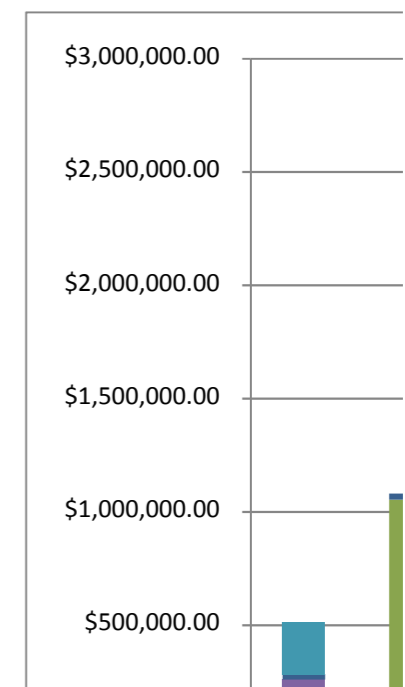
Solid Waste The Way Forward

Council has the required district facilities to continue drop off and disposal services in the district
 Capital projects are based around the ongoing operation and consent of the Broadlands Rd Landfill past 2027 for 20 years
 removal of manual handling at district facilities

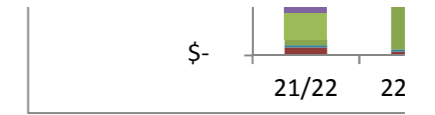
Existing direction

- Strategy review
- Maintain existing service levels
- Maintain disposal capacity

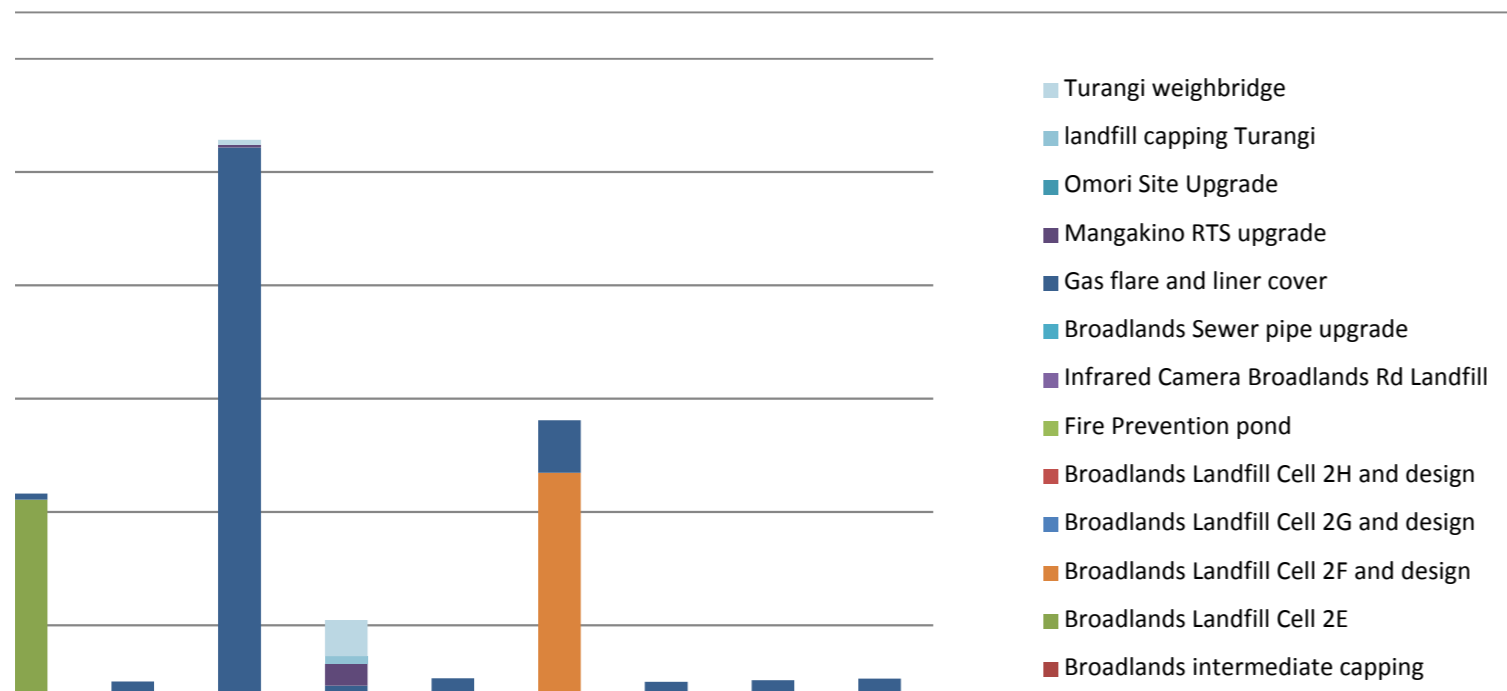
Assumptions

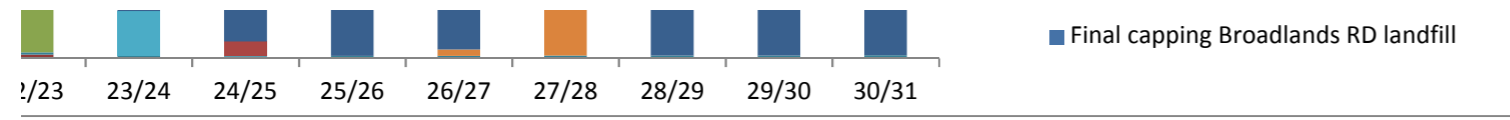


Council will be granted a new consent to extend the Broadlands Rd Landfill
Gas flare is viable in regards to gas destruction / gas venting
Annual tonnages will remain constant to around 25000 growth figures show negligible increase
new consent granted for landfill development post 2027

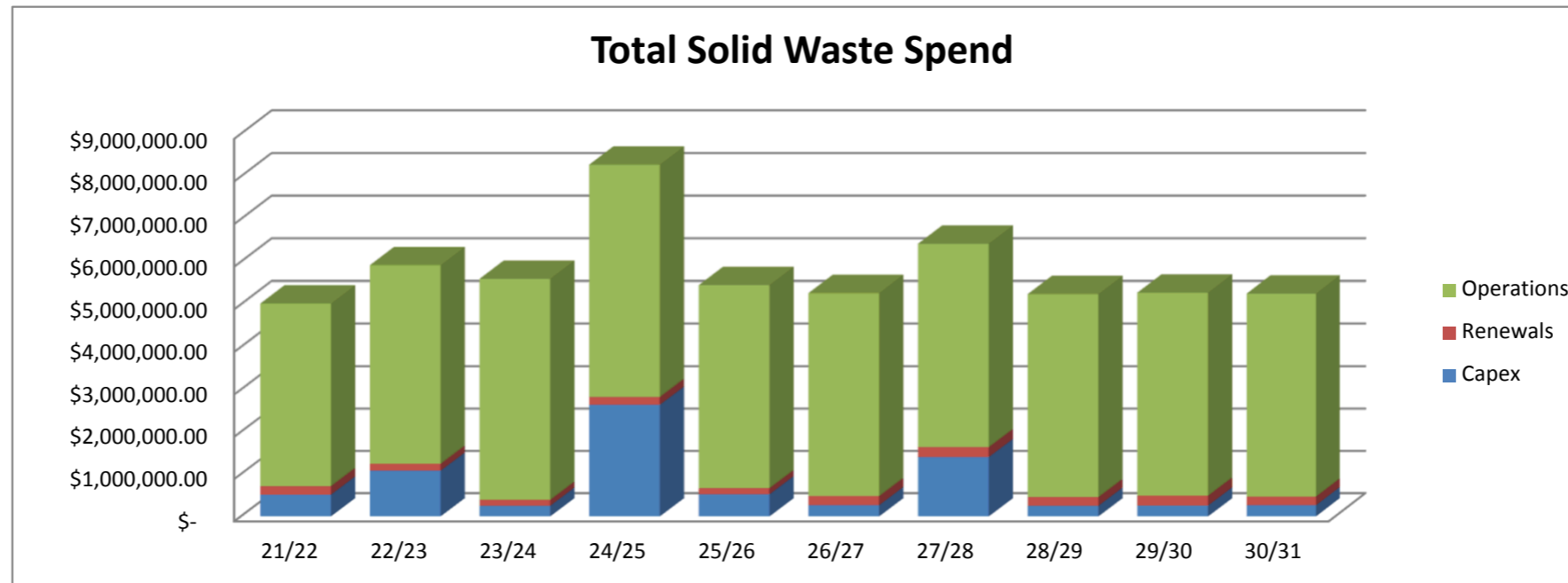


11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Column15	Column16	Column17	Column18	Column19	Column20	Column21	Column22	Column23	Column24	Column25	Column26	Column27	Column28	Column29
31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45	45/46
\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
														\$ 25,000.00
\$ 25,000.00	\$ 1,000,000.00													
					\$ 25,000.00	\$ 1,000,000.00								
					\$200,000.00	\$200,000.00	\$ 200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$ 200,000.00	\$ 200,000.00	\$200,000.00	\$ 200,000.00
\$ 30,000.00	\$ 1,005,000.00	\$ 5,000.00	\$ 5,000.00	\$205,000.00	\$230,000.00	\$ 1,205,000.00	\$205,000.00	\$205,000.00	\$205,000.00	\$ 205,000.00	\$ 205,000.00	\$205,000.00	\$205,000.00	\$ 230,000.00





	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Capex	\$ 514,000.00	\$ 1,080,000.00	\$ 251,000.00	\$ 2,641,000.00	\$ 522,000.00	\$ 265,000.00	\$ 1,404,000.00	\$ 250,000.00	\$ 256,000.00	\$ 263,000.00
Renewals	200000	162000	139000	184000	144000	213000	233000	205000	233000	203000
Operations	\$ 4,302,884.00	\$ 4,675,884.00	\$ 5,207,884.00	\$ 5,449,884.00	\$ 4,785,084.00	\$ 4,784,684.00	\$ 4,784,684.00	\$ 4,784,684.00	\$ 4,784,684.00	\$ 4,784,684.00
Total	\$ 5,016,884.00	\$ 5,917,884.00	\$ 5,597,884.00	\$ 8,274,884.00	\$ 5,451,084.00	\$ 5,262,684.00	\$ 6,421,684.00	\$ 5,239,684.00	\$ 5,273,684.00	\$ 5,250,684.00



Solid Waste Operations

Column1	Column4	Column5	Column6	Column7	Column8	Column9	Column10	Column11	Column12	Column13	Column14	Column15
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Refuse Collection	\$ 851,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00
Broadlands Landfill	\$ 2,263,000.00	\$ 2,571,000.00	\$ 3,101,000.00	\$ 3,341,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00
Kinloch RTS	79350.00	84350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00
Mangakino RTS	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00
Turangi RTS	\$ 406,830.00	\$ 416,830.00	\$ 416,830.00	\$ 416,830.00	\$ 423,030.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00
Omori RTS	\$ 79,000.00	\$ 79,000.00	\$ 79,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 81,000.00	\$ 82,818.18
Whareroa RTS	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00
District Litter Collection	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 377,834.00	\$ 427,750.00
District Disposal Admin	\$ 135,000.00	\$ 135,000.00	\$ 135,000.00	\$ 135,000.00	\$ 125,000.00	\$ 125,000.00	\$ 125,000.00	\$ 125,000.00	\$ 125,000.00	\$ 125,000.00	\$ 125,000.00	\$ 129,000.00

Total Spend Per annum \$ 4,302,884.00 \$ 4,675,884.00 \$ 5,207,884.00 \$ 5,449,884.00 \$ 4,785,084.00 \$ 4,784,684.00 \$ 4,784,684.00 \$ 4,784,684.00 \$ 4,784,684.00 \$ 4,784,684.00 \$ 4,784,684.00 \$ 4,840,163.64 \$ 4,840,418.18

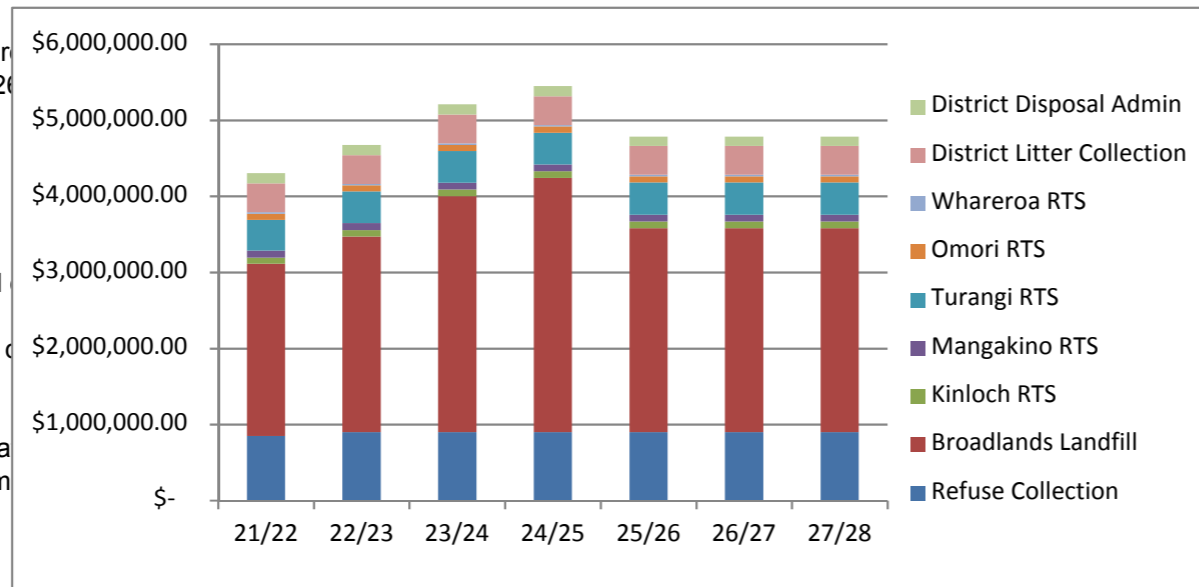
Issues

Councils resource consent for the Br
Consent allowance from 23/24 -25/26

Assumptions
that Council obtains and new landfill

ETS cost does not go over \$25 per c
No change to levy payment

Base dollars for each site predomina
and for RTS sites bin haulage and m



Column16	Column17	Column18	Column19	Column20	Column21	Column22	Column23	Column24	Column25	Column26	Column27	Column28	Column29
33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45	45/46	46/47
\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00	\$ 901,000.00
\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00	\$ 2,680,000.00
86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00	86350.00
\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00	\$ 90,370.00
\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00	\$ 422,630.00
\$ 83,072.73	\$ 83,327.27	\$ 83,581.82	\$ 83,836.36	\$ 84,090.91	\$ 84,345.45	\$ 84,600.00	\$ 84,854.55	\$ 85,109.09	\$ 85,363.64	\$ 85,618.18	\$ 85,872.73	\$ 86,127.27	\$ 86,381.82
\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00
\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00	\$ 427,750.00
\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00	\$ 129,000.00

\$ 4,840,672.73 \$ 4,840,927.27 \$ 4,841,181.82 \$ 4,841,436.36 \$ 4,841,690.91 \$ 4,841,945.45 \$ 4,842,200.00 \$ 4,842,454.55 \$ 4,842,709.09 \$ 4,842,963.64 \$ 4,843,218.18 \$ 4,843,472.73 \$ 4,843,727.27 \$ 4,843,981.82

Column30
47/48
\$ 901,000.00
\$ 2,680,000.00
86350.00
\$ 90,370.00
\$ 422,630.00
\$ 86,636.36
\$ 20,500.00
\$ 427,750.00
\$ 129,000.00

\$ 4,844,236.36

Column1	Column8	Column9	Column10	Column11	Column12	Column13	Column14	Column15	Column16	Column17	
Stormwater Capital Expenditure											
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	
1	Enviropod protection										
2	Waikato street improvement device	\$ 238,000.00									
3	Redoubt street improvement device		\$ 298,000.00								
4	Kohineheke Reserve			\$ 308,000.00							
5	Norman Smith at Control gates improvement device				\$431,000.00						
6	Mobile station Taupo lakefront improvement device					\$309,000.00					
7	Spa Rd improvement device						\$ 329,000.00				
8	Tui street Improvement device						12,000	\$ 298,000.00			
9	Huia Street Improvement device							\$ 12,000.00	318000		
10	Hawai reserve detention pond			\$ 21,000.00	\$ 33,000.00	\$180,000.00					
11	Paenoa rd pipe diversion		\$ 52,000.00	\$ 276,000.00							
12	Mangakino Golf club retic	\$ 90,000.00									
13	Two mile bay				\$ 22,000.00	213000					
14	Overland flow										
	Mango flood mitigation	\$ 25,000.00	\$ 55,000.00			\$174,000.00	\$ 310,000.00				
	Kimberly reserve flood mitigation					\$ 47,000.00	\$ 35,000.00	400000	2023000		
	Puataata RD							12000	308000		
	Tamatea flood protection							48000	123000	1908000	
	Elisabeth street									\$ 328,000.00	
	miro street investigation										
	Tauhara rd / Doc stormwater pond development										
	crown Rd Pond Retic										
	Rakaunui Rd retic										
	Kinloch quality improvement devcie										
	Mangakino quality improvement device										
	Taupo CBD upgrade										
	lake Tce quality improvement device										
		\$ 353,000.00	\$ 405,000.00	\$ 605,000.00	\$486,000.00	\$923,000.00	\$ 685,000.00	758000	#####	2226000	\$ 328,000.00

Totals

Stormwater The Way Forward

Existing piped network capacity is not going to be increased by Council only developers
 Capital projects are either stormwater quality or capacity based
 Some capital works will be identified through the overland flow path truthing

Existing direction

Maintain existing service levels
 Maintain disposal capacity
 increase disposal quality

Assumptions

No Changes in the existing consent requirements
 Iwi will not charge for Lake outlets

priority on overland flow paths that effect over 100 houses there a 7

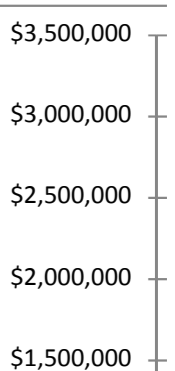
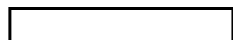
Capital Works Projects for Stormwater

Project

- 1 Elisabeth street flooding mitigation
- 2 Waikato street improvement device
- 3 Redoubt street Improvement device
- 4 Kohineheke Reserve
- 5 Norman Smith Quality Improvement device
- 6 Mobile station Taupo lake front improvement device
- 7 Spa rd Improvement device
- 8 Tui street device
- 9 Huia street device
- 10 Hawai detention pond
- 11 Paenoa Rd diversion
- 12 Mangakino Golf club retic
- 13 Two Mile Bay
- 14 Over land flow paths

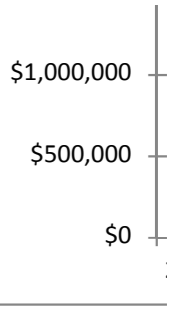
cost \$\$ year build

- 5K Per annum 21/22-47/48
- \$ 238,000.00 21/22
- \$ 288,000.00 22/23
- \$ 290,000.00 23/24
- \$ 395,000.00 24/25
- \$ 275,000.00 25/26
- \$ 285,000.00 26/27
- \$ 260,000.00 27/28
- \$ 260,000.00 28/29
- \$ 210,000.00 21/22
- \$ 310,000.00 21/22
- \$ 90,000.00 21/22
- \$ 220,000.00 23/24
- \$ 200,000.00 21/22



23 Elisabeth street flooding investigation

\$ 20,000.00 24/25



Column18	Column19	Column20	Column21	Column22	Column23	Column24	Column25	Column26	Column27	Column28	Column29	Column30	Column304	Column303
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31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45	45/46
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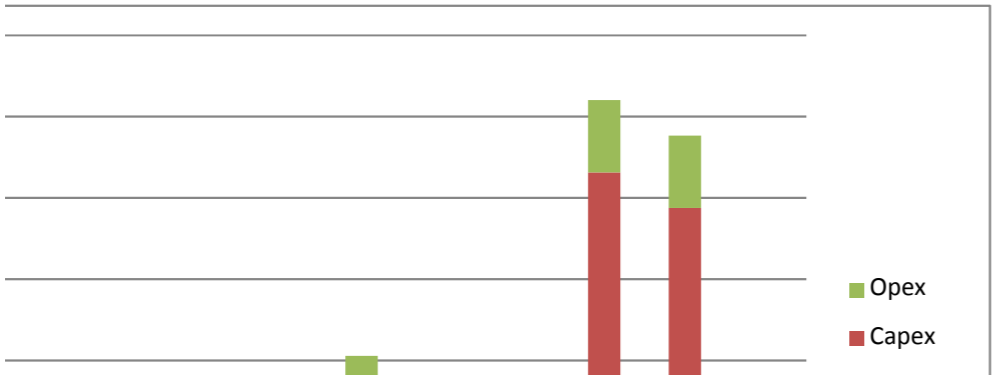
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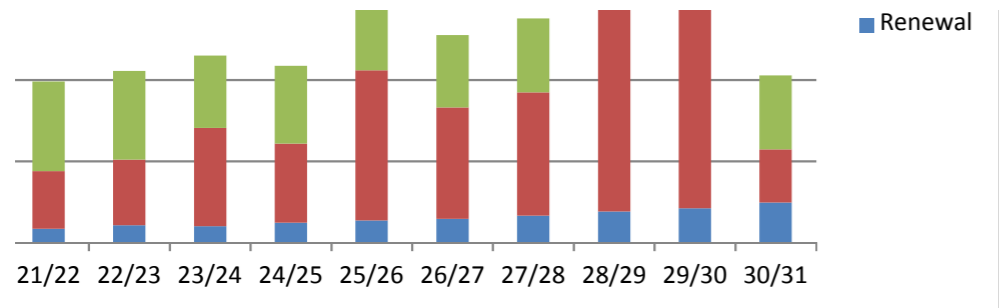
\$964,000.00

\$ 40,000.00	100,000	\$ 1,500,000.00												
			\$ 20,000.00	20,000	\$ 250,000.00									
						\$ 20,000.00	\$ 400,000.00							
									20,000	20,000	500,000			
			\$ 10,000.00	\$260,000.00										
								\$ 10,000.00	250,000					
\$ 10,000.00	260,000											\$ 30,000.00	\$ 80,000.00	#####

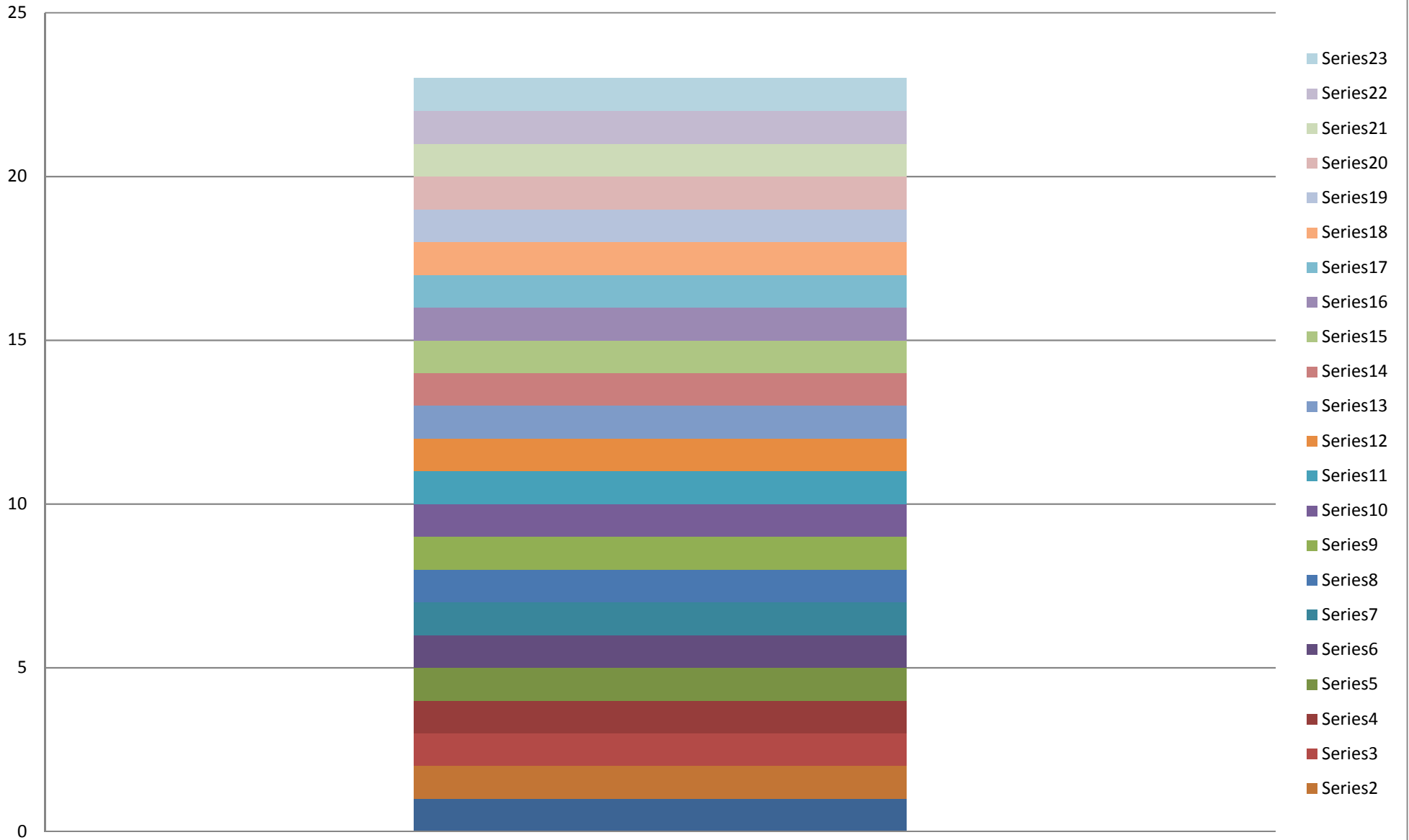
\$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00

	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31			
Renewal	\$86,000	\$106,000	\$101,000	\$123,000	\$136,000	\$146,000	\$166,000	\$191,000	\$211,000	\$246,000			
Capex	\$ 353,000.00	\$ 405,000.00	\$605,000.00	\$ 486,000.00	\$923,000.00	\$ 685,000.00	758000	\$ 2,466,000.00	2226000	\$ 328,000.00	35000	85000	1505000
Opex	\$ 551,750.00	\$ 545,050.00	\$445,050.00	\$ 478,750.00	\$470,050.00	\$ 445,050.00	\$453,750.00	\$ 445,050.00	\$ 445,050.00	\$ 453,750.00			





Stormwater Capex



Stormwater Operational Expenditure

Column1	Column7	Column8	Column9	Column10	Column11	Column12	Column13	Column14	Column15	Column16	Column17	Column18
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Contracts	\$ 198,000.00	\$ 200,000.00	\$ 100,000.00	\$ 100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
outlets	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Maintenance	\$ 245,000.00	\$ 245,000.00	\$ 245,000.00	\$ 245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00
wonderful wai	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00
Monitoring	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 51,000.00	\$ 51,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00
Admin	41750.00	33050.00	33050.00	41750.00	33050.00	33050.00	41750.00	33050.00	33050.00	41750.00	41750.00	41750.00
Total Spend Per annum	\$ 551,750.00	\$ 545,050.00	\$ 445,050.00	\$ 478,750.00	\$470,050.00	\$445,050.00	\$453,750.00	\$445,050.00	\$445,050.00	\$453,750.00	\$453,750.00	\$453,750.00

Issues

Councils stormwater operations are governed by the Comprehensive Consents
Council will need to extend this consent, , allowance in 24-26

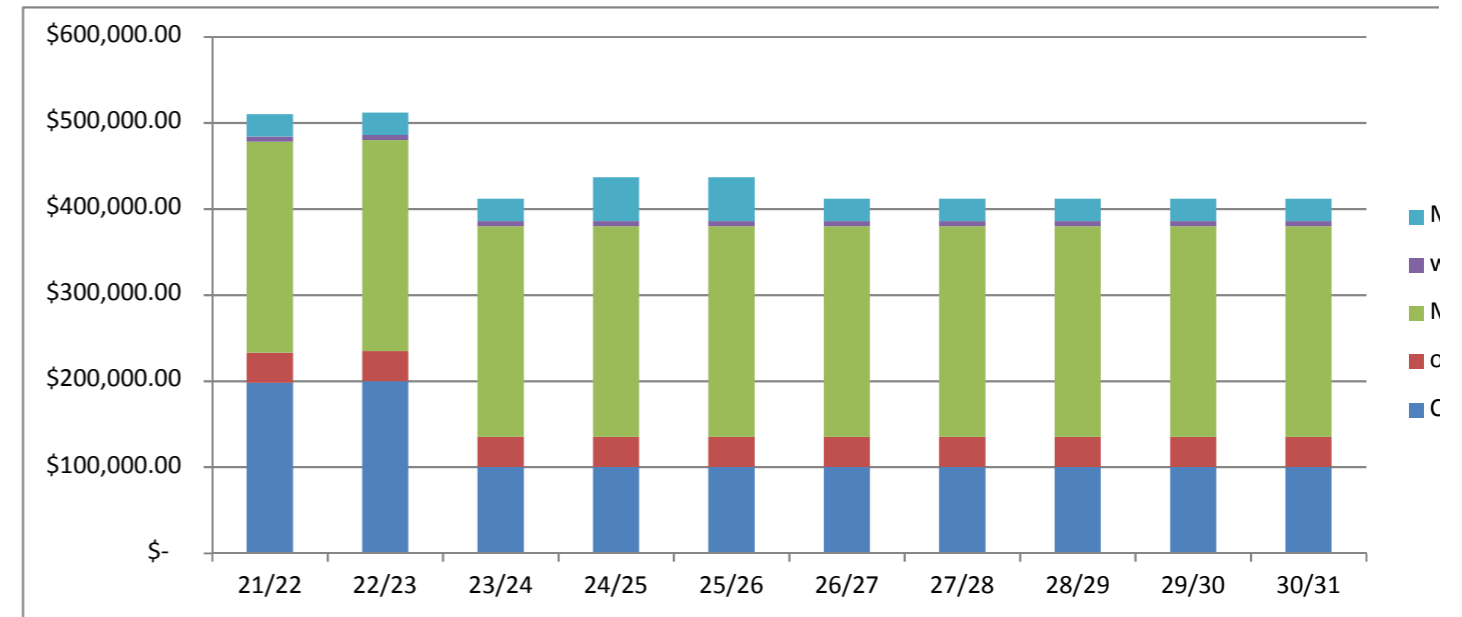
catchment management plan Taupo residential (above Miro) 25/26

Assumptions

Stormwater maintenance carried out under three waters contract
no payment to lwi for Lake bed outlets and pipes
No changes in consent requirements

Increase in Improvement device maintenance

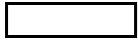
Increased cost in gully maintenance as gullies vested in Council



Column19	Column20	Column21	Column22	Column23	Column24	Column25	Column26	Column27	Column28	Column29	Column294	Column293	Column292	Column30
33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45	45/46	46/47	47/48
\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00	\$245,000.00
\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00
\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00	\$ 26,000.00
41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00	41750.00

\$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00 \$453,750.00

Monitoring
wonderful wai
Maintenance
outlets
Contracts



Stormwater Renewal Budgets 2021 AMP

Column1	Column9	Column10	Column11	Column12	Column13	Column14	Column15	Column16	Column17	Column18	Column19	Column20
	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Enviropods	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Network	\$ 75,000	\$ 85,000	\$ 90,000	\$ 100,000	\$ 125,000	\$ 135,000	\$ 145,000	\$ 180,000	\$ 200,000	\$ 220,000	\$ 250,000	\$ 275,000
quality improvement devices				12000						\$ 15,000		
sampling gear & telemetry	\$ 6,000	\$ 16,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 16,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
Total	\$86,000	\$106,000	\$101,000	\$123,000	\$136,000	\$146,000	\$166,000	\$191,000	\$211,000	\$246,000	\$261,000	\$286,000

Enviropods

Allows for the renewal of 50 units and 25 bags per year

Quality Improvement devices

Devices need internal baskets renewed

Sampling gear

Gear gets damaged by storm flows allows for the renewal of one sampler per year
Telemetry replace every 5yrs

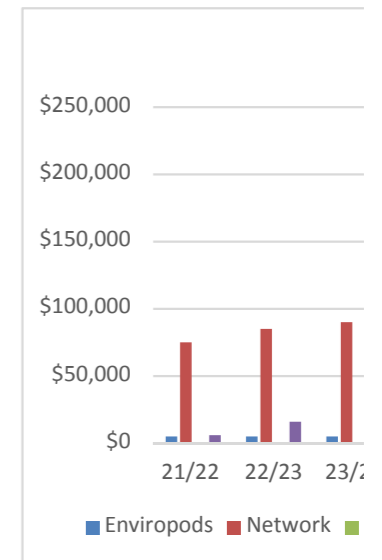
Pipes and fitting cost combined

the 10 yr renewal program for pipes and fittings is based on age, condition assessment, criticality and maintenance records

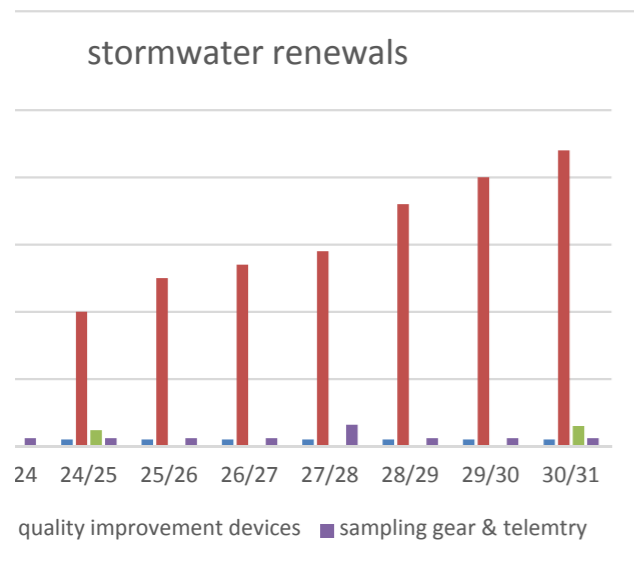
Works undertaken since last AMP : CCTV condition assessment / Criticality assessment of assets

NOTE

Funding of renewals for the first ten years of the amp is based on condition and criticality of the assests, funding past that date is based on assumptions on the rest of the network reflecting the network condition work done to date.
This funding profile will change as more condition work is undertaken



Column21	Column22	Column23	Column24	Column25	Column26	Column27	Column28	Column29	Column30	Column31	Column32	Column322	Column323	Column324	Column325	Column326
33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45	45/46	46/47	47/48	48/49	49/50
\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
\$ 320,000	\$ 370,000	\$ 420,000	\$ 470,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00
				\$ 15,000							\$ 15,000					
\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	#####	#####	\$ 6,000.00
\$331,000	\$381,000	\$431,000	\$481,000	\$526,000	\$511,000	\$511,000	\$511,000	\$511,000	\$511,000	\$511,000	\$526,000	\$511,000	\$511,000	\$511,000	\$511,000	\$511,000



Project Estimates

Stormwater

Brentwood culvert cost

Humes cost for 1800 diameter Z class is \$4554 for a 2.44 metre long pipe.
Rubber rings are about \$83 each

14 pipes at \$4554 (for a 34 metre length) = have allowed for extra \$ 63,000.00
9 rubber rings at \$83 \$ 750

plus installation & backfilling \$ 40,000.00
plus headwalls \$ 25,000.00
plus road reinstatement \$ 15,000.00
plus erosion control and Revegetation \$ 10,000.00
realign waste water pipe \$ 80,000.00
plus design/supervision \$ 10,000.00
EW consent property negotiations \$ 15,000.00
plus contingency at 15% \$ 30,000.00

\$ 288,000.00

Storm Water Quality Improvement Devices

CDS unit \$ 77,000.00
installation and backfilling \$ 25,000.00
design \$ 6,000.00
erosion control \$ 8,000.00
site reinstatement \$ 3,000.00
supervision \$ 3,000.00
allow for services \$ 1,000.00
contingency \$ 10,000.00
\$ 133,000.00

Storm Water Quality Improvement Devices

CDS unit \$ 77,000.00
installation and backfilling \$ 17,000.00
design \$ 6,000.00
erosion control \$ 3,000.00
site reinstatement / road \$ 10,000.00
allow for services \$ 16,000.00
contingency \$ 11,000.00
\$ 140,000.00

The budget has been revised to \$300,000 after tender returns
this is due too asbuilt information not being correct when site was investigated

\$ 300,000.00

Storm Water Quality Improvement Devices

CDS unit \$ 77,000.00
installation and backfilling \$ 30,000.00
design \$ 8,000.00
erosion control \$ 4,000.00
site reinstatement \$ 10,000.00
allow for services \$ 16,000.00
contingency \$ 15,000.00
\$ 160,000.00

Brentwood Down stream contribution to flow effects

Erosion control of gully floor and banks \$ 10,000.00

contribution to lake outlet works. \$ 100,000.00

\$ 110,000.00

Catchment Management Plans

Based around costs to provide CMP for EUL
but reduced in size and cost 2x at 60K each **\$ 120,000.00**

Hawaii street reserve detention pond

design / consultation \$ 10,000.00
Earth works \$ 50,000.00

\$ 60,000.00

Storm Water Quality Improvement Devices

CDS unit \$ 77,000.00
installation and backfilling \$ 30,000.00
design \$ 8,000.00
erosion control \$ 4,000.00
site reinstatement / road \$ 10,000.00
allow for services \$ 16,000.00
contingency \$ 15,000.00
\$ 160,000.00

Puataata Rd

Storm Water Quality Improvement Devices

CDS unit \$ 77,000.00
installation and backfilling \$ 20,000.00
design \$ 8,000.00
erosion control \$ 3,000.00
site reinstatement / road \$ 10,000.00
allow for services \$ 16,000.00
contingency \$ 11,000.00
\$ 145,000.00

North of Mobile Taupo Lake

Storm Water Quality Improvement Devices

CDS unit \$ 110,000.00
installation and backfilling \$ 65,000.00
design \$ 8,000.00
erosion control \$ 8,000.00
site reinstatement / road \$ 35,000.00
allow for services \$ 16,000.00
contingency \$ 15,000.00
\$ 257,000.00

Hawaii street

Storm Water Quality Improvement Devices	Turanga Place	Storm Water Quality Improvement Devices	2 Mile Bay Boat Ramp
	Industrial area	CDS unit	\$ 77,000.00
CDS unit	\$ 77,000.00	installation and backfilling	\$ 30,000.00
installation and backfilling	\$ 17,000.00	design	\$ 8,000.00
design	\$ 8,000.00	erosion control	\$ 6,000.00
erosion control	\$ 6,000.00	site reinstatement / road	\$ 5,000.00
site reinstatement	\$ 8,000.00	allow for services	\$ 6,000.00
allow for services	\$ 10,000.00	contingency	\$ 10,000.00
contingency	\$ 11,000.00		\$ 142,000.00
	\$ 137,000.00		
overland flow path remediation		Kimberly Reserve pond and house removal	
field measurements	\$ 60,000.00	design / house purchase processing	\$ 25,000.00
process review	\$ 15,000.00	pond build and retic	\$ 80,000.00
implementation	\$ 20,000.00	house removal	\$ 575,000.00
			\$ 680,000.00
	\$ 95,000.00		
Paenoa RD Pipe diversion to southern gully		Henry Hill Rd investigation	
allows for 1 of the three barrels to divert to southern gully		Investigation / preliminary design	\$ 20,000.00
Pipe length 111 metres		Total	\$ 20,000.00
45 pipe lengths at 2.44 each pipes at 5000 each	\$ 228,000.00		
plus installation & backfilling	\$ 20,000.00	Rangatira Drive Upgrade	
outlet wing wall	\$ 8,000.00	Design	\$ 15,000.00
inlet wing wall	\$ 9,000.00	construction	\$ 235,000.00
plus erosion control and Revegetation	\$ 5,000.00		
plus design/supervision	\$ 18,000.00		
EW consent property negotiations	\$ 5,000.00		
plus contingency at 10%	\$ 29,000.00	Total	\$ 250,000.00
	\$ 322,000.00	additional quality devices	
		installed	\$ 65,000.00
			\$ 65,000.00
			\$ 65,000.00
Koha Rd Flood Prevention			
investigation	\$ 5,000.00		
consultation	\$ 5,000.00		
design	\$ 80,000.00	Total	\$ 195,000.00
construction	\$ 760,000.00		
Total	\$ 850,000.00	Mangakino Kahu Street Retic	80,000
		required to be directionally drilled through rock	
Mango pond And retic			
design	\$ 13,000.00	Total	\$ 80,000.00 as provided by Bryan Ferguson re intial costings
consultation	\$ 5,000.00		
pipe and fittings	\$ 86,000.00		
manholes	\$ 5,000.00		
fencing	\$ 5,000.00		
planting	\$ 5,000.00		
pond dig out and refurbishment	\$ 7,000.00		
contingency 15%	\$ 19,000.00		

\$ 145,000.00

Solid Waste

Landfill cell development

Liners 3000 sqs 800000
 Earthworks 150000
 drainage / roading 40000
 Reporting /quality control 35000

contingency 10% 100000
 1125000

Big Belly Bin Capex

current servcie provison is 18 leased bins by Contractor
 Council to purchase bins at end of contract term
 contract end date is 28 Feb 2018
 bins will need to be leased for three months until new finacial yr
18 bins purchase value new \$7723.00 per bin

\$ 139,014.00

Negotiation regarding renewal I suggest 10yrs
 will negotiate and condtion assess bins prior to purchase
depreciated value with 10 yr life at \$5407 x 18 bins

\$97,326.00

Prior to negotiation I suggest budget for 15yr life

\$ 112,000.00

Big belly renewal program

total bins currently 35
 8 purchased in 16/17 to be renewed 27/28 (10yrs)
 18 bins from above 13/14 renewal date 24/25
 9 bins purchased 12/13 renewal date 23/24

\$ 60,000.00

\$ 140,000.00

\$ 70,000.00

specific yr renewal

pr/yr renewal

CBD bins steel requires 10K per year **\$ 10,000.00**

Park bins removal of green to slat wooden 10K per year **\$ 10,000.00**

Both of these \$\$ will provide for five bins per year

10 new bins in total

Broadlands Rd Landfill

Entrance gate and fencing \$15,000.00
 seal green waste exit road \$17,000.00

extend conc on steel storage area \$ 8,000.00

raise and bund oil collection tank \$ 4,000.00

Extend water supply and Hydrant to back of site \$15,000.00

Haz waste drop off facility plus internal bunding and containment \$10,000.00

Kinloch RTS Upgrade

Glass disposal wall roof with chutes \$ 20,000.00
 Glass bins \$ 10,000.00
 earth works/ seal extension \$ 10,000.00
 recycling containment \$ 5,000.00
Total \$ 45,000.00

Kinlock water supply

design \$ 5,000.00
 pipe / fittings \$ 14,500.00
 easment /legal \$ 2,500.00
 directional drilling \$ 5,000.00

contingency \$ 3,000.00
\$ 30,000.00

Health and safty issue now need feedback from contractor

Omori RTS

Power supply \$ 30,000.00
 allows fro 8 Poles and overhaed wire
 and some internal wiring

Lighting \$ 6,000.00
 eftpos

Water tank and pump (fire fighting) tank fed from roof water \$ 8,000.00

Road seal \$ 30,000.00

Turangi RTS

Site Glass storage bays
 concrete pad for wood drop off
 retaining wall
 seal

Total

Buildiiing extension for recovered materials handling

Total

Capping of landfill and green waste drop off area

Total

Mangakino RTS

Kiosk
 Koisk and electrical

concrete pad for recyclables handling

Flood Lighting

front

capping
achieve compaction requirements

\$30,000.00

3 budgeted

\$ 10,000.00
\$ 15,000.00
\$ 8,000.00
\$ 10,000.00

\$ 43,000.00

\$ 30,000.00

\$ 30,000.00

\$ 15,000.00

\$ 15,000.00

\$ 12,000.00

\$ 20,000.00

\$ 4,500.00

council has undertaken a comprehensive condition assessment program coupled with a CCTV program

This data has been loaded into asset finda

Council has also undertake a three waters criticality project that also enables council to focus on mainte

to determine not only the condition but the performance of the piped network.

ance and renewal funding

Hi Brent,

Condition Assessment undertaken

Below are the notes taken from our tour yesterday, (No particular order)

Broadlands Landfill.

1. Internal fencing besides steel drop off area needs repair.
2. Oil storage tank life expectancy 5yrs with 8-10k needed to renew.
3. Street lighting 10yrs life expectancy with 9/10 condition on pos
4. Fencing by front gate 5yrs life expectancy with 3/10 condition :
5. Reuse shop, 9/10 condition with 40yrs life expectancy, 60k to r
6. Reuse storage shed, 9/10 condition with 40yrs life expectancy
7. Weighbridge Kiosk, 5/10 condition, with 40yrs life expectancy,
 - a. Building needs clean and paint
 - b. Renewal of internal cabinets (5k needed for both these iter
 - c. Kiosk window need tinting.
 - d. Weighbridge's themselves, 15yrs life expectancy, with 50k
 - e. Load width sign needs renewal now.
 - f. Mirrors and poles 5yrs life expectancy, 4/10 condition, with
 - g. GEC Avery meter indicators need to be repaired.
8. Barrier Arms x3, 5yrs life expectancy with 8k each to renew.
9. Bump stops by pit area, 4yrs life expectancy with 3k to renew.
10. Storm water ditches need clearing (bank at back of Kiosk) 3k.
11. Recycle area 9/10 condition with 40yrs life expectancy 30k to
12. Site seal has been renewed 2016 with 15yrs life expectancy 4
13. Hazard waste storage shed, has 3yrs life expectancy with 10k
14. Large storage shed by pit, need building sheets repaired after
15. Large storage shed by pit, 30yr life expectancy with 60k to rer
16. Fence besides drop off area to pit need renewal 3k needed.
17. Upgrade needed to truck loading area, wall needs to be highe
18. New fence needed to reduce windblown litter in storm water d
19. Capital project to concrete the steel storage/drop off area to re
20. Capital project to seal road beside green waste drop off area :

Turangi RTS

- a. Seal, ok with 5yrs life expectancy, 6/10 condition.
- b. Seal by corner to ramp into pit area needs curbing and
- c. Drop off area building back wall 3yrs life expectancy, 6/
- d. Steel barriers by drop off area need painting/renewal.
- e. Steel plates needed around pit/compactor drop area as
- f. Roof over compactor area needs spouting/downpipe un
- g. Entire site perimeter fence 4/10 condition, 3yrs life expe
- h. Site unsealed roading, needs better drainage to stop pc
- i. Glass holding bays need concrete pad and bays extenc
- j. Main Site building all, 7/10 condition, with 30yrs life exp
- k. Smoko hut needs a paint up 3k and all buildings need a
- l. Oil storage tank, 5/10 condition, needs bunding/renewa
- m. Barrier arm 5yrs life expectancy with 8k to renew.
- n. Kiosk, 4/10 condition, 10yrs life expectancy, 8k to renev
- o. Capital project: Concrete pad and drop off wall area nee

- p. Chain replacement on Travellator and provision of inspection
- q. Replacement of hoses on main pump and provision of guard
- r. Leaking lift arms on travellator

Omori RTS

- 1. Reuse shed needs spouting repaired and cleaned
- 2. Drop Off Building, steel work needs paint done
- 3. All site buildings need water blasting/cleaning
- 4. Seal has 8yrs life expectancy.
- 5. Green waste drop off pad needs work to improve
- 6. Site fencing (sides and rear) 6/10 condition

Both Hook bins on site need repair and repainting

Whareroa RTS

- a. Reuse shed in good condition 9/10 with 40yrs of life
- b. Fencing condition 8/10
- c. Seal looks good 8/10 condition 5-8yrs
- d. Hook bin and stop needed with raise lip off foot rail fence
- e. Steel safety rail needs to be fitted by drop off area.

Note: Bin No 5 need repair and paint.

Mangakino RTS

- 1. Steel plates needed around pit/compactor drop area and compactors
- 2. Pit vehicle bump stops 2yrs left 1k to renew.
- 3. Seal in good condition with a 6yr life expectancy.
- 4. All buildings need clean with pressure washer.
- 5. Reuse shed in good condition with estimated 30yr life 20k to renew
- 6. Recycle area/building in good condition 20yr life expectancy 2k
- 7. Oil storage tank needs lifting above ground and bund. 5k needed
- 8. Kiosk 4/10 condition, 10yrs life expectancy, 5k to renew. building
- 9. Cardboard Cages still need repairs doing to be fit for purpose.
- 10. Concrete pad for IBC handling needs to be extended next year

Kinloch RTS

- a. Reuse shed, 9/10 condition, with 40yr life expectancy, needs a
- b. Fence by glass reuse area needs a clean and paint.
- c. Drop off area building, needs a clean and repaint. Building 8/10
- d. Drop off area building, foot kick plate needs raising to allow swing
- e. V Drop off area building, vehicle wheel stops needed to reduce
- f. Recycle area needs sign renewed and in poor condition.

Capital project, needed to allow larger area of operation in recycle/generation
 Capital project, needed to allow a more operational user friendly and green
 Green waste drop off area needs improvement to base to allow better drop

16 May 2016

feel free to add/adjust anything as needed.

ew above ground and bund 4/10 condition.
its, lights themselves will need renewal in 3yrs.
score with 8k needed to renew.
renew.
, 60k to renew.
40k to renew.

ns)

needed to renew.

3k needed to renew.

renew.
.0k to renew.
; needed to renew.
· damage by contractor.
new.

er with overhang lip to reduce refuse spillages.
rain besides refuse truck loading area. 3k needed.
reduce contamination (pad size 20m x 15m)
and refuse truck loading area to exit of area.

seal repair in 3yrs, estimate 5k needed.
10 condition, 3k needed to renew.

discussed on site with Turangi Engineering.
blocked.
xtancy, 40k needed to renew.
onding. Need ground works to improve drainage 8k estimate needed, use crushed concrete or
led (10m x 18m)
ectancy,
| water blast clean.
| 5k estimated.

v. Cash register needs replacing and building needs fit out/paint up now.
eded for wood drop off area to stop contamination of product.

tion plate

Taupo Engi

arding around top of bin feeding the compactor, same as mangakino

onnected to water tank for toilet, 1k needed to complete.

ing as soon as possible 5k estimate.

ng.

rove in 3yrs estimate 5k

needs renewal in 8yrs.

aint. (All hook bins need to be checked and if required repaired and painted)

expectancy 50k to renew.

for new tarped bins.

actor ram lid estimate 2k to renew.

enew.

0 to renew.

led in 5yrs.

ng needs fit out/paint up now.

ar estimated 5k needed.

a clean with pressure washer.

0 condition 30yr life expectancy.

weepings to get into bin.

a risk of damage by reversing vehicles.

al waste drop of area as visitor numbers are much higher now than before.

ater volume of storage for recycle area by a redesign of the area to allow easier disposal of re

ainage estimate 5-8k for this project.

Other works

Both Mangakino & Turangi Compactors need a renewal program

Litter Bin renewal allowance for Mango & Turangi Litter Bins

Capital works program for Kinloch RTS cope with additional volumes

Taupo Big Belly renewal program and purchase of existing Bins off Manco from Dianne knight

n site.

ineering and Hydraulics Ltd

ecycle and larger bins to be used

Taupo Solid Waste Collection	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23
247136002. COLECTN RECEIPTS	0	0
24713601. Sales	0	0
24713603. Refuse Coupon Sales	0	0
24713604. Refuse Sticker Sales	-240,000	-240,000
2471380. Sundry	0	0
Total Income	-240,000	-240,000
2472275. Staff Training	0	0
2472470. Catering	0	0
2472505. Subscriptions	0	0
2472510. Telephone & tolls	0	0
2472515. Travel	0	0
2472815. Debt Collection	0	0
247401501. Maintenance - Wastewater	0	0
247404502. R&M - VEHICLE & PLANT	0	0
2474310. Contracts	850,000	900,000
2474325. Hire	0	0
2474335. Materials and Supplies	1,000	1,000
247433504. Tip Maintenance	0	0
2474345. Rubbish Disposal	0	0
2474365. Water by meter	0	0
Total Expenses	851,000	901,000

Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31	Budget Comments
-240,000	-240,000	-240,000	have factored no change to service levels pending service review
-240,000	-240,000	-240,000	
900,000	900,000	900,000	estimate only re renewal of operating contract and additional service delivery
1,000	1,000	1,000	sticker purchases
901,000	901,000	901,000	

Taupo Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2551370. Govt levy income for waste minimisation	-132,000	-140,000	-160,000
2551340. Grants Received	0	0	0
2551360. Sales	0	0	0
255136004. TIP MTCE RECEIPTS	0	0	0
25513601. Concrete Sales	-70,000	-70,000	-70,000
2551360101. Refuse Cash Sales	-674,000	-720,000	-815,000
255136011. Sales	0	0	0
25513602. Refuse Commercial Sales	-1,860,000	-2,000,000	-2,200,000
25513603. Refuse Coupons	0	0	0
25513606. Refuse Cash Sales	-6,000	-6,000	-6,000
25513607. Green Waste fees	-180,000	-180,000	-180,000
25513608. Cleanfill Income	-20,000	-20,000	-20,000
2551380. Sundry	0	0	0
Total Income	-2,942,000	-3,136,000	-3,451,000
2552405. Advertising & Publicity	0	0	0
2552470. Catering	0	0	0
255247502. COLLECTN POSTAGE	0	0	0
2552480. Printing & Stationery	1,000	1,000	1,000
255248002. COLLECTION BOOKS/STATIONERY	0	0	0
255248004. TIP MTCE BOOKS & STATIONERY	0	0	0
2552500. Rent/Lease	1,000	1,000	1,000
2552510. Telephone & tolls	2,000	2,000	2,000
2552600. Bad Debts	0	0	0
255261004. TIP MTCE FEES & CHARGES	1,000	1,000	1,000
2552805. Consultants Fees	0	0	0
2552805041. TIP MTCE PROFESSIONAL/SPECIAL	0	0	0
25528050412. TIP MTCE PROF/SPECIAL FEES	0	0	0
2552805042. TIP MTCE CONSULTANT FEE	0	0	0
2552815. Debt Collection	500	500	500
255282502. COLLECTN LEGAL FEES	0	0	0
255401501. Pump Stations	10,000	10,000	10,000
255401504. Rising Mains	0	0	0
255401516. Maintenance - Fat, Oils & Greases Facility		6,000	6,000
2554040. Maintenance - Buildings	0	0	0
2554045. R&M - Plant & Machinery	0	0	0
2554062. Maintenance - Software	1,500	1,500	1,500
2554065. Maintenance - Other	20,000	20,000	20,000
255430004. TAUPO INFO CLEANING	0	0	0
2554310. Govt levy waste minimisation	0	0	0
255431002. Waste minimisation projects	-132,000	-140,000	-160,000
255431004. TIP MTCE CONTRACTS	660,000	720,000	720,000
2554310041. VEGE TIP MTCE CONTRACTS	150,000	150,000	200,000
255431012. Concrete Stock Adjustment	0	0	0
2554315. Electricity	6,000	6,000	6,000
2554325. Hire	0	0	0

255432502. COLECTN EXT PLANT HIRE	0	0	0
255432504. TIP MTCE EXT PLANT HIRE	0	0	0
2554325041. VEGE TIP EXT PLANT HIRE	0	0	0
2554335. Materials and Supplies	0	0	0
255433502. Materials Collection Expenses	0	0	0
255433504. Materials & Supplies		0	0
2554335041. TIP MTCE MATERIALS	0	0	0
2554335042. REFUSE CASH SALES MATERIALS	0	0	0
2554335043. GENERAL SUPPLIES & EXPENSES	0	0	0
2554335044. MATERIALS	0	0	0
255435004. TIP MTCE SECURITY	0	0	0
2554365. Water by Meter	1,000	1,000	1,000
25543801. Govt Levy - Waste Minimisation	500,000	750,000	1,250,000
25543802. ETS Funding Cost	1,041,000	1,041,000	1,041,000
Total Expenses	2,263,000	2,571,000	3,101,000

Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31
-170,000	-170,000	-170,000	-170,000	-170,000	-170,000	-170,000
0	0	0	0			
0	0	0	0			
0	0	0	0			
-70,000	-70,000	-70,000	-70,000	-70,000	-70,000	-70,000
-865,000	-865,000	-865,000	-865,000	-865,000	-865,000	-865,000
0	0	0	0			
-2,400,000	-2,400,000	-2,400,000	-2,400,000	-2,400,000	-2,400,000	-2,400,000
0	0	0	0			
-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000
-180,000	-180,000	-180,000	-180,000	-180,000	-180,000	-180,000
0	0	0	0	0	0	0
0	0	0	0			
-3,691,000	-3,691,000	-3,691,000	-3,691,000	-3,691,000	-3,691,000	-3,691,000
0	0	0	0			
0	0	0	0			
0	0	0	0			
1,000	1,000	1,000	1,000	1,000	1,000	1,000
0	0	0	0			
0	0	0	0			
1,000	1,000	1,000	1,000	1,000	1,000	1,000
2,000	2,000	2,000	2,000	2,000	2,000	2,000
0	0	0	0			
1,000	1,000	1,000	1,000	1,000	1,000	1,000
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
500	500	500	500	500	500	500
0	0	0	0			
10,000	10,000	10,000	10,000	10,000	10,000	10,000
0	0	0	0			
6,000	6,000	6,000	6,000	6,000	6,000	6,000
0	0	0	0			
0	0	0	0			
1,500	1,500	1,500	1,500	1,500	1,500	1,500
20,000	20,000	20,000	20,000	20,000	20,000	20,000
0	0	0	0			
0	0	0	0			
-170,000	-170,000	-170,000	-170,000	-170,000	-170,000	-170,000
720,000	780,000	780,000	780,000	780,000	780,000	780,000
200,000	200,000	200,000	200,000	200,000	200,000	200,000
0	0	0	0			
6,000	6,000	6,000	6,000	6,000	6,000	6,000
0	0	0	0			

**Budget
Comments**

allows for increase levy payments to
Council

levy increases

land handed over to IWI no longer able
to take clean fill after yr 3

possible paywave cost

reflects increase in income for levy
increase
allows for gas tec to be employed

calc 70% reduction in default factor
after yr 4

Kinloch Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2561340. Grants Received	0	0	0
25613601. Refuse Cash Sales	-30,000	-32,000	-37,000
2561380. Sundry Income	0	0	0
Total Income	-30,000	-32,000	-37,000
2562500. Rent/Lease	650	650	650
256251004. TIP MTCE TELEPHONES	700	700	700
2562610. Bank Fees	300	300	300
2562840. Valuation Fees	0	0	0
256284002. COLECTN VALUATION F	0	0	0
2564040. Maintenance - Buildings	1,500	1,500	1,500
256404504. TIP MTCE R&M	0	0	0
256431004. TIP MTCE CONTRACTS	60,000	65,000	65,000
2564310041. VEGE TIP CONTRACTS	15,000	15,000	17,000
256431504. Tip Electricity	900	900	900
2564335. Materials and Supplies	300	300	300
256433502. COLECTN MATERIALS	0	0	0
Total expenses	79,350	84,350	86,350
	79350.00	84350.00	86350.00

Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31
0	0	0	0			
-38,000	-38,000	-38,000	-38,000	-38,000	-38,000	-38,000
0	0	0	0			
-38,000	-38,000	-38,000	-38,000	-38,000	-38,000	-38,000
650	650	650	650	650	650	650
700	700	700	700	700	700	700
300	300	300	300	300	300	300
0	0	0	0			
0	0	0	0			
1,500	1,500	1,500	1,500	1,500	1,500	1,500
0	0	0	0			
65,000	65,000	65,000	65,000	65,000	65,000	65,000
17,000	17,000	17,000	17,000	17,000	17,000	17,000
900	900	900	900	900	900	900
300	300	300	300	300	300	300
0	0	0	0			
86,350	86,350	86,350	86,350	86,350	86,350	86,350

86350.00 86350.00 86350.00 86350.00 86350.00 86350.00 86350.00

**Budget
Comments**

increase in levy cost

anticipates new contract increase

Mangakino Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2571360. Sales	-57,000	-61,000	-70,000
25713601. RECEIPTS	0	0	0
25713602. Refuse Commerical Sales	0	0	0
25713603. Refuse Coupon Sales	0	0	0
25713604. Sales - Recycling	-500	-500	0
25713605. Sales - Reuse Centre	-2,000	-2,000	0
Total Income	-59,500	-63,500	-70,000
2572205. Clothing/Uniforms	350	350	350
2572275. Staff Training	0	0	0
257227504. Staff Training	0	0	0
257240502. Advertising - Collection	0	0	0
257242004. Cellphone & data (use 5512420)	0	0	0
2572500. Rent/Lease	850	850	850
257261004. TIP MTCE FEES & CHARGES	500	500	500
2572805. Consultants Fees	0	0	0
2572805041. TIP MTCE PROF/SPECIAL FEES	0	0	0
2572805042. TIP MTCE CONSULTANTS FEES	0	0	0
257404004. TIP MTCE R&M BUILDINGS	0	0	0
257404012. Maint - Buildings Misc	2,000	2,000	2,000
257404504. Maint - Machinery & Plant	6,000	6,000	6,000
2574065. Maintenance - Other	0	0	0
257430004. Tip Maintenance Cleaning	0	0	0
257431002. COLECTN CONTRACTS	0	0	0
257431004. Contracts	75,000	75,000	75,000
257431504. Electricity	1,000	1,000	1,000
2574325. Hire	0	0	0
257432502. COLLECTION EXT PLANT HIRE	0	0	0
257432504. Hire	0	0	0
2574325041. EXTERNAL PLANT HIRE	0	0	0
257433502. COLECTN MATERIALS	0	0	0
2574335021. REFUSE INCOME MATERIALS	0	0	0
257433504. Materials and Supplies	0	0	0
2574335041. Materials and Supplies	500	500	500
257433510. Materials & Supplies Bin Maint	0	0	0
2574345. Waste Disposal	0	0	0
2574360. Vehicle Costs	1,300	1,300	1,300
257436062. Vehicle Costs - Rego & Roaduser	70	70	70
257436063. Vehicle Costs - Fuel & Oil	800	800	800
257436064. Vehicle Costs - Repairs & Maintenance	2,000	2,000	2,000
257436065. Vehicle Cost - Tyres	0	0	0
585433071. Insurance - Plant & Equipment	0	0	0
Total Expenses	90,370	90,370	90,370

**Budget
Comments**

allows for levy changes

site contracted out recycling revenue to contractor

visa cost unknown

visa cost unknown

anticipates contracted service yr 3

Turangi Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2591360. Sales	0	0	0
259136004. TIP MTCE RECEIPTS	0	0	0
259136011. Refuse Cash Sales	-121,000	-130,000	-148,000
25913602. Refuse Commerical Sales	-32,000	-35,000	-39,000
25913603. Refuse Coupons Sales	0	0	0
25913607. Greenwaste Sales	-43,000	-43,000	-43,000
Total Income	-196,000	-208,000	-230,000
2592405. Advertising & Publicity	0	0	0
259240502. Advertising - Collection	0	0	0
259240504. Advertising - Tip Maintenance	0	0	0
2592415. Cashier Unders	0	0	0
2592480. Printing & Stationery	100	100	100
2592500. Rent/Lease	500	500	500
259251004. TIP MAINTENANCE TELEPHONES	650	650	650
2592600. Bad Debts	0	0	0
259261004. TIP MTCE FEES & CHARGES	280	280	280
2592805. Consultants Fees	0	0	0
2592805041. TIP MTCE PROF/SPECIAL FEES	0	0	0
2592805042. TIP MTCE CONSULTANT FEE	0	0	0
259282502. COLLECTN LEGAL FEES	0	0	0
259282504. TIP MTCE LEGAL FEES	0	0	0
2592840. Valuation Fees	0	0	0
259284002. COLECTN VALUATION	0	0	0
2594015. Maintenance - Wastewater	0	0	0
259401502. Collection Expenses	0	0	0
259401504. Mtce - Wastewater Rising Mains	0	0	0
2594040. Maintenance - Buildings	0	0	0
259404004. TIP MTCE R&M BUILDING	3,000	3,000	3,000
2594045. Mtce-Machinery & Plant	0	0	0
259404504. TIP MTCE R&M PLANT	5,000	5,000	5,000
259406504. Tip Maintenance	0	0	0
259430002. COLECTN CLEANING	0	0	0
2594310. Contracts	0	0	0
259431002. COLECTN CONTRACTS	0	0	0
259431003. Consents	0	0	0
259431004. TIP MTCE CONTRACTS	340,000	350,000	350,000
2594310041. VEGE TIP CONTRACTS	0	0	0
259431504. TIP MTCE ELECTRICITY	1,500	1,500	1,500
2594325. Hire	0	0	0
259432504. VEGE TIP EXT PLANT HIRE	55,000	55,000	55,000
2594325041. TIP MTCE EXT PLANT HIRE	0	0	0
259433002. COLECTN INSURANCE	0	0	0
259433004. TIP MTCE INSURANCE	600	600	600
2594335. Materials and Supplies	0	0	0
259433501. Materials and Supplies	200	200	200

259433502. COLECTN MATERIALS	0	0	0
259433504. TIP MTCE PURCHASES	0	0	0
2594335041. TIP MTCE MATERIALS	0	0	0
2594360. Vehicle Running Costs	0	0	0
Total Expenses	406,830	416,830	416,830

0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
416,830	423,030	422,630	422,630	422,630	422,630	422,630

**Budget
Comments**

levy increase

levy increase

unknown visa fees

weighbridge operation

anticipates new contract increase

allows for thermal rolls etc and
weighbridge coming online

Omori Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
26113601. Sales	-17,400	-18,400	-21,000
Total Income	-17,400	-18,400	-21,000
2612500. Rent/Lease	0	0	0
261261004. TIP MTCE FEES & CHARGES	0	0	0
261280504. TIP MTCE PROF/SPECIAL FEES	0	0	0
2612805041. TIP MTCE CONSULTANT FEE	0	0	0
2612840. Valuation Fees	0	0	0
261284002. COLECTN VALUATION FEES	0	0	0
2614045. Mtce - Machinery & Plant	0	0	0
261404504. TIP MTCE R&M PLANT	4,000	4,000	4,000
2614065. Maintenance - Other	2,000	2,000	2,000
2614310. Contracts	0	0	0
261431002. COLECTN CONTRACTS	0	0	0
261431004. Contracts Tip Maintenance	55,000	55,000	55,000
2614310041. VEGE TIP CONTRACTS	0	0	0
2614325. Hire	0	0	0
261432502. COLECTN EXT PLANT HIRE	0	0	0
261432504. TIP MTCE EXT PLANT HIRE	18,000	18,000	18,000
2614325041. VEGE TIP EXT PLANT HIRE	0	0	0
2614335. Materials and Supplies	0	0	0
261433504. TIP MTCE PURCHASES	0	0	0
2614335041. TIP MTCE MATERIALS	0	0	0
2614335042. VEGE TIP MATERIALS	0	0	0
Total Expenses	79,000	79,000	79,000

**Budget
Comments**

reflects levy increase over ist 4 yrs

Unknown cost for Contactless
payments

reflects contract renewal with cost
increase

Whareroa Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2621360. Sales	0	0	0
262136004. TIP MTCE RECEIPTS	0	0	0
262136011. Refuse Cash Sales	0	0	0
26213605. Refuse Stickers Collected	0	0	0
Total Income	0	0	0
2622480. Printing & Stationery	0	0	0
2622840. Valuation Fees	0	0	0
262404504. TIP MTCE R&M	0	0	0
2624065. Maintenance - Other	0	0	0
2624310. Contracts	19,000	19,000	19,000
262431004. Contracts	0	0	0
2624325. Hire	0	0	0
262432502. COLECTN EXT PLANT HIRE	0	0	0
2624325041. VEGE TIP EXT PLANT	0	0	0
2624335. Materials and Supplies	0	0	0
262433502. COLECTN MATERIALS	0	0	0
262433504. TIP MTCE PURCHASES	0	0	0
2624335041. TIP MTCE MATERIALS	1,500	1,500	1,500
Total Expenses	20,500	20,500	20,500

**Budget
Comments**

no sales as rate funded site

anticipates a new contract with
increase in Oms cost

District Solid Waste Disposal	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
5721330. Fines	0	0	0
Total Income	0	0	0
5722405. Advertising & Publicity	18,000	18,000	18,000
5722805. Consultants Fees	40,000	40,000	40,000
5722820. Grants	10,000	10,000	10,000
5722823. Sponsorship	0	0	0
57228231. Marae Waste Minimisation	5,000	5,000	5,000
57228232. Event Waste Programme	0	0	0
5724335. Materials and Supplies	40,000	40,000	40,000
57243351. EnviroSchools	13,000	13,000	13,000
57243852. Routine testing for resource consent compliance	2,000	2,000	2,000
57243859. Resource consent audit costs	7,000	7,000	7,000
Total Expenses	135,000	135,000	135,000

**Budget
Comments**

allows for consent renewals and
operations /landfill gas
waste mimimisation fund

Para kore

recycliong bins etc
enviroschools

Litter Control - Taupo	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2441340. Grants Received	0	0	0
244136012. MISC RECEIPTS	0	0	0
2441380. Sundry	0	0	0
244133012. Litter Fines	0	0	0
Total income	0	0	0
2442205. Clothing/Uniforms	0	0	0
244221012. Employee Assistance Programme	0	0	0
2442215. Health & Safety	0	0	0
2442270. Staff Teas	0	0	0
2442275. Staff Training	0	0	0
244240012. Accommodation & Meals	0	0	0
2442405. Advertising & Publicity	5,300	5,300	5,300
2442420. Cellphone & data (use 5512420)	0	0	0
2442480. Printing & Stationery	0	0	0
2442500. Rent	0	0	0
244250012. MISC RENT/LEASE/HIRE	0	0	0
2442505. Subscriptions	0	0	0
2442815. Debt Collection	0	0	0
2444040. Maintenance - Buildings	5,000	5,000	5,000
244404010. Building Maintenance	0	0	0
2444310. Contracts	300,000	300,000	300,000
2444335. Materials and Supplies	8,000	8,000	8,000
244433508. LITTER CTRL MATERIALS	0	0	0
2444345. Rubbish Disposal	15,000	15,000	15,000
244436061. Vehicle Costs - Purchase	0	0	0
244436062. Vehicle Costs - Rego & Roaduser	3,417	3,417	3,417
244436063. Vehicle Costs - Fuel & Oil	5,000	5,000	5,000
244436064. Vehicle Costs - Repairs & Maintenance	3,500	3,500	3,500
244436065. Vehicle Costs - Tyres	1,000	1,000	1,000
244436099. Vehicle Costs - Other	0	0	0
Total Expenses	346,217	346,217	346,217
	346217	346217	346217
	28617	28617	28617
	3000	3000	3000
	377834	377834	377834

**Budget
Comments**

wages need to be added here by Julie

covers bin maintenance district wide

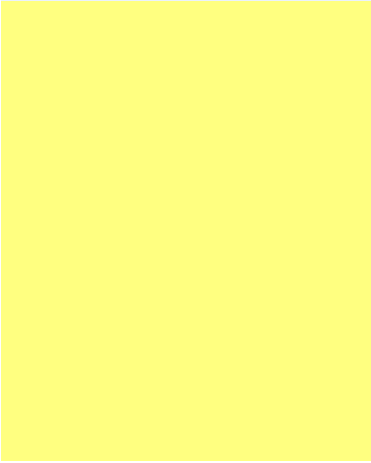
covers litter bin and street sweeping
contracts

Litter Control - Turangi	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2454335. Materials and Supplies	5,000	5,000	5,000
245433512. Miscellaneous	0	0	0
2454345. Rubbish Disposal	10,000	10,000	10,000
2454355. Vandalism	0	0	0
2454360. Vehicle Running costs	0	0	0
245436061. Vehicle Costs - Purchase	0	0	0
245436062. Vehicle Costs - Rego & Roaduser	3,417	3,417	3,417
245436063. Vehicle Costs - Fuel & Oil	5,000	5,000	5,000
245436064. Vehicle Costs - Repairs & Maintenance	4,000	4,000	4,000
245436065. Vehicle Costs - Tyres	1,200	1,200	1,200
Total Expenses	28,617	28,617	28,617

Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31
5,000	5,000	5,000	5,000	5,000	5,000	5,000
0	0	0	0			
10,000	10,000	10,000	10,000	10,000	10,000	10,000
0	0	0	0			
0	0	0	0			
0	0	0	0			
3,417	3,417	3,417	3,417	3,417	3,417	3,417
5,000	5,000	5,000	5,000	5,000	5,000	5,000
4,000	4,000	4,000	4,000	4,000	4,000	4,000
1,200	1,200	1,200	1,200	1,200	1,200	1,200
28,617	28,617	28,617	28,617	28,617	28,617	28,617

need to check with Greg Hadley re any other costs associated here / wages etc

**Budget
Comments**



Litter Control - Mangakino	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
2464335. Materials and Supplies	1,000	1,000	1,000
2464345. Rubbish Disposal	2,000	2,000	2,000
Total Expenses	3,000	3,000	3,000

Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31
1,000	1,000	1,000	1,000	1,000	1,000	1,000
2,000	2,000	2,000	2,000	2,000	2,000	2,000
3,000	3,000	3,000	3,000	3,000	3,000	3,000

Need to check with Greg Hadley regarding any wages costs etc

**Budget
Comments**

Stormwater	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24	Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31	Budget LTP Comments
439131810. Reticulation & Connections	0	0	0	0	0	0	0				
4391380. Sundry	0	0	0	0	0	0	0				
4390735. Other Income	0	0	0	0	0	0	0				
Total Income	0	0	0	0	0	0	0	0	0	0	
4392400. Accommodation & Meals	0	0	0	0	0	0	0				
439240504. Advertising - Outlets	0	0	0	0	0	0	0				
439240510. Advertising	0	0	0	0	0	0	0				
4392420. Cellphone & data (use 5512420)	0	0	0	0	0	0	0				
4392425. Conference Fees	0	0	0	0	0	0	0				
439245002. Mtce General Expenses	0	0	0	0	0	0	0				
4392470. Catering	0	0	0	0	0	0	0				
4392480. Printing & Stationery	0	0	0	0	0	0	0				
4392515. Travel	0	0	0	0	0	0	0				
439261018. Resource Consents Fees/Charges	0	0	0	0	0	0	0				
439280018. Resource Consents Audit Fees	0	0	0	0	0	0	0				
4392805. Consultants Fees	0	0	0	0	0	0	0	0	0	0	
439280504. OUTLETS CONSULTANTS FEES	0	0	0	0	0	0	0				
439280510. RETIC CONSULTANT'S FEES	0	0	0	0	0	0	0				
439280514. Consultant Fees - Reticulation	0	0	0	0	0	0	0				
439280516. Consultant Fees - Ephemeral Gullys	0	0	0	0	0	0	0				
439280518. Consultant Fees - Resource Consents	0	0	0	0	0	0	0				
4392806. Professional Fees	0	0	0	0	0	0	0				
4392825. Legal Fees	0	0	0	0	0	0	0				
439282518. Resource Consents Legal Fees	0	0	0	0	0	0	0				
439283004. Outlets	0	0	0	0	0	0	0				
439283014. Retention Areas	0	0	0	0	0	0	0				
439283018. Reg Fees Resource Consents	0	0	0	0	0	0	0				
439283504. Professional/Special Fees	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	allows for easment development
439283510. Professional/Special Fees	0	0	0	0	0	0	0				
4392840. Valuation Fees	0	0	0	0	0	0	0				
4392845. Research & Development	0	0	0	0	0	0	0				
4394025. Maintenance - Stormwater General	245,000	245,000	245,000	245,000	245,000	245,000	245,000	245,000	245,000	245,000	additional defender maintenace
439402512. Maintenance - Inlets/Outlets	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	
439402514. Maintenance - Reticulation	98,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	
439402516. Maintenance - Ephemeral Gullys	0	0	0	0	0	0	0				
439402518. Resource Consents	0	0	0	0	0	0	0				
439404502. PUMPSTN R & M VEHICLES & PLANT	0	0	0	0	0	0	0				
4394065. Maintenance - Other	0	0	0	0	0	0	0				
439431018. Contracts - Resource Consents	0	0	0	0	0	0	0				
439431502. MTCE ELECTRICITY	0	0	0	0	0	0	0				
439431514. Electricity - Reticulation	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
4394325. Hire	0	0	0	0	0	0	0				
439432504. OUTLETS EXT PLANT HIRE	0	0	0	0	0	0	0				
439432510. Retic External Plant Hire	0	0	0	0	0	0	0				
439432514. Hire - Reticulation	0	0	0	0	0	0	0				

Stormwater and Solid Waste Administration	Total 2021/31 LTP 2021/22	Total 2021/31 LTP 2022/23	Total 2021/31 LTP 2023/24
5681380. Sundry revenue	0	0	0
568133012. Litter Fines	0	0	0
Total Income	0	0	0
5682205. Clothing/Uniforms	0	0	0
5682215. Health & Safety	0	0	0
5682220. Professional Memberships	0	0	0
5682275. Staff Training	2,500	2,500	2,500
5682290. Staff Gifts	0	0	0
5682400. Accommodation & Meals	900	900	900
5682405. Advertising & Publicity	7,000	7,000	7,000
5682420. Cellphone & data (use 5512420)	0	0	0
5682425. Conference Fees	4,500	4,500	4,500
5682445. Entertainment	0	0	0
5682470. Catering	0	0	0
5682475. Postage & Freight	0	0	0
5682480. Printing & Stationery	0	0	0
5682485. Publications	0	0	0
5682510. Telephone & tolls	0	0	0
5682515. Travel	800	800	800
5682805. Consultants Fees	0	0	0
56828051. PROFESSIONAL/SPECIAL FEES	0	0	0
5682806. Professional Fees	0	0	0
56828061. Professional Fees (Business Unit charges only)	0	0	0
5682820. Grants,Donations & Sponsorships	0	0	0
5682825. Legal Fees	0	0	0
5682835. Subscriptions	850	850	850
5682840. Valuation Fees	8,700	0	0
5684025. Maintenance-Stormwater	0	0	0
5684055. Maintenance - Office Equipment	0	0	0
5684062. Maintenance - Software	13,000	13,000	13,000
5684315. Electricity	0	0	0
5684335. Materials & Supplies	3,500	3,500	3,500
Total Expenses	41,750	33,050	33,050
	41750	33050	33050

Total 2021/31 LTP 2024/25	Total 2021/31 LTP 2025/26	Total 2021/31 LTP 2026/27	Total 2021/31 LTP 2027/28	Total 2021/31 LTP 2028/29	Total 2021/31 LTP 2029/30	Total 2021/31 LTP 2030/31
0	0	0	0			
0	0	0	0			
0	0	0	0	0	0	0
0	0	0	0			
0	0	0	0			
0	0	0	0			
2,500	2,500	2,500	2,500	2,500	2,500	2,500
0	0	0	0			
900	900	900	900	900	900	900
7,000	7,000	7,000	7,000	7,000	7,000	7,000
0	0	0	0			
4,500	4,500	4,500	4,500	4,500	4,500	4,500
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0	0	0	0
800	800	800	800	800	800	800
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
0	0	0	0			
850	850	850	850	850	850	850
8,700	0	0	8,700	0	0	8,700
0	0	0	0			
0	0	0	0			
13,000	13,000	13,000	13,000	13,000	13,000	13,000
0	0	0	0			
3,500	3,500	3,500	3,500	3,500	3,500	3,500
41,750	33,050	33,050	41,750	33,050	33,050	41,750

41750 33050 33050 41750 33050 33050 41750

**Budget
Comments**


allows for 2 staff members

allows for two staff members

1/3 share of asset finda cost

LTP Business Case 1 to 3 years

Renewals district Waste facilities

Project Name	District waste facility renewals program		
Description	<p>Council has 6 waste and recycling facilities located across the district which offer varying degrees of service delivery.</p> <p>Renewal works have been packaged per facility, but due to high public usage some tasks may need to be rescheduled if urgent renewals are needed at specific sites</p> <p>A list of renewal packaged works can be found in the finance section of the AMP.</p> <p>It is vitally important that the district solid waste facilities can operate without hindrance to ensure that public health is supported.</p> <p>District facility performance and renewal needs are assessed monthly through the operational contract performance reporting and or daily from operational contractors which forms the 10yr renewal program.</p> <p>The first year expenditure includes the repair of the load out wall that is on a lean with the concrete cracking</p>		
			
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, renewal works are on existing infrastructure across the district
Programme	District Solid Waste facility renewals	Location	In various locations throughout the district

Strategic Objectives <i>(see appendix below to help score Strategic Objectives)</i>			
		Score	Project Score Total
Primary	Maintaining levels of service	3	

Secondary	Health Safety	3	Total of both Scores 6	
Background	This project is part of an ongoing program of renewing infrastructure at the 6 district facilities			
Business Need	Ongoing operation of the six waste facilities across the district			
Benefits and Wellbeings (see appendix)				
Benefit	How will you quantify and track	Benefit Type	Wellbeing	
Process efficiency	site contractor informs Council regarding site condition assessments / council staff undertake assessments condition	Facilities are fit for purpose Reduction in operational maintenance costs	Economic	
Improved public Health	Facilities are safe for the public to use The public find the facilities easy to use	Waste handled appropriately Reduced health and safety incidences Increased community satisfaction regarding facility usage	Social	
Waste reduction	Recycling facilities provide for waste reduction and are fit for purpose	Facilities enable users to recycle as they are safe and easy to use	Environmental	
Opportunity	To improve the satisfaction of facility users			
Scope	In	Out		
	<p>Renewal when appropriate of existing infrastructure at the 6 district facilities. Renewals expenditure based on age and regular condition assessment</p> <p>Expenditure based on packaged renewals at each facility</p> <p>Renewals include but are not limited to these types of infrastructure: Fencing, weighbridge barriers, kiosk fittings, bump stops, signage, road seal, building painting and cladding, street lights, cash registers, sewer pumps, load out walls, intercom systems, fire prevention gear load out wall, etc</p>	New works		
Constraints	none	Assumptions	none	
Dependencies	Site operational contracts and contractors			
Stakeholders	Council, community, WRC, Iwi, contractors, larger customers			
Change Mgmt.	No change management			

Risk of Doing	Low	Commentary	Council is renewing exiting infrastructure
Risk of Not Doing	Facilities will become run down and possibly unsafe for contractors and users	Commentary	These sites have high public use and must be in a fit state

	Option One: Change Nothing	Option Two <List Option>
Overview	Don't undertake renewal works at district facilities	Undertake renewals as required
Advantages	No capital renewal spend	Reduction in maintenance cost. Facilities are fit for purpose with high community usage
Disadvantages	Sites could become dangerous to work at and for the public	Capital renewal spend
Costs	Increased maintenance on older infrastructure that gets high public use	Renewal spend varies see cost section below and Packaged works breakdown in the finance section of the AMP
Achievability	None	This is business as usual
Recommendation		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p>There are packaged renewal tasks for each facility based on age and condition assessment as well as renewals that will pop due to the high usage by the community. Works will be administered by Council with the works contracted out.</p>

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Construction works	Facility renewals as required
	See Amp for packaged facility tasks

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Asset Manager	Procurement / contractor liaison	Internal	3%	12 months

Asset Manager	Installation	Internal	10%	6 months
Contractor	Installation	External	30%	6 months

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
District facilities	\$122 k	\$45 k	\$54 k	\$58 k	\$20 k	\$62 k	\$40 k	\$46 K	\$30 k	\$36 k
Approval <i>If there's been a significant change in scope or change in cost/benefit</i>										
Approvers Name		<insert name of person approving as well as hyperlink to their approval>								
Date		<Date of Approval>								

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

LTP Business Case 7 to 10 years or pushed out due to consent renewal

Project Name	Final Capping at end of consent period		
Description	Place final cap as landfill has run out of operating consent		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Paint by Numbers
Programme	Operation of the Broadlands RD landfill	Location	Broadlands RD Landfill

Strategic Objective (see appendix below to select primary and secondary)			
		Score	Project Score Total
Primary	Legislatively Compliant	5	Total of Both Scores 10
Secondary	Protecting our Environment	5	
Background	Council has owned and operated this lined landfill since the year 2000. It is a consent requirement that the site is appropriately capped.		
Business Need	Adhere to the requirement of the resource consent and place the final capping on the site		
Option/s	Get a new consent postpone the final capping until the end of the new consent Close the facility and truck waste out of the district, place final capping		
Benefits and Wellbeings	Legislative compliance - Environmental		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design Installation / Construction	Infrastructure upgrade	Access Rd realignment
Potential Issues with preferred option	Project will depend on 2027 operational consent renewal		
Risk of Doing Nothing	There is a consent requirement so Council would be in breach of the operational consent		

Timescale/Cost – give a summary of how the project phases will be delivered.									
LTP 2021-2031						47	48		
Phase (Initiate, Plan, Execute)						Design	Installation / Construction		
Cost of phase and year spent						\$50,000	\$1.15Million		

Approval This is the initial approval of the Business Case. It may be further prioritised against other projects	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Lined pond provision for fire prevention
Description	<p>Council recently had a fire at the Broadlands Rd landfill. This exposed the need for a pond to enable both tanker refilling and helicopter monsoon bucket filling.</p> <p>At the top of the site there is already a pond that requires minimal additional works to get the correct shape, then this would be lined with HDPE and a concrete pad placed on the bottom to support the monsoon bucket. The water reticulation on site would then be extended so that the pond could be kept full, there would be some fencing requirement.</p>   <p>The ability to get large quantities of water onto a landfill fire early is essential to stop the spread of the fire across the landfill and outside of the landfill footprint, this could possibly be Mount Tauhara.</p> <p>Feedback from the local fire department was that the Hydrant on site was inadequate and that a pond that serviced both tankers and helicopters was supported.</p> <p>WRC have stated that any consent renewal would have to incorporate fire protection as a condition of consent</p>

Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, Council already undertakes lining operations when developing new landfill cells
Programme	Operation of the Broadlands Rd Landfill for the safe disposal of the districts refuse	Location	The pond is located at the southern corner of the Broadlands Rd landfill land, as shown in the attached photo

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Public Health and Safety	5	Total of both Scores 10
Secondary	Being Resilient and prepared	5	
Background	Fires in the waste industry have increased massively over the last twelve months, and a number of these have been put down to Lithium-ion batteries, and while comms can go some way to reducing the impact they are having, it won't prevent this from occurring again. A pond for both water tanker and helicopter monsoon bucket would enable maximum water to be applied.		
Business Need	Provide a filling point for tankers and helicopters in case of a fire at the Broadlands Rd Landfill		
Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Improved Public Health	Fires impacting the Broadlands Rd Landfill	No contaminates released into the air from a fire at the landfill	Social
Revenue protection	A fire may stop the landfill taking waste, with the resulting drop in revenue from the site as material would have to be trucked out of the district	Financial benefit	Economic
Emissions reduction	A fire at the landfill would emit significant emissions	No contaminates released into the air from a fire at the landfill	Environmental
Legislative Compliance	No Fires at the site	There is a ban on landfill fires	Environmental
Opportunity	Relationship with Iwi, due to location next to Mount Tauhara, safer working environment for site staff and users, community satisfaction as community aware of fire prevention		
Scope	In	Out	
	<ul style="list-style-type: none"> Investigation Design of pond and pipe Installation / extension of existing water main and valve placement Liner installation and testing Formation of access track 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 	

	<ul style="list-style-type: none"> Liaison with helicopter operators regarding safe access Installation of concrete block in the base of the pond to sit the monsoon bucket on Meetings with fire agencies re operational procedures Review of current operating procedures 	
Constraints	none	Assumptions none
Dependencies	Landfill operators, landfill consent compliance, fire department access and procedures	
Stakeholders	Council, Tuwharetoa Trust Board, WRC, community, landfill contractors, fire department, helicopter operators, doc, Contact Energy, Iwi, Medical officer of health	
Change Mgmt.	Work with on site operators, Fire department and helicopter providers to make sure that all parties are aware of the water source	
Risk of Doing	Consent to operate the site is not renewed past 2027	Commentary The operating consent for the site expires in 2027, but there is room for another 20+ years of filling operations
Risk of Not Doing	<p>Fires in the waste industry have become a real issue as the commodities being disposed is diversifying and come with an increased fire risk.</p> <p>Any consent renewal will require council to adequately provide fire prevention options.</p> <p>A large fire at the landfill would impact the Taupo township due to the hazardous plume that could creep over the town.</p>	Commentary Water storage capability for landfill operations are now paramount to reducing the risk of landfill fires

Options Analysis <i>(add more options if applicable)</i>			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	A recent fire at the Landfill exposed the current ability to fight a large-scale fire at the site	Use one of the old septage ponds, line it with plastic and create a storage pond for tankers and helicopters in case of another fire	Increase the Pipe size into the landfill
Advantages	No capital spend	The ability to concentrate water onto the fire	Would fill tankers quicker on site
Disadvantages	No reliable point to access water from a storage pond on site for Helicopters and tankers	Cost of purchase	Not suitable to fill monsoon buckets quickly
Costs	A fire could not only disable the landfill, meaning waste would have to be trucked out of the district, there would be a clean up bill, the fire could spread to Mount Tauhara	Capital = \$110K	Capital = \$129K

Achievability	None	The old septage pond is large enough to turn into a water storage pond in case of a fire	Due to the hazardous nature of the site, if there is a fire, Helicopters will be the main tool to extinguish
Recommendation	Option 2. Use the old septage pond and line it to be used		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p><Describe the following at a high level:></p> <ul style="list-style-type: none"> • There are several liner contractors in the market, the project would be separable portions split between liner and pipe installation. • Contract management arrangements are that contract, and project management is undertaken inhouse • Timeframes, installation will be over a three-week period weather permitting

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Liaise with Helicopter providers to make sure access to the pond is safe
Contract document and procurement	Separate out the liner provision from the pipe installation and then go to the market
Pond commissioned	On site operational review with relevant parties, Fire Dept, Landfill operators, Helicopter pilots
Pipe connected	Sufficient pond and pipe capacity to service a fire helicopter safely
Change of SOPs regarding firefighting on site and testing undertaken	All parties involved in site operations and firefighting are aware of new Sops and procedures have been agreed

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management internal	Internal	15 %	3 weeks
Investigate and design	Construction drawings	External	1	10hrs
Procurement	Tender	Internal	1	8hrs
Contractor installation	construction	External		3 weeks

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Design / review	\$8,000.00	Opex
Pond and pipe build	\$ 110,000.	Capex
Total Estimated Capital Cost	\$110,000.00	
Total Estimated Operational Cost/year		
Total Estimated cost	\$ 118,000.00	
How accurate are your estimates Costs fairly accurate (+/-10%)		
This project will be loan funded under the Stormwater cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Design / Installation									
Cost of phase and year spent	\$8000 \$110,000									

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
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4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Gas Flare and Liner cover		
Description	<p>ETS credit costs are currently at \$34.5 leaving Council with an emission exposure of some \$1mil per annum. Government have signalled that the price of credits is likely to increase as they use cost as a national incentive to reduce emissions.</p> <p>The provision of a gas flare will become economic at a certain credit price taking into account, capital, operating costs and the installation of additional cover material to encase the gas. The current pumice top while environmentally acceptable when keeping water out does allow gas to vent, and the optimum waste depth is 20m plus which we don't currently have, we are at 15m depth.</p> <p>Council could obtain a 60% reduction in emissions and thus reduced emission costs with a Flare, but the Key point will be a new resource consent to operate the landfill after the current consent expires in 2027. There is 20 years of additional filling after the consent term at the current waste tonnages, with the other option being to turn the transfer station into a bulk load out site, which in time it will become, and transport waste out of the district.</p> <p>The costs of operating a landfill with or without a gas flare are better options currently as council negates the cost of transport which adds cost.</p> <p>Due to the complexity and cost of gas engines, the site does not emit enough gas to warrant power generation.</p>  <p>The gas flare would incorporate a number of gas wells and associated pipe work as well as an alternative cover material, which could be a liner, obviously this adds cost to this project. The liner would need to be cut and redone over time as parts of the site receive more waste.</p>		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Medium	Project Complexity	Medium, there are a number of liner materials we could use and a couple of options when it comes to the flare and its capability / cost
Programme	Operation of the Broadlands Rd Landfill for the safe disposal of the districts refuse	Location	The flare will be located at the Landfill, we will look to get this below the skyline, so it is not seen from town. The pipe infrastructure will be spaced out of the active fill site

Strategic Objectives (<i>see appendix below to help score Strategic Objectives</i>)			
		Score	Project Score Total
Primary	Maintaining levels of service	4	Total of both Scores 7
Secondary	Protecting our environment	3	
Background	<p>The landfill falls under the emissions trading scheme, and Govt are using the scheme to reduce national emissions. Previously council has been able to obtain credits form overseas from as little as three dollars, but we don't have the ability to do so now and must buy off the NZ scheme. Council has the option of carrying on paying the full cost by increasing gate fees and rates or try and reduce council's exposure and the amount of emissions by burning the methane gas which is 21 times worse than carbon.</p> <p>Council has a consent to operate the landfill until 2027, and so we are looking to obtain a new consent to utilise the 20 odd years of filling space that could be achieved by removing pumice over time. It would not be cost effective to install a flare for the remainder of the current consent but if we renew we have twenty plus years then the economics of construction and operation of a flare could become viable.</p>		
Business Need	Reduce Councils exposure to the Emissions trading scheme, and reduce the impact of operating a landfill on the environment		
Benefits and Wellbeings (<i>see appendix</i>)			
Benefit	How will you quantify and track		Benefit Type
Emissions reduction	Flare operation will capture emission reduction		Burns methane
Lower ETS cost	By the amount of emissions purchased annually		Reduction in exposure to emissions trading scheme
Improve community affordability	A reduction in emissions should lower the operating costs of the landfill		Not having to purchase emission credits
Legislative Compliance	A new consent to operate the landfill will require a gas flare to cut emissions		Need to be compliant
Opportunity	There is a global realisation that we need to cut emissions to reduce the impact of global warming, a gas flare will support this aim.		
Scope	In		Out
	<ul style="list-style-type: none"> Investigation Design Installation of alternative cover Installation of pipe infrastructure and gas wells Installation of gas flare Negotiations around operational contract 		<ul style="list-style-type: none"> Base lining of any new cell, these are standalone projects
Constraints	Term of the current consent, and the need for a new consent to make a flare viable	Assumptions	That emission credit prices will continue to increase
Dependencies	Landfill operators, new consent term, ability to capture and burn enough gas, waste depth, cover type and cost		
Stakeholders	Council, WRC, community, landfill contractors, community, lwi		
Change Mgmt.	Specialised staff will need to be brought into any operational contract for the landfill who specialise in gas well development and piping and gas flare operation and monitoring		

Risk of Doing	Consent to operate the site is not renewed past 2027	Commentary	The operating consent for the site expires in 2027, but there is room for another 20+ years of filling operations
Risk of Not Doing	It is suggested that any new operating consent for the site will incorporate gas destruction	Commentary	Operating gas infrastructure on landfills is an outcome of the Govt looking to reduce emissions

Options Analysis (add more options if applicable)			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Carry on paying the cost of emissions through rates and user charges.	Install a gas flare once we have a new consent to operate after the 2027 current consent expires	Close the landfill at the end of the consent term, transform the site to enable bulk transport of waste to another landfill
Advantages	No capital spend. If we don't get a consent to operate the site after 2027 then it does not make economic sense to install a gas flare. As soon as the site does not take any waste then you don't pay any emissions costs even when the site will carry on venting gas for some years	As the emission credit costs climb, we will partially avoid the cost as well as reduce emissions	When the landfill reaches its final contours, the site will need to morph to enable bulk transport of waste from the site to another landfill. This option would bring that transformation forward
Disadvantages	If we do get a consent it will likely be part of the conditions to operate.	Cost of purchase and operating the flare and the costs of ongoing gas well development	The cost of transport of waste out of the district is the least economic option of the three, but will be the end outcome once the landfill is full or the current consent runs out
Costs	Cost will be in continuing to pay full emission costs	Capital = \$3.5 million \$400K per year field extension	Capital 1.9M transfer station Capital final capping
Achievability	No problems, just need to apply the appropriate charges to the gates and rate	Gas destruction is widespread on landfills across NZ	A large number of Councils across NZ transport waste to regional facilities
Recommendation	Option 2. If a consent can be obtained to operate the landfill after the current consent expires, council would avoid the cost of transporting waste out of the district.		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p><Describe the following at a high level:></p> <ul style="list-style-type: none"> • There are several gas flare companies in the market that supply and operate gas destruction infrastructure, the project would be separable portions split between liner, gas well and pipe installation and gas flare installation • Contract management arrangements are that contract, and project management is undertaken inhouse • Design to consultants • Timeframes, installation will be over a 9-month period weather permitting

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Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Liaise with the market to determine the best gas destruction infrastructure and liner options
Contract document and procurement	Separate out the liner provision from the pipe and flare installation and then go to the market
Liner or cover installed	Cover material able to avoid venting of landfill gas
Gas well and pipe work installed	A number of wells will be constructed to harvest the gas, with associated pipe work to the flare
Flare commissioned	On site commissioning and operation
Negotiated operational contract	Specialised gas operator employed in operating gas infrastructure

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant
Gas abstraction to the desired levels	moderate	medium	moderate

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management	Internal	25%	6 months
Investigate and design	Construction drawings external	external	40%	2 months
Liner construction	To install an alternative liner that does not vent gas	external		1 month
Gas flare pipes and wells	To install the gas wells and pipe work and install and commission the flare	External		6 months

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Design / review / consenting/ Options	\$90,000	Capex
Liner	\$ 2,500,000.00	Capex
Gas flare wells pipes	\$1,000,000	
Total Estimated Capital Cost	\$3,540,000.00	Capex
Total Estimated capex/year	\$400,000	Capex
Total Estimated opex/year	\$60,000	Opex
Total Estimated cost	\$ 3,540,000	Capex
How accurate are your estimates		

Costs fairly accurate (+/-20%)
This project will be loan funded under the Solid waste cost centre

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Consents	Options finalised	Design / review	Construction						
Cost of phase and year spent	\$25,000	\$25,000	\$40,000	\$3.5 mil	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Infrared camera for fire prevention Broadlands Rd Landfill		
Description	<p>The project is to place a mobile infrared camera with a generator and solar charging at the Broadlands RD Landfill to provide an early warning of a fire at the tip head.</p> <p>Recently the number of fires in the waste industry caused by lithium Iron batteries has shown a massive increase, it is now best practise to provide early detection. WRC and the District Health Board are also supporting early detection.</p> <p>A fire at the Landfill could threaten Mount Tauhara and could cause the evacuation of parts of town.</p>  <p>The camera will operate after the site closes, and will be monitored off site, the camera will be able to identify hot spots (fires) this will then trigger a response process. Early detection of fires will reduce the damage to the landfill but also the impact on the local community due to the hazardous material from the fire</p>		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, Envirowaste operate several cameras of this type and this project reflects the solution they have at their landfill
Programme	Operation of the Broadlands Rd Landfill for the safe disposal of the districts refuse	Location	This will be a mobile camera and as such will need a small generator and a trailer. The camera will be moved as the tip head moves. The camera will be located at the Broadlands Rd Landfill.

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Public Health and Safety	3	Total of both Scores 10
Secondary	Being Resilient and prepared	5	

Background	Fires in the waste industry have increased massively over the last twelve months, and a number of these have been put down to Lithium iron batteries, and while comms can go some way to reducing the impact they are having, it won't prevent this from occurring again.		
Business Need	To provide early warning of a fire after hours at the Broadlands Rd Landfill.		
Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Improved Public Health	Fires impacting the Broadlands Rd Landfill	No contaminants released into the air from a fire at the landfill	Social
Revenue protection	A fire may stop the landfill taking waste, with the resulting drop in revenue from the site as material would have to be trucked out of the district	Financial benefit	Economic
Emissions reduction	A fire at the landfill would emit significant emissions	No contaminants released into the air from a fire at the landfill	Environmental
Legislative Compliance	No Fires at the site	There is a ban on landfill fires	Environmental
Opportunity	Relationship with Iwi, due to location next to Mount Tauhara, safer working environment for site staff and users, community satisfaction as community aware of fire prevention		
Scope	In	Out	
	<ul style="list-style-type: none"> Investigation Design Installation Cameras currently operated at Hampton downs, Council would look to replicate this camera solution Site visit to Hampton Landfill Identification of Council IT needs Negotiation of operating contract for the camera and for the ongoing landfill observation Site SOPs Fire agency notified 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 	
Constraints	Will need to negotiate a monitoring contract, not a lot of options in NZ, Envirowaste use American firm	Assumptions	That Tec will integrate with Council systems, IT reviewing
Dependencies	Council IT system, landfill operational SOPs, fire agency SOPs		
Stakeholders	Council, Tuwharetoa Trust Board, WRC, community, landfill users, health board		
Change Mgmt.	Current SOPs		
Risk of Doing	Options in the market are small and not developed in NZ	Commentary	Landfill fire risk has escalated recently but mobile Infrared camera options have yet to develop, so we are at the front of the wave re the tech
Risk of Not Doing	Fires in the waste industry have become a real issue as the commodities being disposed is	Commentary	Commercial landfill operators have already installed these cameras to reduce the risk of large-scale fires, while we have not had a major fire at the site for 20+ years the industry

	<p>diversifying and come with a fire risk</p> <p>Emissions from a fire could impact the Taupo township</p> <p>A fire could close the landfill resulting in additional cost in trucking material out of the district</p>		has seen a major change in the amount of fires over the last 12 months
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Options Analysis <i>(add more options if applicable)</i>			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	The tip head at the landfill is not monitored after hours. There is no ability to detect a fire on site after operating hours	Install a mobile camera that can identify hot spots and is monitored	Install a fixed camera
Advantages	No capital spend	Early detection of a fire	Reduce the purchase price but will need to provide power on site
Disadvantages	No early detection of a fire on site	Cost of purchase	Power will need to be provided to the camera location. The tip head is constantly moving so the camera may not be in the correct position
Costs	A fire could not only disable the landfill, meaning waste would have to be trucked out of the district, there would be a clean up bill, the fire could spread to Mount Tauhara	Capital = \$60K Operational 3yr = \$3.6K	Capital = \$85K Operational 3yr = \$3.6K
Achievability	None	Cameras are being used by EnviroWaste at Hampton Downs Landfill; this project reflects what they are doing	This option does away with having the camera on a trailer with a generator, so would be easier to achieve but loses the functionality that is required due to a moving tip head and will need a power cable
Recommendation	Option 2 Install a mobile camera mounted on a trailer with a generator and solar charging at the Broadlands Rd Landfill		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p><Describe the following at a high level:></p> <ul style="list-style-type: none"> • The procurement strategy, will incorporate looking at the market to see if any other applications outside what EnviroWaste are currently using at their landfill, if not go with the provider they have used • Contract management arrangements are that contract, and project management is undertaken inhouse • Timeframes, installation will be over a three-week period weather permitting

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Undertake a market review to see if there are any other products in the market that provide the outcome Council is looking for
Contract document and procurement	Selection of experienced provider, match up with IT requirements and select who will undertake monitoring
Camera installed	On site construction
Live monitoring of the tip-head	Early detection of landfill fires after hours
Negotiation of a monitoring contract, currently undertaken in USA	Ongoing observation of the tip head after hrs to identify fires and prevent them taking hold

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
IT risks of systems not integrating with Council systems	unlikely	Moderate	Medium

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management Internal	Internal	15%	3 weeks
Investigate and design	Construction drawings external	External	10%	3 weeks
IT integration	System integration	Internal	10%	1 month

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Design / review	\$1,000.00	Opex
Installation of device	\$ 70,000.	Capex
Maintenance of device (removal of contaminants)	\$1200.00 annually	Opex
Total Estimated Capital Cost	\$71,000.00	
Total Estimated Operational Cost/year	\$1200.00	
Total Estimated cost	\$ 71,000.00	
How accurate are your estimates Costs fairly accurate (+/-10%)		
This project will be loan funded under the Stormwater cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Design Installation									
Cost of phase and year spent	\$10,00 \$70,000									

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



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Empowering People	Process Efficiency	Protecting our Waterways	
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Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

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4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
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Placemaking

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4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
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Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Kerbside Waste and Recycling Service Review and Procurement		
Description	<p>The Taupo district kerbside waste and recycling collection contract was let for a term of 7+2+1 and is currently about to start the 2-year roll over period, with this term ending 1 July 2023.</p> <p>It is timely now to review the current service delivery considering that any changes would require consultation as well as allowance for procurement and a lead time for rollout of services.</p> <p>Drivers for the review are:</p> <ul style="list-style-type: none"> • Current service delivery has been in place since 2007 (it's time for a review) • There has been a push to have a national standardised service across NZ • There have been changes to H&S outcomes with differing service options • There is a need to have good quality recovered product as markets for materials have tightened • The community have identified litter impacts from the current service • The community are concerned about the number of plastic bags being disposed to landfill • There is an opportunity to include additional diversion options such as food waste collection • There is increased awareness of climate change with the community so opportunity to divert waste would reduce carbon emissions and cost related to that under the ETS <p>This project will entail evaluating several collection scenarios, with the Executive team and Councillors to agree on 3 scenarios to consult with the public over. The preferred collection methodology and mix of services will be selected after consultation.</p> <p>Any impacts of the new collection methodology will be determined, and workable solutions provided by the project team. A review of Section 17A of the Local Government Act 2002 will also be undertaken. Any changes to the fees and charges schedule will be identified and areas of collection will be confirmed before procurement for the new services begins. Once contractor resourcing has been finalised, delivery of resources (educational material, new bins, etc) and rollout can begin.</p>		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Large	Project Complexity	Medium, There are multiple service delivery options
Programme	To review the current kerbside waste and recycling program and procure services to commence 1 July 2023	Location	Urban Kerbside across the district including CBD

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Maintaining levels of service	4	

Secondary	Protecting our environment	4	Total of both Scores 8	
Background	Council has had the same kerbside refuse and recycling collection service since 2007			
Business Need	To review the current service and confirm service for a rollout from 1 July 2023			
Benefits and Wellbeings (see appendix)				
Benefit	How will you quantify and track		Benefit Type	Wellbeing
Reduction in greenhouse gas emissions	Reducing the amount of food waste going to landfill will reduce greenhouse gas emissions from landfill. This will be quantified and tracked through tonnages of food waste diverted.		Reduces greenhouse gas emissions	Environmental
Health & Safety	Possible reduction in H&S risk through reduction in manual handling of materials. This will be dependent on the collection methodologies selected.		Improved worker and public safety	Social
Improve community affordability	A fully rate funded service would result in a lower overall cost to the community		Reduction in overall cost to the community	Economic
Customer satisfaction	New service is easy to use and understand		People are empowered to be involved in waste reduction	Social
Opportunity	Council could further reduce waste to landfill and reduce emissions through having a world class kerbside waste and recovered material collection program.			
Scope	In		Out	
	<ul style="list-style-type: none"> Investigation (develop collection scenarios) Undertake Section 17A review to confirm Council service delivery direction Consult with community regarding collection methodologies Work internally within council to resolve any rollout issues Procure selected services Rollout service delivery along with an education program 		<ul style="list-style-type: none"> Facilities operations 	
Constraints	If a user-pays model is adopted, then there is a chance the commercial market could continue to compete with Council for market share	Assumptions	To date there has been no indication from central government regarding container product stewardship. The assumption is that this will not happen before Council procures services. Allowances will therefore need to be made in the contract documentation for when central government implements the program.	
Dependencies	The contract term gives Council the timeline for implementation. Council could also roll the kerbside contract for one further year if needed.			
Stakeholders	Council, service users, contractors, Iwi			
Change Mgmt.	With any new service rollout, it is envisaged that there will be a period of time where council will need to provide a service rollout team which may include dedicated staff to take calls regarding the new service until it becomes BAU.			

<p>Risk of Doing</p>	<p>Changes to services may require different funding requirements such as a change to rates, so will have to make sure that there is future rating capacity. There will continue to be commercial competition in the market for service delivery.</p> <p>New services will come with differing H&S risks.</p> <p>New services may produce differing recovered material product quality which may impact the value of recovered materials.</p>	<p>Commentary</p>	<p>With every service delivery scenario, there will be a number of issues that will require solutions. As Council has not selected the preferred option it is too early to determine what these issues may be.</p> <p>Council staff have made visits to other Councils that are about to or have already rolled out services to understand issues and possible solutions.</p>
<p>Risk of Not Doing</p>	<p>The main risk will be procuring services. The incumbent contractor has developed a monopoly in local services as they compete in the market, making it difficult for other companies to provide a competitive tender. When this contract was last tendered the incumbent was the only tenderer.</p> <p>Some options have positive H&S outcomes due to the reduction of runners on trucks which may not be achieved if Council was to stay with the same service.</p>	<p>Commentary</p>	<p>There will be benefits and issues with each scenario selected.</p> <p>Council staff will endeavour to tease these issues out when discussing preferred solutions with the Executive team and Councillors.</p>

Options Analysis <i>(add more options if applicable)</i>			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
<p>Overview</p>	<p>Roll out the same service provision in the next tender</p>	<p>Provide the community with three options to consider for future service delivery after workshopping options with Executive team and Councillors</p>	<p>Council staff recommend a preferred new option and go to the community with status quo and new option (if they are different)</p>
<p>Advantages</p>	<p>No change management No change to rates requirements BAU achieved earlier</p>	<p>Will enable the community to understand the benefits and limitations of each option</p>	<p>Reduces the amount of consultation with the community Easier for the community to understand</p>
<p>Disadvantages</p>	<p>Would not deliver additional reduction in waste to landfill Procurement may be difficult in the current local market due to contractor monopoly Potential reduction in H&S risk may not be realised Community may feel that they have not been consulted regarding service delivery</p>	<p>Will require consultation through an annual plan process</p> <p>Could require new fees and charges and possible new rates to be struck</p>	<p>Council may get criticism due to the lack of options for consultation</p> <p>Could require new fees and charges and possible new rates to be struck</p>

Costs	Costs should remain relatively consistent apart from changes due to recovered materials and changes for new vehicle fleet etc.	Undetermined at this time as the three preferred options have not been finalised	Undetermined at this time as the preferred options have not been finalised
Achievability	The only issue would be the procurement process	Will enable buy in from the community	May be easier than Option 2 due to reduced consultation
Recommendation	Option 2. Providing three options will enable council to effectively engage with the community regarding future kerbside service delivery.		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<ul style="list-style-type: none"> • This project will entail evaluating several collection scenarios • Working with Executive team and Councillors to agree on 3 scenarios to consult with the public over • The selection of a preferred collection methodology and mix of services after consultation • Determining and providing workable solutions to issues that arise with the new service • Undertaking a section 17A review • Identifying any fees and charges and or rate changes • Confirming areas of collection • Procurement of new services • Contractor resourcing and delivery of any resources (education material, possible bins etc)

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
This project will entail evaluating several collection scenarios	A scenarios options report provided
Working with Executive team and Councillors to agree on 3 scenarios to consult with the public over	Workshop on scenarios and the selection of three preferred options
The selection of a preferred collection methodology and mix of services after consultation	Consultation with the community
Determining and providing workable solutions to issues that arise with the new service	Issues that may arise and will need solutions could include: New rates / fees Multiple dwellings on one property Maori land Bin rollout Bins to be put away Assisted service for the elderly or mobility impaired
Undertaking a Section 17A review	Before any new service is selected, a review of how the service might be delivered needs to be undertaken to satisfy Section 17A. This review is currently underway.
Identifying any fees and charges and or rate changes	Each collection scenario comes with different funding mechanisms. Appropriate fees and charges will need to be implemented through an annual plan process

Confirming areas of collection	Collection areas will need to be confirmed to make sure collection resources are fully utilised on each collection day, considering growth. Some thought must be made as to non-collection days such as Christmas Day and how these will be serviced. This could be done by utilising a Saturday collection.
Procurement of new services	If the status quo is selected, Council will need to consider alternative tender options, taking the current monopoly situation in the local market into account. NZS 3917 may be a more suitable contract platform if other scenarios are selected.
Contractor resourcing and delivery of any resources (educational material, possible bins etc)	A portion of the tender will be dedicated to the rollout of any new service delivery. This may entail the delivery of wheeled bins and/or food caddies to the community. Contractors have done this by using Council's service connection database to identify properties that will get the service.

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
Tender risk due to monopoly situation	Moderate	Medium	Medium
Council reputational risk	Moderate	Medium	Moderate

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
Project Manager	General project management NOTE: if status quo is selected then the timelines below will change	Internal		2 years
Executive Team and Councillors	Selection of preferred service delivery and section 17A review	Internal / External		5 months
Project Delivery Team	Identify and providing solutions for service delivery issues	Internal		3 months
Procurement	Run tender process and rollout of services	External		9 months

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Costs unknown until preferred service delivery selected		
Current annual plan budget funds current service delivery		
Total Estimated Capital Cost		
Total Estimated capex/year		
Total Estimated opex/year		
Total Estimated cost		
How accurate are your estimates Costs fairly accurate (+/-20%)		
This project will be a funded from a mix of possible waste levy grant, rates and user fees and charges under the Solid Waste cost centre.		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Consultation	Procurement								
Cost of phase and year spent	10K	10K								

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	New Lined Cell build Broadlands Rd Landfill		
Description	<p>The Broadlands Rd landfill is the only refuse disposal site for household waste in the district and receives waste from the five district transfer stations as well as the public and commercial operators. The current cell will be near completion and this new cell is the last cell to be filled if the current landfill operating consent is not renewed. It is a requirement of the operating consent to have a fully lined and leachate-controlled landfill, with the design of this cell build following on from previous cells already constructed.</p>  <p>The project scope is to place liner, leachate pipe work and drainage aggregate ready to take waste</p>		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, Council already undertakes lining operations when developing new landfill cells
Programme	Operation of the Broadlands Rd Landfill for the safe disposal of the districts refuse	Location	We will be moving up the gully and this cell will add on to the last cell constructed

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Legislatively compliant	5	

Secondary	Protecting our environment	5	Total of both Scores 10	
Background	Council has owned and operated this lined landfill since the year 2000 with cells being built around every five years. This cell is the progression of that program to enable ongoing waste disposal operations			
Business Need	To provide a waste disposal point for the district that meets consent requirements			
Benefits and Wellbeings (see appendix)				
Benefit	How will you quantify and track	Benefit Type	Wellbeing	
Improved Public Health	The liner system prevents contaminant release into the environment No breaches of the operating consent	No contaminates released into the environment from the landfill	Social	
Revenue protection	Without a lined cell to take waste the site will be unable to receive waste so there would be a loss in revenue	Financial benefit Revenue from disposal support funds waste minimisation operations Waste would have to be trucked out of the district which incur additional cost	Economic	
Legislative compliance	It is a requirement of the operating consent that the landfill be lined to enable to receive waste	The operating consent requires a lined and leachate-controlled landfill	Environmental	
Opportunity	Relationship with Iwi, due to location next to Mount Tauhara, safer working environment for site staff and users, community satisfaction as the community knows that their environmental controls			
Scope	In	Out		
	<ul style="list-style-type: none"> Investigation Design Installation / Construction Contract documentation Determination of lined area Compilation of construction details to pass on to the peer reviewer to gain approval to operate Selection of appropriate drainage aggregate Approval of liner material Overview of on site testing procedures Liaison with site operators Determination of stockpile operations Movement of current concrete storage area 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 		
Constraints	current site operations public weather liner availability	Assumptions	none	

	contractor availability consent requirements		
Dependencies	Landfill operators, Liner supply, contractor availability		
Stakeholders	Council, Tuwharetoa Trust Board, WRC, community, landfill contractors, construction contractor asset manager		
Change Mgmt.	New cell development is part of the overall operation so does not need any change management		
Risk of Doing	Low	Commentary	This is one of a number of cells developed at the site
Risk of Not Doing	There won't be any where we can dispose of waste. Additional cost of trucking waste out of the district	Commentary	This is the only Class 1 landfill in the district to accept household waste, without this site we will be forced to transport waste out of the district

Options Analysis (add more options if applicable)			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Don't build a new cell	Construct a new cell at the landfill	Close the facility and truck waste out of the district
Advantages	No capital spend	Enables the ongoing disposal of waste	Would not have to spend money building a new cell
Disadvantages	higher side slopes increase stability risk	Cost of purchase	The cost of transport would be added on to the cost of disposal. Also, we would have to build a bulk load out facility
Costs	Unknown, possibility of side failure and environmental cost of Leachate spill.	Capital = \$1Million	Unknown but add transport cost and capital cost, meaning least preferred option
Achievability	None	Several new cells have been developed since 2000 when the landfill was first developed	Would have to retro fit the site to enable bulk loading of waste to another landfill so will come with some complications
Recommendation	Construct a new cell at the Broadlands Rd landfill to enable ongoing waste disposal		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p><Describe the following at a high level:></p> <ul style="list-style-type: none"> • Design undertaken by Opus as they have designed all the cells to date • There are several liner contractors in the market, but the main contractor may be a earthworks contractor as they need to achieve a base permeability test and bring the site to the correct contours. • Contract management arrangements are that contract, and project management is undertaken inhouse • Timeframes, installation will be over a 1.5-month period weather permitting

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
design	Design will reflect previous cell builds
Contract document and procurement	There have been several local contractors that have built stages, but we will probably go out to the market

Installation	Earthworks contractor and liner contractor install liner, leachate pipes and drainage aggregate

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management	Internal	15%	3 months
Investigate and design	Construction drawings	External	1	15hrs
Construction		External		3 months

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Design / review	\$25,000.00	Capex
Liner, leachate and aggregate install	\$ 1,000,000.	Capex
Total Estimated Capital Cost	\$1,025000.00	
Total Estimated Operational Cost/year		
Total Estimated cost	\$ 1,025,000.00	
How accurate are your estimates Costs fairly accurate (+/-10%)		
This project will be loan funded under the Solid Waste cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Design	Installation								
Cost of phase and year spent	\$25,000	\$1,000,000								

Approval *If there's been a significant change in scope or change in cost/benefit*

Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
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Strategic Objectives Scoring

Looking after Public Health and Safety

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Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
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4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
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Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
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Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
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Economic Development

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4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

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2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
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5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Mangakino site upgrade		
Description	<p>The Managkino Refuse transfer station manually handles large volumes of recyclables in wool fadges which need to be loaded onto trucks for transport to market. There is manual handling which requires the site operator to physically moves these bags around when they are full.</p> <p>This site has not seen an upgrade for over 25 years and while the sites functions satisfactory it is time to replicate the Kinloch and Broadlands Rd sites recycling interface for the public and eliminate the health and safety risk to the site staff.</p> <p>The below photo shows the recently upgraded Kinloch Transfer station, which enables an easy interface for the public and a move from bins to skips for the collection and handling of collected materials</p>		
	 		
	<p>The above photo shows the fadges that must be handled with the help of a tractor onto the back of a truck to market.</p> <p>The move to bulk loading will reduced the H&S risk to the staff and should also reduce the transport costs due to bulk loading</p>		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Print by numbers, We will look to build the same recycling interface we have installed at the Broadlands Rd and Kinloch facilities
Programme	Operation of the Mangakino Refuse Transfer Station for the	Location	This upgrade will utilise the existing footprint at the site, but some earth works will need to be undertaken to provide a height differential

	safe handling of the community's waste and recyclables		to enable recyclables to slide down the chute to the waiting skips
--	--	--	--

Strategic Objective (<i>see appendix below to help score Strategic Objectives</i>)			
		Score	Project Score Total
Primary	Public Health and Safety	3	6
Secondary	Maintaining Levels of Service	3	
Background	Council has 6 district waste and recycling facilities which handle large volumes of recyclable materials. Council to date has upgraded both the Broadlands Rd and Kinloch facilities, with the Mangakino upgrade replicating what has been done at these two sites		
Business Need	To remove the health and safety risk of site staff having to manually handle recovered materials in bags, and upgrade the site to enable the community to safely utilise the site		
Option/s	Upgrade the site Don't upgrade the site Undertake a partial upgrade		
Benefits and Wellbeings (<i>see appendix</i>)			
Benefit	Benefit Type		Wellbeing
Improved Public safety	Easy and safe recycling facilities		Social
Process efficiency	Health and safety of operators and users of the facility, less truck trips due to bulk loading		Economic
Improve or promoting district sustainability	Providing a facility that promotes recycling of materials		Environmental
Opportunity	Safer working environment for site staff and users, community satisfaction as community are encouraged to use the new facility.		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design installation 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 	<ul style="list-style-type: none"> earthworks
Constraints	There are some site constraints regarding getting enough fall to allow recyclable items to slide down a chute. This will require some small earthworks to achieve	Assumptions	That the site is contracted out and not run by Council and can be included into operational contract that included Kinloch and Broadlands Rd landfill.
Dependencies	The operation of this site was contracted out to achieve the best use of resources	Stakeholders	Council, Mangakino community, contractors
Potential Issues with the preferred option	Recycling markets		
Risk of Not Doing	Council should be actively reducing the H&S risk to the community and its contractors.		

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Contract document ready for tender
Contract project management	Procurement and Construction

Project Resources – Role Name	Internal/External	Primary Responsibility
Project manager	Internal	Project completion
design	External	Infrastructure design / construction drawings

Cost Summary		
Item	Estimated Cost	Capital or Operational
design	10,000	Capital
construction	\$85,000	Capital
Internal roading configuration	\$ 3,000	Capital
Total Estimated Capital Cost	\$98,000	Capital
Total Estimated Operational Cost/year		
Total Estimated cost	\$ 98,000.00	

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)				\$10K	\$88K					
Cost of phase and year spent										

Approval <i>This is the initial approval of the Business Case. It may be further prioritised against other projects</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
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Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

LTP Business Case 7 to 10 years

Project Name	New Landfill Cell Build		
Description	Place Liner and leachate pipes, drainage aggregate to build a new waste disposal cell		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Paint by Numbers
Programme	Operation of the Broadlands RD landfill	Location	Broadlands RD Landfill

Strategic Objective (see appendix below to select primary and secondary)				
			Score	Project Score Total
Primary	Legislatively Compliant		5	Total of Both Scores 10
Secondary	Protecting our Environment		5	
Background	Council has owned and operated this lined landfill since the year 2000 with cells being built around every five years. This cell is the progression of that program to enable ongoing waste disposal operations			
Business Need	To provide a waste disposal point for the district that meets consent requirements			
Option/s	Don't build a new cell, build the waste higher Construct a new cell at the landfill Close the facility and truck waste out of the district			
Benefits and Wellbeings	Legislative compliance - Environmental			
Scope	In	Out	Maybe	
	<ul style="list-style-type: none"> Investigation Design Installation / Construction	Infrastructure upgrade	Access Rd realignment	
Potential Issues with preferred option	Project will depend on 2027 operational consent renewal			
Risk of Doing Nothing	There won't be any where we can dispose of waste, we would be forced to truck out of the district, higher side slopes increase stability risk			

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)						Design	Installation / Construction			
Cost of phase and year spent						\$25,000	\$1Million			

Approval <i>This is the initial approval of the Business Case. It may be further prioritised against other projects</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
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Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

LTP Business Case 10 to 20 years

Project Name	New Landfill Cell Build		
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Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Paint by Numbers
Programme	Operation of the Broadlands RD landfill	Location	Broadlands RD Landfill

Strategic Objective (see appendix below to select primary and secondary)			
		Score	Project Score Total
Primary	Legislatively Compliant	5	Total of Both Scores 10
Secondary	Protecting our Environment	5	
Background	Council has owned and operated this lined landfill since the year 2000 with cells being built around every five years. This cell is the progression of that program to enable ongoing waste disposal operations		
Business Need	To provide a waste disposal point for the district that meets consent requirements		
Option/s	Don't build a new cell, build the waste higher Construct a new cell at the landfill Close the facility and truck waste out of the district		
Benefits and Wellbeings	Legislative compliance - Environmental		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design Installation / Construction	Infrastructure upgrade	Access Rd realignment
Potential Issues with preferred option	Project will depend on 2027 operational consent renewal		
Risk of Doing Nothing	There won't be any where we can dispose of waste, we would be forced to truck out of the district, higher side slopes increase stability risk		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Phase (Initiate, Plan, Execute)	Design	Installation / Construction				Design	Installation / Construction			
Cost of phase and year spent	\$25,000	\$1Million				\$25,000	\$1Million			

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5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

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Placemaking

Score	Criteria	Example Project/s
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Risk Matrix

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Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Omori Refuse Transfer station Upgrade		
Description	<p>The Omori Refuse transfer station manually handles large volumes of recyclables in 44-gallon drums, which requires the site operator to physically move these bins around when they are full.</p> <p>This site has not seen an upgrade for over 25 years and while the sites functions satisfactory it is time to replicate the Kinloch and Broadlands Rd sites recycling interface for the public and eliminate the health and safety risk to the site staff.</p> <p>The below photo shows the recently upgraded Kinloch Transfer station, which enables an easy interface for the public and a move from bins to skips for the collection and handling of collected materials</p> <p>The site currently also lacks a power supply which limits its functions.</p> <p>Egress from the site is via a circular gravel track which routes around the green waste processing area. With persistent wet weather this track can become heavily potholed in a short period of time. There have been occasions where cars with minimal ground clearance have not been able to utilise the track due to fear of damage.</p> <p>There is no water supply on site. Currently water is delivered via truck and stored in a small tank. The water gravity feeds from tank to kiosk where it supplies an outdoor tap, internal handbasin and toilet. As the difference in height between the tank and kiosk is approximately 1.5m, water flow and pressure are very low. There no ability to run a hose for cleaning or fighting fires.</p> <div style="display: flex; flex-direction: column; align-items: center;">   </div> <p>The above shows a collection of fadges and drums for recycling collection at the Omori Transfer station</p>		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Paint by numbers, We will look to build the same recycling interface we have installed at the Broadlands Rd and Kinloch facilities this project would also provide a new power connection by the local power authority. An electrician would need to install a switchboard

			to connect lighting, outlets and a pressure pump.
Programme	Operation of the Omori Refuse Transfer Station for the safe handling of the community's waste and recyclables plus Provision of power to the Omori / Kuratau RTS, sealing of exit road and installation of rainwater tank and pressure pump.	Location	This upgrade will utilise the existing footprint at the site, but some earth works will need to be undertaken to provide a height differential to enable recyclables to slide down the chute to the waiting skips

Strategic Objectives (see appendix below to help score Strategic Objectives)			
		Score	Project Score Total
Primary	Public Health and Safety	3	Total of both Scores 6
Secondary	Maintain levels of service	3	
Background	<p>Council has 6 district waste and recycling facilities which handle large volumes of recyclable materials. Council to date has upgraded both the Broadlands Rd and Kinloch facilities, with the Omori upgrade replicating what has been done at these two sites</p> <p>Providing power to site will not only allow the running of an Eftpos terminal but also provide for lighting in the site buildings and outlets for appliances. It will also power the new pressure pump attached to a rainwater tank to provide the site with its water requirements. Sealing the exit Rd will weatherproof it allowing for uninterrupted used regardless of individual vehicle ground clearances and significantly reduce maintenance requirements</p>		
Business Need	<p>To remove the health and safety risk of site staff having to manually handle recovered materials in drums, and upgrade the site to enable the community to safely utilise the site. Reduce maintenance requirements of exit Rd</p> <p>Provide for the sites water needs</p>		

Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Improved Public safety	No injuries for site staff and the public from using the facility	Easy and safe recycling facilities	Social
Improved level of service	Customer feed back	Easy and safe recycling facilities Allows for provision of Eftpos Provides lighting and power outlets Allows for a pressure pump to be installed	Social
Improve or promoting district sustainability	Skip bin movements/ recyclable tonnages	Providing a facility that promotes recycling of materials	Environmental
Process efficiency	Reduction in manual handling of recovered materials, more efficient movement of recovered materials in bulk	Health and safety of operators and users of the facility, less truck	Economic

			trips due to bulk loading	
Opportunity	Safer working environment for site staff and users, community satisfaction as community are encouraged to use the new facility.			
Scope	In		Out	
	<ul style="list-style-type: none"> Investigation Design installation 		<ul style="list-style-type: none"> Upgrade of existing infrastructure 	
Constraints	There are some site constraints regarding getting enough fall to allow recyclable items to slide down a chute. This will require some small earthworks to achieve	Assumptions	The site operational contract encumbrances three sites, the contract has a three year term it is envisaged that Council will retender this contract at the end of the three year term to enable these upgrades to be fully utilised by a contractor with the appropriate infrastructure to handle and transport skip bins	
Dependencies	The site operation is combined with the Whareroa and Turangi sites under contract. Council will have completed changes to the Turangi site and have changes planned in a separate business case for the Whareroa site.			
Stakeholders	Council, Omori and Kuratau communities and the site contractor			
Change Mgmt.	none			
Risk of Doing	No real risk	Commentary	There is no reason why this site would cease to operate as it is the only facility for the community in the area to dispose of waste and recycle	
Risk of Not Doing	Council should be actively reducing the H&S risk to the community and its contractors. This site has not been up graded for over 25 years and is over due to be upgraded. The site does not have power or running water, which was an issue during Covid-19	Commentary	The manual handling of bins of recyclables places undue risk on the site operators. Bins can overflow creating a risk to site users. By going to bulk transport of recovered materials and providing a safe and user-friendly interface for the public to use the site can continue to operate successfully.	

Options Analysis <i>(add more options if applicable)</i>			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Leave the site to operate with 44gallon drums for recycled material, and don't use bulk loading of materials No water or power to site and unsealed road that needs ongoing maintenance	Build the recycling shed to replicate the Broadlands Rd and Kinloch facilities which will then enable bulk loading of recycling of materials and eliminate the need for manual handling of large drums Provision of power and water to site	Install a container that has different bays in it for different commodities. This a solution undertaken by Western Bays Council
Advantages	No capital spend	Eliminate H&S risk	When the bins is full a truck comes and collects it

		Safe drinking water for operators and ability wash down the site as power supplied to run a pump Enable the bulk movement of recovered materials Reduces the incidences of bins overflowing thus risk to users Provides additional capacity at peak usage times in the summer.	
Disadvantages	Health and safety risk will remain. Site won't fit with the other sites that are going to bulk loading of materials	Cost of infrastructure build	You would need a specialised truck for this contract as well as multiple bins to service the three sites
Costs	H&S cost risk	Capital = \$230K	Capital = \$440K
Achievability	None	We will use the same design as the Taupo and Kinloch sites so should be easily achievable, power and water from closet point	By having uniformity in site design, contractors can operate multiple sites with the same truck
Recommendation	To build a new recycling shed at the Omori transfer station that replicate those in operation at the Broadlands Rd and Kinloch facilities and provide power and water to site		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<ul style="list-style-type: none"> Contract and project management is undertaken inhouse Timeframes, installation will be over a 2-month period weather permitting Design of structure by others Power provided by TLC estimate has power coming from the power lines behind the site (awaiting TLC confirmation and estimate)

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Make sure that the design fits with the site footprint and considers ease of use and all H&S factors current pricing for power is it to be fed from the power lines behind the RTS site in the paddock, additional cost will be incurred if power needs to come up the road
Contract document and procurement	Inhouse contract and project management
Facility Installed	On site construction
Bins used for bulk transport	Site contracts align with new operational procedures

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
This is low risk; we operate this system at other facilities	unlikely	Moderate	low

Power can not be fed from the lines in the paddock behind the property and must come up the road which will require additional funding	Likely	Moderate	Medium
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Project Resource Requirements

Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management	Internal	25%	1 month
Investigate and design	Construction drawings	External	1	1.5 weeks
contractors	Construction	External		1 month

Cost Estimate Summary – for recommended option

Item	Estimated Cost	Capital or Operational
Design / review	\$20,000	Capex
construction	\$ 210,000	Capex
Total Estimated Capital Cost	\$230,000	
Total Estimated Operational Cost/year		
Total Estimated cost	\$ 230,000	
How accurate are your estimates Costs fairly accurate (+/-10%)		
This project will be loan funded under the Stormwater cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.

LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)	Design Installation / construction									
Cost of phase and year spent	\$230,000									

Approval *If there's been a significant change in scope or change in cost/benefit*

Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	New Sewer Pipe Broadlands Rd Landfill		
Description	<p>The sewer pipe (Leachate Line) from the landfill to the main sewer connection is now under sized for the size of the landfill footprint, and if Council is able to obtain a new resource consent for the operation of the site post 2027 then the pipe will need to be increased in size to 150 Dia. The timing of this project anticipates that council will have know if we are to operate after 2027.</p> <p>Part of the consent requirement is the landfill liner is not allowed to have a head of Leachate, so Leachate is not allowed to build up inside the landfill, it must be emptied, and currently the pipe configuration is struggling to achieve this.</p>  <p>The project scope is to place larger size pipe (150 dia) from the Leachate pond to the manhole and from there allow it to gravity feed in the larger pipe to the new sewer inside the ETA. There are manholes down the road existing so we can plumb to them.</p>		
Business Owner	Brent Aitken	BC Author	Bent Aitken
Project Size	Lite	Project Complexity	Print by numbers, this is a straightforward pipe installation and could be mostly directionally drilled
Programme	Operation of the Broadlands Rd Landfill for the safe disposal of the districts refuse	Location	In the berm from the landfill down to the new sewer at the new subdivision on Broadlands road

Strategic Objectives ([see appendix below](#) to help score Strategic Objectives)

	Score	Project Score Total
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Primary	Legislatively compliant	5	Total of both Scores 10
Secondary	Protecting our environment	5	
Background	An under sized pipe was installed back in 2000, with the thought that the land between the landfill in town would be subdivided and a larger sewer pipe be progressively put in over time. To date only the Riding for the Disabled land has been developed, but there is a need to increase the pipe size if a new consent is obtained.		
Business Need	Councils needs to achieve compliance with its resource consent for the operation of the landfill		
Benefits and Wellbeings (see appendix)			
Benefit	How will you quantify and track	Benefit Type	Wellbeing
Improved Public Health	The pipe will allow the landfill to discharge the correct amount of Leachate	No contaminates released into the environment from the landfill	Social
Revenue protection	Without a lined cell to take waste the site will be unable to receive waste so there would be a loss in revenue	Financial benefit	Economic
Legislative compliance	It is a requirement of the operating consent that there is no head build up on the landfill liner	The operating consent requires no water head build up	Environmental
Opportunity	Relationship with Iwi, due to location next to Mount Tauhara, safer working environment for site staff and users, community satisfaction as the community knows that their environmental controls		
Scope	In	Out	
	<ul style="list-style-type: none"> Investigation Design Installation / Construction 	<ul style="list-style-type: none"> No change to the size of the leachate pond 	
Constraints	none	Assumptions	none
Dependencies	Consent renewal for landfill operations		
Stakeholders	Council, Tuwharetoa Trust Board, WRC, community, landfill contractors		
Change Mgmt.	No change management		
Risk of Doing	Low	Commentary	There is already a pipe alignment
Risk of Not Doing	May breach the operating consent	Commentary	The pipe is now undersized

Options Analysis (add more options if applicable)			
	Option One: Change Nothing	Option Two <List Option>	Option Three <List Option>
Overview	Don't install a new pipe	Install a larger size pipe down Broadlands Rd road and connect into the Leachate pond	Construct a larger Leachate pond
Advantages	No capital spend	Enables the ongoing disposal of Leachate and avoids head build up within the landfill	Would avoid the cost of installation of the pipe
Disadvantages	Large rainfall events may see leachate spill outside the lined cell and into the environment	Cost of installation	The pond would need to be significantly larger than what currently exists to cater for the flow in large events and we don't have the room. If the

			pond became full then we would be in the same position needing a larger pipe
Costs	Resource consent breach, unknown cost	Capital = \$188K	\$75K
Achievability	None	Would be replacing the exiting pipe along the same alignment	We don't have the room on the site to install a bigger pond
Recommendation	Install a larger size pipe		

RECOMMENDED OPTION

Delivery Approach – How will this initiative be delivered?
<p><Describe the following at a high level:></p> <ul style="list-style-type: none"> • Design pipe install • Tender pipe installation to the market • There are numerous local contractors that can achieve this installation • Contract and project management is undertaken inhouse • Timeframes, installation will be over a 2-week period weather permitting

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
design	Design will reflect, current pipe alignment
Contract document and procurement	Tender works
Installation	Connect new pipe into exiting manholes and leachate pond

Key Risks – things that provide uncertainty in the project, focus on High risks if possible (see risk matrix in the appendix)			
Risk	Likelihood	Impact	Score
General construction risks	unlikely	Minor	Insignificant

Project Resource Requirements				
Role	Primary Responsibilities	Internal or External	FTE Estimate	Duration Estimate
<Identify Role>	<what will they be responsible for>	<internal or External>	<% of FTE>	<how long will they be required>
Project Manager	General project and Contract management	Internal	15%	3 weeks
Investigate and design	Construction drawings external	External	1	12hrs
Contractor	construction	External		3 weeks

Cost Estimate Summary – for recommended option		
Item	Estimated Cost	Capital or Operational
Design / review	\$15,000.00	Capex
Pipe install	\$ 180K.	Capex
Total Estimated Capital Cost	\$195K	
Total Estimated Operational Cost/year		
Total Estimated cost	\$ 195K	
How accurate are your estimates Costs fairly accurate (+/-10%)		
This project will be loan funded under the Solid Waste cost centre		

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)			Design Installation							
Cost of phase and year spent			\$195K							

Approval <i>If there's been a significant change in scope or change in cost/benefit</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

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Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
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4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
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5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
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2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
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5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development


Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Broadlands Rd landfill Capping		
Description	<p>This project is a requirement of the resource consent for operating the landfill. Each cell after it reaches the desired contour, or if it is the final finished contour will require the site to be capped off with pumice to a certain compaction to avoid ingress of water into the landfill, thus reducing leachate generation.</p> <p>This business case is for intermediate capping for finished side slopes. Capping incorporates a metre of pumice at the required compaction level then finished off with topsoil / mulch mix to enhance grass growth.</p>		
			
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Capping material has been placed on the site as the landfill has grown since it was first developed in 2000
Programme	Operation of the Broadlands Rd Landfill for the disposal of the districts refuse.	Location	At the Broadlands Rd landfill

Strategic Objective (<i>see appendix below to help score Strategic Objectives</i>)			
		Score	Project Score Total
Primary	Being legislatively compliant	5	9
Secondary	Maintaining Levels of Service	4	

Background	The operational resource consent requires capping material to be applied to any finished cell, whether that be intermediate cap or final capping.		
Business Need	To be compliant with the resource consent intermediate and final capping material must be applied to the landfill.		
Option/s	Upgrade the site Don't upgrade the site Undertake a partial upgrade		
Benefits and Well beings <i>(see appendix)</i>			
Benefit	Benefit Type	Wellbeing	
Legislative compliance	Appropriate cap material applied	Environmental	
Waste reduction	Less Leachate produced	Environmental	
Revenue protection	The landfill will continue to take waste and receive revenue	Economic	
Opportunity	Reduction in Leachate production, less vermin, less wind-blown litter		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design installation 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 	<ul style="list-style-type: none"> Alternative liner system
Constraints	Using pumice as the cap material could allow venting of greenhouse gases	Assumptions	That council is unable to obtain a new resource consent to operate after 2027
Dependencies	Resource consent renewal	Stakeholders	Council, Iwi neighbours, community
Potential Issues with the preferred option	Pumice may not be the material used for capping if a new consent is obtained		
Risk of Not Doing	Council would be in breach of its operating consent		

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Contract document ready for tender
Contract project management	Procurement and Construction

Project Resources – Role Name	Internal/External	Primary Responsibility
Project manager	Internal	Project completion
design	External	Infrastructure design

Cost Summary		
Item	Estimated Cost	Capital or Operational
design	10,000	Capital
construction	Interim cap \$60,000	Capital
Internal roading configuration		
Total Estimated Capital Cost	\$60,000	Capital
Total Estimated Operational Cost/year		
Total Estimated cost	\$70,000	Capital

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)				70,000						
Cost of phase and year spent										

Approval <i>This is the initial approval of the Business Case. It may be further prioritised against other projects</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

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Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Weighbridge installation / Turangi RTS		
Description	 <p>The Turangi transfer station currently turns over approximately \$170K all of which is load assessed by volume. The installation of a weighbridge plus ancillary works for traffic flow will enable loads to be weighed in and out so charges will apply based on weight not volume.</p> <p>Central Govt have been flagging a rise in the waste levy with increased requirements for data capture at all disposal sites.</p> <p>The weighbridge would be linked to a weighbridge program that can also process commercial billing.</p> <p>The current traffic configuration on the site will need to be altered to allow internal site traffic to access the weighbridge from both sides to allow for weighing in and out of the site.</p>		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	Medium, as the site will need some traffic configuration to allow for weighing in and out of the site
Programme	Operation of the Turangi Refuse Transfer Station for the safe disposal of waste from the Turangi township	Location	At the Turangi Transfer station on Te Rangitukehu Street Turangi

Strategic Objective (<i>see appendix below to help score Strategic Objectives</i>)			
		Score	Project Score Total
Primary	Internal Innovation	3	6
Secondary	Maintaining Levels of Service	3	
Background	The Turangi Refuse Transfer station is the refuse disposal point for the Turangi community. All waste loads going to the site are currently assessed by volume not weight, and while there are guidelines to assist load classification, a weighbridge will enable all loads to be assessed by weight giving a transparent and fair payment system to all users.		
Business Need	A weight-based system will provide not only a tested verification system, under the weights and measures legislation, it will also bring fairness to the users and link into the current billing system for account holders all of which is done manually currently. Central Govt, with the possible increase in the waste levy will be requiring Councils to provide more data on wastes going to district facilities and with a weight-based system Council can easily provide for this requirement.		
Option/s	List potential options for achieving your business needs		

Benefits and Wellbeings <i>(see appendix)</i>			
Benefit	Benefit Type		Wellbeing
Transparent and fair billing system that eliminates manual system with a transparent and fair weight-based load cost calculation	Revenue protection		Economic
Currently billing is based on loads assessed by staff on the site which inherently will have inconsistency between operators. A weighbridge will eliminate staff assessing loads. Billing process will be linked to Council to enable live assessment of billing	Improve process efficiency		Economic
Customers can rely on a payment system based on weight that is supported by weights and measurement legislation. Weighbridges are load verified annually	Customer satisfaction		Social
Opportunity	Central Govt are looking to raise the waste levy with a requirement for more data capture at disposal facilities, a weighbridge will be supported by a weighbridge program that can compile data related to the waste stream and thus identify opportunities for waste diversion.		
Scope	In	Out	Maybe
	Installation of a Weighbridge and ancillary equipment and billing system and a revamp of the internal roading system to allow for vehicles to weigh in and out of the site.	<ul style="list-style-type: none"> Change to any underground infrastructure such as water and wastewater network 	<ul style="list-style-type: none"> Re positioning of site Kiosk to accommodate weighbridge
Constraints	<ul style="list-style-type: none"> Current roading configuration does not allow for weight-based load assessment 	Assumptions	That the site internal road layout can be altered considering the site contours
Dependencies	<ul style="list-style-type: none"> The billing system being used at Broadlands Rd landfill "Weighbridge 3000" Possible support funding from Govt waste fund 	Stakeholders	Council, Turangi community, site contractor
Potential Issues with the preferred option	Central government are looking to increase data capture at refuse disposal sites and the site will continue to be the disposal point for waste in Turangi.		
Risk of Not Doing	The data capture requirement from central government would be undermined, the manual processing of waste loads (size estimating) to the site with volume not weight-based loads will continue. Centrals governments requirement for more data capture at RTS sites would not be achieved		

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Investigation and design	Contract document ready for tender
Contract project management	Installation of the weighbridge plus changes to road configuration and kiosk
Billing system tested and implemented	Weighbridge loaded tested and billing system operational

Project Resources – Role Name	Internal/External	Primary Responsibility
Project manager	Internal	Project completion
IT	Internal	Link weighbridge with existing weighbridge program
Finance	Internal	Billing processes are implemented

Cost Summary		
Item	Estimated Cost	Capital or Operational
design	10,000	
Weighbridge and ancillary items	\$100,000	
Concrete pit construction	\$ 25,000	
Internal roading configuration Kiosk movement and barrier arms	\$ 30,000	
Total Estimated Capital Cost	\$133,000	Capital
Total Estimated Operational Cost/year	\$ 1500	Operational
Total Estimated cost	\$ 165,000.00	

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)				\$20K	\$145K					
Cost of phase and year spent										

Approval <i>This is the initial approval of the Business Case. It may be further prioritised against other projects</i>	
Approvers Name	<insert name of person approving as well as hyperlink to their approval>
Date	<Date of Approval>

APPENDIX

Project Complexity



Benefits and Wellbeings

Social	Economic	Environmental	Cultural
Improved Public Safety	Cost Reduction	Legislative Compliance	Legislative Compliance
Improved Public Health	Revenue Growth	Reduction in Water Usage	Treaty Settlement Acknowledgement
Legislative Compliance	Revenue Protection	Waste Reduction	Improved Cultural Understanding
Customer Satisfaction	Cost Avoidance	Emissions Reduction	Improve Community Engagement
Empowering People	Process Efficiency	Protecting our Waterways	
Improving Relationships	Brand Awareness	Reduced Emission/Carbon Zero Initiative	
Improve Community Interaction	Legislative Compliance	Improve or Promoting District Sustainability	
Increasing Educational Opportunities	Improve Process Efficiency	Reduced Congestion	
Improve Level of Service	Improve Community affordability		
Increase Community Offerings	Enabling Sustainable Growth		
Improve Community Engagement			
Improve Community Affordability			
Increased Accessibility			
Improved Resilience and Preparedness			
Reduced Congestion			

Strategic Objectives Scoring

Looking after Public Health and Safety

Score	Criteria	Example Project/s
1	Failure to do this project could have a minor impact on the public's health and safety and affect a small number of people	Surface repairs on the velodrome track
2	Failure to do this project could have a moderate impact on the public's health and safety and affect a small number of people	
3	Failure to do this project could have a moderate impact on the public's health and safety and affect a large number of people	
4	Failure to do this project could have a severe impact on the public's health and safety and affect a small number of people	
5	Failure to do this project could have a severe impact on the public's health and safety and affect a large number of people	Water treatment plant upgrade in one of our three main centres

Maintaining Levels of Service

Score	Criteria	Example Project/s
1	This project ensures we can continue to deliver services which are used by a small group of people	Reseal of a club car park, or neighbourhood playground renewal
2	This project ensures we can continue to deliver services which are used by a suburb or neighbourhood	
3	This project ensures we can continue to deliver services which are used by the town or a community	
4	This project ensures we can continue to deliver services which are used by the District	Online LIMS or other online services
5	This project ensures we can continue to deliver services which are Critical for the town/District to Operate	Taupo Water Treatment Plant membrane filtration upgrade

Being Resilient and Prepared

Score	Criteria	Example Project/s
1	Doing this project enables us to respond quickly to a loss of services for a few people	Development of a business continuity plan for a small community or group of people
2	Doing this project reduces the chances of losing services which effects a few people	
3	Doing this project enables us to respond quickly to a loss of services for a small group of people	
4	Doing this project reduces the chances of losing services which affect a small group of people	
5	Doing this project reduces the chances of losing services which are critical for the town/district to operate	Capacity Upgrade of Town Water Treatment Plant, Larger community reservoir construction and burst control valves. Certain Online Services

Being Legislatively Compliant

Score	Criteria	Example Project/s
1	Doing this is best practice	Stormwater improvement devices - downstream defender
2	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have minor impact and is unlikely to result in prosecution	
3	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a moderate impact and may result in prosecution	Fixing Data related to 3 Waters consent conditions
4	We have a legislative or regulatory responsibility to undertake this project, however not doing it will have a major impact and is likely to result in prosecution	Upgrading water schemes to be compliant with NZDWS
5	Doing this now is absolutely mandatory and prosecution is certain	LTP, Annual Plan

Internal Innovation

Score	Criteria	Example Project/s
1	This project leads to minor internal operational efficiencies (such as time and cost savings) through innovative ways of doing things or contributes to an improved employee experience for some employees	Rostering software for a team
2	This project leads to moderate internal operational efficiencies through innovative ways of doing things	Implementation of Smart Trak or Priava booking software
3	This project leads to moderate internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of online booking forms for Customers
4	This project leads to significant internal operational efficiencies through innovative ways of doing things or contributes to an improved employee experience for all employees	RFID implementation at the library
5	This project leads to significant internal operational efficiencies through innovative ways of doing things that improve our external customer experience	Implementation of Online Property Files and LIMS

Protecting our Environment

Score	Criteria	Example Project/s
1	This project increases our reputation as an environmentally responsible organisation	Enviropods or Roof water recycling tanks for any new buildings
2	This project promotes environmental sustainability or provides a mitigation or adaption to climate change	
3	This project will ensure we are compliant with environmental conditions and/or new environmental standards	Stormwater improvement devices - downstream defender
4	Failure to do this project may lead to prosecution or negative publicity due to environmental damage which will damage our reputation	
5	Failure to do this project will lead to major environmental damage with long lasting effects	Wastewater rising-main (pressure pipe) renewals beside the lake. Those that have failed so now need to be renewed

Economic Development

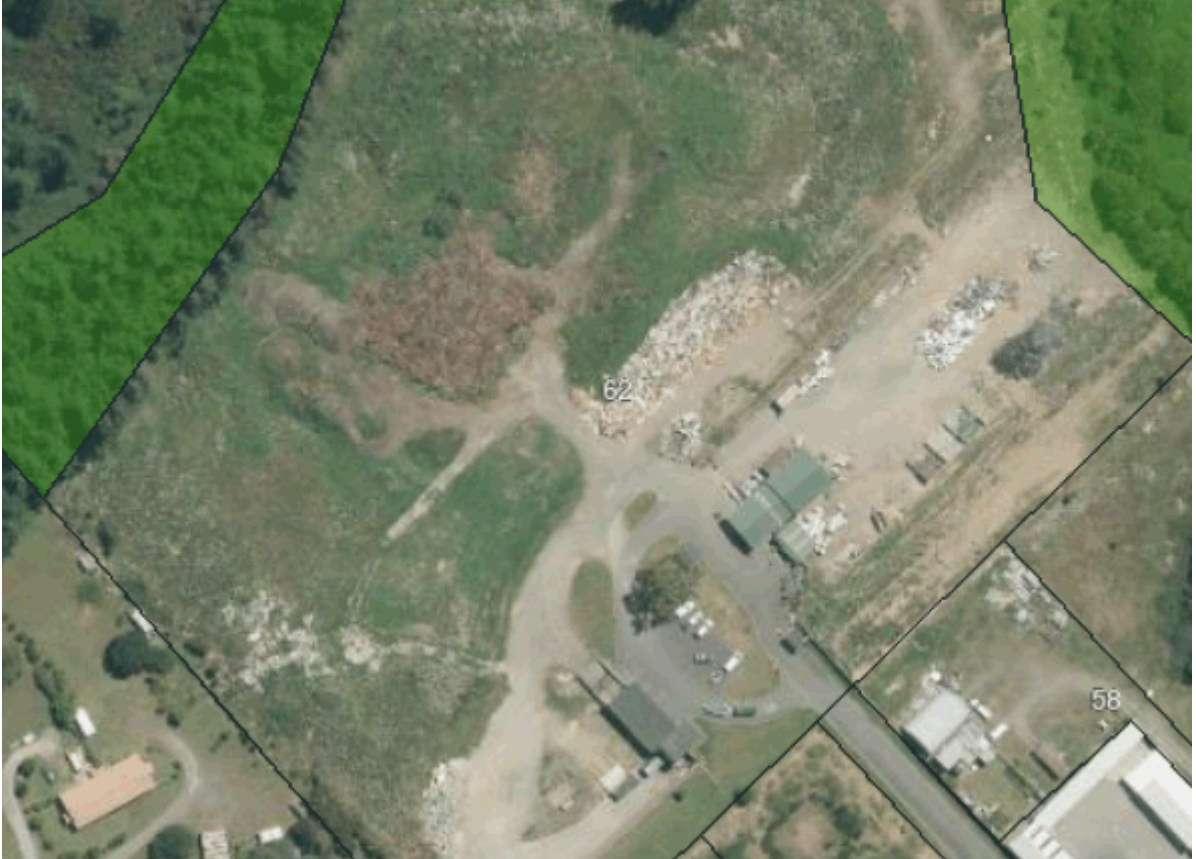
Score	Criteria	Example Project/s
1	This project will contribute to economic development however the scale is unknown or has not been quantified	Mangakino Sports Changing Facilities
2	This project will contribute to minor economic development or enable another minor economic development project to realise its benefits	
3	This project will contribute to moderate economic development or enable another moderate economic development project to realise its benefits	
4	This project will contribute to significant economic development or enable another significant economic development project to realise its benefits	Great Lake Walkway
5	This project will contribute to ongoing major economic development such as the creation of new jobs, town spend to a value >\$1m/year	Ironman, Cycle Challenge

Placemaking

Score	Criteria	Example Project/s
1	Doing this project will enhance the attractiveness of an existing area	Neighbourhood playground renewal
2	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of the town or community	CBD/Intersection Upgrades
3	Doing this project will provide a positive outcome that enhances the vibrancy and connectedness of a District	
4	Doing this project will create a positive nationwide reputation and leave a lasting legacy for our people	
5	Doing this project will create a positive worldwide reputation and leave a lasting legacy for our people	Otumuheke Hot Pools

Risk Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5	Medium	Medium	High	Extreme	Extreme
Likely 4	Low	Medium	High	High	Extreme
Moderate 3	Low	Medium	Medium	High	High
Unlikely 2	Insignificant	Low	Medium	Medium	Medium
Rare 1	Insignificant	Insignificant	Low	Low	Medium

Project Name	Turangi landfill Capping		
Description	<p>This project is a requirement of the resource consent for the closed landfill. The landfill cap needs to keep out stormwater to reduce leachate production. As Council operates the green waste drop off and shredding operation on top of the closed landfill the cap gets damaged over time and needs to be repaired with the introduction of additional cap material in the form of compacted pumice. This extra cap material reduces leachate production and provides a trackable surface for the public to use when dropping off green waste.</p> 		
Business Owner	Brent Aitken	BC Author	Brent Aitken
Project Size	Lite	Project Complexity	This is a simple lay and compact process
Programme	Operation of the closed landfill and Turangi transfer station operation	Location	At the Turangi transfer station

Strategic Objective (<i>see appendix below to help score Strategic Objectives</i>)			
		Score	Project Score Total
Primary	Being legislatively compliant	4	9
Secondary	Maintaining Levels of Service	5	

Background	The closed landfill consent requires capping material to be applied to reduce the environmental impacts from the closed landfill. The material will also provide a hard surface to operate the green waste drop off and shredding operations.		
Business Need	Leachate reduction and trackable surface for green waste operations		
Option/s	Upgrade the site Don't upgrade the site Undertake a partial upgrade		
Benefits and Well beings <i>(see appendix)</i>			
Benefit	Benefit Type	Wellbeing	
Legislative compliance	Appropriate cap material applied	Environmental	
Waste reduction	Less Leachate produced	Environmental	
Revenue protection	Green waste shredding operations are able to be continued	Economic	
Opportunity	Reduction in Leachate production, no cars getting stuck		
Scope	In	Out	Maybe
	<ul style="list-style-type: none"> Investigation Design installation 	<ul style="list-style-type: none"> Upgrade of existing infrastructure 	Metal on the in road
Constraints	Capp should be applied in summer months if possible	Assumptions	Will be able to source pumice when needed
Dependencies	Resource consent	Stakeholders	Council, community, WRC
Potential Issues with the preferred option	none		
Risk of Not Doing	Council would be in breach of its operating consent		

Project Outputs – the things the project is going to deliver	
Output	Output Quality Details
Contract project management	Cap laid on site

Project Resources – Role Name	Internal/External	Primary Responsibility
Project manager	Internal	Project completion

Cost Summary		
Item	Estimated Cost	Capital or Operational
construction	cap \$30,000	Capital
Internal roading configuration		
Total Estimated Capital Cost	\$30,000	Capital
Total Estimated Operational Cost/year		
Total Estimated cost	\$30,000	Capital

Timescale/Cost – give a summary of how the project phases will be delivered.										
LTP 2021-2031	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Phase (Initiate, Plan, Execute)					\$30,000					
Cost of phase and year spent										

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