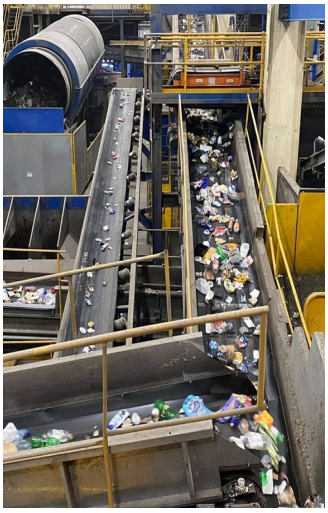
SOLID WASTE

Activity Management Plan

Mahere Para Mārō

2024 – 2034



Nelson City Council
Te Kaunihera o Whakatū

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Quality Assurance Statement

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1	12 Sept 2023	Draft for GM Infrastructure	Terry Dwyer	Mark Macfarlane	Alec Louverdis
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Cover Photos:

Top left: Solar Bin - with bilingual messaging

Top Centre Waste minimisation at events

Top Right: Recycling sorting at the Materials Recovery Facility (MRF)

Lower : Mural at the Nelson Waste Recovery Centre – The Kokupu, Tuna, Kōura, Kawakawa, and other biota promote solid waste's aspirational target of waste-free, clean waterways and protected biodiversity.

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i Overview

This Solid Waste Activity Management Plan (AMP) provides an account of Council owned and/or controlled assets and services, which are under the responsibility of solid waste, and it outlines the management approach to effectively meet demand and expectations, while aligning with existing and imminent legislation.

The AMP aligns with the vision of Whakatū Nelson as a creative, prosperous, and innovative city, where our community is inclusive, resilient, and connected – we care for each other and our environment.'

The purpose of the AMP is to provide an operational plan informed by the 2019 Joint Waste Minimisation Management Plan (JWMMP) to manage and divert waste prior to it reaching the landfill. In simple terms the boundaries of the AMP includes Nelson, up to the weighbridge of the York Valley landfill. While there are areas of common interest with the landfill, any activity on the landfill side of the weighbridge is the responsibility of the Nelson Tasman Regional Landfill Business Unit (NTRLBU).

The AMP gives effect to Council's priorities and guidance and includes input from key plans including the JWMMP and is also informed by the draft Nelson Tasman Joint Waste Assessment which is currently underway as part of the review of the current JWMMP.

Solid Waste operates under a number of policies, standards and legislations. A significant influencer on future AMP activities are the changes outlined in the central government's New Zealand Waste Strategy 2023 - Te rautaki para (NZ Waste Strategy) which has proposed a 30-year roadmap towards a low-emission, low-waste society.

Following the Ministry for the Envionment (MfE) publishing Te whakapai i te kohinga hangarua me te para kai-ā-kāinga - Improving household recycling and food scraps collections, changes to the recycling collection were gazetted, making recycling collection mandatory and restricting what will be collected. Proposed changes which would have made the kerbside collection of foodwaste or organics compulsory were not gazetted. This is now encouraged but is not mandatory.

The gazetting of mandatory kerbside recycling services aligns with what Council currently does, but Council will also have to complete any other services which are gazetted in the future.

In addition to central government legislation, the AMP outlines risks and challenges facing waste management, including the impacts of climate change, emergency events, public expectation, local economic conditions, and considers and includes risk management and emissions reduction.

The AMP will continue to achieve the waste reduction targets set in the present JWMMP and will be flexible enough to meet any agreed targets that may be set as a result of the upcoming review of the JWMMP.

The JWMMP includes a recognition that the community has an active role to play in minimising waste. The AMP builds on this, recognizing that it is desirable to

provide services and activities which actively contribute to reducing waste. Avoiding the creation of waste and supporting a culture where our community chooses not to create waste is the premise of all waste minimisation activities in this AMP.

Financially, Solid Waste operates under a 'closed account' with activities and actions funded through gate fees at the Nelson Waste Recovery Centre (NWRC), the Waste Disposal Levy (WDL) from central government, and the Local Disposal Levy (LDL) paid to each Council by the NTRLBU. This makes Solid Waste independent of residential rates. This AMP does not presuppose any changes to treating solid waste as a closed account.

This AMP focuses on ensuring that Nelson meets any standards or services as required by central government and that assets and waste services are maintained in a cost-effective manner. The AMP ensures that an appropriate, environmentally, and culturally sound waste management disposal option is available for all waste produced in Nelson. Waste creation and waste minimisation are considered in residential and non-residential settings and in response to our changing local, national, and global environment. This includes incorporating the planned residential intensification in the Nelson city centre, and a move to greater responsibility for re-using and recycling materials locally.

The AMP recognises the importance of iwi input to guide research and development of projects, to ensure the appropriateness of recommendations to Council, and to assist asset planning and management. The focus of iwi engagement within the AMP is to agree to shared outcomes. This includes environmental outcomes from processes and assets, and the selection of processes or methodologies that align with cultural as well as fiscal responsibility. The AMP recognises potential opportunities for iwi investment, or tenders to which iwi may choose to reply.

The AMP also presents the environmental, economic, and cultural risks of waste management, which in some cases may exceed the term of this AMP.

ii The Purpose of the Plan

The AMP outlines a strategic direction for managing Solid Waste assets and services to meet current and future changes to waste legislation, and local demands and priorities.

The AMP has been developed to respond to key themes and priorities, which will be referred to throughout the AMP. Without considering their order of importance these include:

1. A population that is growing and ageing
2. Working with stakeholders
3. Kotahitanga with Treaty partners
4. Engaging with our community to avoid and reduce waste
5. Mitigating and managing the effects of climate change
6. Taking responsibility for emissions which are produced by solid waste activities.

7. The Future Development Strategy, including an increase in residential intensification.
8. Government legislation impacting local and Council business.
9. Improvements in services
10. Asset utilisation and efficacy of assets
11. Long term risks relating to waste activities and assets.

This AMP informs the Long Term Plan (LTP), and is consistent with the 30 year Infrastructure Strategy, Climate Change Strategy, and the Financial Strategy.

This AMP gives effect to the 2019 JWMMP and while it cannot presuppose the content of any future changes to the JWMMP, the AMP has drawn from the work underway on the Nelson Tasman Joint Waste Assessment (JWA) to inform this plan. As the JWA will inform the review of the JWMMP some of the direction will be consistent. The AMP also ensures that decision-making related to asset renewal, activity delivery, and service procurement is consistent with achieving long-term outcomes for waste minimisation.

iii Asset Description

As any resource, service, or item of economic value, from which any company would gain future economic value is considered an asset, the solid waste assets can be considered in three parts.

1) Physical assets which are items owned by Council and which have a positive economic value.
2) Physical assets owned by Council which have costs but do not have associated revenue. These are 'negative value assets.' This is primarily the closed Atawhai Landfill.
3) Agreements for delivery of services which will restrain expenses in the future, and which also utilise privately owned assets.

Asset	Quantity	Present value	Replacement cost	Remaining 'life'
Metal bin liners	30	$2k	$4k	1-2 yrs
Metal rubbish bins that tilt for emptying	73	$65k	$190k	4 yrs
Metal rubbish bins that tilt for emptying	10	$20k	20k	10 years
Transfer station compaction hoppers	1	$1M	$1.5 M	10 yr Hopper walls
Nelson Waste Recovery Centre (NWRC) building over the hopper area including Gantry crane for loading bins of compacted refuse or greenwaste onto trucks	1	$1M	$1.9M	15
Post-compactor cartage containers	7	$100k	$500k	1-2 yrs
NWRC recycling area barn	1	$400	$450k	17yrs
NWRC recycling area old sorting shed.	1	$380k	$450k	19 yrs
NWRC NEC buildings	1	$350k	$400k	20 yrs
NWRC kiosk building	1	$50K	$600k	2 yrs
Residential recycling bins 240 litre (in stock)	300	$19K	$19k	10 yrs
Residential recycling bins 120 litre	80	5K	$5k	10 yrs
Stainless steel recycling bins in CBD and sports fields	4	$20K	$50k	4 yrs
Solar bin concrete pads	54	$49K	49k	10+ yrs
Total		$3.41M	$6.58M	

Table 1 : *Solid waste assets (excluding land) highlighted in red indicate replacement within the term of the AMP. These include metal bin liners, some rubbish bins, cartage containers and residential recycling wheelie bins. The replacement capex renewal cost within this AMP is approximately $1.5M.*

Atawhai Landfill

The Atawhai Landfill was closed in 1987 and as emission charges are applied at point of disposal this closed landfill incurs no Emission Trading Scheme (ETS) or waste levy costs. However post-closure emissions require testing, emission monitoring, and maintenance of wells, which are all costs without an associated revenue. Testing has been reduced from bi-annually to annually, maintaining an opex cost of $30k/yr. Maintenance is required on the wells and the results of the last testing (March 2023) has indicated some land and drain remediation work is required. A capex placeholder of $500k has been included in the LTP for this purpose. While not an immediate risk the landfill can only continue to accrue costs and risk, without any tangible benefit to Nelson, therefore this is considered a negative value asset.

Contracts and agreements for services

Contracts and agreements for services are a financial guarantee of service and therefore have a value in the future service to be provided. Operational experience and knowledge of the methodology is an asset, which negates the need for conducting trials when developing future agreements and contracts.

The transfer station kiosk is managed by Council staff so is not part of the transfer station contract.

	Contract	Expiry	Contractor
Street litter	54733	Expires 2027 (+2)	Enviro NZ
Recycling	2906	Expires mid 2025	Nelmac
Transfer Station	4018	Expires 2029	Fulton Hogan
Greenwaste disposal	C1077	Expires mid 2025	Greenwaste 2 zero

Table 2: *Contracts and agreements providing services to solid waste. A Request for Tender (RFT) is scheduled at least nine months in advance of the expiry of the existing contracts.*

iv Key Issues

The following presents the key issues of Solid Waste and the proposed solutions and management practices relating to those issues. These are detailed in individual focus areas in section 8 of the AMP. Management of each of these issues will be through innovative waste management solutions that are economically and environmentally efficient, considering carbon emissions, social responsibility community engagement and will be managed in accordance with Māori Asset Management Principles

Meeting the current JWMMP target of 10% per capita reduction in waste by 2030.

Since creating a 2018-19 baseline, Solid Waste has achieved a 9.05% reduction in waste per capita. This places Solid Waste on target for the 2030 required

reduction. However, it is difficult to measure how much of this has been achieved by council activities, and how much through external factors. Solid waste suggests that in the review of the JWMMP the parameters or the methodology for calculating the target for waste to landfill should be reviewed. A different calculation may quantifiably link a reduction in waste to landfill to solid waste activities.

To encourage waste reduction solid waste includes the Rethink Waste Whakaarohia waste minimisation programme which provides a toolkit including education, engagement, and behaviour change programmes. There are incentive programmes such as grants and subsidies, also opportunities for collaboration with our community to both, avoid the creation of waste, and through better waste disposal choices, to reduce waste to landfill.

The AMP also recognises that residents do not produce a set total amount of waste. An increase in the diversion of waste does not have a direct correlation with the reduction in waste to landfill (and vice a versa). Therefore, the success or otherwise of these programmes cannot be solely judged by the reduction of waste to landfill.

Supporting a culture where people choose not to create waste.

A statement in the JWMMP is that 'community collaboration to effectively avoid or reduce the creation of waste is a critical part of achieving our goal of a 10% per capita reduction by 2030'. Community engagement is more than just a tool to reduce tonnes to landfill, it also increases an understanding of the circular economy, recycling, and reuse, which closes the loop on resource use.

The waste minimisation work programme will address key areas:

- Leadership — Council walking the talk.
- Community – enable a culture where people choose to reduce or avoid waste.

Individual priority waste streams are identified on an annual basis, based on data and strategic priorities — for example, food waste, single use versus reuse, textile waste and construction and demolition waste.

In order to enable a culture where people choose to reduce or avoid waste there is a need for collaboration with the community. This includes partnership with Tasman District Council to deliver the JWMMP, working with iwi, businesses and industry, community groups, NGOs, and schools. The waste minimisation programme uses a range of tools including education, platforms for collaboration, support for school engagement through Enviroschools, grants and subsidies, and individually designed activities to support change and enable the community. The tools and resources in this work area are also used to support other Solid

Waste outcomes such as changes to kerbside recycling, education about hazardous waste and reducing littering.

Impacts of Climate Change and Weather Events

Managing the impacts of climate change, particularly more intense storms and sea level rise, are considered in this AMP. Solid Waste services will not be significantly affected by the medium-term impacts of climate change, but consideration has been given to the impacts on assets such as the NWRC and the Atawhai landfill, of sea level rise and the predicted increase in storms. During the term of the AMP Council will keep up to date on climate change information to guide any future risk assessment for these assets.

With the increasing frequency of weather events, Solid Waste has identified a need for a predesigned plan to ensure that post event waste is managed as closely to normal as possible. This particularly includes protection of waterways and environmentally sensitive areas from hazardous waste. Solid Waste recognises uncontained waste during weather events requires special management and will produce a plan to ensure that Nelson Tasman Civil Defence Emergency Management has current and appropriate information on which to base its decisions.

Solid Waste operations emissions

As the emissions are produced by the contractor, Solid Waste activity is not legally responsible for the emissions produced by the collections. However, the AMP presents a holistic approach and considers the emissions from all services provided under contract, rather than diverting 'emission responsibility' onto the contractors. While there is no obligation to report or pay a levy, when producing tenders or contracts Solid Waste actively considers emission reduction. This has been proven by the current street litter contract which includes an electric collection vehicle. The next tender for recycling collection will include an expectation or preference towards zero or low emission collection vehicles or technologies to reduce vehicle activity.

Proposed legislation which would have made foodwaste collection mandatory has not been enacted at this time, and each council can now determine the local appropriateness of a foodwaste collection service. The introduction of a foodwaste service would therefore be based on environmental, economic, and cultural grounds rather than at the direction of central government. Emission reduction would be a significant consideration in whether to implement a foodwaste service in the future.

The NWRC annually diverts 1,150 tonnes of greenwaste from landfill. This material is locally processed in a manner which does not produce extra methane and produces compost for sale. At the NWRC as the cost of refuse disposal increases, residents are more likely to separate their loads into higher priced

refuse and lower priced greenwaste. This may increase the quantity of organic materials diverted from landfill.

The largest impact on reducing current solid waste emissions is through less vehicle usage and eventually the inclusion of zero emission vehicles in all future collection contracts.

Further emissions reductions could be achieved through the diversion of any emission-producing material that is presently being disposed of to landfill. This potentially could include residential and commercial foodwaste, mixed greenwaste and construction and demolition waste.

Street litter emissions

In October 2022, 54 solar-powered compacting bins were installed in the CBD. Within six months there has been a demonstrated 60% drop in collection frequency. This has reduced service requests, traffic disruption, and noise in the CBD. Other problems such as aggressive seagulls and persons removing items from the bins and spilling the contents have also been stopped. The implementation of an electric vehicle for collections has reduced direct emissions by up to 45 tonnes of CO_2/yr.

The AMP includes the ongoing use of the solar bins while continuing with the existing 85 metal tilt bins for bus stops and dairies. It does not propose expanding the use of solar bins outside of the CBD.

Recycling emissions

Contract 2906 for the collection and processing of recyclables was extended to June 2025.

The tender for post June 2025 kerbside recycling included a recognition of vehicle emissions. While some vehicles could be converted to electric this si expensive and has long lead times in vehicle supply. Emissions can also be minimised through the use of technologies which ensure the most efficient use of vehicles and minimal operating time. Vehicles which do not require the driver to exit the vehicle or take less time per lift produce less emissions. GPS guidance systems also reduce backtracking and excess kilometres of travel. As this activity has been gazetted there is no option to stop providing this service, but these technologies will minimise the emissions.

The new legislation has also created a mandatory list of materials to be collected. The list is almost the same as what is presently being collected so the service does not require any significant changes. However, the legislation specifically excludes any material being added or removed from the list. If a local solution for a (non-listed) plastic is developed it is not permitted to be collected in the general kerbside collection. As an example, this includes soft plastics. The stipulation on what will and will not go in the bin will influence opportunities to consider alternative methods of managing some materials.

This is also a risk to Council, in that Council cannot decide to stop collecting any material. This means that central government are placing the financial and

operational risk for a commodity price collapse, or there not being a processing option for any listed material, onto council. This could compound on the costs that council presently pays to subsidize the commodity values.

In 2022 a review of recycling determined that Nelson and Tasman establishing a cooperative approach to recycling sorting in the region would improve opportunities for sorting efficiencies and the 'best price' sale of commodities. The Nelson tonnes do not justify the establishment of a MRF for only Nelson, and Tasman require more than just Tasman's tonnes so both stand to benefit from increased cooperation. The tender for post June 2025 kerbside recycling returns the ownership of the commodities to council providing this opportunity.

In support of the Government-led ban of hard-to-recycling plastics already under way, the waste minimisation programme will also include engagement at a national and local level to promote the removal of the non-recyclable plastic types from the consumption stream as well as the waste stream. This will improve actual recycling commodity recovery, ensuring that resources are managed to contribute to a circular economy. This will also entail Council engaging with commercial as well as residential waste producers. In Nelson, collection of recyclables from commercial premises is on a user-pays basis. It is proposed that a review be conducted to validate the proportion of actual recycling which occurs through the user-pays collections.

Product Stewardship

Product Stewardship is a central government directed policy which will lead to compulsory recycling or 'take back' for products including packaging, plastics, e-waste and tyres.

The packaging industry is independently proposing the establishment of a product stewardship scheme for recycled plastics. Such a scheme would guarantee a local market and minimum price for recycled plastics and would be funded through levies on plastic importers and manufacturers.

Product stewardship schemes have the potential to subsidise the costs of kerbside recycling.

Recycling Container Return Scheme

An example of product stewardship is a 'Container Return Scheme' (CRS) which guarantees a refund, in effect price fixing the value of certain commodities far beyond their actual value. This scheme does not embed recycling of the materials, only the collation and payment for the collation. The CRS is likely to lead to significant changes in the types and volumes of plastics that are placed kerbside and so will influence the costs of the recyclable collection. Due to the guaranteed value for returning certain items, community groups and charities are likely to use this as a fund-raiser, creating competition for high value recyclables and resulting in kerbside collections only being used for the low value materials. This could remove less than 10% of the collection tonnes but remove over 45% of the commodity revenue. This could lead to higher contract costs or more shared-risk costs for Council. This also provides an opportunity for Council

to install a 'receiving depot' from which Council would receive a share of the CRS revenue.

Tyres

Product stewardship will require the recycling of tyres or potentially the use of the Golden Bay Cement tyre incineration plant. Presently, tyres are cut or shredded and disposed to landfill. Where any organisation establishes a complete tyre recovery service Council may assist in the establishment of tyre collection for recycling and divert existing tyre collection systems to the tyre recycling service. It will also maintain an association with any such private enterprise to ensure close management of the site and to avoid the 'tyre mountains' that have developed in other regions. A national mandatory tyre product stewardship scheme is expected in late 2023.

E-Waste

Product stewardship will require recycling or reuse of e-waste. Being pro-active Council has developed a strong relationship with local community groups which it has supported through e-waste recycling subsidies and grants. Nelson Environment Centre (NEC) e-waste recycling at the NWRC has received financial and operational support from Council and in 2022-23 diverted over 32 tonnes of e-waste from going to landfill. This has created employment and by diverting the batteries has reduced the risk of fires at landfill. A Don't Bin Batteries campaign implemented by Council and supported by the NTRLBU has also supported risk reduction.

Construction and Deconstruction

In the 2019 AMP it was proposed that diversion of construction and deconstruction materials be considered. A joint Nelson / Tasman funding application was made to the central government Waste Minimisation Fund and Nelson received $162k to establish a sorting area. The Nelson site is at the NWRC. The funds have provided for site modifications, bins and racks, the purchase of an electric forklift, and some building modifications. The NWRC site has been operational since April 2024.

The NWRC site will divert an estimated 800 tonnes of potentially methane-producing material from landfill per year. The site is operated by NEC staff who will sell recovered materials and retain the revenue to cover their costs. This makes the site significantly self-funding with most of the establishment and operating costs for the first three years being paid for from the Waste Minimisation Fund.

Currently, unsorted materials from construction sites are disposed to landfill. This is primarily due to the labour-cost of sorting the materials. It is also common practice that buildings are demolished rather than deconstructed. There is an identified need for a methodology to divert the materials and to encourage the deconstruction of buildings. Through waste minimisation activities Council is engaging with the building sector to assist in the communication and cooperation between the construction sector, the deconstruction sector, and community groups. The aim is to divert materials generated at construction and

deconstruction sites away from landfill. While this reduces emission-producing tonnage from landfill, it also has identifiable social outcomes for employment and training.

Community expectations and Government priorities

The AMP considers how to respond to community expectations, central government, and Council priorities, all of which have demonstrated an increased demand for waste reduction and better management of all waste streams. Public education relating to the aims of the central government waste legislation will continue to raise public expectation placing more demands and costs on council.

At the time of writing, it has also been advised that the policing, monitoring, and reporting on waste to meet the criteria of the new legislation will be a cost to Council. Furthermore, where new legislation does not make sufficient provision, there is an expectation that councils will be required to produce and enforce by-laws whose content will be supplied by central government. An example of this is the government proposal to introduce mandatory construction and demolition site waste management plans, which, if implemented, would be the responsibility of TAs to monitor and enforce.

Foodwaste

As the introduction of a kerbside residential foodwaste service could reduce the volume of material to landfill and reduce emissions, and as it also aligns with the New Zealand waste strategy, and could be a possible future activity.

Following the completion of the 2020/21 collection trial an Expression of Interest (EOI) was published which indicated the level of interest by private companies in the establishment of collection or processing services. Further research was commissioned in association with Tasman District Council, to model the most appropriate systems for collection, bin size, and various processing options etc. The results of this research will inform the business case. A Ministry for the Environment funded business case is underway which will determine the most appropriate options for any future tender.

s the introduction of a kerbside residential foodwaste service could reduce the volume of material to landfill and reduce emissions, and as it also aligns with the New Zealand waste strategy, it is being researched by Solid Waste as a possible future activity.

There is political, but not necessarily economic encouragement from central government to provide residential kerbside foodwaste services. At this time no option for management, collection, or processing has been specifically excluded and options from vermicast (worms) to composting to anaerobic digestion are all in consideration.

Should the political climate change, or the result of the research indicate that the introduction of a service would provide sufficient benefit, a financial and operational model would be presented to council.

CBD and Sports fields Recycling

Less than 10% of the public recycling bin material collected from CBD or sports fields is recycled. Most of the material is contaminated and cannot be sorted so goes to landfill. The AMP considers a review of all public bin recycling to determine whether Council are offering an effective service.

v Levels of Service

ACTIVITY	COMMUNITY OUTCOME	LEVEL OF SERVICE	PERFORMANCE MEASURE	PERFORMANCE TARGET			
				2023-24	2024-25	2025-26	2026-27
Nelson Waste Recovery Centre (NWRC)		We enable effective waste minimisation Activities and services	A quantifiable reduction of refuse from the NWRC to landfill for the first three years as measured by the tonnage carted to landfill compared to the 2021-2022 baseline of 4337 tonnes (excluding disaster waste)	Reduction of 5-7%	Further reduction of 3-5% from baseline year	Further reduction of 2-3% from baseline year	Further reduction of 2-3% from baseline year
Kerbside Recycling			Effective recovery of all commodities, as measured by collected weights compared to sales and distribution rates (excluding contaminated material to landfill)	Commodity revery exceeds 90% of all collected materials (excluding contaminated material)			
Kerbside Recycling		Kerbside services are reliable and easy to use	Recycling service is provided to all nelson residents with less than 1% verified missed collections	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints

Table 3: *levels of service: included in the LTP.*

vi Future Demand

Future demand for solid waste services can be viewed as;

1) Demand according to volume modelling in relation to existing services.
2) Demand according to new expectations from residents.
3) Demand from central government (i.e., legislation) or Council direction

When considering the demand volume modelling of existing services, Nelson's growing population and future residential development in the city centre, combined with the existing national trend of an increase in waste per capita, there is likely to be an increase in service demand for waste services.

Residents have an expectation that recyclables should be recycled. Information about recycling is generally based on publicity which considers any form of reuse, reprocessing, or recycling as 'recycling', so long as it is demonstrated that the collected material is not disposed to landfill.

The expectations of both central Government and residents may be influenced at a national level by activities such as the eventual introduction of a mandatory product stewardship scheme for packaging and broadening/increasing waste levy activities. However, at a local level this will involve developing a collaborative approach between Council and residents, supported by tools and resources to enable the community to avoid/reduce waste.

Management of expectations and demands requires an accurate and ongoing measurement of waste from each source, with the results guiding management or planning for the most effective means of service delivery. For this reason, Council requires more waste stream data collection from previously unrecognised diversion, such as re-use shops. Solid Waste is engaged in the annual Solid Waste Assessment Protocol (SWAP) at York Valley and administration relating to disposal codes and customer disposal criteria. This is further defined in the monitoring and improvement section of this executive summary.

vii Lifecycle Management Plan — Assets

The historical strategy has been to maintain and the replace required assets, usually like-for-like, while following a policy of appropriate end of life management. However, ownership of an asset restricts operational options. The purchase of an asset with a 10-year lifespan ensures the activity will continue for that timespan in the same manner. This limits the introduction of improvements or new technologies. In other words, even if an asset fails to align with Council intentions, financial reasons can limit options for asset renewal.

Solid Waste has limited assets and is not budgeting for significant new assets. Any new services are not budgeted to require significant assets and there is an expectation that most new services would be achieved through contracts with an

asset owner. This also means that while there may be opportunity for iwi to engage on the manner of the service suggested in any tender, any engagement as to the appropriateness of the privately owned asset would happen at resource consent stages.

In some areas of solid waste technology is providing solutions to an innovative and rapidly moving market, so this AMP proposes that asset ownership be consistently reviewed against alternative financial options such as lease, lease to own, or that where possible assets are included in the service contract. This reduces up-front cost to Council and provides the opportunity to be at the forefront of technology and environmental improvements.

Existing assets will be maintained in line with existing plans through the term of their asset life and then disposal will be in line with both the AMP and the waste hierarchy. Assets will be repurposed where possible, recycled as required, and disposed of in a manner that is both environmentally sound and economical. Significant asset replacements during the term of the AMP are indicated in Table 1.

viii Lifecycle management plan — services

Solid waste activity includes services which are performed on behalf of Council through service contracts. These include the recyclables collection service, the NWRC public drop off, the street litter and other infrastructure bins, the stock effluent facility emptying, and the refuse hoppers and cartage for the NWRC. (See Table 2.)

The services performed on behalf of Solid waste are managed through effective contract management. The contract management of services has its own lifecycle with contracts being produced to align with existing Council policies and the Long Term Plan. This has led to a proactive approach to contracts, with recent contracts including social outcomes and emissions monitoring prior to these being a formal procurement requirement in Council contracts.

During the life of the contract the working relationships and close contract management approach ensures all parties are aware of the political, social, and economic environment under which they operate. Council and contractors maintain a cooperative approach which ensures the use of appropriate technology, that service is of the required standard, and which also considers the ongoing viability of the contractor.

At intervals determined by the Local Government Act and prior to the end of any contract, the service and the contract are reviewed to determine the improvements to services that could be applied to any future contract. The review includes alternative procurement options and differing options for governance. This also provides an opportunity to include expectations such as zero emission collection vehicles, social outcomes, and potential improvements in health & safety or technology.

All contracts are developed, evaluated, awarded, and managed in line with Council policies and procedures, which ensures a coherent, cooperative approach.

ix Risk Management Plan

Council is committed to using risk management principles and techniques to understand and appropriately manage all internal and external factors and influences which affect the achievement of its objectives. Doing this will:

- Provide a reliable basis for sound decision making.
- Increase the likelihood of achieving objectives.
- Provide an agreed basis for prudent risk taking.
- Enable the organisation to understand the level of risk associated with each decision as well as Council's aggregate exposure to risk.
- Improve accountability and assurance of control.
- Enable Council to avoid threats and seize opportunities.
- Foster an organisational culture based on reasonable foresight and responsible hindsight.

The Council's standardised risk assessment method explicitly follows the process outlined in section 5 of AS/NZS 31000:2009.

Risk analysis involves consideration of the sources of risk, the consequences, and the likelihood that those consequences may occur.

The following consequences are considered:

- Health and Safety
- Asset performance/Service Delivery
- Environmental/Historical/Cultural
- Financial
- Climate Change
- Political/Community/Reputational
- Relationship with Iwi
- Legal compliance
- Information/Decision support

The consequences of an event are rated 1–5 (Insignificant to Extreme). Likelihood is then rated 1–5 (Rare to Almost certain) to calculate a risk level rated 1–5 (Very Low to Very High).

The objective of risk analysis is to separate the low impact risks from the major impact risks, and to provide data to assist in the evaluation and treatment of the risks.

Table 4: *Summary of risks to the main solid waste activities. Consequences of an event are rated 1–5 (Insignificant to Extreme). likelihood is then rated 1–5 (Rare to Almost certain) to calculate a risk level rated 1–5 (Very Low to Very High).*

	Health & Safety	Asset performance	Service delivery	Environmental	Financial	Political / reputational	Information / Support
Risk rating	3	3	2	2	2	3	1
Greenwaste	Risk of incidents, traffic, residents actions	buildings, site,	contracts in place. Strong management required	environmental incidents from inappropriate disposal by residents	machinery replacement or significant site modification	Residents have high expectations of the process outcomes	Data collection
Risk rating	3	3	1	1	2	1	1
Recyclables collection	Kerbside activity has risks partially contracted out	Service is dependent on contractor and 3rd party maintenance	Monitoring systems and close contract management	Risk of collected materials contaminating the environment	Dependency on markets for materials and international agreements	Residents have high expectations of the process outcomes	Data collection and monitoring and tracking collections
Risk rating	3	2	2	1	1	1	1
Streetlitter	Kerbside activity has risks partially contracted out	Failure of leased bins technology	Monitoring systems and close contract management	Risk of collected materials contaminating the environment	CBD bin overuse (pay per empty)		CLEAN software
Risk rating	3	3	1	1	1	1	1
Foodwaste (proposed)	Kerbside activity will have risks partially contracted out	Service will be dependent on private collector and processor	Monitoring systems and close contract management	Risk of collected materials contaminating the environment	Volumes not matching proposed volumes	Meeting legal and residential expectations	MfE reporting

x Financial Summary

Solid Waste activities operate in a 'closed account' with all revenue streams retained within the activity, in effect making the activity financially independent of Council rates. The cost of all Solid Waste projects is compiled and the revenue from the waste disposal levy and the gate takings at the NWRC are deducted. The balance is the amount of revenue required from the local disposal levy (LDL) from landfill. Nelson and Tasman independently apply to the landfill business unit for funding, and whichever is the lower of the two values is allocated to both parties.

The landfill business unit has now advised that their maximum allocation is $3M (plus inflation adjustment) per year to each party. This has reduced the Solid Waste budget meaning activities will be adjusted in content or timeline to maintain the budget.

Any Solid Waste projects or services that have a direct environmental effect, such as disposal of hazardous materials, management of environmental contaminants or street litter have continued to be given priority and will not be reduced or delayed.

***Table 5** : (next page) Financial summary of solid waste activities. The expenses in this table do not include staff costs, interest on loans or depreciation. The result of including these factors is a small surplus returned to reserves over the 10 year period.*

(units in 1000s)	Comments reference	Year 0 (2023/24)	Year 1 (2024/25)	Year 2 (2025/26)	Year 3 (2026/27)	Year 4 (2027/28)	Year 5 (2028/29)	Year 6 (2029/30)	Year 7 (2030/31)	Year 8 (2031/32)	Year 9 (2032/33)	Year10 (2033/34)
Expenses												
6005 Waste Minimisation	1	589	596	588	588	618	535	505	505	535	505	496
6010 Transfer Station	2	1,757	1,760	1,950	2,010	2,004	2,107	2,183	2,233	2,232	2,234	2,209
6030 Green Waste	3,5	355	340	340	365	1,640	1,615	1,615	1,615	1,570	1,570	1,570
6035 Recycling	4,11	1,849	1,783	1,310	1,305	1,315	1,355	1,365	1,415	1,425	1,465	1,475
Streetlitter	6,9	220	223	223	223	223	223	223	223	223	223	223
Total		4,769	4,702	4,410	4,490	5,799	5,834	5,890	5,990	5,984	5,996	5,972
Revenue	8											
6006 Waste Minimisation		(356)	(230)	(230)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
6011 Transfer Station	7	(967)	(996)	(998)	(1,018)	(1,018)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)
6031 Green Waste		(1,473)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)
6036 Recycling		(20)	(20)	(221)	(226)	(226)	(245)	(250)	(250)	(270)	(272)	(272)
Streetlitter		(356)	(230)	(230)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
Total		(3,171)	(2,983)	(3,186)	(3,171)	(3,171)	(3,193)	(3,198)	(3,198)	(3,218)	(3,221)	(3,221)
LDL	9	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
TOTAL		(6,171)	(5,983)	(6,186)	(6,171)	(6,171)	(6,193)	(6,198)	(6,198)	(6,218)	(6,221)	(6,221)

Comments; Refer to column 2

1. Waste minimisation projects including construction and deconstruction $63k, minimisation at Council facilities $20k, waste minimisation at events $30k, community engagement $145k, e-waste subsidy $25k, compost subsidy $15k, compost education $20k, schools $40k, resources $10k, JWMMP $30k, SWAP $12k.
2. The NWRC will incur an increase in costs due to the increase in the WDL for refuse disposal. This will be directly proportional to the increases in gate revenue, so no increase is demonstrated in this table to either NWRC or gate revenue.
3. Greenwaste disposal costs will increase as the volume diverted from landfill increases (due to the increased refuse disposal costs caused by the WDL).
4. Recyclable kerbside costs start with existing contract costs but changes to a collection only contract with a direct MRF / NCC contract for the sorting and sale of commodities. Also, the public drop off returning to NCC. NCC accepting the revenue from commodities and eliminating the subsidy costs. Also presupposes a CRS in 2025.
5. Foodwaste — Following the successful trial and further research, and MfE funding for a business case, Council proposes to start a residential Foodwaste kerbside collection service. Due to budget in the LTP this is planned for 2027. The Table demonstrates costs to establish the service.
6. Streetlitter includes the lease of solar powered compactor bins. The collection service is included in Transport CBD costs. In 2027 the cost of solar bins will reduce (buy 2nd hand bins)
7. The gate revenue at the NWRC will increase in direct proportion to the increase in costs of disposal, with the gate fee formula being cost of freight plus cost disposal divided by sales. Other site costs will be 'fixed costs'
8. The WDL is shared across the GL lines. The increase of revenue to Nelson, due to the increase in the WDL from $50 to $60/tonne. As approximately 50% of the levy is returned to Nelson's Solid Waste activity, by 2023/24 it will return approximately $1.3M/yr.
9. The LDL for Nelson from the NTRLBU has been entered at the advised $3M. Activities and timeframes for activities will be adjusted to ensure that this amount matches the actual LDL for that year.
10. Capex item 'partial replacement of hoppers and cartage containers is dependent on volumes which produce 'wear and tear'. If volumes decrease or increase, the time to which the cost is applied may move accordingly.
11. As they will not be replaced at a single time wheelie bins have been included as an opex item, although they may be included in the collection contract. Both options have the same bottom line result.

xi Monitoring and Improvement Programme

The AMP guiding document, the 2019 JWMMP has performance and waste diversion targets which the AMP exceeds. The focus of this AMP has shifted from waste disposal to waste recovery and that every programme should be able to yield an identifiable environmental, economic, social, or cultural benefit.

The AMP includes te ao Māori Kaupapa of Wairuatanga by maintaining a more holistic approach when determining the success of any project or service.

This AMP has a strong operational focus which will achieve not only diversion from landfill but the processing of diverted materials in a socially conscious, environmentally sound, and potentially economically sustainable manner. Improvements to the service contracts such as the introduction of new technologies like zero emission vehicles and improved street litter and CBD recycling collection systems, will also create an awareness of better practice, and encourage residents to take more responsibility for their waste and waste reduction.

In order to achieve this wider programme, there is a need to review all data, and ensure that the social engagement is sufficiently flexible to be able to bring forward or push back projects to align them with the highest degree of awareness, and to maximise their ability to succeed. This will require a constant updating of data and communications, and the setting of annual reviews of that information. Where a project is not meeting expectations there must be an intent to change or refocus that activity.

This AMP suggests that an updated review is conducted to determine changes in collection as reported in the jointly commissioned by Nelson and Tasman, Tonkin & Taylor 2021 waste report. This could include consideration of a system of reporting by charities or NGOs as well as utilisation of landfill information beyond the purposes for which it is presently collected. The cost of this would be aggregated across existing Solid Waste activity lines.

1. Introduction

The Plan (AMP) gives effect to the Nelson Tasman Joint Waste Management Minimisation Plan (JWMMP). The JWMMP was adopted in September 2019, and is being reviewed in 2024/5. It expresses a vision for the "communities of the Nelson Tasman region to work together to reduce waste", including a target to reduce waste to landfill by 10% per person by 2030.

The waste hierarchy diagram is a significant guide to waste management and minimisation and Solid waste activities. The 2020 AMP utilised the diagram from the 2019 JWMMP however the waste hierarchy diagram has now evolved in line with central government policies and widening priorities. The new diagram has a broader recognition of energy recovery.

This diagram is utilised by the Ministry for the Environment (MfE) and is the basis for pending legislation. Consequently, this diagram will be used in the waste evaluation process. It guides the priorities for taking action to reduce and manage waste. The aim of the waste hierarchy is to extract the maximum practical benefits from products and to generate the minimum amount of waste.

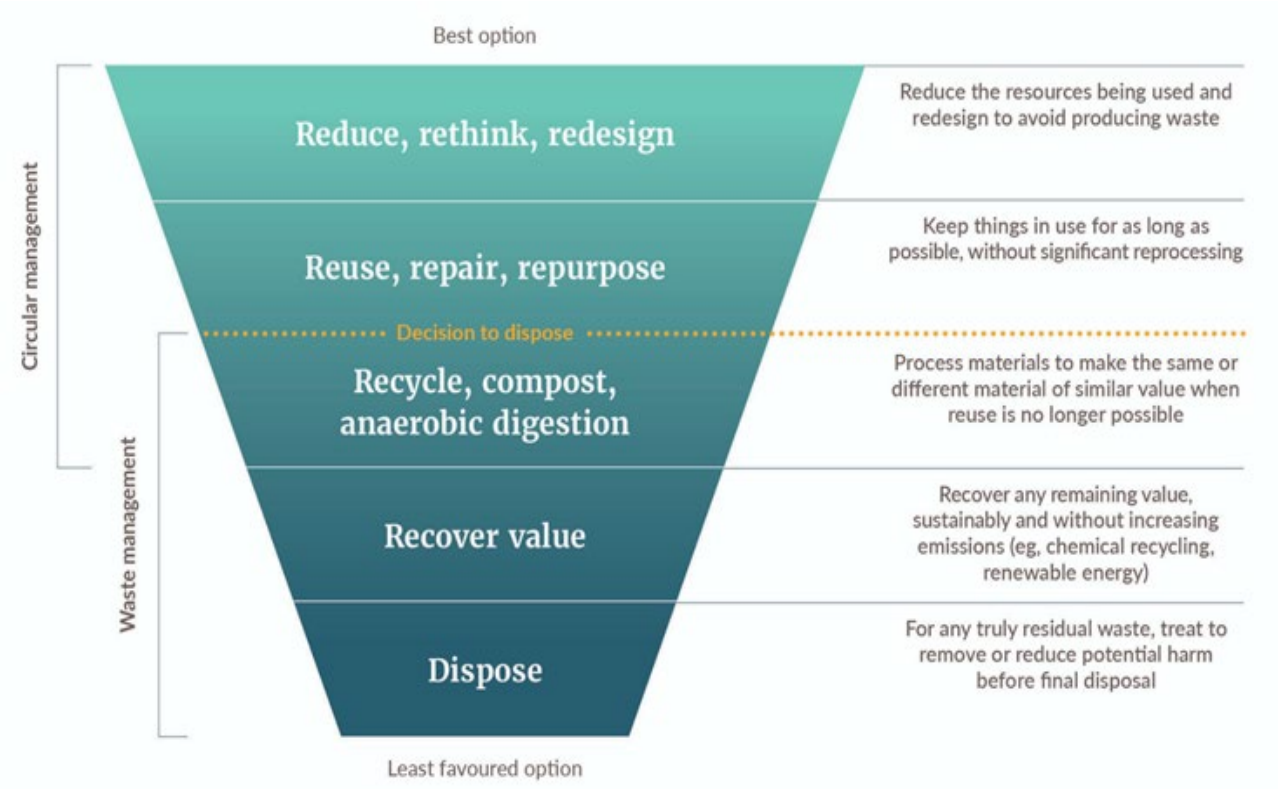


Fig. 1: *The new waste hierarchy.*

Solid Waste intends that all waste is disposed of in a manner which aligns with environmental, social, and cultural expectations, and that the disposal complies with national and international regulations and standards.

As Nelson has a range of industries, producers, and residences, the waste produced in Nelson is typical of that produced nationally, in scale, variation, and complexity. There are no regionally dominating industries producing a disproportionately large single waste stream or product.

Council provides some of Nelson's services, facilities, programmes, and collection systems, but Council is also reliant on private businesses and community groups to provide some waste services, particularly in the areas of waste minimisation. Some of these organisations have developed operations based on current Council activities and policies. The organisations are therefore reliant on consistency of council policy or council contracts. Long-term plans and a clear direction are essential to maintain these symbiotic relationships.

Community and Council priorities for the treatment of waste have changed over time. In the past, Council was expected to provide an 'out of sight out of mind' solution for the lowest possible cost. The community and central governments direction is now for a sustainable waste management process and a circular economy.

A key feature of the New Zealand Waste Strategy 2023 is the move towards ōhanga āmionmio - the circular economy, which focuses on a whole-of-economy shift in the way we value and use resources. This means not only increasing recycling rates for certain materials, but also designing out waste in the first place. For a circular economy to succeed in reducing waste, we will require better services and systems that promote waste avoidance methods. This also means more reuse systems and system changes such as scaled up reusable packaging and transitioning from product ownership-models to accessing products through services and other means (eg, car share schemes vs car ownership, leasing, etc).

As part of Solid Waste, the waste minimisation role of Council is focused on community engagement, waste avoidance and reduction. Waste minimisation considers 'how can we reduce the need for waste management'.

Council has an obligation to ensure that the services, processes, and assets are provided and managed to a standard and outcome commensurate with the aspirations of local iwi. This is achieved through meaningful engagement resulting in agreed outcomes. Solid Waste ensures that all services are available equally to all residents and that everyone has an opportunity to access services and waste education. In line with the equitable outcomes of Mana Orite Solid Waste will not recommend entering into any contract, agreement, or service where any residents in publicly accessible areas of Nelson are disadvantaged or excluded from solid waste services.

The AMP also gives effect to the kaupapa of Kaitiakitanga and Wairuatanga in the protection of the environment with particular emphasis on waterways. Protecting the environment from waste and hazardous substances, even during emergency

events is a core principle and activity of Solid Waste and is detailed in various areas of the AMP.

As well as waste management and minimisation, Nelson residents have an increased awareness of climate-related emissions. At a local level, Council has a role in reducing emissions and engaging with the community to create a resilient and low emissions future. Council also maintains solid waste assets and provides services, both of which require a climate change plan to ensure the viability of the assets and services in the future.

Other Council plans outside of solid waste, including housing intensification and centralisation, will change the collection methodology and requirements of residents, but may also provide opportunities to change services and residential behaviour to minimise both emissions and waste disposal.

How Council delivers its services will play a significant role in building community resilience and meeting emission reduction targets. The AMP recognises that waste processing options can produce various climate related emission levels and that not all emissions are produced only at landfill. For example, it is estimated that close to 50% of greenhouse gas emissions can be associated with how we 'take, make, waste' and the waste minimisation programme has a role to play influencing consumer behaviours. The AMP also considers route efficiency and vehicle procurement decisions such as the use of e-vehicles where viable. It also addresses adaption to climate change and a reduction of emissions from solid waste services.

While Council services can minimise the emissions under its control council has minimal influence over the emissions created by services it does not manage or contract.

Community outcomes

Councils are required by the Local Government Act 2002 to have Community Outcomes – a statement of the measures of success that Council is working to achieve for the community. Solid Waste activities contribute to six of the eight Community Outcomes, as outlined below.

Community Outcome	How this Council activity contributes to the outcome
Our unique natural environment is healthy and protected	Nelson's environment is protected by an efficiently managed waste service which reduces landfill use, protects the environment, and provides safe disposal of waste for residents.
Our urban and rural environments are people-friendly, well planned and sustainably managed	Residents are supplied with a recycling service and litter collection keeping their streets and recreational areas free of dumped refuse and litter. Waste activities are actively managed to reduce greenhouse emissions.

Our infrastructure is efficient, cost effective and meets current and future needs	Contracts and assets are managed to ensure the most efficient services which maximise recycling recovery, provide a waste hierarchy approach to waste disposal while minimising disruption to traffic or the environment.
Our region is supported by an innovative and sustainable economy	Impact on businesses and economic activity are minimised by understanding and managing the collection service. Clean streets and a Smart Little City approach to waste is beneficial to tourism.
Our communities are healthy, safe, inclusive and resilient.	Developing a circular economy ensuring that food is not wasted, and people make better use of resources.
Our Council provides leadership and fosters partnerships, a regional perspective and community engagement.	Council walks the talk in terms of waste minimisation associated with its own activities, and actively seeks to collaborate with Tasman District Council and other organisations on waste minimisation initiatives.

Table 6. *Community outcomes*

Solid waste goals

The goal of solid waste is for Council to provide.

- A street litter collection service
- A residential kerbside recycling service
- A publicly accessible transfer station
- Residential hazardous disposal
- Opportunities for diversion to reuse
- Waste minimisation support

The methods chosen to supply these services will also prevent harm to people and property, contribute to community and cultural wellbeing and, protect the environment from litter, pollution and traffic disruption, all while mitigating greenhouse emissions.

The goal of waste minimisation activities is for Council to provide resources and support to enable our community to take action to reduce or avoid waste. These can range from financial support through to behaviour change programmes, events and education.

AMP framework and key elements of the plan

The framework of AMP follows the generic layout identified in section 4.2 of the International Infrastructure Management Manual 2015.

The AMP has the following key elements:

- Why we need a plan (Introduction)
- What we provide (Levels of service)
- Planning for the future (Future demand)
- How we provide the service (Lifecycle management)
- Dealing with uncertainty (Risk management plan)
- What it will cost and how we pay for it (Financial summary)
- What we're doing to improve (Plan improvement and monitoring)

Relationship with other planning documents

The AMP aligns with the Joint Waste Minimisation Plan (JWMMP) 2019 and also the Infrastructure Strategy and the Long Term Plan (LTP). Other documents include the draft Nelson Tasman Joint Waste Assessment and the York Valley SWAP analysis.

Infrastructure assets included in the AMP

Infrastructure assets include,

- Customer service kiosk
- Reuse shop buildings
- Hoppers and associated cranes and loading area
- Cartage containers
- Tilt bins for streetlitter
- Kerbside recycling bins
- Atawhai landfill gas wells

Key stakeholders

As noted earlier, Council relies on a range of organisations to deliver waste services in Nelson. The following table identifies the main stakeholders and partners and defines their area of activity.

Stakeholder and Partners	Subjects of relevance	
Residents, businesses, schools and community organisations	Kerbside collection Waste disposal Opportunities to avoid or reduce waste including, reduce, reuse and recycling Food waste Climate change Street litter	Residents have expectations that include collection services and litter-free streets. As residents cannot directly access a landfill, residents expect access to a transfer station to dispose of refuse and to divert greenwaste. Some residents are actively involved in NGOs and social actions promoting sustainable lifestyles and activities such as beach clean ups Residents have demonstrated a desire to see action on climate change, particularly relating to post disposal emissions. Residents have expressed an interest in playing an active role in avoiding or creating waste. Schools are actively engaged in teaching good resource use/waste minimisation. Businesses are looking for advice and support on how to reduce/avoid waste.
Local iwi	Atawhai Landfill Kaitiakitanga Waste disposal	Specific issues relating to Atawhai Landfill located near to Whakatū Marae, emissions, environmental considerations such as Te Mana o te Wai and mahinga kai. Kaitiakitanga and the perspective of te ao Māori and should be reflected in how Council plans and delivers waste minimisation, which requires building relationships with iwi partners. (Refer to section 7)

Nelmac Which is a Council Controlled Trading Organisation (CCTO)	Recycling Street litter Illegal disposal Recycling drop off	Operates the kerbside recyclable collection contract for plastic, fibre and glass; illegally dumped refuse collection. Operates the public recyclables drop off at the NWRC contracted until July 2025 Performs on 'demand work' such as dumped rubbish, emergency waste services, site repairs. Servicing of the stock effluent facility in Richmond.
Enviro NZ	Streetlitter Hazardous	Streetlitter collection of solar and tilt bins Hazardous collection from the NWRC and battery collection
Fulton Hogan	NWRC Hopper	Hoppers and freight services NWRC
Nelson Environment Centre	Reuse shop	Reuse shop at the NWRC C&D waste diversion
Greenwaste to Zero	Greenwaste processing	Accepts greenwaste from the NWRC for processing to compost
Materials Recovery Facility (sorts and sells the recycling)	Recycling (Nelson Kerbside)	The Regional Materials Recovery Facility (MRF) in Richmond Tasman, owned jointly by Smart Environmental Limited and Tasman District Council, sorts and sells commodities from the Nelson and Tasman kerbside recyclables collection. The MRF is dependent on the collections for materials to sort. Sorting contracts are with collectors not Councils.
Nelson Tasman Regional Landfill Business Unit (NTRLBU)	Transfer station Kerbside refuse Waste minimisation	Refuse operators and transfer stations require a landfill. Increased waste diversion will influence landfill revenue. Activities in the AMP will influence the level of greenhouse gas emissions from landfill.
Other private companies, for example Can Plan, Waste Management,		Commercial Refuse and greenwaste services, including skips. Engaged during Emergency management

Table 7: *Stakeholders and partners of solid waste activities.*

Organisation structure

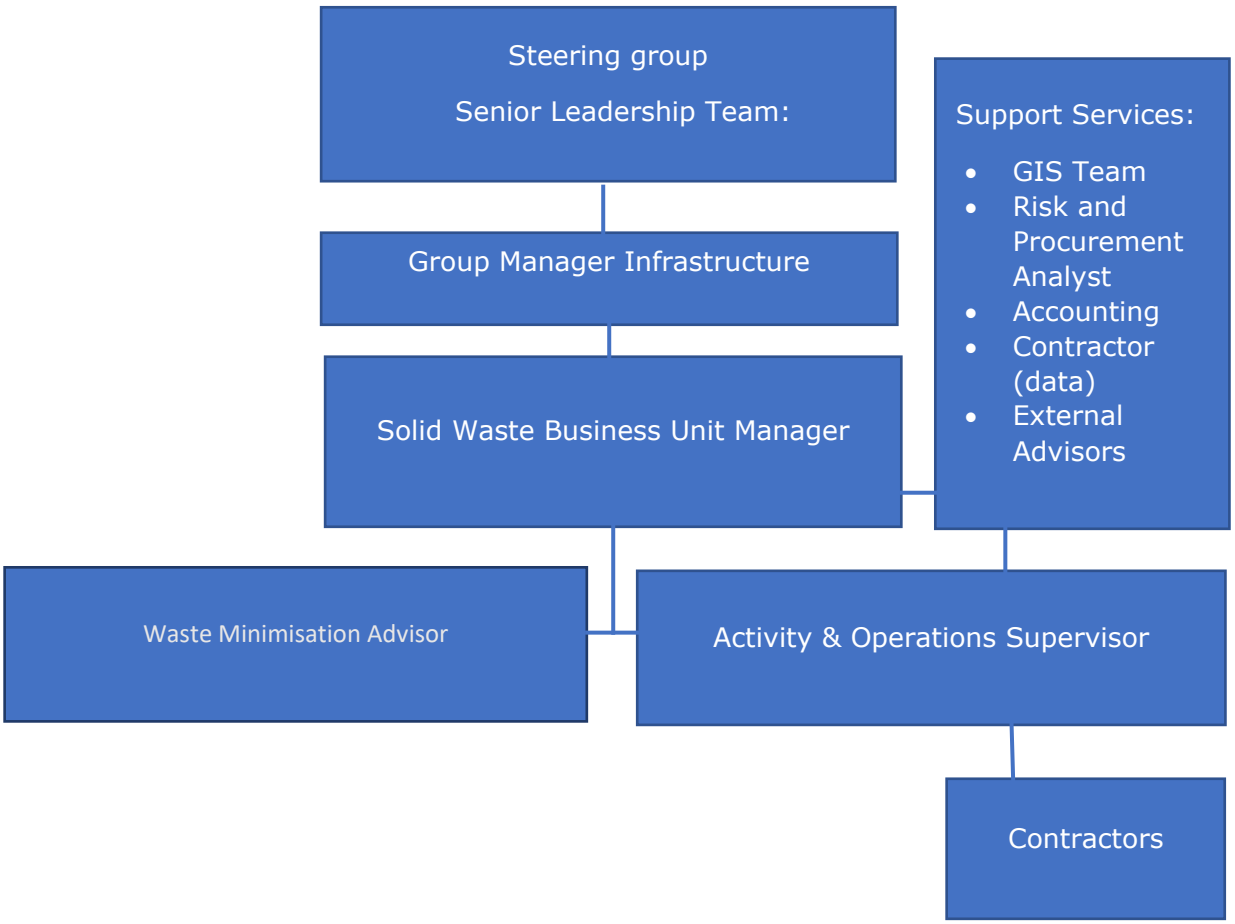


Fig 2 *demonstrates the organisational structure of solid waste*

2. Strategic Direction

Strategic changes related to solid waste include:

- The introduction of mandatory construction and demolition waste reduction.
- Introducing Council-led management of commodities in line with a container return scheme, and legislation relating to performance standards and recycling collection methodology.
- Developing commitments to reducing operational greenhouse gas emissions as part of a transition to a low carbon society.

- Direct engagement with commercial waste providers and builders to achieve coordinated waste minimisation.
- Direct engagement with industry to support both voluntary and mandatory product stewardship, including diversion of soft plastics and refrigerants.
- Developing strategies for the increasing requirements of protecting the environment from outputs from closed landfills and waste related to weather events.

2.1. Goals and Objectives of Asset Ownership

Council enters into service delivery contracts to provide effective and efficient waste management and minimisation services for Nelson. As the contracts provide a service, they are also considered an asset.

Assets must be practically and economically fit for purpose, and flexible enough to meet Council and community expectations of the services associated with that asset. Therefore, one of the goals of any purchase of a new asset is operational flexibility.

There must also be a clear plan for the lifecycle of the asset, which includes ensuring that changes to assets match new contract periods, and that refurbishment or replacement takes into account any relevant changes in available technology. Assets may also need to be altered to match social expectations, such as waste services associated with inner city living or changes to open spaces.

Activity management, including the choice of asset and 'future-proofing', is now an essential component of activity planning. Where an asset was once purchased based on economic longevity, assets are now chosen to align with public expectations, improvements in waste disposal and recycling methods, and to reduce Council's carbon emissions.

As an example, during the term of the last AMP Solid Waste entered into a lease agreement for solar powered compacting street litter bins. This allows Council to keep abreast of the technological changes without significant initial expenditure, and without that expenditure requiring an extremely long asset life to justify the expenditure. This also mitigates Council from owning outdated or inefficient technology.

Council provides some services which utilise physical assets owned by Council. This includes the kerbside recyclables collection and the street litter collection. While these services are contracted to private or Council-owned companies, the assets require Council-managed maintenance and replacement to maintain the service.

Where Council chooses to change an asset to improve the standards of service, safety, or to lower emissions, the contractor will have to adapt to using the new asset. This adaptation may require investment in machinery or methodology. For example, the choice of a different kerbside recyclables wheelie bin replacement may happen mid-contract. In such a scenario the contract may need to be adjusted to match the timing of the bin replacement to ensure appropriate machinery is in place for the term of the contract.

3. Levels of Service

AMPs set out the levels of service Council seeks to provide to the community. Levels of service are the standards Council aims to meet when providing a facility or service in support of community outcomes. They are the measurable effect or result of a Council service, described in terms of quality, quantity, reliability, timeliness, cost or similar variables.

The levels of service that are required to meet central government legislation are considered to be the minimum. and council may choose to provide a higher level of service.

This section defines the current levels of service and performance as well as the proposed levels of service, and how they will be assessed. These performance measures are included in the Long Term Plan 2024–2034, and are reported on annually through the Annual Report or quarterly through Quarterly Reports to the relevant Committee.

3.1. Current Levels of Service

The intent of Council's levels of service is that,

- LOS should meet customers' needs.
- LOS should be responsive to the challenges of climate change.
- Industry benchmarking comparisons should be relevant to Nelson's needs.
- LOS are aligned to management contracts and any strategic plans.
- LOS should be meaningful to management for performance monitoring.

- LOS should align with local iwi guidance and agreed outcomes.
- LOS should be easy to collate and measure, and data should provide useful information.
- LOS should support financial forecasting.
- Legislative requirements are treated as non-negotiable requirements

ACTIVITY	COMMUNITY OUTCOME	LEVEL OF SERVICE	PERFORMANCE MEASURE	PERFORMANCE TARGET			
				2023-24	2024-25	2025-26	2026-27
Nelson Waste Recovery Centre (NWRC)		We enable effective waste minimisation Activities and services	A quantifiable reduction of refuse from the NWRC to landfill for the first three years as measured by the tonnage carted to landfill compared to the 2021-2022 baseline of 4337 tonnes (excluding disaster waste)	Reduction of 5-7%	Further reduction of 3-5% from baseline year	Further reduction of 2-3% from baseline year	Further reduction of 2-3% from baseline year
Kerbside Recycling		We enable effective recycling services	Effective recovery of all commodities, as measured by collected weights compared to sales and distribution rates (excluding contaminated material to landfill)	Commodity revery exceeds 90% of all collected materials (excluding contaminated material)			
Kerbside Recycling		Kerbside services are reliable and easy to use	Recycling service is provided to all nelson residents with less than 1% verified missed collections	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints	Less than 1% verified missed collection complaints

Table 8: *levels of service*

3.2. Customer Research and Expectations

The community can provide feedback on the proposed levels of service through the Long Term Plan consultation process. Council also undertakes a range of consultation processes related to service provision. These formal and informal consultation processes are outlined below.

Consultation Process	Date/Frequency	Reasons for Consultation	Extent of Consultation	Applicable to which Customer Value
Historical and Proposed				
Residents' Survey	Most years since 1998	Rate satisfaction with services provided by Council.	300–400 residents surveyed by telephone.	N/A
Long Term Plan process	Every 3 years	Legislative requirement of the Local Government Act 2002.	Public, business and Industry submissions requested. Advertising in local papers.	Sustainability Reliability Capacity Responsiveness
Annual Plan process	Each year that changes to the Long Term Plan are proposed	Legislative requirement of the Local Government Act 2002.	Public, business and Industry submissions requested. Advertising in local papers.	Sustainability Reliability Capacity Responsiveness
Joint Waste Management and Minimisation Plan process	Every 6 years	Legislative requirement of the Waste Management Act 2008	Public, iwi and business – all Council media channels, advertising	Sustainability Reliability Capacity Responsiveness
Other waste minimisation surveys	Approximately every 2 years	Testing community attitudes on reducing/avoiding waste	Surveys carried out where opportunities arise	Responsiveness capacity
Online engagement platforms such as Shape Nelson	Ongoing	Gathering supplementary community data	Feedback provided by website visitors.	Sustainability Reliability Capacity Responsiveness

Table 9: *Customer research and expectations*

Residents' Survey

The purpose of the Residents' Survey is to obtain statistically representative resident feedback on Council activities which relate to performance measures and identify areas for improvement.

Council has been conducting annual surveys of residents since the late 1990s.

The 2023 survey identified an 81% satisfaction with the recycling service with 86% of residents rating it as important. This placed recycling as one of the top performers in the residents' survey.

Joint Waste Management and Minimisation Plan Consultation

The most recent consultation on the JWMMP occurred in 2018/2019, after Council completed a Waste Assessment in 2017 (as required by the Waste Minimisation Act 2008). The purpose of the JWMMP consultation was to review the original 2012 JWMMP. This review led to the introduction of a target of 10% reduction per capita waste to landfill by 2030, as well as some changes to the section on Kaitiakitanga. Both Nelson City Council and Tasman District Council recognised that achieving the 10% target will be contingent on cost, which is discussed in section 6.1 of the AMP. The updated JWMMP was adopted in September 2019. A new A JWMMP review will be started in 2024, with a Nelson Tasman Joint Waste assessment currently being drafted.

3.3. Strategic and Corporate Goals

Organisation strategic goals and impacts on levels of service.

The AMP has been developed to respond to Council's key themes and priorities:

- Support our communities to be prosperous, connected, and inclusive.
- Transform our city and commercial centres to be thriving, accessible and people focused.
- Foster a healthy environment and a climate resilient, low-emissions community

Nelson Tasman Joint Waste Management and Minimisation Plan

The JWMMP vision is: "Communities of the Nelson Tasman region work together to reduce waste". using the following three goals and objectives:

1. Avoid the creation of waste.

Our community's culture makes waste avoidance and reduction the actions of choice.

Members of our community work together collaboratively to avoid the creation of waste.

2. Improve the efficiency of resource use.

Our communities have access to good information on the efficiency of resource use.

Our community can easily use a wide range of services to divert material away from landfill.

The proportion of material diverted from landfill will increase over time and the quality and range of diverted material will improve.

Our community will actively support and encourage product stewardship

3. Reduce the harmful effects of waste.

Our community can easily access and use services for the safe disposal of waste.

We manage our waste management services to avoid or mitigate any adverse public health, cultural and environmental effects.

Waste management and minimisation services and all related activities are safe to operate and use.

To achieve these JWMMP goals and objectives, seven core principles have been adopted by the Councils, and these will be referred to in this AMP. The principles are:

1. The Waste Hierarchy
2. Global Citizenship
3. Kaitiakitanga and Stewardship
4. Product Stewardship
5. Full-cost Pricing
6. The Life-cycle Principle
7. The Precautionary Principle.

3.4. Key Linkages

In preparing this AMP, external national drivers that influence this activity were considered including legislation, national policies, regulations, strategies,

standards, and guidelines. Local or internal drivers that influence the AMP include Council's bylaws, polices, plans, strategies and standards.

Overview

The following diagram outlines the key linkages between Council's AMPs

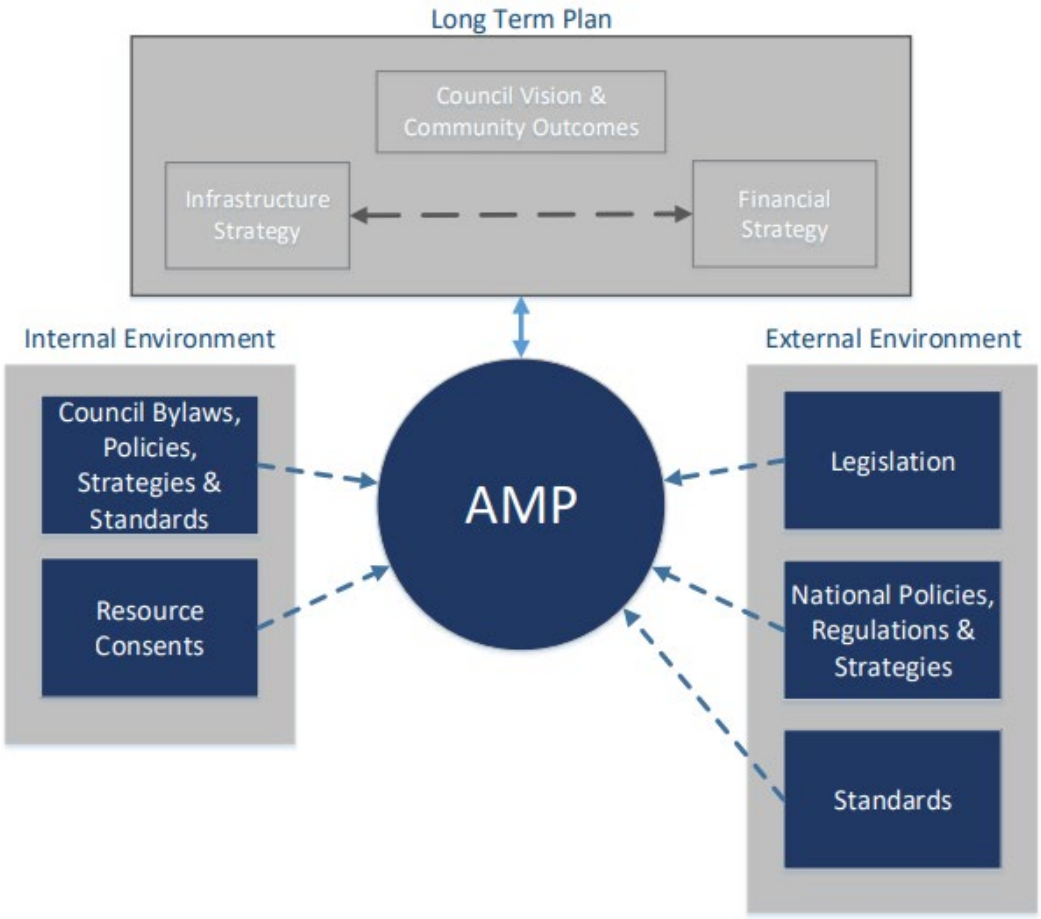


Figure 3 – How the Activity Management Plan relates to other documents

Identification of key Linkages is necessary to ensure this AMP is consistent with all other relevant plans, policies, standards, bylaws etc.

We also have a number of constraints to work within, particularly the legal constraints and obligations that Council has to comply with in undertaking this activity. The main drivers, linkages and constraints are described in the following sections.

Local Government Act 2002

The Local Government Act sets out the requirements of Council to deliver services and the responsibility of the Council to assess the services provided, including waste management. The Local Government (Community Well-being) Amendment Act (2019) amended the purpose of local government, reinstating

the promotion of the social, economic, environmental, and cultural well-being of communities in the present and for the future.

Waste Minimisation Act 2008

The Waste Minimisation Act aims to reduce waste generated and disposed of in New Zealand, encouraging better use of materials and lessening the environmental harm from waste. It is a key piece of legislation for Council's solid waste responsibilities. It states that territorial authorities "must promote effective and efficient waste management and minimisation within their districts". It places a levy on waste disposal to landfills and provides for distribution of waste minimisation grants. The Act required the development of the Nelson Tasman Joint Waste Minimisation and Management Plan 2019, which must be reviewed every six years.

The Natural Built Environment Act and the Spatial Act

The Natural Built Environment Act 2023, and the Spatial Planning Act were passed in August 2023 which replace the Resource Management Act 1991.
A further Act is in development to support these other two Acts.

Climate Change Amendment Act 2008

The Climate Change Amendment Act 2008 provides the basis for the New Zealand Greenhouse Gas Emission Trading Scheme. This Act requires landfill owners to purchase emission trading units to cover methane emissions generated from the landfill.

Climate Change Response (Zero Carbon) Amendment Act 2019

This Act sets a new domestic greenhouse gas emissions target for New Zealand to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050. It also requires central government to develop and implement policies for climate change adaptation and mitigation. To achieve this goal, it established a new, independent Climate Change Commission to provide expert advice and monitoring. It has developed a system of emissions budgets as steps towards the long-term target.

Other Legislation

Other legislation impacting waste management and minimisation planning is listed below.

- The Hazardous Substances and New Organisms Act 1996 controls the handling and disposal of hazardous substances.
- The Civil Defence Emergency Management Act 2002 requires lifeline services to function to the fullest practical extent during and after an emergency, and to have business continuity plans.

- The Health Act 1956 aims to prevent nuisance (which includes odour and dust from the NWRC etc) and promote public health.
- The Local Government (Rating) Act 2002 allows Council to determine a rate or charge for any activity Council chooses to get involved in.
- The Health and Safety at Work Act 2015 outlines health and safety responsibilities for the elimination or minimisation of risks associated with work. The Act enables the Governor-General to make regulations related to hazardous substances.
- The Building Act 2004 requires building consents for building construction, operation and demolition.
- The Litter Act 1979 (and Amendment Act 2006) provides Council with powers to establish litter enforcement officers or "Litter Control Officers" who have powers to issue infringement notices, with fines, to those who have committed a littering offence.

Basel Convention

New Zealand's commitments to international agreements also influences solid waste activities. The Basel convention is a multinational environmental agreement which was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries. The Convention is also intended to minimize the amount and toxicity of wastes generated. The effect of the Basel Convention is that mixed recyclables such as a single bale of plastics containing 3,4,5,6 & 7 plastic types, or a bale of a single type of plastic with less than 99% purity, are now considered waste and cannot be exported to other countries. Commodities that are baled as a pure waste stream (e.g. only No5) can be exported with an export license combined with an import license.

Pending Legislation

The single largest influencer on future AMP activities are the changes outlined in the New Zealand Waste Strategy 2023 - Te rautaki para (Strategy). The Strategy has proposed a 30 year roadmap towards a low-emission, low-waste society.

Part of the Strategy will be new legislation, which has been outlined in 'Te whakapai i te kohinga hangarua me te para kai-ā-kāinga - Improving household recycling and food scraps collections'. This creates mandatory collection services and a schedule against which services are to be introduced.

Previous Solid Waste AMPs were an extension of the direction and resolutions from Council that were included in the JWMMP. However, the legislation is now the primary guide for all solid waste activities.

The introduction of mandatory standardisation of kerbside recycling services was gazetted in September 2023 for a January 1 2024 start.

Due to the legislation this AMP and its financial strategy has a direction of active change because a business-as-usual approach to subjects such as recycling is not an option.

4. Future Demand (planning for the future)

Details of future demand for each activity has been included in the focus areas in section 6 of this AMP. This section explains the basis on which each activity's future demand has been modelled.

Table 10 Timetable of significant enacted and proposed activities which influence future demand on services and assets. Each item is operationally reviewed in section 6 Focus areas.

	23-24	24-25	25-26	27-28	28-29	29-30
Recycling	Jan 24 compulsory domestic kerbside recycling services with a mandatory collection list	Early 24 : tender for future recycling : collection only contract which removes sorting services	June 25 expiry of kerbside contract. New collection contract starts NCC commodity subsidy ends		10% of kerbside bins replaced	20% of kerbside bins replaced
		Potential Container Return scheme	NWRC Public drop off becomes a container return scheme site			
		NCC establish sorting contract with MRF for July 25 start	From June 25 NCC own commodities and contract sorting services			
NWRC recycling			CRS depot and separate management			
Streetlitter			Solar bin lease ends bins are purchased EOY 26	Infrastructure streetlitter contract renews	Tender for new streetlitter contract	Infrastructure streetlitter contract expires
NWRC hopper		4 freight containers replaced	3 freight containers replaced	Tender for Hopper contract	Hopper contract expires	
NWRC NCC	Dome building erected		New kiosk building			
NWRC NEC				NEC lease		
NWRC C&D	Started 2023	MfE milestone 2	MfE milestone 3. No further funding			
Foodwaste	Research Eunomia	business case Tender for services, collection and processing contracts		Collection services start (proposed)		
Atawai closed landfill	Gas vent improvements		Drainage potential leachate management	Drainage potential leachate management		

4.1. Assumptions

The most significant assumptions and uncertainties underlying the approach taken to Council's activities are:

Population and growth projections – The projections for an increase in population and an aging population inform the assumption of the physical capacity of the residents, such as elderly will be less mobile, or produce less or more waste. Purchasing, and hence waste production is assumed on present behaviour. Population trends also advise likely land use.

Climate change - Increased numbers or severity of extreme weather events, such as heavy rainfall with flooding and slips, and dry weather resulting in drought and fire, would lead to increased costs for Council in both responding to the events and building greater resilience into infrastructure.

Legislative reform - There are reforms and legislative changes impacting local government that are likely to progress or come into effect during the period of the Long Term Plan 2024-2034. The resulting impact on Council's work programmes and budgets is unknown.

4.2. Climate Change

Climate change is our biggest global challenge and Council is committed to considering and reducing climate change impacts.

At a local level, Council has a key role to play by reducing its corporate emissions, supporting and providing leadership on mitigation actions across the community, and managing and reducing risk by helping Nelson to adapt to climate change effects, especially in relation to:

- **Sea level rise**: sea level rise is the most significant climate challenge for Nelson as a large proportion of its urban infrastructure is coastal or low lying. These areas will become more vulnerable to coastal inundation over time.
- **Heavy rainfall and flooding events**: higher intensity rainfall events means Nelson will experience more regular and extensive flooding from streams, rivers and stormwater overflows, which will increase the risk of landslips.
- **Droughts and high temperatures**: with a warmer climate, the temperature of the water within our rivers and streams will increase and affect habitats. Droughts will result in a higher risk of fires.

4.2.

Responding to Climate Change

Mitigation

Mitigation is about reducing greenhouse gas (GHG) emissions and enhancing carbon sinks (sequestration to remove greenhouse gases from the atmosphere). Council is committed to emissions reduction targets for its own activities in line with government targets:

Net zero emissions of all GHGs other than biogenic methane by and beyond 2050;

10% reduction below 2017 biogenic methane emissions by 2030;

24-47% reduction below 2017 biogenic methane emissions by 2050.

Adaptation

Adaptation is the process of responding to current and future climate related impacts and risks. To manage these impacts and risks, Council is following the Ministry for the Environment guidance and is using the Dynamic Adaptive Pathways Planning (DAPP) approach. This means managing our assets in a way that makes them more resilient, or in some instances, it may mean moving those assets.

What Council is doing

How Council delivers its services will play a key role in meeting emissions reduction targets and building community resilience.

Acknowledging the need for urgent action, Council declared a climate emergency in May 2019. Council adopted Te Mahere Mahi a te Āhuarangi Climate Action Plan in 2021, a living document which outlines what Council is doing to address climate change over the next decade. In 2022, Council also began developing a Climate Change Strategy, which will set the long-term direction and guide Council and community investment in climate action.

Council is working with Tasman District Council on a regional climate change risk assessment, which will build a comprehensive picture of how climate change will impact the region.

4.3. Demand Drivers

Factors that will influence demand:

- Behaviour and expectations
- Population
- Landfill acceptance criteria and waste composition
- Central government and Council requirements and policies (including greenhouse gas emission reduction targets)
- New legislation and mandatory services
- Container return schemes and product stewardship

Demand Forecasts

Projected growth or decline in demand for services has been modelled. In some activities this is based on several competing factors.

For example, there is an expectation that a recycling collection service will be provided and that residents will use the service. The volume of recycling would be expected to increase in line with increases in population. However, as people learn about the waste hierarchy and make better purchasing decisions, the

volume of recyclables to be collected may reduce. When product stewardship is introduced, more materials may be recycled but not necessarily through the kerbside service. If the value of certain recyclables increases, these materials may be separated out for fundraising activities rather than included in the kerbside collection.

Activity	Detailed in section	Demand forecast	
NWRC			
Recycling drop off		consistent	
Recycling drop off after a container return scheme		increase	May become a 'refund' depot.
Greenwaste disposal NWRC	8.6	Slight increase	Increased 23% last 3 years
Refuse disposal NWRC	8.11		Decreasing (21% in the last 3 years)
E-waste NWRC	8.9	increase	In line with the introduction of product stewardship
Streetlitter	8.4	increase	More demand ie bus stops CBD
CBD recycling	8.5	increase	With CRS and technology
Recycling kerbside	8.3	consistent	While some products may reduce the overall tonnes are expected to be consistent
Recycling inner city	8.5	increase	In line with more inner city residents

Table 11: The forecasting of demand by activity. Each activity is detailed in individual activity chapters within section 6

Nelson Population and Household Projections:

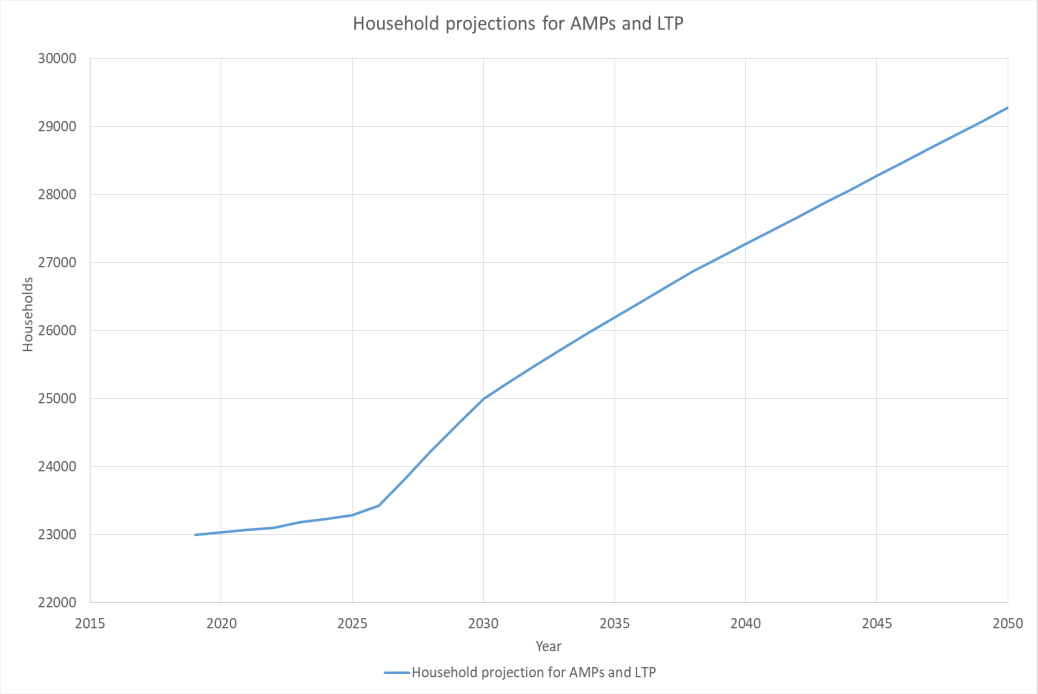


Figure 4: Household projections

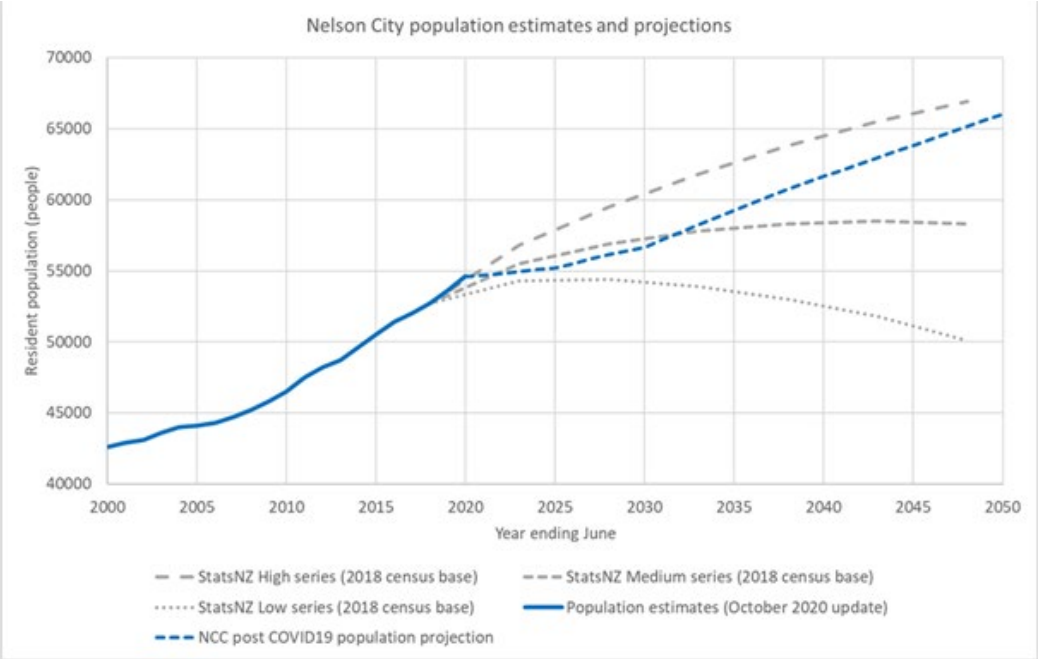


Figure 5: Population projections

One of the key issues facing Nelson is the ageing of its population, which will have a significant impact on the types of services Council will need to provide in the future. The geography of some areas of Nelson, which includes steep driveways and narrow streets, may also make it more difficult for older residents to move bins or utilise waste services.

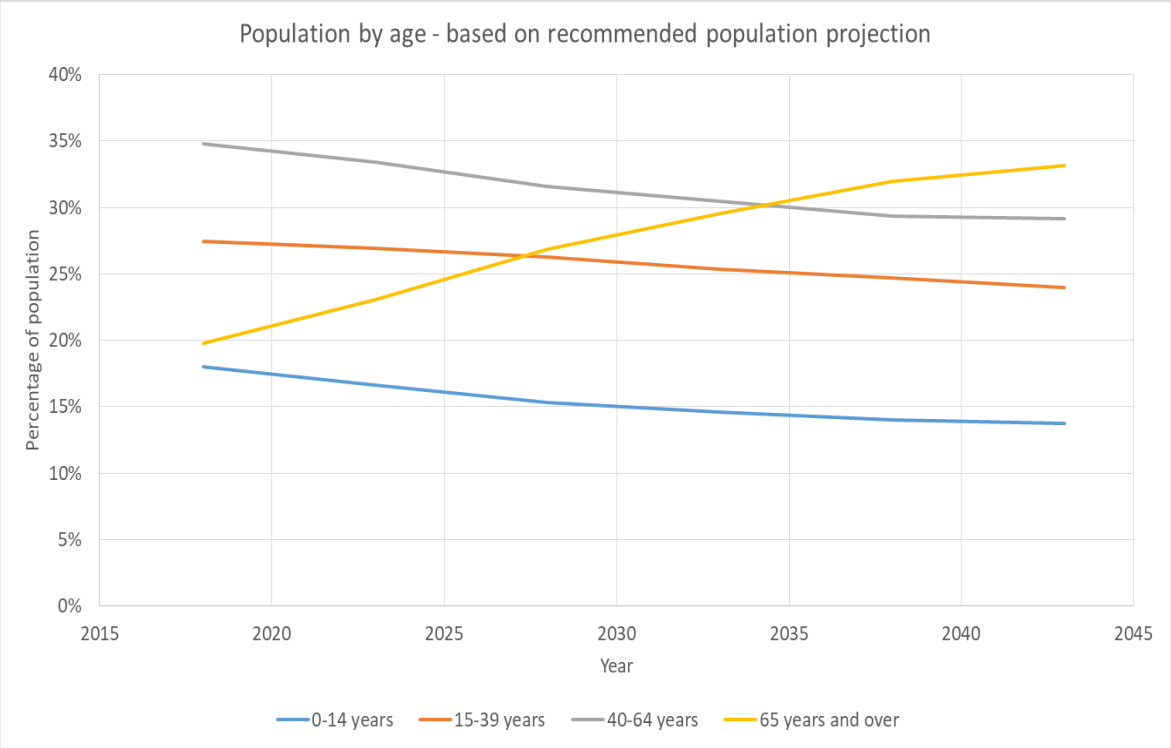


Figure 6 shows the projected trends for each age group from 2018

4.4. Demand Impacts on Assets

The capacity of the current assets is reviewed in this section. Spare capacity does not necessarily mean that the asset is in the appropriate form for that service. While there may be unutilised capacity in the existing assets, the demand drivers listed in section 4.3 may suggest an alternative asset design as being more appropriate. This may be as simple as whether the rider of a mobility scooter can reach the mouth of a streetlitter bin, or whether a central government directed kerbside collection methodology negates the practicality of the existing wheelie bins. A demand management plan is required to assess the combined implications of demand, asset design and utilisation.

Demand	Impact
Consumer culture continues to drive increase in waste	Pressure on infrastructure
Population growth changes	Pressure on infrastructure
Increased expectations	Expectation of climate change action
Increased expectations	Expectation of a wider range of disposal options
Increased expectations	Operational or site improvements required to meet Kaupapa of Iwi partners.
Innovation and Technology	The implementation of 'clean' technologies which align with environmental expectations often at a higher cost.
Economy	Changes to the economy influence behaviour. In tighter economic times people want to minimise waste disposal costs – risk of inappropriate disposal
Legislation	Changes to key legislation affecting the financial resources available or the methodology of collection processes. Also, the requirement to introduce new services

Table 12 Demands and the expected impacts

4.5. Demand Management Plan

Solid Waste encompasses a range of assets and activities that form part of Council's responsibilities for minimising and managing Nelson's waste. Current and future responsibilities cover a range of contracts, and services for residential and CBD streetlitter, recyclable collections, food waste, greenwaste, and diversion of items such as building waste and e-waste from landfill. Solid Waste activity is also responsible for engagement and education programmes to support waste minimisation and maintains oversight of the closed Atawhai Landfill.

The demand management plan for each asset or activity is included in the focus area (section 8). This includes demand forecasts, impacts on assets and future planning.

Solid Waste also encompasses waste minimisation. The purpose of Council's waste minimisation programme is to support a culture where the community chooses to avoid and to reduce waste generation. There is a growing recognition in the community of the value of making better use of resources through concepts such as the 'circular economy' and the waste hierarchy, as well as the link between reducing waste and reducing climate change impacts. Council anticipates that a growing percentage of residents will choose to actively divert waste or reduce consumption, and the waste minimisation component of this AMP focuses on providing the tools to support this.

Demand management strategies are an alternative to the creation of new assets and services to manage waste. These strategies aim to modify customer demands for waste services to achieve:

- the delivery of cost-effective services
- deferral of the need for new assets and optimisation of the performance/ utilisation of the existing assets
- Sustainable management of existing assets.

4.6. Asset Programmes to Meet Demand

During the term of the AMP the main asset replacements will be:

1. Partial replacement of NWRC hoppers and refuse cartage containers
2. Replacement of yellow lidded recycling wheelie bins
3. Replacement of the NWRC freight bins
4. Facilities for C&D waste diversion
5. Kiosk for NWRC
6. Atawhai landfill well maintenance.

5. Lifecycle Management (how we provide the service)

5.1. Background Data

Asset Lifecycle

Assets have a lifecycle, and they move through from the initial concept to final disposal. Depending on the type of asset, its lifecycle may vary from 10 years to more than 50 years. Key stages in the asset lifecycle are outlined in Section 14.

The Operations & Maintenance and Renewal programmes focus on maintaining the current service potential of the assets. The key consideration is the condition of the current assets, although asset performance is often an indicator of asset condition.

In contrast, the Development programme focuses on closing gaps between the current and desired levels of service by increasing the potential of the solid waste system. This is primarily driven by the performance of assets and the need to accommodate population growth in the city, and the need to implement the JWMMP.

The following table is a list of physical assets, their condition and life expectancy.

Asset	Quantity	Location	Condition	Life expectancy
Cast iron Bins	25	Not in use		
Cast iron bins with seagull lids	49	Not in use		
Tilt bins	84	Bus stops, dairies	Average condition but require high maintenance 10% per year replaced	6 yrs.
Solar bins	54	CBD	On lease	4yrs remaining
Stainless recycle bins	3	Sports fields CBD		3-5 yrs.
240 litre recycle wheelies	18565	Distributed to residents	Variable because lifespan is according to frequency of use	5–7 yrs.
120 litre recycle wheelies	2635	Distributed to residents	Variable because lifespan is according to frequency of use	5–7 yrs.
Unused 240 litre wheelies	88	NWRC storage	Unused	10–12 yrs.
Unused 120 litre wheelies	234	NWRC storage	Unused	10–12 yrs.

Unused 65 litre blue glass crates	10	NWRC storage	Unused.	To be sold
Asset	**Quantity**	**Location**	**Condition**	**Life expectancy**
Unused 45 litre blue glass crates	1020	NWRC storage	Unused	To be sold
Gantry crane	1	NWRC	Good with maintenance	10 yr. +
Compactor	1	NWRC	Good with maintenance	10 yr. +
Hoppers	2	NWRC	Medium	Partial replacement in 3-4 yrs.
Cartage containers	7	NWRC	Average – maintenance scheduled replacement in LTP	2-3 yrs.
Recycling shed	1	NWRC	maintenance / modification work required	30 yrs
Sorting shed	1	NWRC	maintenance / modification work required	20 yrs
Reuse building	1	NWRC	maintenance / modification work required	15 yrs
Kiosk	1	NWRC	poor	2 yrs

Table 13 General comments on asset quantity, age, size, material, location, and current issues

5.1. The following table is a list of physical assets describing their location and utilisation

Asset	**Description and utilisation**
Cast iron Bins	
Tilt bins	84 x 100 litre bins. Green or silver bins on a post which tilt outward for emptying. Locations are mapped. Bins are generally outside dairies and bus stops
Solar compacting bins	54 bins on a 5 yr lease. Not a council asset but require asset management. All located in CBD. Option to purchase at end of lease.
Stainless recycle bins	3 x stainless steel boxes. Each contains 1 x 120 litre bin for glass and 1 x 120 litre bin for recycling. They are located in the CBD, Tahunanui Sportsgrounds, and Saxton Field. Although provided for recycling, they suffer from misuse and unacceptable levels of contamination. Very little material from these bins is ever recycled.
240 litre recycle wheelies	18,565 x 240 litre black bins with yellow lids. These have been individually assigned to a residential property and

	there is a GIS based tracking of all bins and locations using the serial numbers of the bins.
120 litre recycle wheelies	2635 x 120 litre black bins with yellow lids. These have been individually assigned to a residential property and there is a GIS based tracking of all bins and locations using the serial numbers of the bins.
Unused 240 litre wheelies	88 x unused 240 litre recycle wheelie bins to be used for new properties and replacements.
Unused 120 litre wheelies	234 x unused 120 litre recycle wheelie bins to be used for new properties and replacements.
Unused 65 litre blue glass crates	10 x 65 litre blue glass crates to be sold to residents via Nelmac or Council.
Unused 45 litre blue glass crates	1020 x 45 litre blue glass crates to be sold to residents via Nelmac or Council.
Gantry crane	1 maintained under Contract 4018.
Compactor	1 maintained under Contract 4018.
Hoppers	2 maintained under Contract 4018.
Cartage containers	7 x 30m^3 containers which lock onto the compactor to accept compressed refuse or greenwaste, which are then loaded onto the truck for cartage. Utilised under Contract 4018 but maintained by Solid Waste. budgeted for replacement in 2027-28
Recycling shed	1 x 180m^2 barn-style building within the NWRC recycling yard. This is utilised by Solid Waste for storage of bins etc.
Sorting shed	1 x 65m^2 industrial building within the NWRC recycling yard. Due to the in situ machinery, it has limited immediate options for use.
Reuse building	1 x 400m^2 open industrial building in the NWRC which is utilised (along with the 1100m^2 yard) as a reuse shop under lease to Council.
Kiosk	1 x 25m^2 portable building within the NWRC which is utilised by Council as the customer service and payment office. Budgeted for replacement in2025-26

Table 14 : Asset description and Utilisation

The following table reviews the capacity of the assets. Although the capacity identified is the actual capacity of the asset in some cases there may other limiting factors.

Asset	**Asset capacity**
Cast iron bins	Not in use
Tilt bins	84 bins total 21892 collections per year. Maximum capacity is approximately 130 tonnes per year
Solar compacting bins	54 bins with capacity of 287 tonne per year
Stainless recycle bins	As noted in the previous table, very little material from these bins is ever recycled.

240 litre recycle wheelies	Audited recycling weighs on average 70 grams per litre. By comparing actual collections against the capacity of the bins, it can be determined that the recycling collected in 2019/20 was under 30% of the maximum possible capacity. This is primarily because most people do not leave their bins out on every collection day.
120 litre recycle wheelies	
Unused 240 litre wheelies	Adequate stock to meet requirements. (on order)
Unused 120 litre wheelies	Adequate stock to meet requirements.
Unused 65 litre blue glass crates	Adequate stock to meet requirements.
Unused 45 litre blue glass crates	Adequate stock to meet requirements.
Gantry crane	Utilised as required, with seasonal variation. Annual refuse: 4500 tonnes. Greenwaste: 1,150 tonnes. Estimated to be operating at 70% of maximum capacity.
Compactor	
Hoppers	
Cartage containers	
Recycling shed	Fully utilised for storage of materials and items belonging to Solid Waste
Sorting shed	Not utilised
Reuse building	Leased to Nelson Environment Centre. Fully utilised.
Kiosk	Fully utilised.

Table 15: Asset capacity

5.2. Operations and Maintenance Plan

The following table reviews physical assets in line with management of their maintenance

Asset	**Operation & Maintenance**
Cast iron bins	Currently unused and in storage at the NWRC
Tilt bins	Bins are maintained and replaced as required. Damage from vehicles is the primary cause of replacement.
Solar compacting bins	Maintenance contract (MANCO)
Stainless recycle bins	Repairs as required.
240 litre recycle wheelies	Bins are supplied to new customers. Residents are charged for replacement bins delivered under Contract 2906. Where the collector damages a bin, the collector is liable for the cost of its replacement. Maintenance and cleaning of the wheelie bins is the responsibility of the resident.
120 litre recycle wheelies	
Gantry crane	Operational maintenance under Contract 4018. Reporting schedule for machine checks and certifications for gantry crane. Engineering report completed bi-annually to determine life expectancy etc.
Compactor	
Hoppers	

Cartage containers	Operational maintenance under Contract 4018. Reporting schedule for bin condition. Engineering report completed bi-annually to assess condition and maintenance requirements Livery managed by Solid Waste, exclusive of Contract 4018.
Sorting shed NWRC	Annual building Warrant of Fitness. Damage caused by other parties is repaired at their cost. Maintenance managed by Solid Waste.
Reuse building	Leased to Nelson Environment Centre. Fully utilised. Maintenance included in Nelson Environment centre lease.
Kiosk	Maintenance and repairs managed by Solid Waste.

Table 16 Operation and maintenance of solid waste assets

5.3. Renewal/Replacement Plan

The AMP includes areas of significant renewal expenditure.

The NWRC cartage containers are subject to metal fatigue and wear. The need for renewal is dependent on wear, which is caused by the tonnage in contact with the metal. Therefore, the renewal will be completed as required but could be earlier or later than indicated. The financial summary in section 7 of this AMP includes the cost of this renewal.

The renewal of the yellow lidded recyclables wheelie bins is also included in the financial summary, and they may also be required earlier or later according to wear and tear. The information available at this time indicates that renewal would be achieved by replacing the bins at their original capacity. However, if changes to the collection methodology are required by central government prior to the renewal time, this may result in the selection of a different bin option.

The customer service kiosk at the NWRC requires replacement and has been budgeted for in the LTP.

5.4. Disposal Plan

The disposal of assets will be in line with the waste hierarchy and Council procedures. This was evidenced by the 2023 disposal of materials from the modifications of the NWRC recycling barn. All timber and fittings were sold through the C&D waste diversion at NEC preventing 3.2 tonnes to landfill.

6. Risk management Plan (dealing with uncertainty)

6.1. Critical Assets

Critical assets are the ones which would result in a significant failure of service, or significant unbudgeted expenditure to Council, if they broke down or were not available to use. These are the assets which require the closest management. Assets and activities considered to be critical to solid waste are:

- Nelson Waste Recovery Centre (waste disposal and transport functions)
- Kerbside collection of recyclable materials
- Streetlitter collection
- Atawhai Landfill (critical through failure not lack of supply)

The Nelson Waste Recovery Centre (NWRC) is not critical in its entirety. While the closure of the reuse shop or the public recyclables drop-off facility may be inconvenient, the closure would not in itself cause significant social disruption. This was demonstrated during Alert Level 4 lockdown due to COVID-19.

However, there is a need for a residential refuse disposal service. The limits of residents' ability to safely store refuse at home was also demonstrated during the COVID-19 lockdowns, The temporary closure of the refuse disposal at the NWRC also reduced the separation of greenwaste from refuse. Where residents stockpiled, they stopped separating materials resulting in refuse, greenwaste and recyclables being compiled to a single disposal.

Residents cannot directly access the landfill and for items or amounts larger than can be left kerbside in pre-paid bags or bins they rely on the transfer station for waste disposal. The closure of the refuse collection for longer than a few weeks may lead to poor environmental outcomes. Hence the transfer station facility, including the hoppers, must be considered critical.

The other critical component of the NWRC is the kiosk. The kiosk staff collect gate revenue, provide advice on hazardous materials, and manage some health and safety matters. Since October 2021 the site has been manned by Nelson Council staff. The building itself is also critical as without a kiosk facility it would be extremely difficult to collect gate revenue. Due to its importance and declining condition a rebuild budget has been included in the LTP

Recycling

The recycling collection contract is critical to maintain the now gazetted collection of recyclables. The current contractor does not have a sorting facility and sub-contracts the commodity sorting and sales to Smart Environmental. The MRF is leased from TDC. Without this facility the collected materials would have to be landfilled or transported out of region. Access to, and the processing capacity of, the MRF is critical to the Nelson recycling service. Being dependent on a third party sub contract presents a risk to council.

Post June 2025 the recycling collection contract will be for collection only and the sorting and sales agreement with the MRF will be held by council. This will reduce operational and contractor risk and allow council to directly manage the commodity recovery. As there are no other facilities in the Nelson or Tasman region this would not be tendered.

Street litter

Street litter management is not in itself critical. The service does not require specialised collection vehicles and an alternate collector could be established. The assets require minimal maintenance, and the contract requires minimal management. As the solar bins hold several days of street litter the automation provided by the solar compacting bins has also reduced any effect in the CBD of a temporary loss of service.

Refuse

Council does not provide a kerbside refuse collection service and for such a service to be achieved in Nelson it is dependent on private companies. Until February 2022 residential kerbside refuse was primarily performed on a user pays basis by Nelmac. The Nelmac 'Betta Bins' brand was then sold to Smart Environmental who have continued to collect blue bags and bins under the 'Betta-Bins" brand. At the time of the sale Smart Environmental agreed to collect from all areas that are presently serviced by the recycling service. For convenience they also collect on the same day and will continue for a period of two years. This good faith agreement expires in February 2024 and from this time there is no guarantee that all residents in Nelson will receive a collection service.

While there is no plan to supply any irregular services to any specific area of Nelson while not providing it to another area because, as has been discussed with Iwi, there is an expectation that every resident has access to all services on an equal basis.

The AMP recommends that this is treated as an identified risk

6.2. Risk Assessment

Activity or Asset	Description of risk	Risk assessment
Recycling collection service	Changes at a government level which will impact on collection methodology	15
	Changes at a central government level which will impact on the selection of materials collected	4
	Failure of asset — wheelie bins	6
	Meeting demand for inner city recycling	2
Streetlitter	Failure in streetlitter service, leading to complaints	3
	Failure of asset — cast iron bins	2
	Failure of asset — tilt bins	5
NWRC	Risk to public or residents in relation to existing services and operations.	6
	Failure of hoppers and compactor	4
	Failure of cartage containers	4

Table 17: Risk assessment of assets and activities for services supplied by solid waste. The risk matrix (above) should be used to interpret the level of risk that has been assigned.

6.3. Identified Risks – Discussion

This section identifies several risks which will influence solid waste activities and planning. More detail about management of specific risks related to each activity is provided in section 8 (Focus Areas).

National and international activity such as legislation and international agreements have a significant impact on local waste management. While there is an awareness within solid waste of the policies and direction of international markets and central government, solid waste has limited influence on the impacts that result from the following external decisions.

6.3. **Central Government Legislation**. Central government legislation may be introduced for political expediency without consideration of financial or operational burdens on council. In relation to solid waste, it is essential that council keep abreast of central government thinking, international environmental trends, and the programs of local NGOs and environmental groups.

6.3. **Private kerbside collection.** Since February 2022 residential kerbside refuse services are provided by a private company on a user pays basis. Previously refuse services were performed by Nelmac and council were in a position to guide from where and when collections would be performed. Smart environmental purchased the 'Betta Bins' brand from Nelmac in 2021. As a private company they can now decide that it is uneconomical to collect in any area, or even particular street, and residents could be left without a collection service. The risk to council is that council may then be expected to subsidise or to supply an unbudgeted collection to these residents.

The legislation does not specify that council will collect kerbside refuse but has been published including an assumption that this is performed by all councils. This has been reinforced by the requirement to reduce kerbside collected tonnes, something impossible for council to do to a private company. Solid waste has opposed this, explaining the effectiveness of the present structure. However, should private collectors leave streets or suburbs uncollected it would be difficult for Council to maintain this stance.

6.3. **Legislation requiring specific waste services** to be provided by Council. It is a risk that legislation does not take into account local conditions or local economic structures. There is a risk that Council will not meet the required standards and will need to introduce new services which are outside the LTP and which will put Council in direct competition with existing commercial waste providers. As an example, this could include being obliged to expand a proposed Foodwaste service to also collect garden waste.

6.3. **Legislative targets and penalties.** Within pending legislation is the proposal that Council achieves a reduction in kerbside refuse. This is something outside of Council's control and so this target is not achievable. The proposal includes withholding the WDL (approximately $1.2M of solid waste revenue) as a penalty for non-achievement.

6.3. **Commodity value and markets**. The now permanent status of China's National Sword Policy Which set new standards for the purity of recyclables being imported. The new levels exceeded the design parameters of most New Zealand based sorting facilities, reducing exports to China by over 95%. This change created a 'stock outside of China' glut which caused a worldwide collapse of commodity prices. Locally, this created a need for subsidies to ensure the continuation of the recyclables service. Following the expiry of the Nelmac collection contract in 2025 NCC will inherit the full costs of commodity shortfall and this has been budgeted in the LTP

6.3. Other countries including Malaysia and India have followed Chinas example and now require a purity level unachievable by New Zealand for any recyclable commodity exported to these countries These countries however continue to accept fibre and are the largest importer of fibre exported from New Zealand.

6.3. **The Basel Convention.** This is an international treaty was designed to reduce the movement of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries.

It is also noted that on the day that MfE gazetted the compulsory collection of No 5 Plastics (PP) the New Zealand market reached capacity and stopped accepting the material. Now all compulsorily collected PP will have to be either exported or landfilled.

In 2019 Council decided that it would not collect plastics where there is not a New Zealand based processor available to take them. This resulted in 90 tonnes of mixed plastics going to landfill annually. Due to recent legislation non collection of a commodity is no longer a council decision.

6.3. **Waste levy and landfill prices**. The increase in the Waste Disposal Levy (WDL) will increase the cost of disposal of refuse. While at this time disposal prices do not directly correlate with incidences of illegal dumping, (Fig 20) there may be a price point at which some residents will try to avoid the higher disposal charges and this will place Nelson at an increased risk of illegal disposal.

Natural disasters including the effects of climate change. Natural disasters such as earthquakes and floods pose significant risks to solid waste assets and activities. There is an immediate impact on kerbside collection of refuse and recyclable materials, and their appropriate processing. Solid Waste can supply information and facilities to manage emergency waste, to protect residents and waterways.

6.3. **Service delivery through multiple private contracts** Council is reliant on some stakeholders and partners in the private and community sectors to deliver its waste management and minimisation activities. Service delivery and relationships are formalised through service delivery contracts and agreements to ensure that Council priorities and obligations are achieved. As the Nelson market is small and should a service provider cease to trade it cannot be assumed that a replacement provider would be available.

6.4. Infrastructure resilience approach

Council can keep informed about potential policy changes at a central government level, and make submissions, and also work with other influencing agencies and lobby groups, while recognising that any long-term plans made by Council may need to change due to policy changes at central government level.

While international decision-making is out of the control of Nelson City Council, the risks associated with those impacts can be reduced through:

- Keeping informed on international trends.
- Ownership of flexible assets in which minimises council risk.
- Applying short term solutions or assets in relation to technology, where an asset may have a shorter effective lifespan, and therefore be more replaceable.
- Structuring contracts with timeframes that match the likely operational or legislative changes rather than matching the lifecycle of long-life assets.

7. Engagement with Partners and Stakeholders

Council aspires to be a trusted partner, making good community decisions in collaboration with iwi/māori, the public and other stakeholders across Te Tauihu o Te Waka-a-Māui.

Relationship with iwi/māori

Council is committed to strengthening partnerships with iwi and māori of Te Tauihu and providing opportunities for māori involvement in Council decision-making processes in a meaningful way. This includes an intention to:

- Build genuine partnerships with all eight Te Tauihu iwi at governance, management and operational levels.
- Support iwi to participate in local government decision-making.
- Increase Council's understanding of te reo Māori me ōnā tikanga (Māori language and culture).
- Support iwi aspirations.

There are eight iwi trusts with interests in Whakatū/Nelson region who affiliate to three waka:

Tokomaru Waka:
- Ngāti Tama ki Te Waipounamu Trust
- Te Ātiawa o Te Waka-a-Māui Trust

Kurahaupo Waka:
- Ngāti Kuia Trust
- Ngāti Apa ki te Rā Tō Trust
- Rangitāne o Wairau Trust

Tainui Waka
- Ngāti Rārua Iwi Trust
- Ngāti Koata Trust
- Ngāti Toa Rangatira Trust

During the development of central government legislation there is consultation and engagement with various groups, including Iwi representatives. Engagement with iwi at a local level cannot override or supersede what has been agreed to at a national level, or what has been enshrined into law. Therefore, while Solid Waste recognises the kaupapa of Ūkaipōtanga of local Iwi, and local Whakatipuranga, solid waste activities will need to align with the national legislation. For example, pending legislation has produced a list of what will and will not be collected for recycling. Local iwi cannot advise or request Council to locally add to or to remove from that list, however as the methodology of processing is outside of the legislation, local iwi may choose to provide advice to ensure that the process utilised is cognisant with local aspirations.

Solid Waste provides feedback to central Government on proposed legislation. This feedback may represent the elected Council and on other occasions represent 'the waste industry'. Where occasions arise, to support the shared outcomes, iwi are encouraged, either locally or through their national representatives, to engage in the consultation process.

The budget of the AMP includes professional and legal consultation, research, and iwi engagement. This budget is maintained throughout the AMP and LTP and is available whenever it is required.

Subject	Basis for service	Activity in AMP	Local opportunity	Engagement opportunities
Recycling	Central Government legislation	Continued in line with national legislation	No local variation permitted as per legislation	national level
Recycling processing	Sorted and sold as per council resolution	No changes planned in AMP all activities in line with existing legislation	Limited opportunity to change the process	Opportunity
Container Return Scheme	Central Government legislation	Introduced in line with legislation	No local variation permitted as per legislation	national level
Streetlitter	In line with litter act and council decision	No new assets or changes to operations planned		
Foodwaste collection contents	Central Government legislation	Proposed introduction of service	Local variation may be permitted depending on processing option.	Recommended engagement
Foodwaste collection methodology (trucks and bins)	Council decision	Proposed introduction with lowest emission options	Local option permitted	Opportunity
Foodwaste processing	Council decision	Final use of material will determine processing option	Local option for processing, also economic opportunity	Recommended engagement

Nelson Waste Recovery Centre	Council decision	No significant changes planned		
Building waste diversion in reuse shop	Council decision	Established in September 2023. Reduces waste to landfill and increases reuse and economical availability of reusable materials	No further changes planned.	Opportunity
Hazardous disposal	In line with HAZNO, litter act, etc	Subsidised acceptance of hazardous materials for safe recycling or disposal.	No local variation permitted as per legislation	national level
Acceptance of batteries	In line with HAZNO, litter act, etc	Subsidised acceptance of hazardous materials for safe recycling or disposal.	No local variation permitted as per legislation	national level

Table 18 displays solid waste operational activities that are included in the AMP identifying opportunities for iwi engagement. The examples are not the only areas of solid waste upon which iwi may choose to engage and does not include engagement at resource consent level.

While solid waste recognises the established cultural traditions and associated customary practices for managing waste associated with the human body, the solid waste AMP only includes waste services presently supplied, or proposed to be supplied, by council solid waste. Solid waste does not include wastewater, biosolids, crematoria, hospital waste, industrial and biological waste, or factory discharges. Each of these items will be included in their relevant AMPs.

8. Focus Areas

8.1. Focus Area 1: Meeting the target set by the JWMMP

The JWMMP 2019 set a target of reducing tonnes of waste per capita to landfill by 10% (compared against the 2018-19 York valley JWMMP baseline). This will require a reduction in the average amount of waste per capita. Since the 2018/19 baseline year the per capita reduction is 9.06% so it could be concluded that council is on-target.

	2018/19	2019/20	2020/21	2021/22	2022/23
General Rubbish	43406	42584	47666	53730.	50213
Liquid Waste	0.00	0.00	0.00	0.00	0.00
Transfer Station	5801	5179	5005	3461	4425
Sawdust Untreated	95	31	1	126	53
Fulton Hogan Compactor	0.00	0.00	0.00	0.00	0.00
Skips,Minibins & Compactor trucks	12847	11843	12262	7008	7844
Documents to be buried	22.06	0.00	0.00	0.00	0.00
Demolition	1620	2112	1740	2024	1993
Car Bodies & Parts	2	0.00	0.00	0.	0.00
Emergency ie flood (and diverted)	0.00	0.00	0.00	0.00	94.46
Earth Fill	128	13	133	3	9
Vegetation	132	68	131	35	24
Greenwaste	0.00	0.00	0.00	0.00	0.00
Street Litter Bins	249	619	158	192	82
Street Sweeping	4	19	18	24	364
No Charge	116	0.00	0.00	0.00	0.00
Light waste	10	0.00	1	5	2
Steel Light Gauge (Recycle)	0.00	0.00	0.00	0.00	6
TOTAL to landfill	**64434**	**62472**	**67119**	**66614**	**64400**
combined population	105000	107700	109965	112170	115400
Kg per capita	**613**	**580**	**610**	**593**	**558**
		-5.47%	-0.54%	-3.22%	-9.06%

Table 19 *Reads the JWMMP calculated waste to York Valley and the resulting reduction to date from the 18/19 baseline. This also includes 94 tonne of flood generated waste that was disposed of at the NWRC (free of charge)*

On reflection the target set by the JWMMP needs to be reassessed to address the following

- The target did not define whether it was a progressive reduction to 10% or whether it was a target to be met on a single date.

- The calculation in the 2019 JWMMP also excluded 'special waste' This is waste such as sewage sludge, contaminated soils, and waste and that which requires special treatment or handling.
- The remaining waste is also based on a set of landfill cost codes rather than a genuine waste descriptor. As some waste can be disposed of under a variety of cost codes, which may or may not be included in the calculation, the total of the cost codes does not necessarily represent the actual waste to landfill.
- The calculation is then based on a Nelson / Tasman population projection whose accuracy also influences the per capita result.

If waste diverted through recycling, greenwaste, and reuse, is combined with waste disposed or landfilled, at a national and at a local level, total waste per capita is increasing. Therefore, reduction in waste to landfill is only demonstrating that diversion options are effective, not that residents are choosing to create less waste.

How do we measure reductions in waste?

Waste minimisation engages the community in waste hierarchy practices including reuse and recycling. However, despite the value of these campaigns in terms of supporting new norms through behaviour change, many of the targets of waste minimisation will have negligible effects on tonnes to landfill. Waste at landfill and the JWMMP target is measured in tonnes, but the diversion of a bulky and lightweight material (such as plastics), may not register as a reduction of waste to landfill, even though it may be a primary cause of litter or pollution. Also only measuring by tonnes can be misleading, as tonnes do not accurately equate with emissions.

This is further distorted at the York Valley landfill weighbridge, as the driver decides which cost code to use with many drivers using a generic 'General waste" code rather than specifying the material in the load. As the cost codes do not relate to price, this is not of significant concern to the landfill unit. However, it means that cost codes cannot be relied on to identify tonnes but not the composition of tonnes disposed to landfill.

To determine the actual composition of landfill disposal a Solid Waste Analysis Protocol (SWAP) is conducted. This internationally recognised audit system physically sorts materials into identifiable waste streams. This allows analysis of the composition of refuse by percentage, which can be matched against the weighbridge tonnes of disposal.

Furthermore, each annual SWAP provides a reliable comparison model to track fluctuations of specific waste streams. This identified that putrescible material (everything food, green, or garden) dropped by 21% between 2021 and 2023 whereas the cost codes display no change. The SWAP also allows solid waste to measure total tonnes and then determine what the likely composition of that waste was. The 2022-23 per capita waste to landfill was 580Kg so it can be concluded that 116Kg of that was putrescible, and disturbingly, 118Kg was plastic and cardboard.

The value of the SWAP is evidenced by the cross referencing of SWAP results with actual trials or data from other sources. The SWAP also identifies 58% of putrescible is non-garden or Foodwaste. 116Kg per capita extrapolates to 3.23Kg per house per week of non-garden putrescible, which is comparable to the results of the kerbside trial and the expectations for a proposed kerbside Foodwaste service.

Therefore, while Solid Waste continues to follow the targets of the JWMMP the data on which conclusions are made is a combination of the total landfill and the SWAP results.

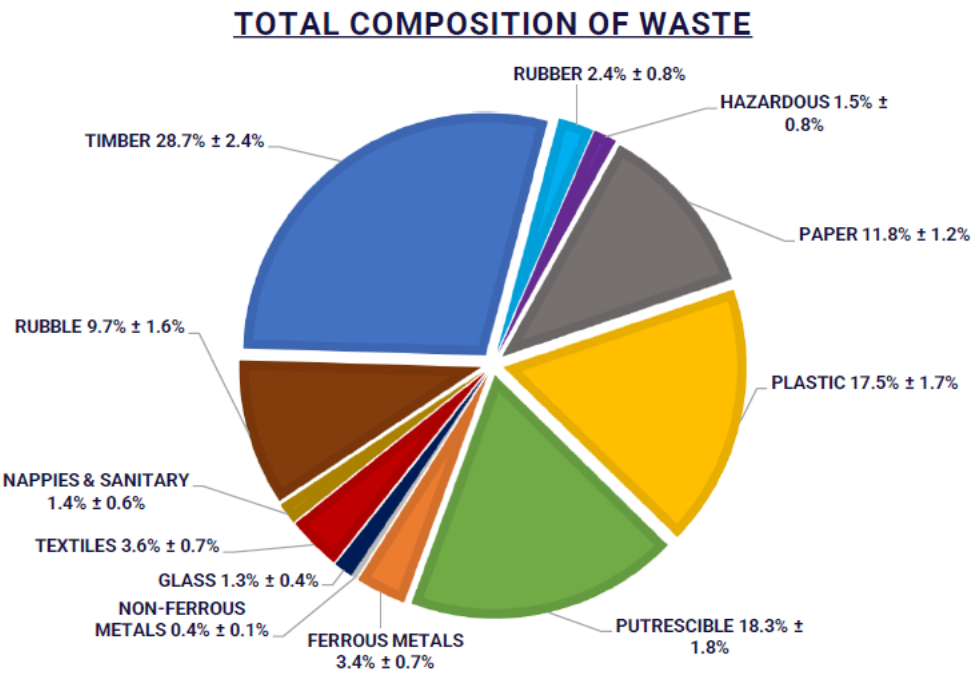


Figure 7. SWAP breakdown by composition of the total rubbish to landfill in October 2022

Comparison with national collection rates.

National collection rates utilise all waste to class one landfills and do not exclude the special waste that is removed from the local JWMMP waste per capita calculations. For this reason, the total tonnes will be higher. Figure 12 demonstrates that even when compared to national rates of disposal Nelson and Tasman's combined waste is lower than the national average.

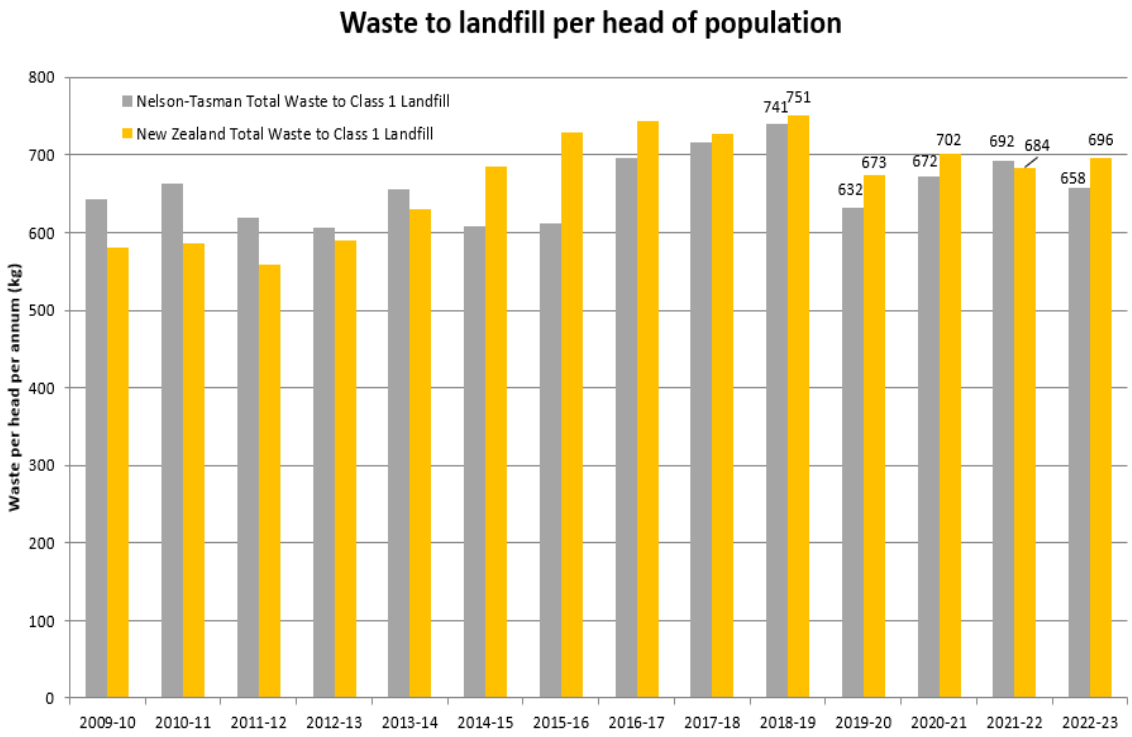


Fig:8 demonstrates the difference between the NZ total waste to class one landfills and the combined Nelson and Tasman waste to class one landfills. As this is a 'total waste' measure the tonnes differ from the selected list of disposal codes as used in the JWMMP calculation.

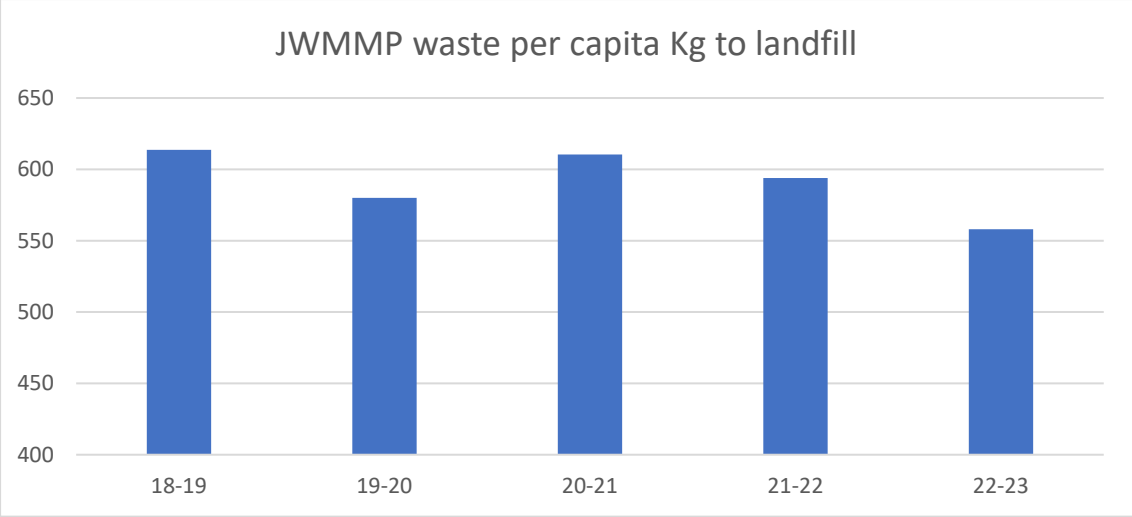


Figure 9 : residential waste per capita to York Valley Landfill from baseline 2018-19 to 2023.

Refuse disposal and the waste levy

National and local data shows that households are generating more waste. Both refuse and recycling volumes are increasing. In an effort to reverse this trend, central government is increasing the waste levy. The intention in increasing the levy is that at a specific price point residents will divert rather than dispose of waste. This price point is indicated to range between $300 and $400 per tonne.

The waste levy is charged for all waste (excluding coverfill) which is disposed of to landfill. This is collected by the Ministry for the Environment and the funds distributed to support waste minimisation activities. The present split of the funds is that approximately 50% of the money is returned to the region (based on a population formula). In 2020 the levy was $10 per tonne and this returned approximately $200k to Nelson but due to the progressive increase in the levy which is presently $50 per tonne in 2023/24 it is projected to return over $1.2M. This is an essential component of the Solid Waste budget. The other 50% of the waste levy is a contestable fund for waste minimisation activities. In 2022 solid waste obtained $165K from this fund for the construction & demolition waste project.

In 2023 the waste levy is $50 per tonne with an expectation of $60 by 2025 and this may be raised further after that date.

The indicated NTRLBU increase in charges will raise the average cost of disposal to residents, adding $60 to a skip and at least $1.14 to a kerbside bag. This price increase is unlikely to significantly influence residential disposal but may influence commercial diversion.

A higher waste levy will make diversion more economically attractive and improve outcomes for focus areas such as construction and deconstruction waste. Councils are required to use the increase in funding to support activities which move our community up the waste hierarchy

The levy increase will increase costs for the street litter activity, as well as disposing of contaminants from recycling, and any deconstruction or demolition waste from projects carried out by Council. While these projects will all be completed under contract, the costs will be passed back to Council in the tender price.

8.2. Focus Area 2: Supporting the community.

The primary focus of this activity is Goal 1 of the JWMMP — avoid the creation of waste, which also includes an aspiration that our community's culture makes waste avoidance and reduction the actions of choice, and that members of our community work together collaboratively to avoid the creation of waste.

To achieve these outcomes, waste minimisation is delivered through the Rethink Waste Whakaarohia programme, which has broadened engagement not only with households and community groups but also businesses and the construction sector, including encouraging industry led waste avoidance and recovery schemes. The key point to consider is how can we reduce the need for waste management? Many of the decisions which will achieve this sit outside of Council's direct control and for that reason there is a recognised need to collaborate with the community.

The waste minimisation work programme will address several key areas:

- Leadership — Council walking the talk.
- Community — enable a culture where people choose to reduce or avoid waste and support the development of a circular economy.
- Individual priority waste streams identified on an annual basis based on data and strategic priorities — for example, food waste, single use plastics, textile waste and construction and demolition waste.

Activity	Examples of actions	Objectives
Collaborating with community including industry, business, education sectors, iwi, groups and individuals	• Joint action plan to deliver JWMMP with TDC • Use of a range of platforms to engage with different sectors of community • Advocacy and engagement with local and central government, as well as industry bodies and other relevant organisations	• Reduction of regional greenhouse gas emissions • Reduction of waste per capita to landfill • Council strategic direction both influences and is influenced by all voices in the community, as well as legislation and other drivers

Council walking the talk	• Building waste minimisation into the delivery of Council projects • Reviewing how Council facilities and events avoid the creation of waste • Building waste avoidance into organisational culture	• Reduce Council's operational greenhouse gas emissions • Reduction of volumes of Council waste to landfill
Enabling a culture where people choose to avoid or reduce waste	• Creating resources and messaging to tell the story and inspire change • Using tools such as grants, community social marketing and education to enable new choices	• Reduction of regional greenhouse gas emissions • Reduction of waste to landfill
Supporting the development of a circular economy	• Working with different sectors, local and central government, industry bodies and waste reduction advocates to build waste minimisation into planning and design of projects	• Reduction of regional greenhouse gas emissions • Reduction of waste per capita to landfill
Targeting avoidance or reduction of specific waste streams	• Use of SWAP analysis data and other data sources to identify waste stream priorities. Example waste streams include organic waste such as kitchen waste reduction supported through kerbside collection trial, promotion of home composting and Love Food Hate Waste, and C&D waste reduction through workshops with building industry and developing resources to support new behaviours	• Reduction of regional greenhouse gas emissions • Reduction of waste per capita to landfill
Improving collection of data to evaluate programme effectiveness and how objectives are achieved	• Use surveys more consistently to establish baseline • Review LTP performance measures • Introduce new platforms such as Shape Nelson to increase data on waste minimisation and behaviour change	• Consistent baseline data established • Reduction of regional greenhouse gas emissions • Reduction of waste per capita to landfill

Table 20: Waste minimisation activities

Demand

More residents are choosing to actively divert waste due to a variety of reasons, education, engagement, a wider range of available disposal options, or even

because of an increase in the cost of living, The waste minimisation component of this AMP focuses on providing the tools to support this. This area will also actively contribute to the reduction of regional greenhouse gas emissions.

Council will work towards making waste avoidance the norm. Methods to do this include using of subsidies and grants to encourage new behaviours and support community-led programmes and providing education and engagement through a range of channels including school programmes and Council media.

As with many behaviour change programmes, the benefits of the increased expenditure will also only be recognised over time. Unlike with the introduction of a new service, behaviour change produces a progressive improvement, but has long term benefits. It is also recognised that when an individual changes one aspect of their behaviour they become more receptive to other changes in behaviour, providing a 'snowballing' effect of improvements in their waste disposal behaviour.

The waste minimisation programme is currently under-resourced to meet the expectations of the community. Whilst the programme benefits from a full-time staff role to support it, the funding does not allow sufficient coverage of the broad ranging topics encompassed by waste minimisation activities. Significant funding increases are proposed to enable programmes to be extended.

Risk

It is important to recognise that individual waste minimisation decisions are made in the community rather than by Council. Waste minimisation engagement programmes are critical to enable this change to occur, but the methods used should be reviewed and used in tandem with other measures such as compliance and provision of infrastructure to ensure the best results. In order for waste minimisation activities to achieve intended outcomes, the programme design will follow best practice methods and include the principles of investigation, trial, deliver and evaluation.

8.3. Focus Area 3: Recycling

Recycling History

A wheelie bin based kerbside collection service for recycling was introduced in 2016. Prior to this time, recycling was left kerbside in a blue crate (or associated bundles and bags) and collected with glass and recyclables on alternate weeks. The same crate was used for kerbside glass collection.

The recycling materials were hand sorted (at Pascoe Street) with a fine weather recovery of approximately 60% (annual average was approximately 40% contamination) and a wet weather recovery of approximately 35%. Materials were baled and sold to exporters.

In October 2016 the introduction of wheelie bins and use of the Materials Recovery Facility (MRF) in Richmond raised the overall tonnage of plastic and fibre to more than 2,000 tonnes per year with a recovery rate of over 85% (wet or dry weather) with the remaining 15% being rejected due to general contamination.

In December 2019 Council resolved to only collect glass and materials for which there was New Zealand processing, resulting in collection of 1, 2 and 5 plastics and fibre;

- Plastic 1 is PETE, commonly referred to as PET. This is Polyethylene terephthalate. It is commonly visually clear and used in soft drink bottles.
- Plastic 2 is HDPE or high-density polyethylene. It is commonly opaque and is used in milk bottles and detergents.
- Plastic 5 is PP or Polypropylene. It is used in some food containers, car parts and toys.

The plastics that Council decided not to continue collecting include: PVC (Polyvinyl Chloride), LDPE (Low Density Polyethylene), PS (Compressed Polystyrene) and other plastics including Acrylic, Polycarbonate, Polylactic Fibres Nylon, and Polylactic Acid.

This will reduce total recovered tonnes by 90 t/yr, with any of these collected materials that are sorted at the MRF being disposed to landfill as contamination.

Recycling Assets

There are approximately 22,000 wheelie bins in circulation with an average of only 20 per month requiring replacement. At the introduction of the bins (June 2016) the bins were expected to last 10 years however it appears that most bins will be operational until 2028 with some exceeding 2030. Consequently, the cost of bin replacement in the 2023 LTP has been re-budgeted to stretch the cost over later years.

Legislation relating to Collecting recyclables

In September 2023 MfE gazetted the introduction of mandatory kerbside recyclables collection for any locality with more than 1000 people. This included a list of compulsory items and a list of compulsorily excluded items. The service is required to start by January 2024.

The list is almost identical to the existing list of materials collected in Nelson, with the only exclusion being plastic bottles above 4 litres in size. Therefore, there will not be any operational changes required for Nelson to meet the new standard, and communications with be published to remove the larger plastic bottles.

The list of excluded items clarified some items about which there was some confusion, such as aerosols, but did not remove any items that were specified on the Council list of acceptable items.

The aim of the mandatory recycling is to increase the amount of recycling in New Zealand, however, as it is written it does not recognise the difference between recyclable materials and recycling and so does not clarify how the aim could be achieved. In summary:

1. The list reads what will be collected, it does not embed the actual recycling of the recyclable material. For economic reasons a Council may decide to collect and then landfill rather than sort and recycle, and it would be permitted to do so. This would not increase recycling.

2. The day that the mandatory service was gazetted all New Zealand based recyclers of Plastic 5 (Polypropylene) reached capacity and will not accept more material. Therefore, this material will have to be exported, not increasing recycling in New Zealand.

3. The ability for local innovation is constrained, so even if a company could recycle a material that is not on the list, the Council is not permitted to add it to the list.

4. There is no definition of 'recycling'. It is recycling if a company recycle a material into a product which is then used, collected, and remade into the same product. It is not recycling if a company mixes plastics as this makes any resulting product unrecyclable. This may also divert materials that may have otherwise been repeatedly recycled into a single reuse, removing them from the recycling stream.

5. Council must collect materials on the list, even if there is no market for the material meaning Council inherit the liability for managing the material. Presently fibre costs over $450 per tonne to manage, it would be considerably cheaper for it to be designated as 'contaminated' and disposed of rather than recycled.

6. If Council fails to meet MfE targets for recycling (or the targets for refuse) some or all of the WDL ($1.2M p.a.) could be withheld. This may have an unintended consequence of the material being collected and going to landfill.

Kerbside recycling collection contract

Currently Nelmac holds this contract which includes the collection, sorting, sales of commodities, and delivery of recycling bins and crates. The collection is performed by Nelmac vehicles and the sorting and sales of commodities are completed by Smart Environmental Ltd under contract to Nelmac. This provides Council with a single contract, but now Council lacks direct engagement or

contractual influence over the sorting and sales. The other significant feature of the existing contract is that Nelmac owns the commodities and receives any return from the sales of commodities.

Commodity value

Commodity prices are fluctuational, meaning in some years Council subsidise low commodity prices, in others Council receive revenue from them. The trend for the last 4 years has been consistently reducing commodity values with 2022-23 year costing council $145k in subsidies.

The introduction of a Container Return Scheme (CRS) would have a significant effect on the value of some plastics. A CRS would charge at point of purchase and refund part of that charge to the person depositing the bottle, and part to the person operation the acceptance depot. It's likely schools, sports clubs etc will collect the bottles for fundraising purposes rather than leave them in the recycling bins. This is likely to significantly reduce the quantity of some plastics in the kerbside bins.

Under the present contract Nelmac would receive the revenue from any plastics that are left in the bin and Smart Environmental would receive the handling fee while Council continues to subsidise the non-CRS plastics. The proposed post 2025 collection contract would change this to council receiving the revenue for the plastics included in the CRS scheme

In 2022 Central government placed the CRS "on hold" and Council continued to be liable to Nelmac for the losses in the value of plastics. Prior to the CRS being put 'on hold' the collection contract had been extended with an expiry of June 2025. This was intended to align the new contract with the introduction of the CRS. Now a new recycling contract is being tendered in 2024 with clauses allowing for a variation following any CRS introduction.

The new tender is for a collection contract and a separate commodity sorting and sales contract which puts council in a position to benefit from any potential CRS revenue.

A 'collection only' contract without the complex requirement for sub contractors would ensure a larger number of replies to the tender. As with all future tenders, preference would be given to companies providing the service with zero carbon vehicles.

Council will establish a separate contract for sorting and sales of commodities. As there is only a single company in the region that is capable of providing this service it will not be tendered. In the present contract the ownership of the commodities is retained by the collector. Upon introduction of a CRS the ownership will become a revenue stream so future collection contracts will be modelled to ensure that Council retain any revenue stream.

This can also be supplemented by the NWRC public drop off. Ownership of commodities at the public drop off would provide a revenue stream which would make the site cost neutral, as compared to a 2023 budget of $210k.

The future demand for recycling

Currently, Council's estimates of future demand are based on existing processes, and the current value of recyclables. However, there are a number of external factors which could influence these projections such as the CRS, fluctuations in commodity prices, improved recovery rates from kerbside collections.

The introduction of a CRS will, in effect, 'price fix' the value of plastics far beyond their actual value this is likely to lead to higher recovery rates for materials within the CRS.

The selection of materials

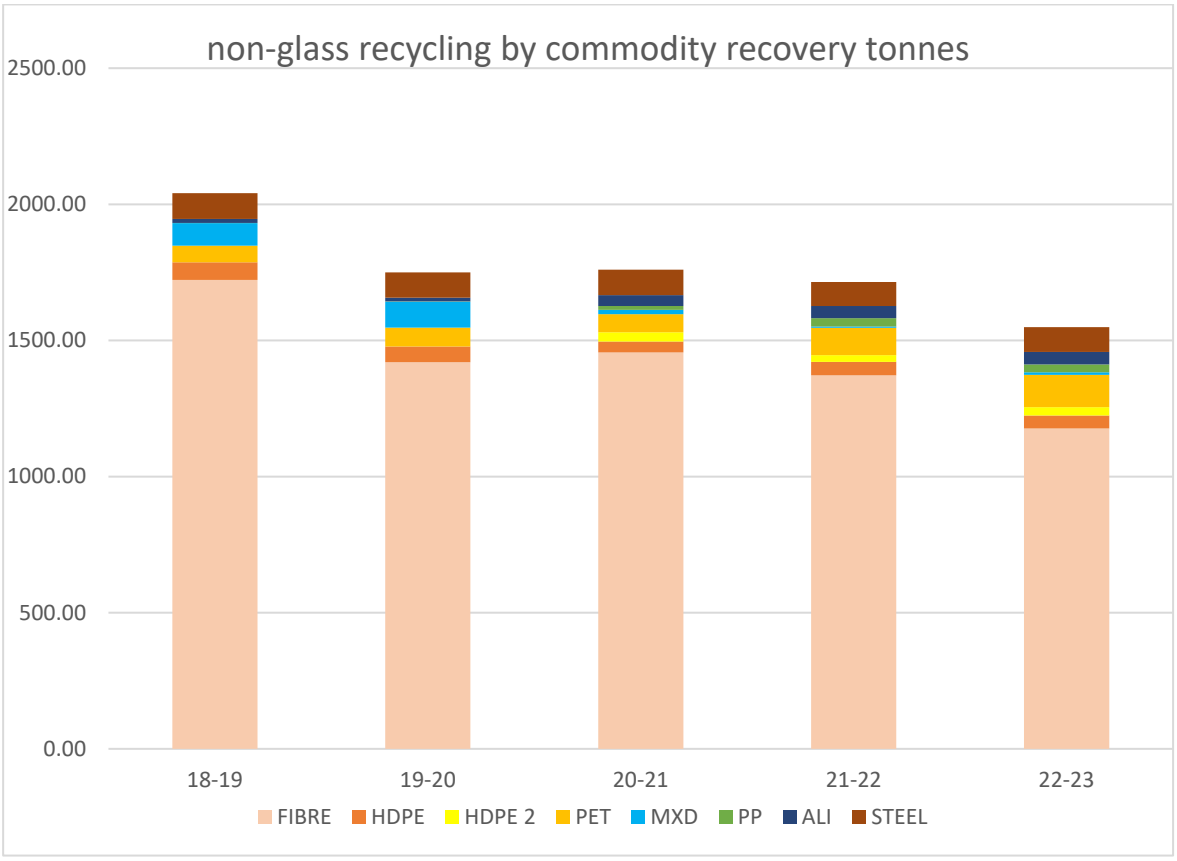


Figure 10 : This demonstrates the proportions of the non-glass recyclables. Fibre (which is a mixture of all paper and cardboard) accounts for at least 70%

of non-glass recyclables. In 21-22 mixed plastic was separated into PP (No. 5) and HDPE (No 2) was separated into 2 streams.

Apart from glass, fibre is the main recyclable material collected in Nelson. Despite there being different prices for paper and cardboard Nelson lacks the technology or economic impetus to separate them. This material is both recycled in New Zealand, and exported. While New Zealand may have adequate demand for the fibre, it does not have sufficient capacity to process all of it. In addition, as each time paper or card is recycled, the fibres (which hold the material together) get shorter, it is essential that new material is constantly added to the recycled fibre. A 100% circular use of fibre would result in all fibre in New Zealand becoming unrecyclable after 3-4 cycles. Therefore, when processed locally New Zealand is dependent on its ability to export a proportion of its fibre and to utilise virgin material in conjunction with the recycled material. At this time if the fibre was not exported it would be landfilled which, being organic, would produce unwanted landfill emissions.

As of 2023 fibre cost over $600 per tonne to collect, sort, bale, and export. The emissions of freight to India are comparable to landfill emissions so alternative methods of managing fibre are being considered. This may include use as a composting bulking agent or an additive to an anaerobic digestor (AD) or vermiculture system. Any use of fibre will include consideration of emissions from transport, sorting and processing as well as the direct economic costs.

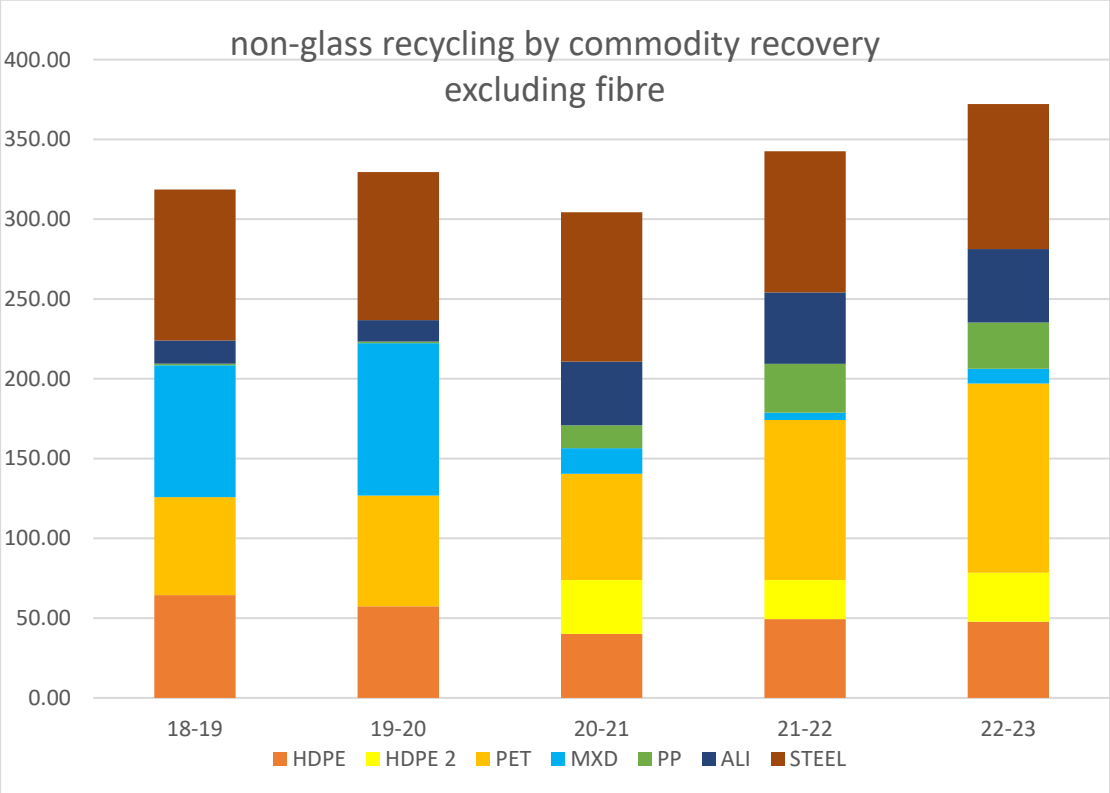


Figure 11 : demonstrates that over the last 5 years the non-fibre content of the recycling bins has increased.

The quantity of materials to be recycled

As of June 2023, there are 21,200 residential recycle bins in service which are used to collect over 1600 tonnes fibre, plastic, tins and aluminium annually. While the total volume of recyclables has decreased the amount of non-fibre, which is the more valuable component, has increased.

The collected materials are sorted in the Materials Recovery Facility (MRF) in Richmond. The sorting plant machinery incorporates up to date technology such as ALCHEMY, an artificial intelligence optical sorting machine. This technology has improved non-fibre recovery rates. The ALCHEMY sorting technology is owned by Smart Environmental and is not part of the MRF lease.

As a CRS will be very product specific it will not create a reduction in all commodity streams. Products that are not included are likely to continue in direct proportion to population growth.

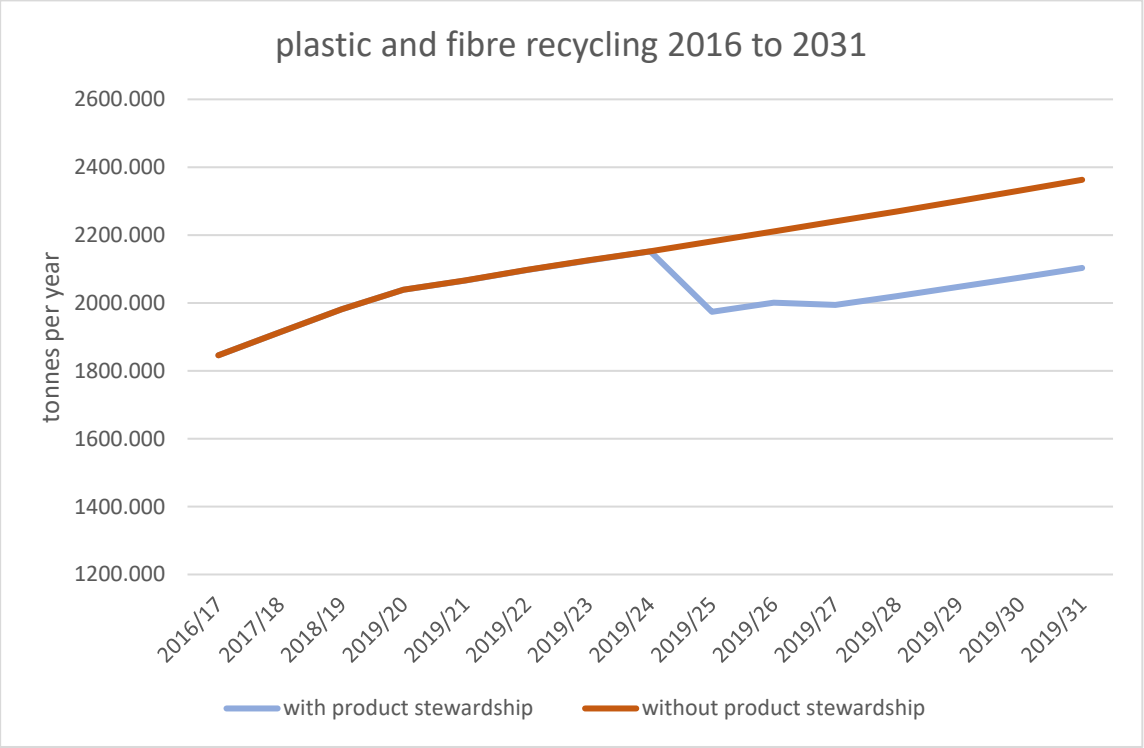


Figure 12 demonstrates the potential changes to recycling volumes after a product stewardship scheme is introduced.

	tonnes	Kg per Nelson household	National rates	difference
Fibre	1175	56.5	74.00	-17.5
Plastic containers	108	10.9	22.60	-11.7
Metal packaging	134	6.3	11.30	-5
Glass	1553	72.2	94.80	-22.6
Total	3098	144.12	235.10	-90.9

Table 20: Nelson recycling compared with national recycling rates.

Nelson households consistently produce over 25% less recyclables than nationally collated figures. This demonstrates that local data needs to be used when considering future demand.

Demand impacts on assets

In the term of the AMP it is predicated that the required amount to be collected will not be exceeded by either bin capacity or collection capacity.

The restricting factor in reducing costs is the time required for the collections. The decrease in the collection service from not accepting some plastics has negligible effect on the cost of collections.

Demand Management Plan

The contract for the recyclables collection service is a total cost contract and does not contain any allowance for changes to volumes or participation. In effect it means that regardless of how the service is patronised, the costs to Council are the same. A post 2025 contract that offers a collection only contract would continue to be a total cost contract.

Emissions

The emissions from the vehicles used in the recycling service are not assigned to Council. As the service is performed under contract, the emissions are assigned to the contractor. However, Council takes a holistic view and is actively seeking to reduce emissions created as a result of its services. As demonstrated by the streetlitter contract priority was given to the respondent that included an electric collection vehicle. Prior to the post July 2025 recycling collection contract being awarded consideration will be given as whether the collection service could be completed with EV or carbon neutral trucks. Where it would be appropriate, the

use of low emission nor zero emission vehicles could be used in the non-price attributes for the contract assessment.

Future demand for glass

Under the new legislation the collection of glass is compulsory for Nelson after January 2024. However, there is no stipulation as to the methodology of the collection.

Presently glass is collected from the kerbside in blue crates. Since 2017 glass has been colour sorted at kerbside and the colour separation is maintained in the vehicle. The glass can then be sent for recycling and, as it does not require optical sorting, it has a commodity value. This value has been highly variable with values ranging from $35 per tonne to -$25 per tonne, primarily due to the cost of transporting the glass to Auckland. Since 2020, approximately 98% of glass has been fully recycled.

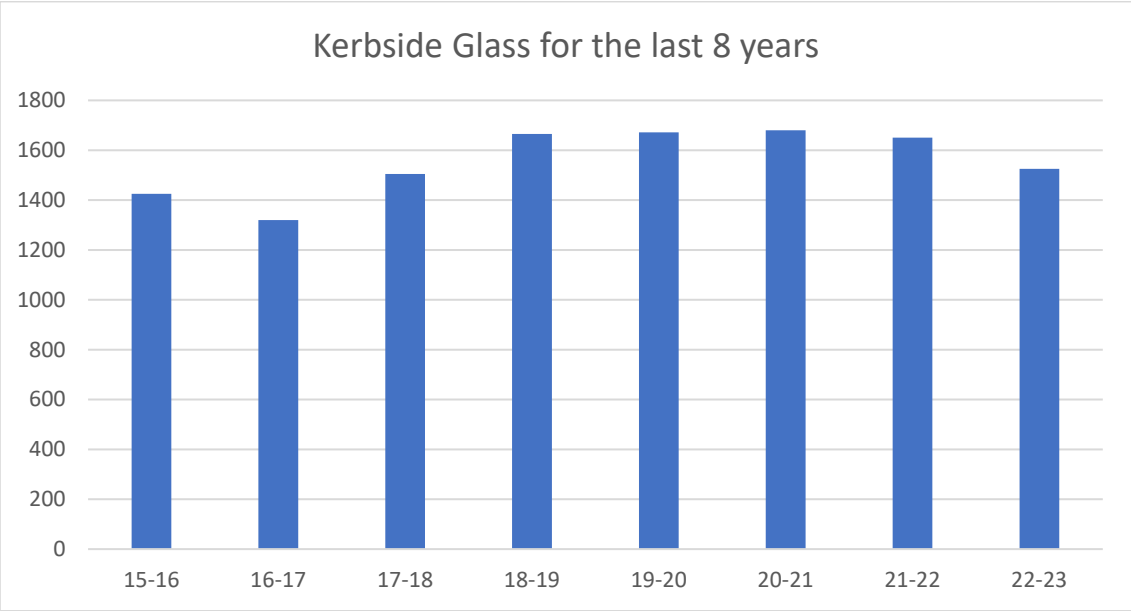


Figure 13: Annual glass tonnes

Currently glass is transported to Auckland for recycling. While not liable for the emissions Council considers the emissions from the glass collection vehicles. There are three main collection vehicles of differing sizes, covering a total approximately of 80,000 kms per year and producing over 300 tonnes of CO_2 or 19Kg CO_2 per tonne of glass.

Solid Waste is exploring option for the local use of crushed glass which would reduce transport emissions.

8.4. Focus Area 4 : Street litter

The present infrastructure street litter bins have been installed and sited with the intention of providing an assumed, but undefined, 'clean street' service. Installation and assessment of service is complaints-driven. It is difficult to predict future street litter demand, but solid waste engages with developments, such as the new bus services, to ensure service supply is consistent with demand.

Demand Impact on Assets

For the purposes of the AMP 'streetlitter' refers to infrastructure bins (not rubbish bins in parks).

Streetlitter comprises of 139 bins for casual pedestrian refuse disposal. They are sited in the CBD (54) and various sites around Nelson including dairies, bus stops, and car parks. The collection contract (24733) started in 2022 (5+2 years). The contract includes a set price for the management and the collection schedule of tilt bins, and a per empty price for solar compacting bins in the CBD. This contract has a value of $200k/yr. Disposal of collected material is a cost to the contracted service provider, so an increase in tonnes collected does not result in an increase in costs for Council.

The present 85 streetlitter tilt bins have a replacement value of $205k. The solar compacting bins are on a five-year lease. There are still 80 cast iron bins which are no longer utilised which are being held in stock until a disposal option is finalised. These have an approximate value of $30k.

There are no plans to exchange tilt bins with solar bins or to increase the number or area serviced by the solar bins.

Some of the materials placed in the bins are recyclable but there is no ability at present to separate this material from other refuse.

Management

The contract, variations, and service requests relating to this task are managed by the Solid Waste Supervisor.

Levels of service

The tilt bins are emptied according to a contractual schedule with most bins emptied 4 times per week to a total of 421 empties per week. Service Requests are monitored to determine the efficacy of the collection schedule.

The solar compacting bins are emptied as required. The solar bins use an online software package which alerts the contractor when a bin is over 80% full, and bins are then emptied. This system has reduced the CBD empties from over 30 thousand cast iron bin empties per year to under 6 thousand.

Low emission collections

For the infrastructure street litter contract EnviroNZ introduced an electric collection vehicle. This vehicle reduces the carbon footprint of street litter collection by up to 45 tonnes of CO_2/yr.

Figure 14: Electric collection vehicle with a solar compacting bin

8.5. Focus Area 5: CBD Recycling

Council has four stainless steel recycle bins which were supplied for the Rugby World Cup in 2011. Each bin has two disposal slots, each going a 120 litre wheelie bin. There are 3 bins in service which are sited at BNZ Trafalgar Street, Tahunanui sportsgrounds, and Saxton netball courts. The bins are in average condition and have a useful life of more than another 10 years.

Figure 15 : stainless steel recycle bins

Unfortunately, the bins have been ineffective as recycling collection vessels as they are frequently contaminated with unrecyclable materials. They also attract fly tipping with stacks of household rubbish left against or around the bins.

Cages were added to the mouth of the bins to restrict the maximum size of any item to 150mm wide to reduce contamination which stopped some of the larger contamination but did not eliminate the problem.

In the term of this AMP Solid Waste proposes to relocate the bins to areas where they are more likely to be effective, and to research alternative options for public pedestrian recycling.

Reverse Vending Machines

Enabling recycling of material by pedestrians is consistent with the goals of the JWMMP. Reverse vending machines are effective where the commodity has a recyclable value and are well suited to be implemented in conjunction with a CRS. Without a CRS this project is not budgeted.

The machines 'read' the recycling and only allow recyclable materials to be deposited into them. They also provide accurate information on weight and content so that efficacy and need can be quantified.

Figure 16: A reverse vending machine in action in Perth, introduced at the time of a deposit scheme.

As the appropriate bottle or container is disposed of into the machine, the barcode is read, and the 'refund' is paid onto a mobile phone account or automatically diverted to a selected charity. The bulk container within the machine is then collected and the contents are added to the recycling.

Following the introduction of a CRS Council could place reverse vending machines in various locations in the CBD. However, Council could introduce the technology ahead of the container deposit scheme. While an early introduction would be an additional cost, it would also have educational and city perception benefits. This technology is in use in Australia, Europe, China, and in the USA.

8.6. Focus Area 6: Greenwaste (not Foodwaste)

The projected increase in population and households in Nelson is unlikely to increase the total quantity of greenwaste. There will be an increase in inner city living and infill housing neither of which produce greenwaste. Modern housing developments, as evidenced by areas such as Montebello, Atawhai and upper Champion Road, tend to have smaller shrubs and lower maintenance gardens. These properties produce less greenwaste so are unlikely to get a kerbside greenwaste bin. They will probably use direct disposal such as the NWRC. While traditionally many residents would just dispose of their greenwaste with their refuse. The rising cost of refuse disposal will encourage separation of greenwaste from refuse. Therefore, the quantity of greenwaste disposed of at the NWRC is likely to continue to increase.

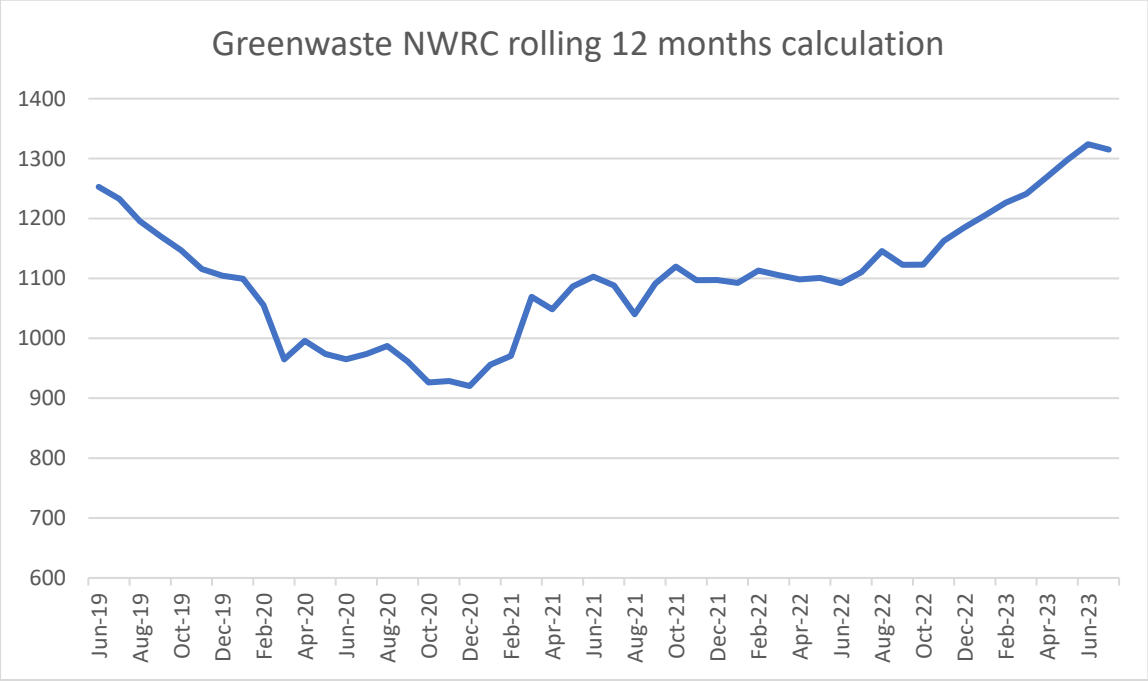


Figure 17: Greenwaste disposed of to the NWRC. A rolling 12 months calculation has been used to minimise the seasonal variances.

Currently, user-pays residential greenwaste bins (excludes skips) in Nelson collect approximately 3200 tonnes per year.

Over the last 3 years there has been an increase in the greenwaste tonnes disposed of at the NWRC. While many residents have not loaded their vehicle or trailer planning to separate the loads, the kiosk staff apply prices in a manner which encourages the separation of loads.

Regardless of who collects or accepts the greenwaste, the material is being processed and hence diverted from landfill, so the overarching intent of the JWMMP is being maintained. For this reason, this AMP does not propose competing or removing material from the private contractors and will instead monitor the tonnes to ensure that greenwaste is still being diverted to processing and composting. Any calculation of tonnes diverted from landfill for the JWMMP will not include the residential kerbside greenwaste tonnes.

While some councils offer a greenwaste kerbside service, there is no indication that a kerbside service would divert more greenwaste from landfill. The AMP does however include actions to encourage increased separation of greenwaste from refuse at the NWRC and to promote home composting.

Part of the new recycling legislation is the requirement to reduce kerbside refuse to landfill.

Risk

In line with the declaration of a climate emergency and the 21-31 AMP council aims to reduce greenwaste entering York Valley Landfill this is dependent on private operators to accept and process greenwaste. Without private service delivery, it is likely that residents would expect Council to provide that service. Presently there is enough volume of greenwaste being disposed to the windrow composters to ensure ongoing commercial viability. If the greenwaste volume drops by 30% it is unlikely that a composting company would be sustainable, and Council would then need to consider subsides to ensure an operation or a suitable alternative disposal option.

A close and ongoing relationship between Council and commercial greenwaste collectors and composters will ensure effective greenwaste diversion continues.

This AMP aims to achieve the maximum diversion from landfill of greenwaste. However, not all greenwaste diversion is quantifiable. While resident surveys have indicated that up to 65% of residents perform some kind of composting it is difficult to determine how much material is home composted.

Some greenwaste is disposed of into the NRWC refuse hoppers because it is mixed with refuse, but the lower gate rate for greenwaste minimises this risk. For this reason, the difference in the gate fee between refuse and greenwaste should be maintained or expanded.

The landfill weighbridge has a code for vegetation. However, as the code is only used for loads consisting totally of vegetation, is only recorded at the whim of the driver, it does not accurately reflect the amount of vegetation being disposed to landfill.

Private skip companies provide 'green only' skips which are diverted to composting operations but mixed loads continue to be disposed of at York Valley Landfill.

8.7. Focus Area 7: Foodwaste

A residential kerbside foodwaste service was proposed in the 21-31 AMP. Foodwaste covers material sourced from the kitchen including vegetable matter, food scraps, dairy, meat, bones and bread. Any collection and processing option would have to be able to accept any materials that would reasonably come from a kitchen.

In Nelson there are several programs which divert commercially produced foodwaste to foodbanks, kai rescue, or to pig farms. This AMP focus area is focussed on developing a proposal for a solution for residentially produced foodwaste. Any proposal would specifically exclude food that may be diverted, whether to human or animal consumption, rather than processed.

Because at this time foodwaste cannot be processed at the existing greenwaste processors or included in the user-pays greenwaste kerbside collection bins, most residents do not have access to a method of having their greenwaste professionally processed.

Research is underway to identify systems for collection and processing. The systems being considered do not include or exclude or any system based on its outputs. Solid waste does not have any preference if an outputs is suitable for any specific purpose.

Following the completion of the 2020/21 collection trial an Expression of Interest (EOI) was published which indicated the level of interest by private companies in the establishment of collection or processing services. Further research was commissioned in association with Tasman District Council, which is modelling the most appropriate systems for collection, bin size, and various processing options etc. The results of this research will inform the business case. The Ministry for the Environment funded business case is underway which will determine the most appropriate options for any future tender.

The research is exploring options for collection methodology, transport, processing options, emission implications, and regional issues. This may result in a recommendation for a combined service, or independent collection and joint processing. The options for processing will guide the methodology for collection, and at this time no processing method has been excluded. Each council may determine which process is most appropriate. Processing options being considered include covered or open windrows, in-vessel systems, vermiculture (worms) and anaerobic digestion (AD). The processing options will be the subject of engagement with iwi and the community, and the results of which will be a component of the processing recommendation that will be taken to Council.

Additional research into sources of commercial and industrial food waste will also be included.

Potential funding models are,

- Council-funded
- Council and commercial co-funded
- Commercial funded with Council as customer
- Build, Own, Operate, and Transfer (BOOT) model

Options and recommendations,

- Analysis of best options for garden waste if not part of a FOGO collection
- Identification of appropriate collection methodology and infrastructure, including kerbside bins and caddies if considered appropriate.
- Scope procurement including truck specifications, driver training, monitoring, maintenance, enforcement and compliance, etc
- Design engagement and education programme at the introductory stage; during roll out, and as an ongoing engagement programme
- Complete draft programme costing based on above elements, including considering collection areas.

- Final option recommendations and costings

8.8. Focus Area 8: Nelson Waste Recovery Centre (NWRC)

In line with the aims of the NRWC, refuse disposal has decreased by 23% since 2019. As 94% of all gate fee is spent on disposal costs this reduction has no economic impact on the NWRC. The site is receiving the same quantity of customers and as 'per capita waste to landfill' during the same time has only reduced 5% this demonstrates that residents are utilising the diversion options at the NWRC prior to hopper disposal.

Increases to landfill disposal fees will continue to influence disposal choices by residents. Higher disposal prices may lead to more diversion. However, as residents do not have direct access to a landfill, there will always be an expectation of a publicly accessible transfer station.

The NWRC provides Council's best opportunity to implement the waste hierarchy and maximise the diversion and reuse of waste materials. Much of the material brought to the site for refuse disposal can instead be diverted into a reuse or recycling waste stream.

The free of charge public drop off for recyclables at the Vivian Place end of the NWRC is operated by Nelmac as part of Contract 2906 (which expires in 2025). This allows any material which could have been put into a kerbside recycling bin or blue crate to be disposed of for recycling. It is primarily a residential service which is also utilised by some light commercial operators. After 2025 the management of this site may be reassessed. Within the recycle site are two Council buildings which are used by Council for storage and solid waste activities, and which are not included in the Nelmac contract.

The largest Council owned building on site, and associated yard, is leased (as of 2020) to the Nelson Environment Centre (NEC) for the purposes of operating a reuse shop. Reusable household items can be donated to the reuse shop, which sells the items either directly to the public or via their other sites.

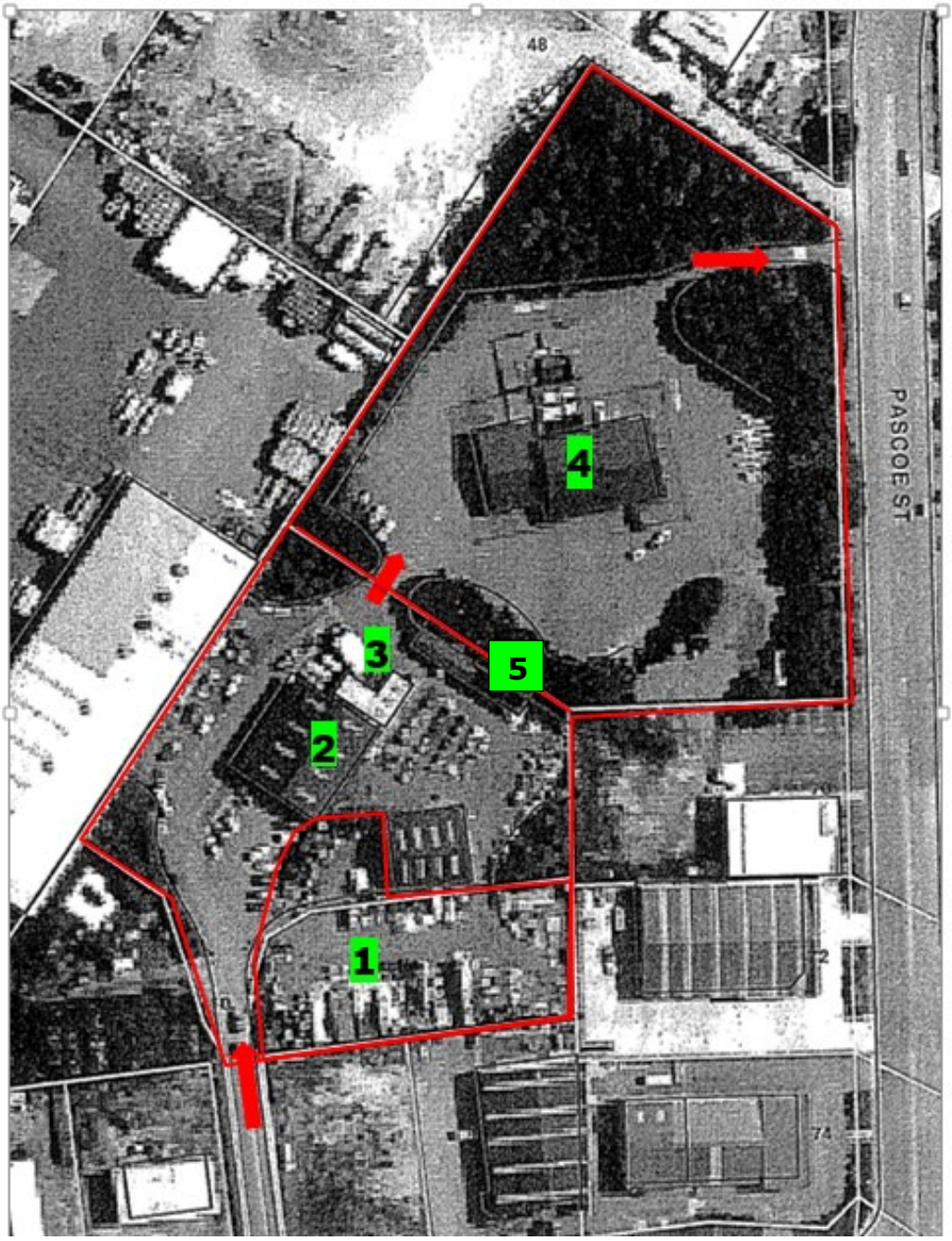


Figure 18: Aerial view of the Nelson Waste Recovery Centre

1. Recycle yard
2. NEC reuse shop
3. Kiosk
4. Transfer Station Hoppers
5. Commercial & Demolition waste area

NWRC hazardous waste disposal

Residential quantities of hazardous materials are accepted free of charge at the NWRC. Since 1 November 2020, the hazardous material handling and storage on site is performed by Fulton Hogan under Contract 4018. This material was previously managed by the ticket office operator. Materials accepted include used flares, ammunition, agrichemicals, batteries, fluorescent tubes, gas bottles and paint.

Enviro NZ supply a collection service for hazardous materials. It is intended to formalise this service into a contract.

Special handling

Tyres can be disposed of for a charge. Tyres are manually cut down before landfilling in order to reduce the 'airspace' of the tyre. This will continue until there is an option for diversion or recycling.

Fridges can be disposed of for a charge and a contractor de-gasses them prior to metal recycling. Currently 600 per year are processed.

Oil is accepted as hazardous and combined in a bunded tank inside a shipping container. This is collected for recycling.

NWRC ticket office (kiosk)

The kiosk is a Council asset and Council staff provide customer service, including providing advice, and processing payments, with input from Activity and Operations Supervisor. Prior to October 2020 the customer service role was performed by Nelmac. Since Council started managing the kiosk there has been a 20% increase in gate fees.

The gate charges for refuse and greenwaste do not reflect the actual disposal costs. Greenwaste gate charges are 120% of the disposal cost whereas refuse gate charges only cover 82% of the disposal cost.

NWRC Hoppers

The hoppers are metal lined below-ground bins, into which people can tip their waste, usually operated as one for refuse and one for greenwaste. The material from each hopper is compacted utilising a large hydraulic ram into a 30 cubic metre cartage container. The containers are then loaded by a gantry crane onto the cartage vehicles. The hoppers, crane, and transport are operated under Contract 4018.

The hopper complex is a Council asset which has been depreciated, with financial allowance made for replacement when required. There has been little development in hopper technology in the last 20 years and it is likely that at point of replacement like-for-like hoppers would be installed.

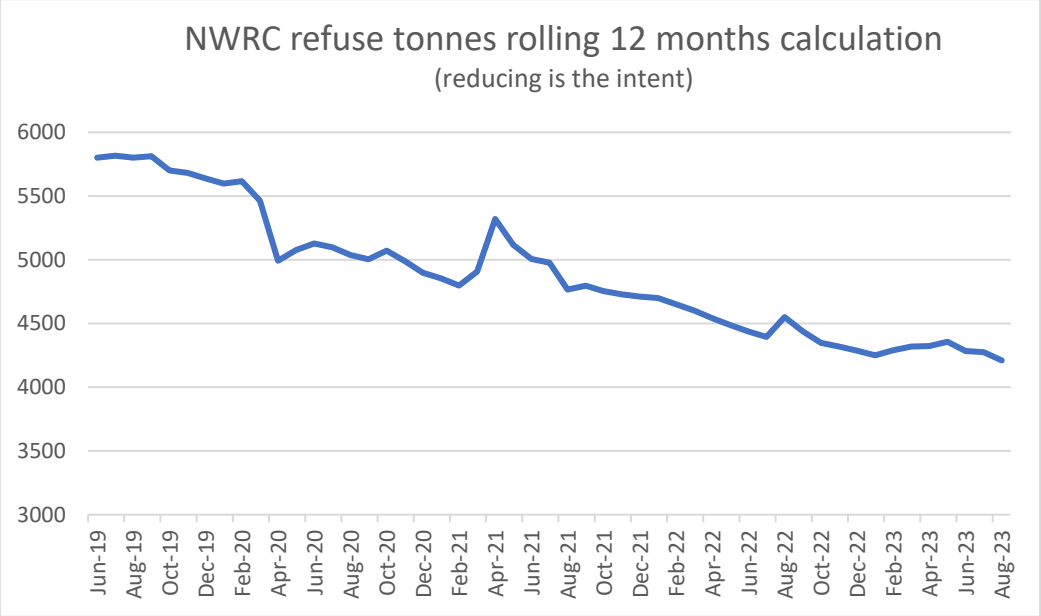


Figure 19 The reducing tonnes of refuse (27% in 3 years) managed by the hoppers under contract 4018. Using a rolling 12 months calculation

A new contract was signed in August 2020 to operate the hoppers and to carry out related tasks. The term is five years with a Council option to extend another two years followed by a further Council option to extend another two years.

Within Contract 4018, management, hopper operation, and cartage are separately charged so a reduction in waste to the hoppers and a reduction of waste to cartage would result in a lower cost to Council.

8.9. Focus Area 9: E-waste

In Nelson e-waste is primarily recycled by NEC, which follows the waste hierarchy by promoting repair and reuse before recycling. It currently employs 4 staff in the breakdown process.

The NWRC maintain a policy of not permitting batteries or items containing batteries to be disposed of into the hoppers. Customers with battery containing e-waste are directed to the NEC e-waste recycling area. This has resulted in an increase of what is disposed of to the NEC e-waste site.

Since 2020 NEC has operated its e-waste recycling from 6 Vivian Place (outside of the NWRC, and on its associated site) but NEC are in the process of

improving the main leased building within the NWRC with the intention to move the service within the NWRC boundaries. This will simplify e-waste disposal to residents and assist in maintaining a one way system for diversion prior to disposal.

NEC dispose of batteries from the e-waste in the NWRC hazardous battery drop off which isolates site risks and prevents batteries going to landfill.

For 2023/2024 Council has awarded an annual grant of $20k to NEC to promote and encourage the e-waste drop off.

8.10. Focus Area 10: Product stewardship

In 2019 Nelson City Council submitted on the Ministry for the Environment's proposals for the introduction of a Product Stewardship scheme for New Zealand. The CRS product stewardship was expected in 2023 however remains on hold. Other industry led schemes are being proposed.

The impact of product stewardship and materials having a cash value will potentially mean that the post 2025 recycling contract will require a different model. Presently the sorting costs are covered by the commodity value. Following the introduction of a product stewardship scheme, the volume (which is predominantly paper and cardboard) will continue but the higher value materials which offset the low value paper and cardboard may not be put in the bin. There is a risk that if a significant amount of the most valuable plastics are removed from the recycling service it may create a financial imbalance where the recycling kerbside is little more than a cardboard collection. This would change the cost of the contract and potentially the collection methodology.

Tyres

It is estimated that approximately 40,000 tyres are disposed of per year in Nelson. The end of life disposal for many of these tyres will be the York Valley Landfill. Other tyres may be reused on farms. Tyres being disposed of via transfer stations into York Valley are cut or shredded. This reduces how much space they take up and ensures an effective revenue per metre of landfill airspace. Tyres which are disposed of in mixed loads or general refuse such as skips are not usually cut or shredded. These tyres fill more landfill airspace and also create air-pockets in the landfill. As tyres do not compact more or decompose over time, they continue to take up significant space which reduces projected landfill revenue.

The NWRC accepts 1,200 tyres per year and has a limit of 50 uncut tyres on site at any time.

In the proposed product stewardship scheme tyres will require a payment at purchase which will be used to fund the recycling of the tyre.

8.11. Focus Area 11: Refuse

Within pending legislation is a directive that councils must collect data and reduce the tonnes to landfill from residential kerbside collection, with potential financial penalties for failing to do so. As Council do not operate a kerbside collection there is the potential Council may be expected to collate data from private companies on MfE's behalf, and monitor private refuse activity. There is no additional funding from MfE to fund these extra tasks.

8.12. Focus area 13 : Dumped refuse (in streets and parks)

Solid waste cooperates with Parks and Roading to manage dumped rubbish. If the rubbish is on a public street, it is usually managed by solid waste. As solid waste has some facilities it sometimes assists Parks and Roading with dumped rubbish and hazardous disposal.

Dumped refuse is a long standing issue in streets and parks. Research shows that increases in the price of disposal don't correlate to an increase in incidents. This suggests that illegal disposal is behavioural and not economic. Therefore prices at the NWRC will not be kept artificially low and illegal dumping will be managed as an offence.

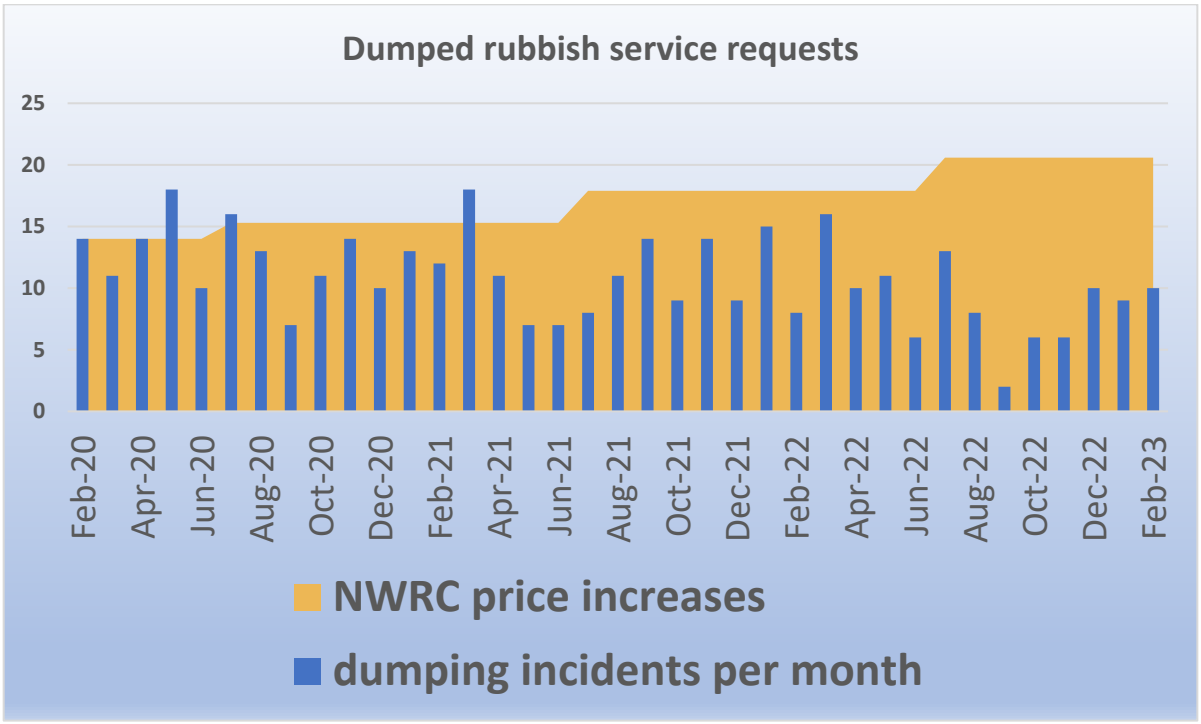


Figure 20 displays the percentage increases to prices matched against the frequency of service requests incidences of rubbish dumping, demonstrating no correlation between prices and dumping.

8.13. Focus Area 13: Atawhai Landfill

The Atawhai Landfill is a Council asset. It is not part of the Nelson Tasman Regional Landfill Business Unit (NTRLBU), so post-closure management is managed by solid waste. At present the post-closure management consists of annual monitoring of leachate and gas composition, and ensuring a process is in place to manage unexpected gas levels.

Atawhai Landfill operated as the primary disposal site for Nelson from prior to 1947 until 1987. As each stage was completed it was capped in varying degrees of thickness and the land area then used for parks, reserves, Founders Heritage Park, Whakatū Marae, and housing developments.

Although the landfill was closed in 1987, the area continues to produce landfill gas which is released to the air through a combination of mechanical vents and natural seepage through the capping. Atawhai landfill will continue to produce decreasing amounts of landfill gas for at least another 20 years.

Council monitors the surface gas as well as the below-ground gas. Landfill gas is mainly composed of methane, carbon dioxide, and oxygen, and some small amounts of other gases such as hydrogen sulphide. When on the surface, landfill gas is naturally mixed with air which oxygenates the landfill gas, so the standards for an acceptable limit for above ground gas at ground level are far lower.

The surface gas is professionally monitored fortnightly in one area, and every year at a number of mapped locations where the surface may be disrupted, such as by tree roots or buildings. Disruption of the surface increases the chance of gas reaching the surface. Six of the 10 below ground gas wells are consistently elevated gas levels. The weekly testing for airborne gas has not exceeded 20% of the permitted levels.

Figure 21: Wells (red) which consistently demonstrate elevated levels and (blue) site of weekly testing for airborne gas.

There are several passive vents to relieve pressure from the landfill and these are monitored for gas levels and mechanical condition. The 2023 Atawhai Closed Landfill Nelson Annual Monitoring Report identified vents which require repair or replacement and funds have been budgeted for this purpose.

The concentrations of methane detected by the surface testing are consistently below the criteria of requiring any action or notification to any business or residents. These levels are also checked against the workplace exposure standards for both short- and long-term exposure.

In May 2017, 10 wells (different from vents) were established in the landfill so that below ground gas can be measured and monitored. These are not vents and no gas is released from them on a daily basis. Testing is carried out in the wells to measure the composition of the landfill gas at about six metres below the ground. This testing measures landfill gas only (not mixed with air) so produces a reliable picture of underground activity. The results are in line with expectations and will continue to be managed through ongoing monitoring.

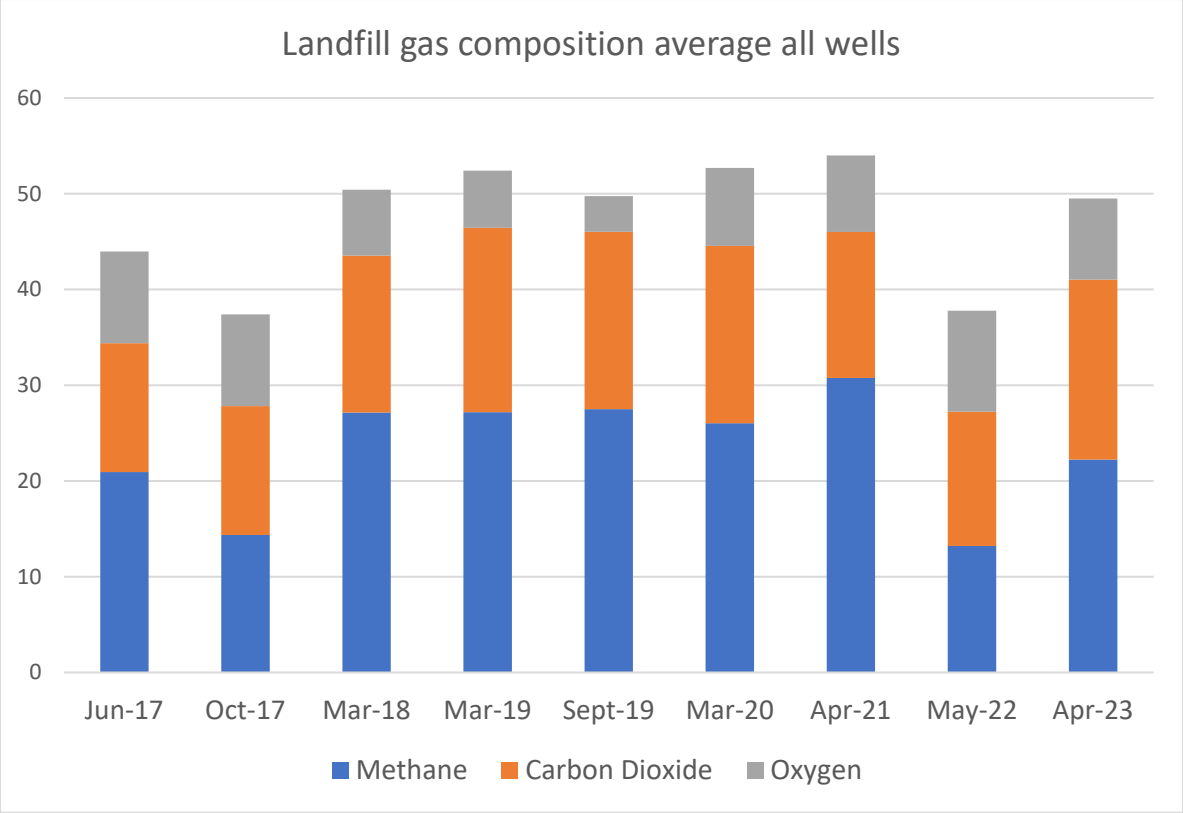


Figure 22. Composition of landfill gas at the Atawhai landfill. This indicates that the % of gas composition is in line with expectations and the MFE guide to management of closed landfills (2001).

As no new material is being added the production of the landfill gas will continue to decrease but the site will require gas management until at least 2050. The site will therefore require budgeting of site and gas management costs (without any associated revenue) until that time. As the ETS is calculated from tonnes at the time of disposal, the production of this gas does not incur any ETS costs.

Sea level rise in coastal environments

The 2023 report by Focus Environmental identified areas around drains which had potential to release historical leachate. Discharge from these points would allow landfill residues into Nelson Haven. The protection of waterways and preventing any discharge to waterways is a priority for solid waste. Focus Environmental are producing an update to the Atawhai landfill management plan and funding has been allocated in 25-27 years to remove any potential discharge.

Atawhai Landfill has almost 1.5 km of shoreline, so being coastal, the site should be reviewed within the term of the AMP to validate structural integrity and to assess the likelihood of inundation during storms, floods, or through general sea level rise. There is no indication that under normal circumstances that a loss of landfill integrity will occur within the term of this AMP. The wells and site will require the identified and budgeted maintenance but at this time there is no

budget in the LTP for significant groundworks or repairs resulting from an emergency event.

Residential use of the closed landfill area.

The gas composition and leachate composition is presently monitored annually which provides a snapshot of the status of the landfill and this assists in any risk assessments. If this frequency of monitoring is continued it will continue to prove valuable data on which decisions relating to the landfill can be made.

In 2022 any property that is inside the testing area of the Atawhai landfill was re-designated as within a HAIL zone. This identified that the property was on or beside a closed landfill and that gas or leachate may be under, or have migrated to, the property. An addition was made to the LIMs for these properties, including links to the monitoring reports and related available data. This also includes the advice that prior to construction or significant soil disturbance residents should seek advice from Council.

Other uses of the Atawhai landfill area

Nelmac operate a plant nursery on part of the closed landfill. This area was reclaimed between 1965 and 1968. Ongoing gas testing at four locations at the nursery demonstrate that airborne gas is consistently below 0.75%. The parameter for instigating further investigation is 5%.

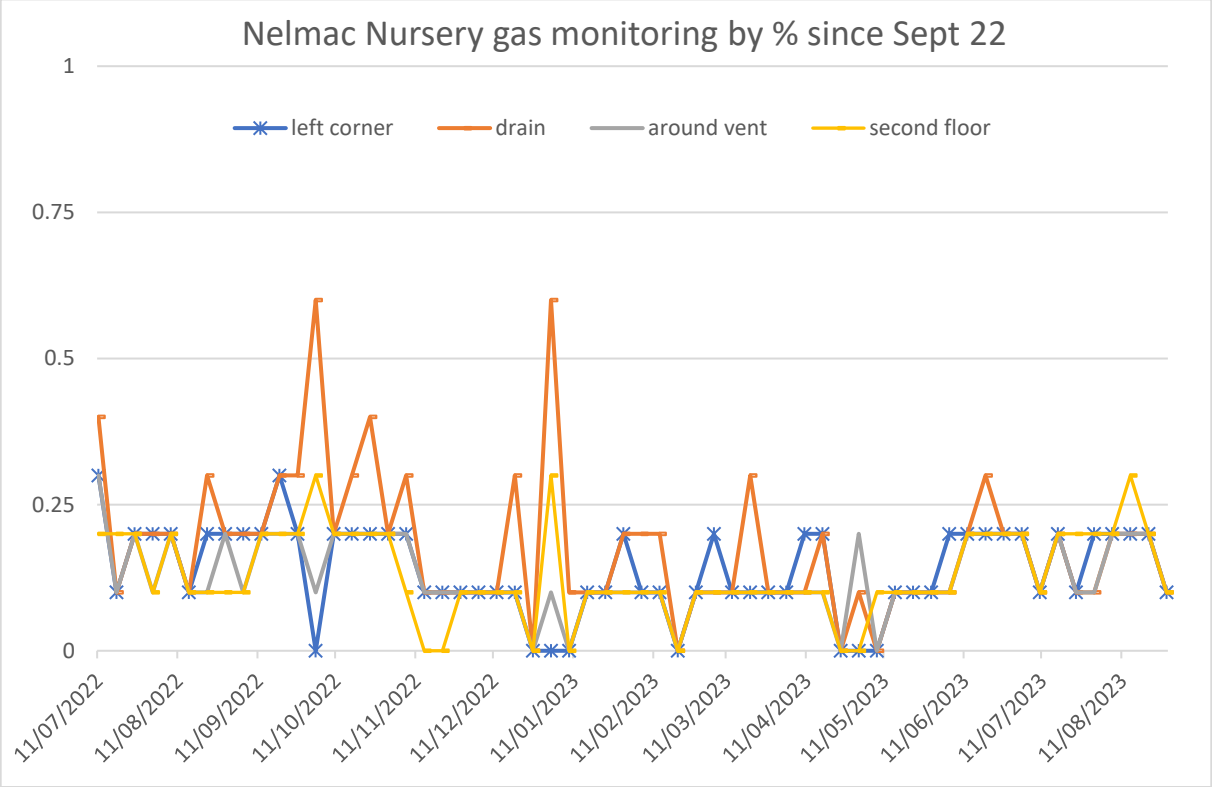


Figure 23 : Gas monitoring at the Nelmac nursey. This demonstrates that the highest reading in the term was 0.6%. The lowest level at which further monitoring is conducted is at 5%

As the Whakatū Marae is also sited on part of the landfill the kaupapa of Ūkaipōtanga and Rangatiratanga is recognised in the management of the Atawhai landfill. The area of the marae was filled or reclaimed between 1960 and 1964 and ongoing testing within 70 meters of the waharoa displays consistently safe levels of landfill gas at ground level. Should the marae be moved to another part of the site, or if the present area is expanded a full investigation will need to be undertaken in line with the focus environmental monitoring and management reports.

9. Emergency Management Planning

The increasing frequency of damage to infrastructure and residences during storm events identifies a need for a plan to manage waste during emergency events.

Solid Waste can assist the emergency decision making process by pre-planning and making information about waste infrastructure and local disposal practices and management options available prior to the event. The basis of this information is to ensure that all waste is managed in a manner consistent with usual practices.

The partial list of advice would include

- Where possible residents should pay for the disposal
- Engagement with insurance companies to cover disposal costs
- Hazardous materials should be separated and appropriately handled
- Materials should not be left where they could pollute drains or waterways
- Materials should not be left where scavenging could occur
- Fridges should be de-gassed prior to disposal
- Council or emergency management should not remove facilities or infrastructure from the private sector at a time that the public want to hire it.

- Monitoring of material being disposed to ensure the material was the result of the event.

Solid Waste will provide information on the available facilities, their capacity, limitations, such as hazardous acceptance, to ensure that the service meets the needs of the emergency, but is done so ensuring environmental protection, safety of residents, and fiscal responsibility.

10. Financial Summary (what it will cost and how we pay for it)

Solid Waste activities operate in a 'closed account' with all revenue streams retained within the activity, in effect making the activity financially independent of Council rates. The cost of all solid waste projects is compiled and the revenue from the waste disposal levy and the gate takings at the NWRC are deducted. The balance is the amount of revenue required from the Local Disposal Levy (LDL) from landfill. Nelson and Tasman Solid Waste each independently apply to the landfill unit and usually whichever is the lower amount of the two requests is provided by the landfill to both parties.

The NTRLBU announced in 2023 that their budget is for a maximum $3M (plus inflation adjustment) per year to each party and this has lowered the available and budgeted funds for solid waste. As the landfill revenue is less than expected, solid waste activities have been adjusted to match, ensuring an independently balanced budget.

Where there is an operational surplus, these funds are retained in a 'reserve' from which projects or budget overspend can be funded. As of 2023 the reserves are low so no projects can be instigated from reserve funding. Now with a smaller budget Solid Waste is moving projects and lowering expenditure until projects can be afforded. This has resulted in foodwaste services not starting prior to 2027.

As Solid Waste shares the principle of Kaitiakitanga any projects or services that have a direct environmental effect, such as disposal of hazardous materials, management of environmental contaminants or streetlitter have continued to be given priority and will not be reduced or delayed.

10.1. Financial Statements and Projections

1000s	(2024/25)	(2025/26)	(2026/27)	(2027/28)	(2028/29)	(2029/30)	(2030/31)	(2031/32)	(2032/33)	(2033/34)
Solid Waste Total	(1,146)	(1,940)	(1,866)	(556)	(544)	(493)	(393)	(418)	(409)	(433)
Income	(223)	(223)	(223)	(223)	(223)	(223)	(223)	(223)	(223)	(223)
Expenses	223	223	223	223	223	223	223	223	223	223
Mtce: CBD Litter Collection	36	36	36	36	36	36	36	36	36	36
CBD rubbish bin collection	187	187	187	187	187	187	187	187	187	187
Solid waste	(1,146)	(1,940)	(1,866)	(556)	(544)	(493)	(393)	(418)	(409)	(433)
Waste Minimisation	366	357	377	407	324	294	294	324	294	285
Income	(230)	(230)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
Other Income	(230)	(230)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
Recoveries: Levy reimbursement	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
Waste Minimisation Fund MfE	(20)	(20)	0	0	0	0	0	0	0	0
Expenses	596	588	588	618	535	505	505	535	505	496
Base Expenditure	65	86	86	86	86	86	86	86	86	86
Diversion engagement : deconstruction and subsidies	65	86	86	86	86	86	86	86	86	86
Unprogrammed Expenses	15	15	15	15	15	15	15	15	15	15

Subsidy on Compost Bins	15	15	15	15	15	15	15	15	15	15
Programmed Expenses	516	486	486	516	433	403	403	433	403	394
Waste Minimisation Resources	10	10	10	10	10	10	10	10	10	10
E-waste subsidy/Zero Waste/Product stewardship	25	25	25	25	25	25	25	25	25	25
Community engagement-schools	40	40	40	40	40	40	40	40	40	40
Streetlitter : bin technology and climate change	173	173	173	173	90	90	90	90	90	90
Waste Minimisation at Council Facilities	20	20	20	20	20	20	20	20	20	20
Waste min: composting & food growing prog	20	20	20	20	20	20	20	20	20	20
Waste min: community engagement contract	145	145	145	145	145	145	145	145	145	145
Waste minimisation at events	30	30	30	30	30	30	30	30	30	30
Waste Mgmt and Minimisation Plan	40	10	10	40	40	10	10	40	10	1
Feasibility Study SWAP	13	13	13	13	13	13	13	13	13	13
Transfer Station	765	953	992	987	1,086	1,162	1,212	1,212	1,213	1,188
Income	(996)	(998)	(1,018)	(1,018)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)
Other Income	(996)	(998)	(1,018)	(1,018)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)	(1,021)
Rental Vivian place	(20)	(22)	(22)	(22)	(25)	(25)	(25)	(25)	(25)	(25)
Disposal Fees : NWRC	(1,137)	(1,220)	(1,186)	(1,234)	(1,260)	(1,311)	(1,310)	(1,360)	(1,310)	(1,335)

Sundry Income	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)
Vivian Place Water Recovery	0	0	0	0	0	0	0	0	0	0
Container return	0	0	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)
Green Waste O/head Contributn	(110)	(110)	(110)	(110)	(110)	(110)	(110)	(110)	(110)	(110)
Expenses	1,760	1,950	2,010	2,004	2,107	2,183	2,233	2,232	2,234	2,209
Base Expenditure	1,633	1,823	1,882	1,926	1,978	2,104	2,103	2,152	2,103	2,128
Hopper Operation contract	300	300	300	300	325	400	400	400	400	400
Provide Refuse cartage	120	120	120	120	150	150	150	150	150	150
Provide: Hazardous Waste	90	90	90	90	90	90	90	90	90	90
Provide: Car Tyre Disposal	5	5	5	2	2	2	2	2	2	2
public recycling drop off	0	107	200	200	200	200	200	200	200	200
Provide: Operator/Ticket Office	8	8	8	8	8	8	8	8	8	8
Landfill Charges	1,017	1,100	1,066	1,114	1,110	1,161	1,160	1,210	1,160	1,185
Bank Fees	11	11	11	11	11	11	11	11	11	11
Electricity	14	14	14	14	14	14	14	14	14	14
Rates	49	49	49	49	49	49	49	49	49	49
Water By Meter	1	1	1	1	1	1	1	1	1	1
Trade Waste Charges	0	0	0	0	0	0	0	0	0	0
Insurance	18	18	18	18	18	18	18	18	18	18

Unprogrammed Expenses	65	65	65	65	65	65	65	65	65	65
Building Maintenance	65	65	65	65	65	65	65	65	65	65
Programmed Expenses	62	62	63	13	64	14	65	15	66	16
Grounds Maintenance	12	12	13	13	14	14	15	15	16	16
Plant & Equipment Maintenance	50	50	50	0	50	0	50	0	50	0
Landfill	(2,871)	(3,171)	(3,171)	(3,171)	(3,171)	(3,171)	(3,171)	(3,171)	(3,171)	(3,171)
Income	(3,000)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)
Other Income	(3,000)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)
Local Disposal Levy from Regional Landfill	(3,000)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)
Expenses	129	129	129	129	129	129	129	129	129	129
Base Expenditure	59	59	59	59	59	59	59	59	59	59
Provide: Illegally Dumped Rubbish	50	50	50	50	50	50	50	50	50	50
Rates	6	6	6	6	6	6	6	6	6	6
Insurance	3	3	3	3	3	3	3	3	3	3
Unprogrammed Expenses	30	30	30	30	30	30	30	30	30	30
Reactive maintenance: 1920 to 84 Landfill	30	30	30	30	30	30	30	30	30	30
Programmed Expenses	40	40	40	40	40	40	40	40	40	40
Atawhai Closed Landfill	40	40	40	40	40	40	40	40	40	40
Green Waste	(1,168)	(1,168)	(1,143)	132	107	107	107	62	62	62

Income	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)
Other Income	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)	(1,507)
Contribution from WMF	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)	(1,297)
TDC contribution	0	0	0	0	0	0	0	0	0	0
Fees: Green Waste	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)	(210)
Expenses	340	340	365	1,640	1,615	1,615	1,615	1,570	1,570	1,570
Base Expenditure	340	340	365	1,640	1,615	1,615	1,615	1,570	1,570	1,570
Provide: Green Waste Disposal	83	83	83	83	83	83	83	83	83	83
Provide: Transport Green Waste	71	71	71	71	71	71	71	71	71	71
Transfer Station Overhead	110	110	110	110	110	110	110	110	110	110
Kerbside Foodwaste Service	75	75	100	0	0	0	0	0	0	0
kerbside collection foodwaste	0	0	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000
processing costs foodwaste	0	0	0	300	300	300	300	300	300	300
foodwaste bins	0	0	0	75	50	50	50	5	5	5
Recycling	1,763	1,089	1,079	1,089	1,110	1,115	1,165	1,155	1,192	1,202
Income	(20)	(221)	(226)	(226)	(245)	(250)	(250)	(270)	(272)	(272)
Other Income	(20)	(221)	(226)	(226)	(245)	(250)	(250)	(270)	(272)	(272)
Recycling Commodity Income	0	(201)	(201)	(201)	(220)	(220)	(220)	(240)	(240)	(240)
Sales Recycling Bins Wheelie	(20)	(20)	(25)	(25)	(25)	(30)	(30)	(30)	(32)	(32)

Expenses	1,783	1,310	1,305	1,315	1,355	1,365	1,415	1,425	1,465	1,475
Base Expenditure	1,783	1,310	1,305	1,315	1,355	1,365	1,415	1,425	1,465	1,475
Provide: Kerbside Contract	1,712	850	850	850	850	850	850	850	850	850
Provide: Recycling Bins	20	20	20	20	50	50	90	90	120	120
Provide CBD Recycling Bins	5	5	5	5	5	5	5	5	5	5
Fibre subsidy	30	15	0	0	0	0	0	0	0	0
sorting costs	0	200	210	220	230	240	250	260	270	280
MRF payments	0	61	61	61	61	61	61	61	61	61
Commodity recovery	0	143	143	143	143	143	143	143	143	143
Provide: Schools recycling	16	16	16	16	16	16	16	16	16	16

Table 21: Financials for all activities

10.2. Funding Strategy

The funding of Solid Waste is dependent on the following factors:

1. That the NWRC gate rate for refuse will be adjusted as required to match the total cost of disposal and cartage of refuse with the operating costs of the NWRC being a 'fixed cost'.
2. That the NWRC gate rate for greenwaste will be adjusted as required to match the total cost of disposal and cartage of greenwaste with the operating costs of the NWRC being a 'fixed cost'.
3. That the central government Waste Disposal Levy will continue to be collected and distributed to the regions in line with the current process (50% returned to the region)
4. That Nelson receives from the NTRLBU the Landfill Local Disposal Levy (LDL) of $3M as advised in 2023
5. That any new services or changes to services that are not in the current budgets and forecasts are only instigated if there is supplementary revenue.
6. That 'at point of renewal' contracts remove variables and subsidies that cannot be effectively budgeted

Solid Waste revenue is derived from the Waste Disposal Levy from central government, the 'gate revenue', and from Nelson's share of the LDL from the NTRLBU. In summary:

1. The Waste Disposal Levy (WDL) is a fee charged by central government for waste to landfill. While presently $50 per tonne it will be $60 per tonne, by 2025. A share (approximately 50% based on population) is returned to the region to fund waste activities.
2. The 'gate' is the revenue derived from the NWRC when residents pay for the disposal of refuse and greenwaste.
3. The Landfill Disposal levy (LDL) is the share Nelson receives from the NTRLBU.

10.3. Valuation Forecasts

Physical assets are monitored as per a schedule, and in line with table 25. The monitoring process validates the condition of the asset and at each monitoring frequency each asset can be assigned a new valuation. The valuation assumes a remaining life expectancy but this may not align with previous life expectancy projections.

Asset	Quantity	Total remaining value

Cast iron bins	78 bins	$12k
Tilt bins	83 bins	$160k
Stainless recycle bins	4	No book value
240 litre recycle bins in service	21200 wheelie bins	$400k
120 litre recycle bins in service	2635 wheelie bins	$45k
Unused 240 litre wheelie bins	88 wheelie bins	$8k
Unused 120 litre wheelie bins	234 wheelie bins	$18k
Cartage containers for refuse and greenwaste	7 x 30M^3 bins	$100k

Table 22: Valuation of assets in 2023

Remaining value has been calculated by reviewing the total replacement value, divided by the expected lifespan of the asset, multiplied by the years remaining. The remaining life of an asset has a number of variables and valuations may move up or down with each review, according to the condition of the asset.

Assets relating to the NWRC including the Hoppers, gantry crane, and buildings are actively depreciated on behalf of Solid Waste. This ensures funds are available, if required, following an unforeseen event. This would include events such as a complete failure of the hopper machinery and the need for an unplanned significant repair or replacement. The likelihood of this, which would affect the amount that should be depreciated, is monitored through engineering inspections and a maintenance plan which is part of contract 4018.

The following table forecasts the depreciation of the physical assets. As there is not an existing baseline for asset condition, assets have been reviewed and lifespan estimates have been applied.

Asset	Quantity	Total remaining value	Estimated value 2025	Estimated value 2028	Estimated value 2031
Cast iron bins	78 bins	$12k	$12k	$12k	$12k
Tilt bins	83 bins	$160k	$120	$80	$20
Stainless recycle bins	4	No book value	No book value	No book value	No book value
240 litre recycle bins in service	21200 wheelie bins	$400k	$300	$150k	$0
120 litre recycle bins in service	2635 wheelie bins	$45k	$35k	$15k	$0

Unused 240 litre wheelie bins	88 wheelie bins	$8k	$8k	$8k	$8k
Unused 120 litre wheelie bins	234 wheelie bins	$30k	$30	$30	$30
Cartage containers for refuse and greenwaste	7 x 30M^3 bins	$105k	$40	$0k	$0

Fig 23: forecast of physical asset depreciation. NWRC assets are separately depreciated on behalf of solid waste.

10.4. Key assumptions made in Financial Forecasts

The key assumptions made in the financial forecasts are:

1. Where there is insufficient revenue within the solid waste account, activities will be slowed, stopped, or modified until they can be afforded.

2. That the increases in the Waste Disposal Levy (WDL) shall be instigated in the timeframe that was suggested in the information provided by the Ministry for the Environment. The WDL line also assumes that the current method for distribution of the fund will continue.

3. A proposed foodwaste kerbside service will not be instigated prior to 2027 (if at all)

4. That the proposed foodwaste service will not be a kerbside and mixed greenwaste (FOGO) service. Should the business case identify a preference for FOGO this would require a budget review.

5. That the current user-pays green waste companies in the Nelson/Tasman region will continue to be available to residents and Council. Council is dependent on private companies to achieve greenwaste diversion.

6. That pending legislation does not require Council to instigate a refuse kerbside service and that Council is not penalised for the standards or achievements of the present user-pays kerbside refuse services.

10.5. Forecast Reliability and Confidence

Waste minimisation expenditure can be planned with a high degree of confidence, and these activities will be undertaken in accordance with the available revenue.

The activities are adaptable, and where there is a surplus or a saving in one line it will be applied to another activity.

Other solid waste activity expenditure has been planned in accordance with scheduled projects and with the best available information from central government. However, decisions and actions taken by central government, the composition of the government, and reaction to national economic conditions may alter the introduction of some services and introduce other projects which require financial input by council.

Activity lines in which there could be significant variation are the residential foodwaste service, the recycling services, and there is potential that new GL lines would need to be created to fulfil central governments intentions in regard to construction and demolition waste and kerbside refuse.

11. Asset Management Practices

The goal of infrastructure asset management is to:

"Deliver the required level of service to existing and future customers in a sustainable and cost effective manner."

A formal approach to the management of assets is essential in order to provide services in the most cost-effective manner, and to demonstrate this to customers, partners and stakeholders. The benefits of improved asset management are:

- Improved governance and accountability
- Mana Orite and customer satisfaction
- Improved approach to asset management through engagement
- Enhanced service management
- Kaitiakatanga and Rangitiratanga
- Improved risk management
- Improved financial efficiency
- More sustainable decision

11.1. AM leadership and structure

The structure of solid waste leadership has been diagrammatically represented in Figure 2 however solid waste operates with minimal staff and so does not form teams to progress projects. Whether solid waste or waste minimisation, the development of projects is significantly managed by the staff member who will supervise the project. Guidance and management is supplied by the Transport and Solid Waste Unit Manager and the Group Manager of Infrastructure.

11.2. Management Systems

Management strategies

The following table demonstrates the interactions within the organisation which are required to deliver the objectives of the AMP.

Strategy	Objective/ Description
Strategic Planning	
Human Resources	Develop the professional skills of the staff through adequate training and experience Personal Development Plans will be agreed with staff each year and a register maintained to record training history. Staff are encouraged to belong to appropriate professional bodies and to attend appropriate conferences, seminars and training courses.
Strategic Alignment	This AMP will support the achievement of relevant Community Outcomes for Council, as set out in the Long Term Plan. The intended contribution of the Council solid waste service and the contribution of waste minimisation to the achievement of Community Outcomes is shown in Table 3 of this AMP.
Service Levels	A clear statement of the solid waste services provided and standards to be achieved that support the stated community outcomes are shown in table 3 of this AMP.
Sustainable Management	Ensures all planning for the solid waste activity is compatible with sustainable management principles. Council will pursue ways of limiting the use of natural resources including energy, valued landscapes (and other natural heritage) and adverse effects on waterways.
Data Management and Utilization	
Data Collection	Data collection programmes (condition, performance, asset registers) closely aligned with business needs will be operated in accordance with documented quality processes Data collection, maintenance and analysis are expensive and it is important that programmes and techniques are cost effective and consistent with business needs. Systematic processes will be introduced for the collection and upgrading of essential data based on asset criticality including: - Asset attribute information - Asset performance data - Asset condition data. - Service efficacy such as energy / emissions per collection - Social engagement outcomes
Geographical Information System Data	Geographical information system data will be the subject of defined quality assurance processes. Council has quality processes to ensure that all data entered to the Geographical Information System (GIS) meets defined quality standards and supports Asset Management through connectivity with the asset register and Asset Management data storage.

Strategy	Objective/ Description
	GIS systems and similar technology is utilised for collection services, asset locations, and service provision.
Business Processes	
Activity Management Plan Updates	This AMP remains a strategic 'living' document and will be updated as required and reviewed at three yearly intervals to coincide with the Long Term Plan. The scope of the review will be influenced by changes in Community Outcomes for Council, service standards, improved knowledge of assets, corporate strategy/ policy and process.
Risk Management	Risk Management is an essential part of Asset Management. Implementing a Risk Register including risk controls for the solid waste activities will assist in maintaining risk exposure at agreed levels. Risk controls include maintaining appropriate insurance cover, emergency response planning, condition monitoring of critical assets, preventative maintenance, operations manuals, review of standards and physical works programmes.
Infrastructure Asset valuation	Perform valuations in a manner that is consistent with national guidelines and Council corporate policy for valuation cycles which are carried out every 1-3 years to reflect international financial activity and align with the Long Term Plan requirements. Asset valuations are the basis for several key asset management processes including asset renewal modelling and financial risk assessments. Valuations of the solid waste assets will be carried out based on data from the Asset Management System to ensure audit ability and alignment with other processes.
Monitoring	
Level of Service Standards	Continue with the monitoring procedures to ensure the activity is contributing to the community outcomes as stated and that internal controls (service requests, operational contract requirements) are also monitored and managed
Asset Performance	The performance of assets are monitored as an input to asset renewal and asset development programmes. The monitoring includes: • Customer service requests • Asset failure records • Asset Maintenance records • Compliance with Resource Consents • Critical asset audits • Supervisory Control and Data Acquisition • Legislative compliance.
Financial Management	
Budgeting	Expenditure programmes for solid waste activities are budgeted with a 10 year projection. The AMP is intended to provide sufficient detail to provide the basis for those 10 year projections. 30 year budget projections are also undertaken for the Infrastructure Strategy.
Financial management	Manage the activity budget in accordance with statutes and corporate policy. This involves: • Economic appraisal of all capital expenditure • Annual review of Activity Management Plan financial programmes • Recording of significant maintenance and asset renewals • Continuous monitoring of expenditure against budget.
Sustainable Funding	The financial requirements for the provision of the solid waste activity, which are sustainable and to acceptable standards over the long term will be identified and provided for in the budgets. These financial requirements include: • management of the solid waste activity • operation and maintenance of the solid waste services • asset replacement

Strategy	Objective/ Description
	Asset development to ensure that the ability of the solid waste activity to deliver an acceptable level of service is not degraded by population growth in Nelson. That all changes to services or new assets are introduced and maintained within the 'closed account' solid waste financial structure.

Table 24: procedures and interactions within the organisation which will progress the delivery of the objectives of the AMP

11.3. Information Systems and Tools

Solid Waste utilises several computer-based operating systems. These include Council-wide administrative systems such as Sharepoint and Magiq. Information relevant to the collection services (such as closed streets or new streets) is provided by other Council officers using Road Assessment and Maintenance management (RAMM) and similar 'street information' systems. During development of various activity lines solid waste also makes significant use of N-Map.

Solid Waste respects the privacy of individuals and each person's right to both privacy and minimal collation and storage of any data relating to that individual. Solid waste collates data from other Council systems, such as addresses and rating numbers but does not collate or store any individualised data or personal information. Mapping systems do not identify individuals. Individuals are identified within the service request system, (usually at their request) but personal data is not retained outside of this system. The non-collation of data is consistent with the aspirations of Te Mana Raraunga - Māori data sovereignty.

Touchway

Touchway is the York Valley weighbridge activity software. While this is primarily utilised by the NTRLBU for general accounting, there is a vast amount of information relating to solid waste activities that can be extrapolated from the weighbridge activity. Currently this data is being used in conjunction with MfE reporting and the SWAP report to calculate waste composition and volumes as required by the JWMMP.

Clean

Clean is the mapping and monitoring software for the solar powered compacting bins. It allows remote monitoring of bin capacity, battery levels, and reporting of issues such as hopper jams. It also records historical data for each bin.

Citrix

Solid Waste utilises Citrix software to access Supervisory Control and Data Acquisition (SCADA) This allows remote monitoring of the Stock Effluent Facility (SEF) which is owned by Council and located in Richmond. This allows for remote capacity monitoring.

Geographical Information System (GIS)

Infrastructure streetlitter bins were mapped in 2016 and their location audited in 2022. Solar bins were mapped in 2023.

‘Editor’ Recycling service software

Currently the recyclables kerbside service and the foodwaste trial utilise a unique layer in N-map (provided by GIS) which reads each residential property, their recyclables bin serial number, and associated service requests. This ensures there is only one bin per household, that replacement bins are tracked so it is clear whether someone should pay for their replacement or not. The system is also used to identify recovered ‘lost’ bins. The system identifies addresses but does not identify individuals.

In the event of Council replacing or supplying new blue glass crates, the crates would have a unique serial number and would, like the wheelie bins, be assigned to each property and tracked in the same system.

Once instigated, the residential foodwaste service bins will likely utilise the same software.

Service Delivery Models

Maintenance contracts have been reviewed and grouped to provide a good balance between price and quality, and use either prequalification or price/quality supplier selection methods. The methods used to procure capital projects will differ depending on the size of the project, but will be either lowest price or price/quality.

Council maintains an in-house professional services capability balanced with external consultants as required to achieve best value for money. Additional professional services are sometimes required.

12. Plan Improvement and Monitoring (what we're doing to improve)

Activity	Monitoring methodology	Frequency
Recyclable collection	Monitoring using dashcam and e-roads for collection service	As required or at least weekly
	Review of service requests relating to recycling to identify areas that require improvement	As required or at least monthly
	Auditing of bins left kerbside for recyclables composition	100 bins annually
	Audits of 3 days of collection using the MRF	annual
	Analysis of collection data including per capita and trends	Monthly
	Review of the quantity of bins replaced for damage or wear and tear	monthly
	Analysis of commodity subsidy	monthly
Streetlitter	Monitoring of service requests relating to bin service	At least weekly
	Audits of bins locations and conditions	3 monthly
Atawhai Landfill	Management and monitoring investigation and report	annually
Nursery gas	Testing and compilation	weekly
NWRC		
Kiosk	Compilation of financial and operational tonnes	weekly
Hoppers	Engineer's inspection of hopper condition including metal wall thickness and wear rates	Every 2 years
	Engineer's inspection of compactor	Every 2 years
	Engineer's inspection of gantry crane	Annually
	Certification for gantry crane	Annually
Recycling shed	Building warrant of fitness	Monthly inspections
Reuse shop	Building warrant of fitness	Annually
York Valley Landfill	Monitoring of weighbridge information	Monthly
	Per capita and diversion calculations	Monthly
Waste Minimisation	Ongoing monitoring of each project	

Table 25 The method and timeframe of monitoring for physical assets and services

Table 25 identifies the current monitoring and auditing procedures. These are the baseline from which improvements can be developed.

Each activity is monitored. Information is collated from audits and used to both guide operational decisions and new projects.

12.1. Improvement Programme

AMP monitoring and review procedures

This AMP is a regularly revised and evolving document. It will be reviewed annually and updated at least every three years to coincide with the Annual and Long Term Plans and to incorporate improved decision making techniques, updated asset information, and Council policy changes that may impact on the levels of service.

The AMP will be improved throughout its lifecycle as further information about the assets is collected in terms of condition, performance and service delivery. Council is committed to advanced data collection and management systems that will allow for a greater appreciation of the performance and condition of the Council assets.

The three yearly review of the JWMMP will also guide operational and financial decisions and form part of the review of the AMP.

Council will report variations in the adopted annual plan budgets against the original asset management plan forecasts and explain the level of service implications of budget variations.

Internal Audits

Internal audits will be taken every three years to assess the effectiveness of the AMP in achieving its objectives. The internal audit will also assess the adequacy of the asset management processes, systems and data.

Statutory Audits

The Local Government Act requires an independent, annual audit of Council's operations.

Improving accuracy and confidence in the AMP

Accuracy and confidence in the plan will be enhanced through monitoring, data collection, and using that information in an integrated manner to determine whether activities are achieving their desired trajectories. Improvements in accuracy will be achieved through inter-technology communication.

Technology systems for asset improvement

Solid waste assets include both physical assets and services. For both of these information relating to waste disposal is the single most effective tool when

assessing the efficacy of services, the suitability of a physical asset, or the future demand for waste services.

The implementation of a solid waste activity, or the targeting of a specific material for diversion, requires time to be established. For this reason solid waste collates information from 'now' and is always looking several years ahead.

Solid waste utilises several computer based systems for monitoring, reviewing asset and service provision, and for future planning. This includes tonnes disposed, volumes collected and distances travelled. The present lack of integration of these systems isolates some activity lines from their related services. This results in data being manually extracted from one software and then re-entered into another.

A significant improvement in data collation and management will be achieved though improvements in synchronous software. These improvements would not require supplementary funding so are not itemised in the financial summary.

12.2. Monitoring and Review Procedures

The AMP will be reviewed annually and updated at least every three years to coincide with the Annual and Long Term Plans and to support improved decision making, updated asset information, and policy changes that may impact on the levels of service. The AMP will be improved throughout its life cycle as further information about solid waste assets and services are collected including condition, performance and service delivery data. Changes to expectations and technologies will influence the reviews of the plan and ensure that the plan continues to be action focussed and appropriate to contemporary political, social and environmental expectations.

Council is committed to advanced data collection and management systems that will allow for a greater appreciation of the performance and condition of the Council assets and service achievements. Council will report variations in the adopted annual plan budgets against the original activity management plan forecasts and explain the level of service implications of budget variations.

Internal Review

Internal reviews will be taken every three years to assess the effectiveness of the plan in achieving its objectives.

Statutory Audit

The Local Government Act requires that an independent, annual audit of the operations of the Nelson City Council be carried out.

12.3. 17A Section 17A of the local government Act 2002

Section 17A 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. This must be completed within 2 years of the expiry of a contract and not less than every 6 years. The 17A schedule is,

Subject	completed	Required
Recycling	2023	
Streetlitter	2021	2027
NWRC hoppers	2020	2026
Kiosk	2020	2026

12.4. Performance Measures

How the effectiveness of this AMP will be measured

The effectiveness of this AMP will be monitored by the following procedures:

- The achieving of the performance targets outlined in Table 3, levels of service.
- Financial expenditure projections being in line with budgets
- Resource consent monitoring for sites operations.
- Operations and Maintenance reports.
- A recognised process of succession for all services and contracts

The continued monitoring of these procedures and ongoing analysis of results will result in:

- Optimisation of expenditure through the asset lifecycle
- Service levels actively monitored and reported on
- Management of risk and control of failures

13. Appendix 1 : Glossary

AMP	Activity Management plan. Generically used to include the Solid waste Activity management Plan.
AD	Anaerobic Digestor. A in-vessel composting process that does not produce a compost but controls emissions
Compost	Organic material that is decomposed and can be used as a growing medium.
Contamination	Any material that is not the primary aim of the collection or acceptance service. This may include non-recyclables in the recyclable wheelie bin or foodwaste or animal waste in the greenwaste.
C&D	Construction and Deconstruction
Coverfill	Non-hazardous soil (not from a HAIL site) which can be used at the York Valley landfill to cover refuse on a daily basis or to build embankments.
Deconstruction	The controlled demolition or dismantling of a building or structure to maximise the recovery of materials — potentially for resale.
Demolition	The clearing of a building or structure without any attempt to recover materials for reuse.
Diversion	The interruption of a waste stream so that materials are handled in a manner more conducive to (or higher up) the waste hierarchy.
EOI	Expression of Interest.
Fly-tipping	Illegal dumping of refuse without consideration for the safety of the environment or other people.
Foodwaste	Any food material that could be diverted for food rescue, pig farms or be used for composting. This does not usually include meat and animal by-products.
FO	Food organics (Not including garden waste)
FOGO	Food Organics Garden Organics
Greenwaste	Garden material including weeds and trees under 200mm in diameter. This does not usually include flax or bamboo.
HAIL	Soil which through previous land use is contaminated beyond the safe acceptance levels for coverfill but which can still be accepted at York Valley Landfill as hazardous soil.
foodwaste	Any food or food material that would reasonably be expected to be used in a kitchen. This will include meat, dairy, bread, bones fish waste as well as general foodwaste.
MRF	Materials Recycling Facility (or sometimes a municipal recycling facility). A site at which materials are sorted and re-packaged for transportation to the recycler.
NEC	Nelson Environment Centre. A local community group which operates a reuse shop and e-waste recycling within the NWRC.
NGO	Non-Government Organisation, usually a charity or special interest group.
NWRC	Nelson Waste Recovery Centre. Previously referred to as 'Pascoe Street" or the 'Nelson Transfer Station'.
NTRLBU	Nelson-Tasman Regional Landfill Business Unit
RFT	Request for Tender

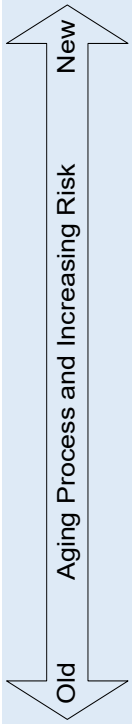
Recyclables	Any material that is on the list of acceptable materials to put in the yellow topped kerbside recyclable bin. Any other material is a contaminant.
Streetlitter	A street based bin emptying service (Contract 54733)
Street litter	Loose litter on the footpath etc
Skip	A fixed volume refuse container usually 3-9 M^3 delivered by truck and filled by the resident.
Windrow	An open air row of compostable material that is 'turned' for aeration.

Table 26. Glossary

14. Appendix 2 : Asset lifecycle management plan

Asset Lifecycle

Assets have a lifecycle as they move through from the initial concept to final disposal. Depending on the type of asset, its lifecycle may vary from 10 years to over 50 years. Key stages in the asset lifecycle are:



Asset planning	When the new asset is designed - decisions made at this time influence the cost of operating the asset and the lifespan of the asset. Alternative, non-asset solutions, must also be considered.
Asset creation or acquisition	When the asset is purchased — constructed or vested in the Council. Capital cost, design and construction standards, commissioning the asset, and guarantees by suppliers influence the cost of operating the asset and the lifespan of the asset.
Asset operations and maintenance	When the asset is operated and maintained — operation relates to a number of elements including efficiency, power costs and throughput. Maintenance relates to preventative maintenance where minor work is carried out to prevent more expensive work in the future and reactive maintenance where a failure is fixed.
Asset condition and performance monitoring	When the asset is examined and checked to ascertain the remaining life of the asset — what corrective action is required including maintenance, rehabilitation or renewal and within what timescale.
Asset rehabilitation and renewal	When the asset is restored or replaced to ensure that the required level of service can continue to be delivered.
Asset disposal and rationalisation	Where a failed or redundant asset is sold off, put to another use, or abandoned.

Asset Failure Modes

Generally it is assumed that physical failure is the critical failure mode for many assets. However, the asset management process recognises that other modes of failure exist. The range of failure modes includes:

Structural	Where the physical condition of the asset is the measure of deterioration, service potential and remaining life.
Capacity	Where the level of under or over capacity of the asset is measured against the required level of service to establish the remaining life.
Level of Service Failure	Where reliability of the asset or performance targets are not achieved.
Obsolescence	Where technical change or lack of replacement parts can render assets uneconomic to operate or maintain.
Cost or Economic Impact	Where the cost to maintain or operate an asset is greater than the economic return.
Operator Error	Where the available skill level to operate an asset could impact on asset performance and service delivery.

The Lifecycle Management Programmes cover the four key categories of work necessary to achieve the required outcomes for the Solid Waste activity. These programmes are:

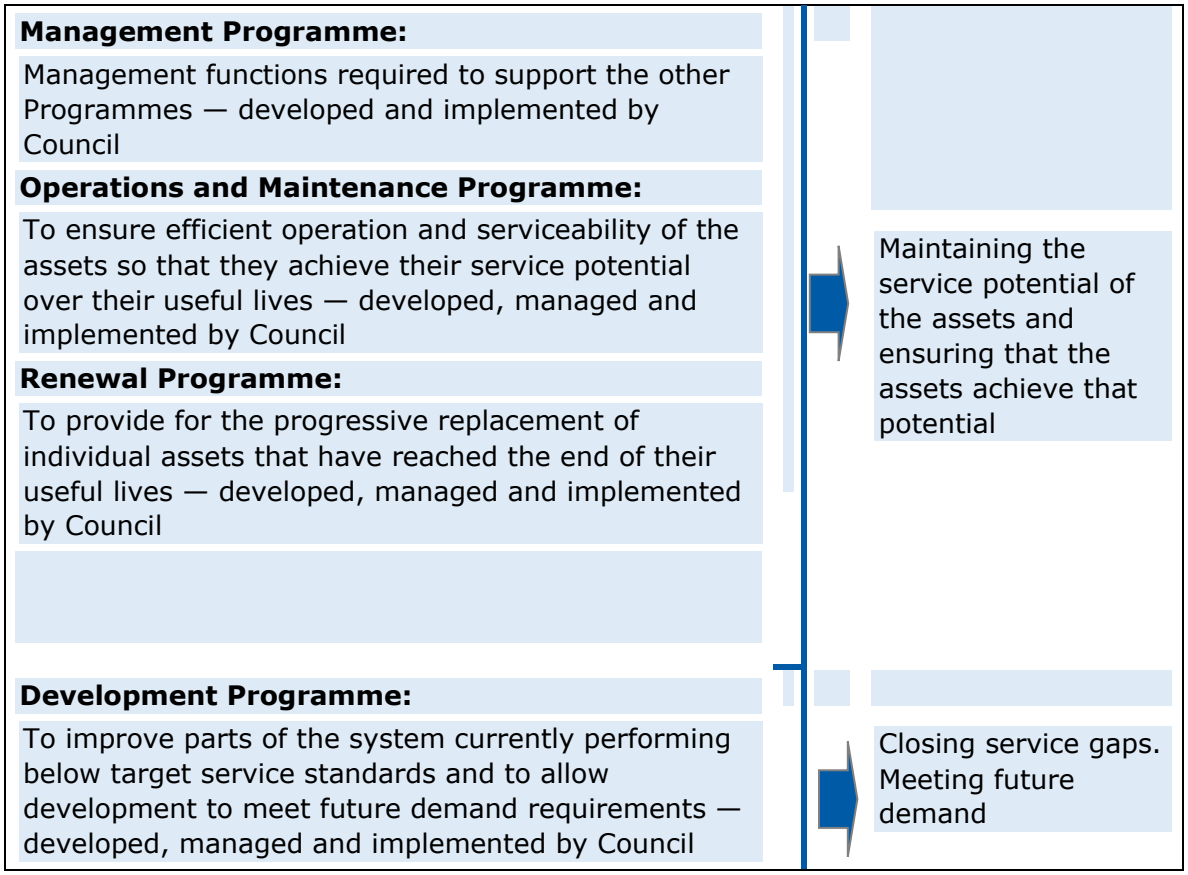


Table 27 Asset lifecycle

Table 28 Monitoring procedures of assets

	23-24	24-25	25-26	27-28	28-29	29-30
Recycling	Jan 24 compulsory recycling services with a mandatory collection list	Early 24 tender for future recycling : collection only contract which removes sorting services	June 25 expiry of kerbside contract. New collection contract starts NCC commodity subsidy ends		10% of kerbside bins replaced	20% of kerbside bins replaced
		Potential Container Return scheme	NWRC Public drop off becomes a container return scheme site			
		NCC establish sorting contract with MRF	From June 25 NCC own commodities and contract sorting services			
Streetlitter			Solar bin lease ends bins are purchased	Infrastructure streetlitter contract renews	Tender for new streetlitter contract	Infrastructure streetlitter contract expires
NWRC hopper		4 freight containers replaced	3 freight containers replaced	Tender for Hopper contract	Hopper contract expires	
NWRC NCC			New kiosk building			
NWRC NEC				NEC lease		
NWRC C&D	Started 2023	MfE milestone 2	MfE milestone 2. No further funding			
Foodwaste	Research Eunomia	MfE funded business case Tender for services, collection and processing contracts		Collection services start		
Atawai closed landfill	Gas vent improvements		Drainage potential leachate management	Drainage potential leachate management		
Administrative	Waste assessment	JWMMP				

15. Appendix 3 Key Legislation and Regulations

This activity is guided by national legislation. Acts are listed in Table 29 by their original title for simplicity and as they include any Amendments Acts. For the latest Act information, please refer to https://www.legislation.govt.nz/

Table 29: Key legislation and regulations that influence the solid waste Activity (it is accurate as at 16 June 2023, however, please note that legislation is continually being amended and replaced.)

15.1.

Key legislation	How it relates to the solid waste Activity
Bylaws Act 1910	Sets out general provisions for making and operating bylaws, quashing or amending bylaws and recovery of fines.
Climate Change Response Act 2002 (and Climate Change Response (Zero Carbon) Amendment Act 2019)	Puts in place a legal framework to support New Zealand to respond to climate change and meet its international obligations. It also established the New Zealand Emissions Trading Scheme. In 2019 the Act was amended by the Climate Change Response (Zero Carbon Amendment Act 2019, which: • Set a new domestic greenhouse gas emissions reduction target for New Zealand to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050 • Established a system of emissions budgets to act as stepping stones towards the long-term target • Required the Government to develop and implement policies for climate change adaptation and mitigation • Established a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals.
Civil Defence Emergency Management Act 2002	The Act is designed to: • Improve sustainable management of hazards in a way that contributes to community well-being, public safety and protection of property • Assess and manage risks • Require local authorities to plan and prepare for emergencies through reduction, readiness, response and recovery activities through regional groups • Integrate local and national emergency management planning • Encourage co-ordination of emergency management and planning across a wide range of agencies.
Claims Settlement Acts 2014:	Settlement Acts are designed to settle historical claims for breaches of Te Tiriti o Waitangi/Treaty of Waitangi. Settlements aim

Key legislation	How it relates to the solid waste Activity
• Ngāti Apa ki te Rā Tō, Ngāti Kuia, and Rangitāne o Wairau • Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, and Te Ātiawa o Te Waka-a-Māui • Ngāti Toa Rangātira	to resolve these claims by providing some redress to claimants. Redress may involve: • An historical account of the Treaty breaches and Crown acknowledgement and apology • Cultural redress • Commercial and financial redress. As a consent authority, Council must have regard to the statutory acknowledgements contained in the Acts and must attach information recording the statutory acknowledgements to all statutory plans covering the area.
Copyright Act 1994 and Copyright (infringing File Sharing) Regulations 2011	Regulates the use, lending, copying and public performance of printed works, sound recordings, films and DVDs and other media in digital formats. Governs the lending of library materials, use of recordings and films in library programmes, the copying of library materials and the use of public internet services.
Environmental Reporting Act 2015	Requires the regular reporting on New Zealand's environment.
Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018	The Council, as the owner of community facilities and other buildings, must have a procedure in place (evacuation procedure) for the safe, prompt, and efficient evacuation of the building's occupants in the event of a fire emergency requiring evacuation.
Food Act 2014 and Food Hygiene Regulations 1974	Places certain duties on the Council – advice, enforcement, registration, audit and verification of food premises. Not all food businesses are audited by Council.
Freedom Camping Act 2011	Regulates freedom camping on land controlled or managed by councils. However, the powers do not allow for freedom camping to be prohibited on all land controlled or managed by a council.
Hazardous Substances and New Organisms Act 1996	Protects the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms. The Act also places restrictions and controls on the transport and storage of hazardous substances. This places requirements on the Council in the receipt and handling of some materials accepted at Resource Recovery Centres and any collection services.
Health Act 1956 and Health Regulations 1966	The Council has responsibilities under the Health Act to improve, promote and protect public health within the city and power to appoint environmental health officers to discharge its duties under the Act. The Act places responsibility on the Council to provide sanitary works and, as a water supplier, to protect the quality and safety of drinking water. Responsibilities include the duty

Key legislation	How it relates to the solid waste Activity
	to take reasonable steps to contribute to protection of sources of drinking water by preparing and implementing Water Safety Plans for schemes supplying over 500 people. The Act also enables councils to issue defect notices to property owners where properties lead to sewer overflows which pose a risk to public health. Regulations under the Act require the Council to inspect and register premises such as hairdressers, mortuaries and camping grounds.
Health and Safety at Work Act 2015 and associated regulations	The Act and associated regulations (e.g. Asbestos Regulations 2016) provides a framework to secure the health and safety of workers and contractors.
Infrastructure Funding and Financing Act 2020	Provides a tool to enable private capital to support the provision of new infrastructure for housing and urban development. The Act provides opportunities for councils, Māori and iwi, and developers to partner and deliver infrastructure, free from council debt limits or from charging high upfront costs to developers.
Land Drainage Act 1908	Outlines the responsibilities as landowners and as the local authority for drainage works.
Land Transport Management Act 2003	Contributes to an effective, efficient, and safe land transport system in the public interest. It defines how transportation is organised in New Zealand. This includes: - Planning (including preparation of Regional Land Transport Plans) and funding of the land transport system - Strategic documents - Regional Transport Committees The funding of the Nelson local road network by Waka Kotahi is defined by this Act.
Land Transport Act 1998 and Regulations	Defines the types of transportation that can be undertaken on the Nelson road network and how the system is licensed and administered.
Litter Act 1979	Defines the offence of littering on public or private land. Requires the Council (and other landowners) to provide and maintain litterbins in places where litter is likely to be deposited, and to empty these bins at regular intervals. It also gives powers to the Council to appoint Litter Control Officers and Litter Wardens and to enforce the provisions of the Act. Central government has indicated a review of the Litter Act. This review could involve a repeal of this act and incorporation of all or some of its provisions into the Waste Minimisation Act.
Local Government Act 2002	Sets out the structure and obligations of Councils and Council-Controlled Organisations in regard to public services and controls their regulatory and enforcement powers. Section 10 outlines the purpose of local government – for democratic decision making on behalf of

Key legislation	How it relates to the solid waste Activity
	communities and to promote the social, economic, environmental and cultural well-being of communities now and in the future. Other parts of the Act require councils to undertake various planning and decision making processes, Māori and public engagement processes, reporting requirements, etc, relating to their activities.
Local Government Act 1974	Covers matters such as: • Local authority fuel tax • Roads, service lanes and access ways; provision of parking places and transport stations; road stopping and temporary restrictions of traffic on roads; and conditions of fixing roads • Aspects of sewerage and stormwater drainage • Land drainage and rivers clearance and water race schemes • Prevention of fires, fire hydrants and water • Offences and legal proceedings
Local Government Borrowing Act 2011	Establishes the Local Government Funding Agency and authorises local authorities to deal with the Agency.
Local Government Official Information and Meetings Act 1987	Governs Council meeting procedures and release of official information. It also sets out responsibilities for councils to provide information about a property in a Land Information Memorandum.
Local Government (Rating) Act 2002	Provides local authorities with powers to set and collect rates to fund their activities, with rates being set in a transparent and consultative manner. Council must keep rates records. Council can have policies for the remission and postponement of rates and that govern liability for rates on Māori freehold land.
Marine and Coastal Area (Takutai Moana) Act 2011 and associated regulations	The Act: • Ensures the protection of the legitimate interests of all New Zealanders in the marine and coastal area of New Zealand • Recognises the mana tuku iho exercised in the marine and coastal area by iwi, hapū and whānau as tangata whenua • Provides for the exercise of customary interests • Acknowledges the Treaty of Waitangi. Local authorities must take into account any planning documents lodged with them under the Act when making any decisions in relation to the customary marine title area. Local authorities can apply to the Minister of Conservation for redress for any losses to its title to any land or investments in the common marine and coastal area.
Occupiers Liability Act 1962	States the duty which a person in control of premises owes to visitors in respect of dangers

Key legislation	How it relates to the solid waste Activity
	due to the state of premises or to things done or not done on them, and outlines the consequences if visitors are hurt or unsafe.
Plumbers, Gasfitters and Drainlayers Act 2006	Protects the health and safety of members of the public by ensuring the competency of persons engaged in the provision of sanitary plumbing, gasfitting, and drainlaying services. The Act requires registered people to undertake such work. This requirement applies to work undertaken for councils.
Privacy Act 2020	Stipulates how personal information can be collected and used, and people's rights to gain access to that information and ask for it to be corrected. This applies to information held by councils.
Public Bodies Contracts Act 1959	Outlines the mode of contracting by public bodies and enables public bodies to delegate the power to enter contracts to committees or officers.
Public Bodies Leasing Act 1969	Provides powers to local authorities to lease land and outlines general provisions for the process for granting leases and of the content of leases.
Public Records Act 2005	Provides a framework within which local authorities create and maintain records and sets requirements for preserving and archiving records.
Reserves Act 1977	Provides for the preservation and management for the benefit and enjoyment of the public areas possessing: • recreational use or potential, whether active or passive • or wildlife • indigenous flora or fauna • environmental and landscape amenity or interest • natural, scenic, historic, cultural, archaeological, biological, geological, scientific, educational, community, or other special features or value. It also enables the preservation of access for the public to and along the sea coast, lakeshores, and riverbanks, and fostering and promoting the preservation of the natural character of the coastal environment and of waterbodies. The Act applies to reserve land gazetted under the Act, including local authority reserve land. It requires reserve management plans for reserve land, outlines processes for declaring and classifying land and leasing reserve land.
Resource Management Act 1991 (RMA)	Sets out obligations to protect New Zealand's natural resources such as land, air, water, plants, ecology, and stream health. Council is required to prepare various planning

Key legislation	How it relates to the solid waste Activity
	documents, as both a regional council and territorial authority, to achieve integrated management of the natural and physical resources of the region and land use and development under the Act. It is also required to administer resource consents. Work Council undertakes may require resource consents and compliance with any conditions in the consents. The Government has a review of the RMA underway. The review proposes repealing the RMA and replacing it with three new Acts: Natural Environments Act, Spatial Planning Act and Climate Change Adaptation Act.
Self-contained Motor Vehicles Legislation Act 2023	Introduces a new default position that freedom camping on local authority land in a non-self-contained vehicle is prohibited meaning that freedom camping on local authority land is restricted to self-contained vehicles only. A local authority can diverge from this position by implementing freedom camping bylaws permitting freedom camping in non-self-contained vehicles in certain areas or placing restrictions on it in certain areas.
Soil Conservation and Rivers Control Act 1941	Makes provision for the conservation of soil resources, the prevention of damage by erosion and to make better provision for the protection of property from damage by floods.
Taumata Arowai – the Water Services Regulator Act 2020	Establishes Taumata Arowai – the Water Services Regulator and provides for its objectives, functions and governance arrangements. The Regulator will set standards and compliance rules for councils to comply with relating to council drinking water supplies until the new water services entities are formed.
Te Tauihu Statutory Acknowledgements	A statutory acknowledgment is legal recognition of the particular cultural, spiritual, historical and traditional association of an iwi with an identified statutory area. The eight iwi of Te Tau Ihu to which these statutory acknowledgements and areas relate are: • Ngāti Apa ki te Rā Tō • Ngāti Kuia • Rangitāne o Wairau • Ngāti Koata • Ngāti Rārua • Ngāti Tama ki Te Tau Ihu • Te Ātiawa o Te Waka-a-Māui • Ngāti Toa RaNgātira. The statutory acknowledgments place obligations on local authorities which are explained in the statutory acknowledgements document attached to the Nelson Resource Management Plan. The maps do not indicate all sites of importance to iwi. Other sites have

Key legislation	How it relates to the solid waste Activity
	been recognised through other redress instruments from the Crown.
Te Tiriti o Waitangi – Treaty of Waitangi	The Treaty of Waitangi is an agreement between Māori and the Crown. However, under section 4 of the Local Government Act 2002 local authorities are required to 'recognise and respect the Crown's responsibility to take appropriate account of the principles of the Treaty of Waitangi and to maintain and improve opportunities for Māori to contribute to local government decision-making processes. Further sections of the Act, particularly 77 and 81, detail the scale of requirement for local authorities to seek contributions and involvement from Māori in consultation and decision-making processes.
Waste Minimisation Act 2008 (WMA)	Drives Council's waste management and minimisation activities. Part 4 of the WMA sets out the responsibilities of territorial authorities in relation to waste management and minimisation. Section 42 of the WMA states that the Council "must promote effective and efficient waste management and minimisation within its district". Activities required of the Council by the WMA include: • adoption of a Waste Management and Minimisation Plan (WMMP) • review of the WMMP at least every six years • preparation of a Waste Assessment prior to review of the WMMP. Central government is currently reviewing the WMA. This review may change the waste management and minimisation responsibilities of the Council and may amend Council's funding distribution from waste disposal levies.

Key National Policies and Standards

Table 29 outlines the key National Policies and Standards that apply to the solid waste Activity.

Document	How it relates to the solid waste Activity
Drinking Water Standards for New Zealand	The Drinking Water Standards list the maximum concentrations of chemical, radiological, and microbiological contaminants acceptable for public health in drinking water. The standards also specify the sampling protocols that must be observed to demonstrate that the drinking water complies with the standards.
National Energy Efficiency and Conservation Strategy	The current Energy Efficiency and Conservation Strategy's focus is on promoting energy efficiency, energy conservation and renewable energy.
National Environmental Standards for Air Quality	Many locations in New Zealand experience poor air quality, primarily due to home heating during winter and to a lesser extent due to

Document	How it relates to the solid waste Activity
	emissions from motor vehicles. Regional councils and unitary authorities are responsible for ensuring that national air quality standards are met in their regions.
National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS)	The NESCS is a nationally consistent set of planning controls and soil contaminant values. It ensures that land affected by contaminants in soil is appropriately identified and assessed before it is developed and, if necessary, the land is remediated or the contaminants contained to make the land safe for human use.
National Environmental Standards for Freshwater (Freshwater NES)	The NES regulates activities that pose risks to the health of freshwater and freshwater ecosystems.
National Environmental Standards for Sources of Human Drinking Water	This NES sets requirements for protecting sources of human drinking water from becoming contaminated.
National Environmental Standards for Storing Tyres Outdoors	It is the responsibility of regional councils to implement this NES. It provides rules for storage of tyres on properties and allows regional councils to charge for compliance monitoring.
National Policy Statement for Freshwater Management 2020 (Freshwater NPS)	Provides direction to local authorities to set objectives for the state of freshwater bodies and to set limits on resource use to meet these objectives
National Policy Statement for Renewable Electricity Generation 2011	Provides guidance for local authorities on how renewable electricity generation should be dealt with in RMA planning documents, including regional plans and district plans.
National Policy Statement on Urban Development 2020	Sets out the objectives and policies for providing development capacity under the Resource Management Act 1991. It removes overly restrictive barriers to development to enable growth.
New Zealand Biodiversity Strategy	This strategy, launched in August 2020, sets out a strategic framework for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in New Zealand, from 2020 to 2050.
New Zealand Coastal Policy Statement 2010 (NZCPS)	Guides local authorities in their day-to-day management of the coastal environment. Highlights declining coastal water quality because of contamination through stormwater and wastewater discharges.
New Zealand Waste Strategy 2023	The Strategy provides a high level direction to guide the management and minimisation of waste in New Zealand. Councils must have regard to the New Zealand Waste Strategy when preparing, amending or revoking a waste management and minimisation plan (WMMP). The Government may direct a council to change its WMMP if that will help achieve the waste strategy.

Key Industry Standards and Guidelines

For all New Zealand standards, please refer to standards.govt.nz

Key Council Policies, Plans and Strategies

This Activity Management Plan (AMP) is a key part of Council's strategic planning process. This plan supports and underpins the financial forecasts and work programmes contained in planning documents like the Long Term Plan and Annual Plan.

Table 30 describes the key Council plans and policies with linkages to the solid waste Activity.

Plans, Policies and Strategies	Discussion
Activity Management Plans (AMPs)	AMPs describe the activities and services, and infrastructural assets needed for Council to undertake those activities and services. The AMPs outline the financial, management and technical practices to ensure the assets are maintained and developed to meet the requirements of the community over the long term. AMPs focus on the service that is delivered as well as the planned maintenance and replacement of physical assets.
Annual Plan	An Annual Plan is prepared in the years between reviews of the Long Term Plan. It contains the annual work programme, annual budget and rating information, and any variations from the Long Term Plan for the year. The Annual Plan helps provide integrated decision making and coordination of Council's resources and contributes to Council's accountability to its community.
Annual Report	The Annual Report identifies the prior year's achievements against Long Term Plan/Annual Plan targets.
Asset Management Policy July 2010	Objectives are: • To provide for a consistent approach to asset and activity management planning within Council and to ensure plans reflect the strategic direction of Council. • To demonstrate to the community that Council recognises the critical importance of managing the city's assets and activities in an effective and sustainable manner in order to deliver appropriate levels of service to current and future generations. • To confirm a coordinated process for each significant asset/activity area that links their contribution to the Community Outcomes with specific levels of service, performance levels and desired improvement priorities and strategies.

Plans, Policies and Strategies	Discussion
Climate Action Plan	This Action Plan shows all the resources Council has currently allocated to climate change projects over the next ten years, as set out in our Long Term Plan 2021- 31. The Action Plan is a living document that will be updated as the actions are completed, or amended or new actions are added. The actions in the Plan cover a wide range of infrastructural, social, and environmental areas, demonstrating Council's commitment to meeting the urgent challenge of mitigation of and adaptation to climate change.
Compliance Strategy 2020	The purpose of this compliance strategy is to: • provide a strategic approach to monitoring and enforcement; • encourage a high level of compliance; • provide guidance to ensure monitoring and enforcement duties are consistently applied by Council staff or contractors; • provide a process to monitor and review the effectiveness of the compliance strategy; • be consistent with the Regional Sector Strategic Compliance Framework 2019-2024; • be consistent with the Ministry for the Environment's Best Practice Guidelines for Compliance, Monitoring and Enforcement under the Resource Management Act 1991.
Contracts and agreements	The service levels, strategies and information requirements contained in the AMP are the basis for performance standards in the current Maintenance and Professional Service Contracts for commercial arrangements and in less formal "agreements" for community or voluntary group
Development Contributions Policy	Council seeks to recover from developers a fair, equitable and proportionate portion of the capital costs of infrastructure, reserves and some facilities needed to support growth through Development Contributions (DCs) under the Local Government Act 2002. Each new household unit of demand or the equivalent for commercial development is required to pay a DC.
Financial Strategy	Council must adopt a Financial Strategy as part of its Long Term Plan. The Council's Financial Strategy facilitates prudent financial management by Council and provides a guide for Council to consider proposals for funding and expenditure

Plans, Policies and Strategies	Discussion
	against. It makes funding and expenditure proposals transparent to the community by outlining the effects of proposals on services, rates, debt and investments.
Infrastructure Strategy	Council must adopt an Infrastructure Strategy as part of its Long Term Plan. The Infrastructure Strategy looks at least 30 years into the future and details the infrastructure needs that the Council can reasonably foresee. It outlines the principal options for managing infrastructure issues and the implications of those options.
Long Term Plan (LTP)	The LTP is Council's 10-year planning document. It sets out the broad strategic direction and priorities for the long-term development of the District; identifies the desired community outcomes; describes the activities the Council will undertake to support those outcomes; outlines Council's work programme over the ten years; and outlines the means of measuring progress. The LTP includes Council's current Infrastructure and Financial Strategies.
Nelson Tasman Future Development Strategy 2022	The joint Nelson Tasman Future Development Strategy is a 30-year high-level strategic plan that outlines areas in our region where there is potential for future housing and business growth. It provides a valuable guide for decision-making that will benefit current residents and those who choose to live in Nelson and Tasman. The Strategy also provides an evidence base to inform reviews and changes to resource management plans and support the next round of infrastructure strategies and long-term plans.
Nelson-Tasman Joint Waste Assessment 2017	Waste assessments are required to be prepared every six years. These assessments review the provision of services and the Council's proposed response to future demand. The waste assessment is currently being reviewed jointly with Tasman District Council and is due to be completed about April 2024.
Nelson-Tasman Joint Waste Management and Minimisation Plan 2019	The Nelson – Tasman Joint Waste Management and Minimisation Plan outlines the councils' waste management and minimisation aims, requirements and activities for the region. The Plan is currently under review and due to be completed in July 2025.
Nelson 2060	The strategy begins with a community-led vision for Nelson in 2060. It sets out 10 goals that will help Nelson achieve that

Plans, Policies and Strategies	Discussion
	vision and ideas of how to reach the goals, plus ways to measure our progress as a community.
Nelson Events Strategy	The underlying objective of the Nelson Events Strategy is to stimulate Nelson City's economy by bringing new spending through visitors coming to Nelson for distinct events in the shoulder and off season. Council provides an Events Fund that is overseen by the Events Development Committee, comprising representatives from the Nelson City Council and Nelson Regional Economic Development Agency.
Nelson Resource Management Plan	This plan sets objectives, policies and methods for addressing the City's resource management issues. It is regulatory document produced under the Resource Management Act 1991.
Nelson Tasman Land Development Manual (LDM) 2020	The LDM sets out the requirements that all infrastructure must conform with. It is based on national guidelines and standards, but there are requirements that are specific to Nelson and ensures that Council's infrastructure assets achieve acceptable levels of service, are modern, cost-effective and durable. The LDM also dictates the standards that developers have to meet when undertaking work that will be vested with the Council.
Procurement Policy	Provides a set of requirements that Council needs to follow when purchasing goods and services.
Reserve Management Plans	These plans are required to be prepared for all reserve land with a Reserves Act classification. They may be prepared for a single reserve or a group of reserves and provide detailed information on specific reserve development and management. Council's Reserve Management Plans often also apply to Council freehold land. In respect to that land, they have the status of Council policy.
Significance and Engagement Policy	The Significance and Engagement Policy is required under the Local Government Act. It lets both Council and the community know: • How Council will determine the degree of significance of matters • When the community can expect to be engaged in Council's decision making processes • How this engagement is likely to take place • Council's strategic assets.
Social Wellbeing Policy	The Social Wellbeing Policy aims to support Nelson to be "a happy, healthy community

Plans, Policies and Strategies	Discussion
	where people have access to necessary services and facilities and feel connected to each other and to the city". Areas where the Council has a key responsibility in promoting social wellbeing include the physical environment, leisure and recreation, social connectedness, cultural identity, civil and political rights and safety. •

Iwi Management Plans

Iwi Management Plans are lodged by iwi authorities and received by Council under the Resource Management Act 1991. Once lodged with Council, they are planning documents that Council is required to take into account when preparing or changing Resource Management Act Plans (e.g. the Regional Policy Statement, Air Quality Plan or Nelson Resource Management Plan). Iwi Management Plans document iwi worldview and aspirations for the management of resources, and help Councillors and staff to better understand those factors.

The following Iwi Management Plans have been lodged with Council:

- Pakohe Management Plan 2015 (Ngāti Kuia)
- Nga Taonga Tuku Iho Ki Whakatū Management Plan 2004 (Ngāti Rarua, Rangitira, Te Atiawa, Ngāti Koata, Ngāti Tama)
- Iwi Management Plan 2002 (Ngāti Koata)
- Te Tau Ihu Mahi Tuna (Eel Management Plan) 2000 (all iwi).

Nelson City Council Bylaws

NCC Bylaw	High-level purpose	Notes
Urban Environments 2022	This bylaw has one or more of the following purposes: To protect, promote and maintain public health and safety in Nelson's urban environments To maintain and enhance the amenity of Nelson's urban environments and to protect the public from activities that may constitute, or have the potential to constitute, a nuisance, including the keeping of animals, bees and poultry To minimise the potential for disorder or offensive behaviour within Nelson's urban environments, including controlling the bringing of alcohol into specified public places and the consumption and possession of alcohol in those public places To regulate trading in public places, including soliciting donations, busking and begging	

NCC Bylaw	High-level purpose	Notes
	To manage activities within Nelson's parks and reserves, including Nelson's cemeteries To promote the display of street numbers on buildings To regulate the use of public rubbish bins.	
City Amenity 2017	Aims to help manage the safety and amenity of our central city and suburban shopping areas.	Review scheduled to take place later in 2023
Freedom Camping 2017	Gives Council powers to regulate and manage freedom camping activities on Nelson City local authority lands and introduces an infringement regime for offences.	

CONSEQUENCES					LIKELIHOOD of the given consequence occurring			
Insignificant(1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)	Descriptor	Qualitative guidance statement	Indicative Probability range %	Indicative frequency range (years)
Medium (5)	Medium (10)	High (15)	Very High (20)	Very High (25)	Almost certain (5)	The consequence can be expected in most circumstances OR *A very low level of confidence/information*	>90%	>1 occurrence per year
Medium (4)	Medium (8)	High (12)	High (16)	Very High (20)	Likely (4)	The consequence will quite commonly occur OR *A low level of confidence/information*	20% - 90%	Once per 1-5 years
Low (3)	Medium (6)	Medium (9)	High (12)	High (15)	Possible (3)	The consequence may occur occasionally *A moderate level of confidence/information*	10% - 20%	Once per 5-10 years
Very Low (2)	Low (4)	Medium (6)	Medium (8)	High (10)	Unlikely (2)	The consequence may occur only infrequently *A high level of confidence/information*	2% - 10%	Once per 10 - 50 years
Very Low (1)	Very Low (2)	Low (3)	Medium (4)	Medium (5)	Rare (1)	The consequence may occur only in exceptional circumstances *A very high level of confidence/information*	<2%	Less than once per 50 years

Figure 24 : Risk assessment matrix used in 6.2