Agenda for a meeting of the Infrastructure Committee to be held in the Council Chambers, District Office, 15 Galileo Street, Ngaaruawaahia on **WEDNESDAY, 17 APRIL 2024** commencing at **9:30 AM.**

Information and recommendations are included in the reports to assist the Committee in the decision-making process and may not constitute Council's decision or policy until considered by the Committee.

The meeting will be opened with a karakia.

1. APOLOGIES AND LEAVE OF ABSENCE

2. CONFIRMATION OF STATUS OF AGENDA

3. DISCLOSURE OF INTEREST

The register of interests is no longer included on agendas, however members still have a duty to disclose any interests under this item.

4. MINUTES FOR CONFIRMATION

Minutes for the meeting held on 5 May 2024

5. ACTIONS REGISTER

Actions Register - April 2024

6. REPORTS

6.1 Facilities Maintenance Services Contract 19/035 Extension

6.2 Waste Assessment and Waste Minimisation and Management Plan process

6.3 Request to Lease Land - Avon Reserve, Pookeno

6.4 Motor Sport Events – Use of Waikato District Roading Network

6.5 Road Resilience Study

6.6 Capex Delivery Report
This report was not available at the time of publishing and will be circulated under seperate cover

7. EXCLUSION OF THE PUBLIC

GJ Ion
CHIEF EXECUTIVE

TERMS OF REFERENCE

INFRASTRUCTURE COMMITTEE

Reports to: The Council

Chairperson: Cr Eugene Patterson

Deputy Chairperson: Cr David Whyte

Membership: The Mayor and all Councillors

Meeting frequency: Six-weekly

Quorum: Majority of the members (including vacancies)

Purpose

The Infrastructure Committee is responsible for:

1. Guiding sustainable, physical development and growth of the Council's infrastructure to meet current and future needs.
2. Oversight and monitoring of efficient, safe and sustainable roading and transport, and waste management.
3. Governance of District's parks, reserves, community facilities and cemeteries.

In addition to the common delegations on page 10, the Infrastructure Committee is delegated the following Terms of Reference and powers:

Terms of Reference:

1. To provide direction on strategic priorities for core infrastructure aligned to the District's development, and oversight of strategic projects associated with those activities.
2. To guide the development and implementation of the 30 Year Infrastructure Plan.
3. To support and provide direction regarding Council's involvement in regional alliances, plans, initiatives and forums for regional infrastructure and shared services (for example, Regional Transport Committee).
4. To monitor and make decisions in relation to Council-owned community centres, facilities and halls.

The Committee is delegated the following powers to act:

- Approval of acquisition (including lease) of property, or disposal (including lease) of property owned by the Council, (where such acquisition or disposal falls within the Long Term Plan and exceeds the Chief Executive's delegation).
- Approval of easements, rights of way and other interests over property on behalf of Council.
- Approval of all matters under the Public Works Act 1981, unless such delegation is prohibited by legislation or is otherwise expressly reserved by Council or delegated to the Chief Executive or staff.
- Approval of road names in the Waikato District in accordance with Council policy.
- Approval of any proposal to stop any road.

- Hearing any written objections on a proposal to stop any road, and to recommend to Council its decision in relation to such objections.
- Approval of alterations and transfers within the provisional programme of capital works as prepared for the Long Term Plan and Annual Plan, subject to the overall scope of the programme remaining unchanged and the programme remaining within overall budget.
- Approval of tender procedures adopted from time to time within the guidelines as set down by Waka Kotahi New Zealand Transport Agency for competitive pricing procedures (CPP), or other authorities where funding or subsidies are subject to their approval.
- Approval of traffic regulatory measures defined as:
  a. Compulsory Stop Signs
  b. Give Way Signs
  c. No Passing Areas
  d. No Stopping/Parking Provisions
  e. Speed Restrictions
  f. Turning Bays
  g. Weight Restrictions on Bridges (Posting of Bridges).

- For all Council-owned land that is either open space under the District Plan, or reserve under the Reserves Act 1977, the power to:

  a. Approve leases, subleases, licences, and easements (in relation to land and/or buildings).
  b. Approve amendments to management plans.
  c. Adopt or change names of reserves.
  d. Make any decision under a management plan which provides that it may not be made by a Council officer (for example, agree a concession), provided that any decision that has a significant impact under the management plan is recommended to Council for approval.
  e. Recommend to Council for approval anything that would change the ownership of such land.

  For clarity, the committee is delegated all powers of the Council as administering body under the Reserves Act 1977, unless such delegation is prohibited by legislation or is otherwise expressly reserved by Council or delegated to the Chief Executive or staff.

- Enquire into and dispose of any objection to a notice issued pursuant to Section 335 (1) of the Local Government Act 1974 requiring payment of a sum of money for the construction of a vehicle crossing by the Council (section 335(3) Local Government Act 1974). Should a decision be made to reject the objection and reaffirm the requirements in the notice, to authorise that an application be made to the District Court, (section 335(4) Local Government Act 1974) Act, for an order confirming the notice.
- Consider and approve subsidies for the installation of stock underpasses in extraordinary circumstances in accordance with Council policy and bylaws.

Waikato District Council
Te Kaunihera aa Takiwaa o Waikato

Open - Information Only

To	**Infrastructure Committee**
Report title	**Minutes for the meeting held on 5 May 2024**
Date:	17 April 2024
Report Author:	Thomas Rowland, Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

1. Purpose of the report
Te Take moo te puurongo

To confirm the minutes for a meeting of the Infrastructure Committee held on Tuesday 5 March 2024.

2. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee confirms the minutes for a meeting held on Tuesday, 5 March 2024 as a true and correct record.

3. Attachments
Ngaa taapirihanga

1. 240305 Unconfirmed Infrastructure Committee minutes

Minutes for a meeting of the Infrastructure Committee held in the Council Chambers, 15 Gallileo Street, Ngaaruawaahia on **Tuesday, 5th March 2024** commencing at **9:30am**.

Present:

Cr E Patterson (Chairperson)
Cr C Beavis *(arrived at 10:41am)*
Her Worship the Mayor, Mrs JA Church *(via Zoom)*
Cr C Eyre (Deputy Mayor)
Cr J Gibb
Cr M Keir
Cr K Ngataki *(via Zoom)*
Cr M Raumati
Cr V Reeve
Cr L Thomson
Cr P Thomson
Cr T Turner
Cr D Whyte

Attending:

Ms A Diaz (Chief Financial Officer)
Ms M May (General Manager for Service Delivery)
Mr K Abbot (Executive Manager, Projects and Innovation)
Mr M Cooper (Sports Waikato)
Mr Hayden Weathe (Sports Waikato)
Mr G Huelson (Infrastructure Portfolio)
Mr Luke McCarthy (Acting Roading Manager)
Mr Anthony Averill (Deputy General Manager for Service Delivery)
Mrs G Kanawa (Democracy Manager)
Mr T Rowland (Demoracy Advisor)
Ms K Brotherson (Democracy Advisor)

The meeting was opened with a karakia.

APOLOGIES AND LEAVE OF ABSENCE

Resolved: (Crs Whyte/P Thomson)

THAT the Infrastructure Committee accepts the apologies from Cr Beavis for lateness, and Cr P Matatahi-Poutapu for absence.

CARRIED **INF2403/01**

CONFIRMATION OF STATUS OF AGENDA ITEMS

Agenda Item 2

Resolved: (Crs Gibb/Whyte)

THAT the agenda for a meeting of the Infrastructure Committee held on Tuesday, 5th March 2024 be confirmed:

a. **with all items therein being considered in open meeting with the exception of those items detailed at agenda items 8, which shall be considered with the public excluded; and**

b. **all reports be received.**

CARRIED **INF2403/02**

DISCLOSURES OF INTEREST

Agenda Item 3

No further conflicts were discussed/disclosed.

CONFIRMATION OF MINUTES

Agenda Item 4

The report was received *[INF2403/02 refers]* and no further discussion held.

Resolved: (Crs Patterson/Eyre)

THAT the Infrastructure Committee confirms the minutes as a true and correct record for meetings held on Tuesday 3 March 2024.

CARRIED **INF2403/03**

ACTIONS REGISTER

Agenda Item 5

The report was received *[INF2403/02 refers]* and no further discussion was held.

REPORTS

Sports Waikato Report 1 July – 22 December 2023

Agenda Item 6.1

The report was received *[INF2403/02 refers]* and the following discussion was held.

- Sports Waikato provided an update on their current work in the Waikato region and what their goals are for the future.
- Cr Eyre commended Sports Waikato with the work they have done within the accessibility community.
- It was queried whether Sports Waikato could push for feedback from clubs on how the organization was delivering on their targets.
- Sports Waikato noted that the organisation was performing strongly in the region.
- It was noted that the funding going into schools was positive, and it was queried if more information from Sports Waikato could be obtained so Council could information share and push the positive news.
- It was noted that it would be good to see more information from the ground level of sports in the region.
- A concern was raised over the lack of information around changes to unincorperated societies and that more information is needed to educate groups in that space.
- The chairperson noted it was key to upskilling people around incorporating societies and that it would be helpful to get an information template out to help these groups.
- Sports Waikato noted that fees is an interesting point and highlighted that high fees for the youth sports was not sustainable in keeping youth in the game.
- It was noted that the work done in Taukau across multiple facilities was well received and Sports Waikato was thanked for their work.

Cr Raumati left the chambers at 9:56am and re-entered at 9:58am

Service Delivery Project Status Report
Agenda Item 6.2

The report was received *[INF2403/02 refers]* and the following discussion was held:

- It was noted that greater communication could be positive for future infrastructure projects to take the public along on the journey.
- The General Manager Service Delivery noted that projects that have fallen behind schedule are due to issues out of Councils hands.
- It was noted that Community Boards and Community Committees could play a big role in the communications around projects within the community.
- It was noted that the Community Boards and Committees work well in providing feedback back to council.

Cr Gibb exited the chamber at 10:25am and re-entered at 10:27am

Cr Beavis joined the meeting at 10:41am.

Cr Raumati exited chambers at 10:48am and re-entered at 10:53am

ACTION: Service Delivery General Manager to investigate the addition of a digital progress bar to show how far projects were in their development.

Approval to publicly notify the review of the Neighbourhood Park Reserve Management Plan & Sports Park Reserve Management Plan
Agenda Item 6.3

The report was received *[INF2403/02 refers]* and the following discussion was held:

- The Reserves Planner noted that the Park strategy outlines the difference between the different types of parks.
- It was further noted that by having the document in place it allows Council to be proactive in this area.

Resolved: (Crs Eyre/L Thomson)

THAT the Infrastructure Committee:

a. **approves the commencement of public notification of the Neighbourhood Park Reserve Management Plan as required under Section 41 of the Reserves Act 1977; and**

b. **approves the commencement of public notification of Sports Park Reserve Management Plan as required under Section 41 of the Reserves Act 1977.**

CARRIED **INF2403/04**

Meeting adjourned at 11:09am for morning tea and readjourned at 11:23am

Proposed Road Name for private road under land use consent number LUC 001024
Agenda Item 6.4

The report was received *[INF2403/02 refers]* and no further discussion was held.

Resolved: (Crs Keir/Gibb)

THAT the Infrastructure Committee:

a. **approves the following proposed private road name submitted by the developer for LUC 001024 at 65 Beer Road, Tauwhare:**

    i. **Option 1: Road 1 (Proposed Road A) – Marakiraki Way**

CARRIED **INF2403/05**

Cr L Thomson and Cr Beavis were absent from the vote.

Proposed Road Name for private road under Subdivision number SUB 0054/23
Agenda Item 6.5

The report was received *[INF2403/02 refers]* and no further discussion was held.

Resolved: (Crs Raumauti/P Thomson)

THAT the Infrastructure Committee:

a. approves the following proposed road names submitted by the developer for SUB0054/23 at 43 Scott Road Te Kauwhata:

i. Road 1 (Proposed Road B) – Riverine Road

ii. Road 2 (Proposed Road C) - Haahi Crescent

iii. Road 3 (Proposed Road D) - Maniapare Road

iv. Road 4 (Proposed Road E) - Parerangi Rise

CARRIED **INF2403/06**

Cr Beavis was absent from the vote.

Motor Sports Events – Use of Waikato District Roading Network
Agenda Item 6.6

Cr Beavis re-entered the chamber at 11:28am at the beginning of this item.

The report was received *[INF2403/02 refers]* and the following discussion was held:

- It was noted that it was not good practice to be approving items retrospectively.
- The General Manager Service Delivery noted that work was currently underway on reviewing the policy.
- A concern was noted for the roading network in regards to these events and what could be done to reduce the work on Council.
- It was noted that the routes used by the rally are important connections for through traffic.
- It was noted that the true cost should be reflective in the charges

ACTION: Staff to bring back a date to the next Infrastructre Committee around the policy review of Motor Sport Events.

ACTION: Staff to report back on a date for a workshop on Motor Sports Events

Resolved: (CrsPatterson/Eyre)

THAT the Infrastructure Committee notes the Sub-committee decision to approve Temporary Road Closure for the 2024 Targa Bambina rally.

CARRIED **INF2403/08**

Pookeno Tennis Club
Agenda Item 6.7

The report was received *[INF2403/02 refers]* and the following discussion was held:

- It was noted that a 10 year period seemed short with staff noting that Pookeno is a fast growing area and factors could change in the future.

Resolved: (Crs Ngataki/Reeve)

THAT the Infrastructure Committee:

a. **subject to Council staff engaging with mana whenua regarding this proposal, exercises its delegated authority under Section 54 of the Reserves Act 1977 to grant a lease to the Pookeno Tennis and Recreation Hub Incorporated ("the Club") of 160m2 being part of Allotment 336 Suburban Section 1 Parish of Mangatawhiri, for a term of 10 years.**
b. **delegates to the Chief Operating Officer authority to execute all relevant documentation to give effect to the resolution, provided he is satisfied by the outcome of the engagement with mana whenua.**

CARRIED **INF2403/09**

Huntly Rail Station
Agenda Item 6.8

The report was received *[INF2403/02 refers]* and the following discussion was held:

- It was queried how the Huntly station could be protected security wise. It was noted that the building was alarmed and as secure as Council can make it.
- The chairperson noted that there was CCTV at the platform.
- It was queried if there was an investigation into a fire surpression system ontop of a fire alarm.
- It was noted that the community should be informed about the costs these acts of vandalism are causing the community.
- The chairperson commended Council staff on the work they had done to repair the Huntly Train station.

ACTION: A Communications plan to be investigated to keep the public involved with Council meetings and committees.

Resolved: (Crs Whyte/Turner)

THAT the Infrastructure Committee recommends to Council:

a. **that approval be provided to complete the Huntly Rail Building project to enable the building to be available for the Waikato Coalfields Museum to use and public toilets to be available for use as well as the exterior finishings.**

b. **that the Infrastructure Committee notes the Insurance settlement remains to be finalised and approves the additional funding of up to $222,000 from the Tuakau Hall Seismic Upgrade Project 103637-9220-0000-00-25514.**

CARRIED **INF2403/10**

EXCLUSION OF THE PUBLIC

Agenda Item 7

Resolved: (Crs Beavis/Reeve)

a. THAT the public be excluded from the following parts of the proceedings of this meeting:

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Item PEX 1 **Minutes for confirmation**	**Good reason to withhold exists under Section 6 or Section 7 Local Government Official Information and Meetings Act 1987**	**Section 48(1)(a)**
Item PEX 2 **Actions Register**		
Item PEX 3.1 **Raglan Seawall Repair**		

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

Item No.	Section	Interest
Item PEX 1 **Confirmation of minutes**	**Refer to previous Public Excluded reason in the agenda for this meeting.**	
Item PEX 2 **Actions Register**		
Item PEX 3.1 **Raglan Seawall Repair**	**7(2)(b)(ii)** **7(2)(i)**	**To protect information that would otherwise unreasonably prejudice a person's commercial position** **To enable negotiations to carry on without prejudice or disadvantage.**

CARRIED **INF2403/11**

Resolutions INF2403/12 – INF2403/13 are contained in the public excluded section of these minutes.

There being no further business the meeting was declared closed at 1:00pm

Minutes approved and confirmed this day 2024.

Eugene Patterson
CHAIRPERSON

Open - Information Only

To	**Infrastructure Committee**
Report title	**Actions Register - April 2024**
Date:	17 April 2024
Report Author:	Karen Bredesen, Executive Assistant
Authorised by:	Megan May, General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To provide the Infrastructure Committee with an update on actions arising from the 5 March 2024 meeting.

2. Executive summary
Whakaraapopototanga matua

Updates are provided with the attached Actions Register for April.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee receives the April 2024 Actions Register.

4. Next steps
Ahu whakamua

Once items listed within the actions register have been completed, they will be removed from the register.

5. Attachments
Ngaa taapirihanga

1. Infrastructure Actions Register - April 2024

Infrastructure Committee's Actions Register – April 2024

	Meeting Date	Item and Action	Person / Team Responsible	Status Update
1.	5/3/2024	**Service Delivery Project Status Report** Service Delivery General Manager to investigate the addition of a digital progress bar to show how far projects were in their development.	Kirsty Wellington/Kurt Abbott	Noted.
2.	5/3/2024	**Motor Sports Events – Use of Waikato District Roading Network** • Staff to bring back a date to the next Infrastructure Committee around the policy review of Motor Sports Events. • Staff to report back on a date for workshop on Motor Sports Events.	Joban Singh, Roading Corridor Engineer	Council workshop booked for 7 May (TBC) to outline the direction of the policy review and seek Elected Member feedback, with the plan to bring before Policy and Regulatory Committee on 18 June for approval to consult.
3.	5/3/2024	**Huntly Rail Station** A Communications plan to be investigated to keep the public involved with Council meetings and committees.	Anthony Averill, Deputy General Manager Service Delivery	An update is provided monthly to the Huntly Community Board.

Open - Information Only

To	**Infrastructure Committee**
Report title	**Facilities Maintenance Services Contract 19/035 Extension**
Date:	17 April 2024
Report Author:	Tracey Morgan, Facilities Team Leader
Authorised by:	Megan May, General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To inform the Committee of the intention to proceed with the three year renewal provided for in year four of the Cushman & Wakefield 19/035 Contract for Facilities maintenance services.

2. Executive summary
Whakaraapopototanga matua

Contract 19/035 reflects the partnership between Waikato District Council (Council) and Cushman and Wakefield to provide facilities maintenance services to Council owned facilities. This contract commenced on 01 September 2020, has an initial expiry date of 31 May 2024. This is subject to two rights of renewal of three years each, this will be the first three-year extension.

The purpose of this report is to advise Council of the intention to formalise the first extension of this contract that is provided for in year four of the contract for a further three years of the Contract period. The Contract will then be due for another three-year renewal on 31 May 2027.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee notes the intention to proceed with the three-year renewal provided for in year four of the Cushman & Wakefield 19/035 contract for facilities maintenance services.

4. Background
Koorero whaimaarama

The contract between Council and Cushman and Wakefield requires, that from the anniversary of the fourth year of the contract term, with the annual review on overall contract engagement and performance, that consideration be given to the option to extend the contract for the three year right of extension.

5. Discussion
Matapaki

Contract 19/035 Facilities Maintenance Services includes an initial four-year period from 01 September 2020 with two rights of renewal of three-years each. This report advises of the intent to grant the first three-year extension.

The Cushman and Wakefield Facilities Maintenance Contract Annual Report is attached (Attachment 1) and the following is noted;

- 15 out of the 18 contract KPI's have consistently been achieved, the three contract KPI's that have not consistently been achieved are – Timely service delivery – response, timely service delivery – Completion, up to date asset information. The service delivery response and completion KPI's are due to be reviewed as the KPI is set at 100% which does not accurately measure month on month performance, these are set to be reviewed for the contract renewal document. Cushman and Wakefield have reviewed their asset updating process, including writing a new SQL to download the data and writing a new Macro to transform the data into the SPM format and refresher training the wider team, this has brought the asset information KPI back to performance alignment.
- There were no significant health and safety incidents reported in year three. Thirty-two hazards and near miss corrective opportunities were identified and reported on. A comprehensive review was carried out on the contract Health and Safety Management Plan with collaboration from the Council Zero Harm team and all revisions have been reviewed and approved by the Zero Harm team.

- There were 1670 work orders raised for reactive maintenance in year three and 723 planned maintenance work orders raised, this accounted for 30% of all work orders.
- Cushman & Wakefield have provided a large number of initiatives for broader outcomes which include Shoe box Christmas, Earth Hour, Pink Shirt Day, Horotiu Planting Day, Pound Pups and Dirty Dog challenge, Gateway Students and a Pathways Day.
- Cushman and Wakefield purchased a drone to assist with a Council project to carry out roof inspections for a number of buildings with low condition grades.

The performance of Cushman and Wakefield within this contract framework is to be celebrated as the results outlined in the attached report are to a high level.
This report informs the Committee of the proposal to award the first three-year renewal of the contract, as enabled at the end of year four of the contract, to enable both the Council and Cushman & Wakefield to continue to deliver Facilities Management Services through this contract.

Council have formed a constructive partnership with Cushman and Wakefield and the Facilities Maintenance Contract is performing well. The objectives of this contract are being met and the obligations to the wider community, broader outcomes and innovation are now evident. The proposal to extend this contract will enable Cushman and Wakefield to support the continuation of this service to our community.

6. Next Steps
Ahu whakamua

Council staff will confirm the Contract renewal as per the requirements of the Contract to renew on 31 May 2027.

7. Attachments
Ngaa taapirihanga

1. Waikato District Council Annual Report 2023

Waikato DISTRICT COUNCIL

CUSHMAN & WAKEFIELD

ANNUAL **REPORT**

Riipoata aa tau

WAIKATO DISTRICT COUNCIL

SEPTEMBER 2023

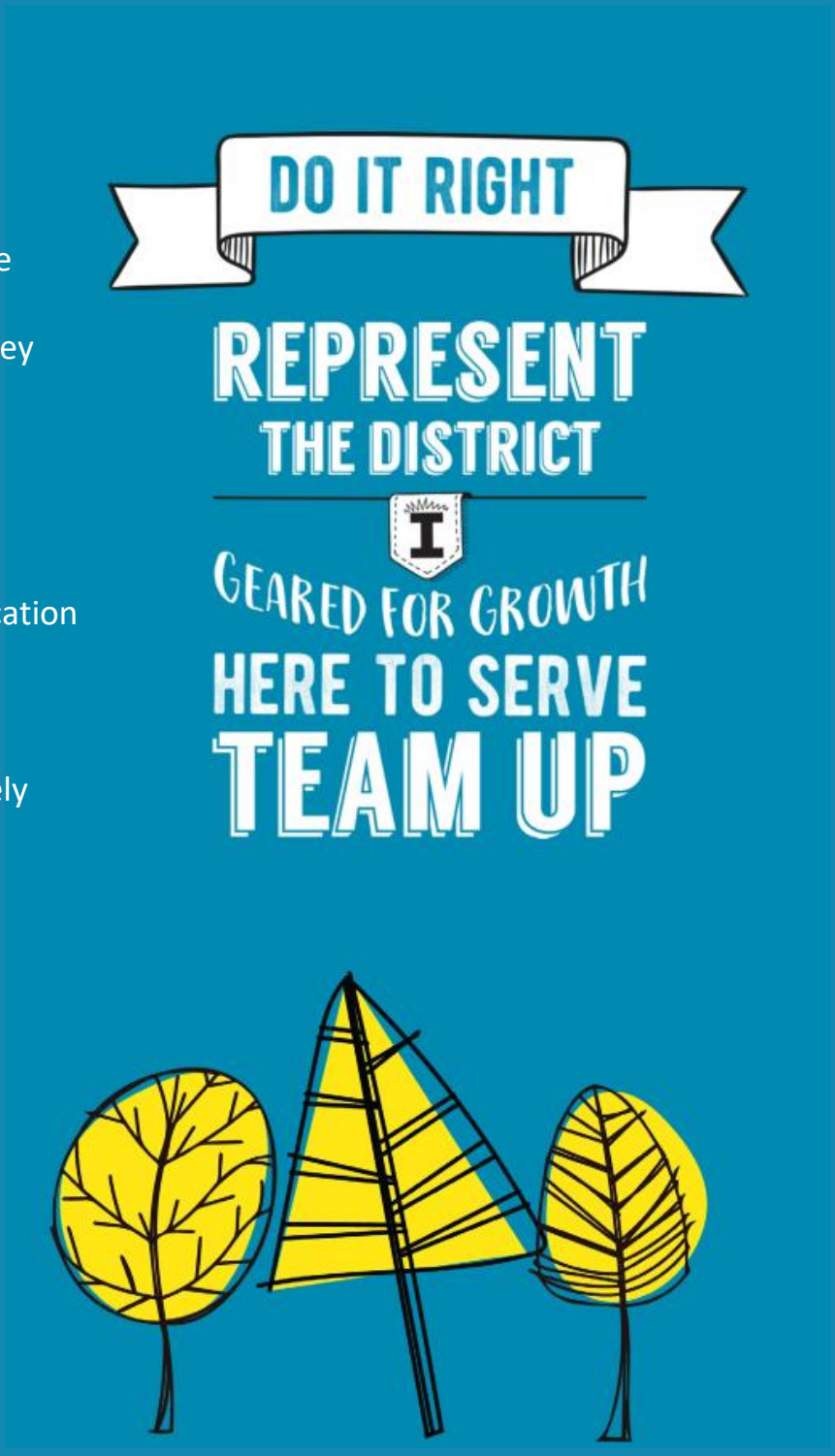
OUR PARTNERING CHARTER DOCUMENT

OUR PURPOSE

"To build liveable, thriving and connected communities"

To do that we need great people and facilities.

It is critical that our infrastructure and assets are appropriately and robustly maintained to ensure they remain fit-for-purpose.



WHAT WE VALUE

One team
Open and transparent communication resulting in no surprises
Transparency
Community first
Deliver on our promises in a timely manner
Excellence in customer service

OUTCOMES

Accountability
Stewardship
Strong partnership
Planned approach
Better data
Financial control
Consistency
Happy customers
Celebrate success

CONTENTS

2022/2023

EXECUTIVE SUMMARY

This report provides an overview of year three of the services contract between Waikato District Council (WDC) and Cushman & Wakefield (C&W) 1st of September 2022 through to the 31st of August 2023. The content provided is a representation of the health and safety, operational and financial performances.

With the conclusion of our third year, it is a great time to reflect on the contact performance from not only the previous year but from the contract start itself.

We have seen significant growth in the relationship between WDC and C&W and see one united team.

We have seen the understanding and maturity of the contract vision and intentions being brought to the forefront of conversation and decision making. This proactive approach has been greatly beneficial to C&Ws approach to focusing on great long-term outcomes for the community we serve.

Health and Safety:
We are pleased to report that were no significant Health and Safety Incidents reported in year three.

We are so pleased that our team has identified and reported thirty-two hazards and near miss corrective opportunities. WDC has been very responsive and all incidents we raise in the Bware system are promptly resolved.

With collaboration from the WDC Zero harm team we have completed a comprehensive review of the contract health and safety management plan. All revisions have been reviewed and approved by WDC Zero Harm.

Contract Key Performance Indicators:

We have consistently achieved fifteen out of the eighteen contract KPIs.

The three contract KPIs that have not consistently been achieved are:

- *Timely Service Delivery – Response*
- *Timely Service Delivery – Completion*
- *Up to Date Asset Information*

We have recently completed a review of the asset updating process, including writing a new SQL to download the data, writing a new Macro to transform the data into the SPM format and undergoing refresher training with the wider team. This has brough the contract KPI back to performance alignment.

We are committed to the 100% target for response and completion contract KPIs. WDC and C&W are yet to agree on a reduce KPI to more accurately measure month on month performance.

Reactive Maintenance: There has been a total of **1670** work orders raised for year three, this is a 30% increase on the year two total of **1280**. Analysis of the comparative data shows an individual increase across all trades not one specifically.
The top three trades were plumbing which increased from 404 to 466, electrical which increased from 275 to 380 and building which increased from 275 to 400.
Reactive maintenance has been the primary work type for year three with **42.86%** of all work orders.

Reactive Key Performance Indicators: Overall, we have achieved **88.24%** of Attendance KPIs and **90.63%** of Completion KPIs.

Planned Maintenance: There has been a total of **723 PPMs** work orders raised for year three. This accounts for **30%** of all work orders.

From our planned maintenance program, we have been able to raise 62 additional works orders in deferred maintenance and 50 have had RM remedial work orders created. We have one site that cannot have a 12a issued for BWOF, this is the Huntly Aquatic Centre.

We are pleased to have submitted 144 non-compliance PPMs for consideration by WDC.

Financial Invoicing: The total invoicing for year three was **$1,813,564.52** which is 36.22% increase on year two ($1,156,604.95)

Sub-Contractor Management: We completed a renewal of all the back-to-back agreements with our sub-contractors too whilst refreshing and, ensuring all the contract expectations and clear and concise for all.

We have improved the formality of our regular contract/operational meetings with our sub-contractors. These meeting are used to review previous period performance, raise concerns, promote achievements/results, and discuss innovation and ideas.

Broader Outcomes: We have again had a tremendous year. This remains an area of great pleasure for us. Initiatives for year three:

- *Shoe Box Xmas – Earth Hour*
- *Pink Shirt Day – Horotiu Planting*
- *Pound Pups and Dirty Dog Challenge*
- *FMANZ Update*
- *Gateway Students – Pathways Day*

360 Degree Survey: We completed a third annual 360-degree satisfaction survey in August. We sent this survey to 60 recipients with 10 responses a 15% response rate.
32 opened the email a further 16 began the survey and never completed it.
The recipients were a diverse range of end users and direct users selected by their association with the contract.

OUR PARTNERSHIP

TOGETHER WE MAINTAINED:

723
PLANNED MAINTENANCE WORK ORDERS

1670
REACTIVE MAINTENANCE WORK ORDERS

203
CRITICAL MAINTENANCE WORK ORDERS

2 CAMPGROUNDS

38 COMMUNITY HALLS

6 LIBRARIES
THAT SERVICED 19406 LIBRARY MEMBERS

60 PUBLIC TOILETS
USED BY 4000 PEOPLE EVERYDAY

2 ANIMAL SHELTERS

3 SWIMMING POOLS

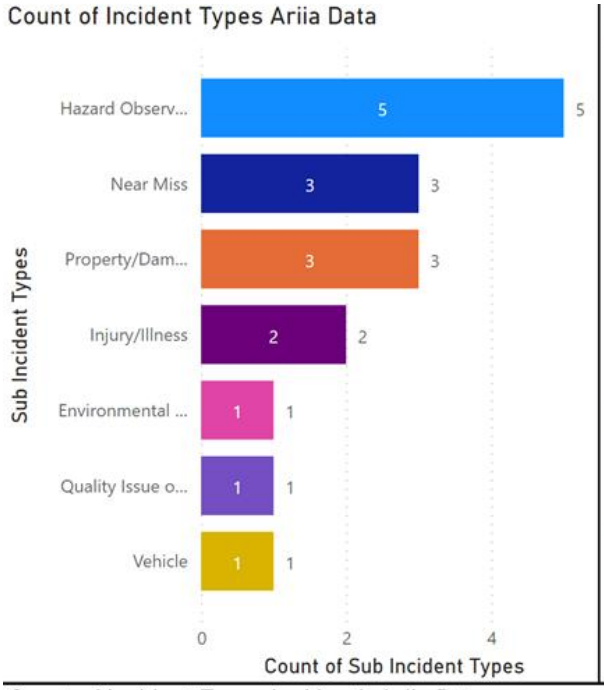
CUSHMAN & WAKEFIELD

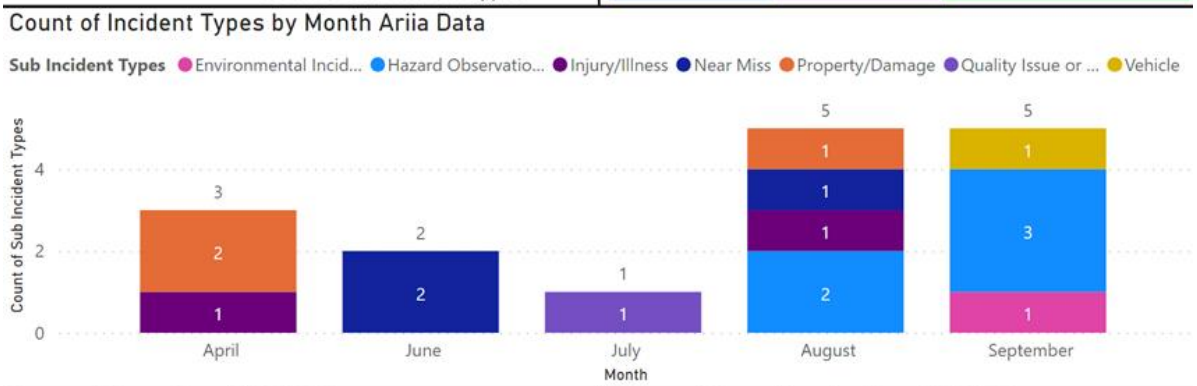
Waikato DISTRICT COUNCIL
Te Kaunihera aa Takiwaa o Waikato

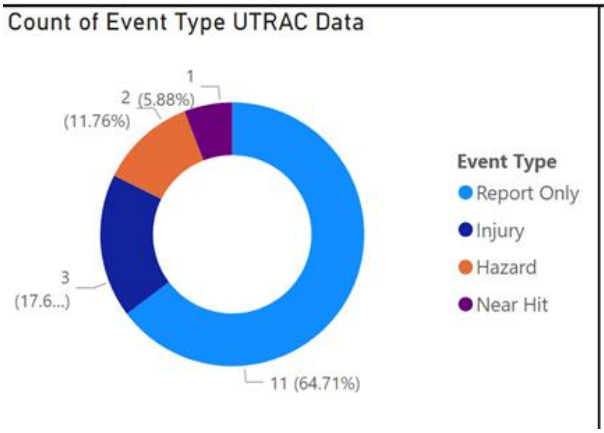
HEALTH AND SAFETY

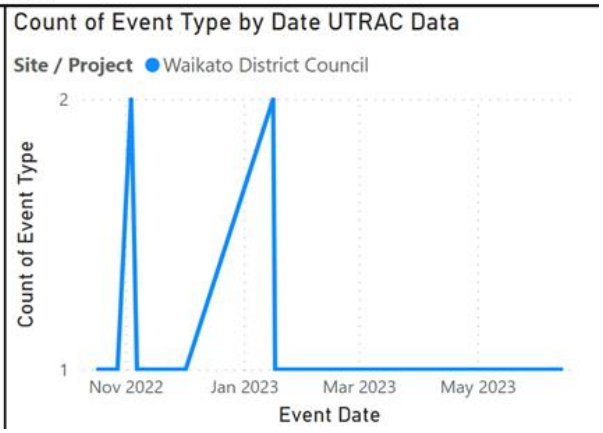
HEALTH AND SAFETY OVERVIEW

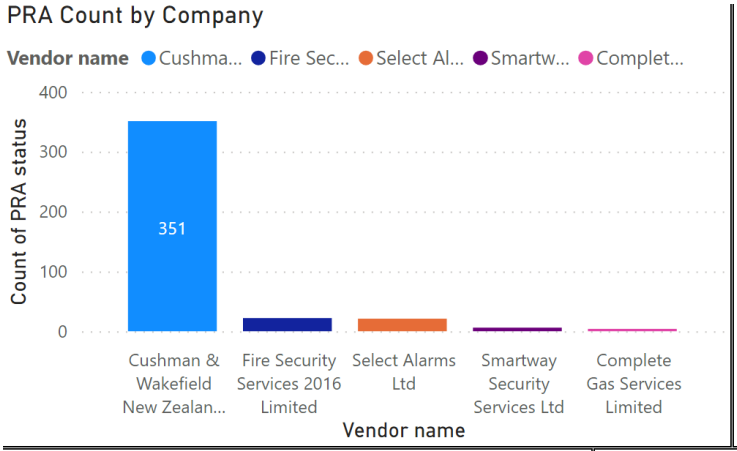
Health and Safety: There has been no significant Health and Safety Incidents reported. We have been able to raise 32 near miss/hazards incidents and all these incidents have been raised with council through Bware and actioned accordingly. We often see the actionable work orders for the health and safety concerns issued shortly after reporting.

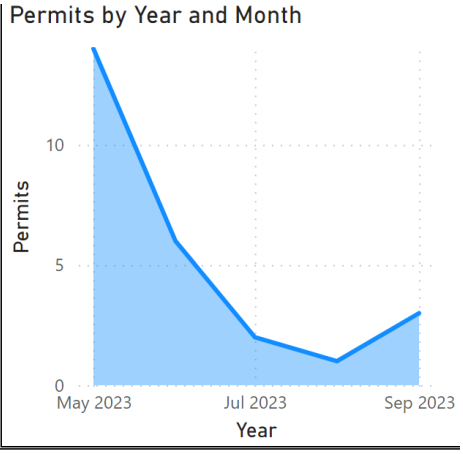


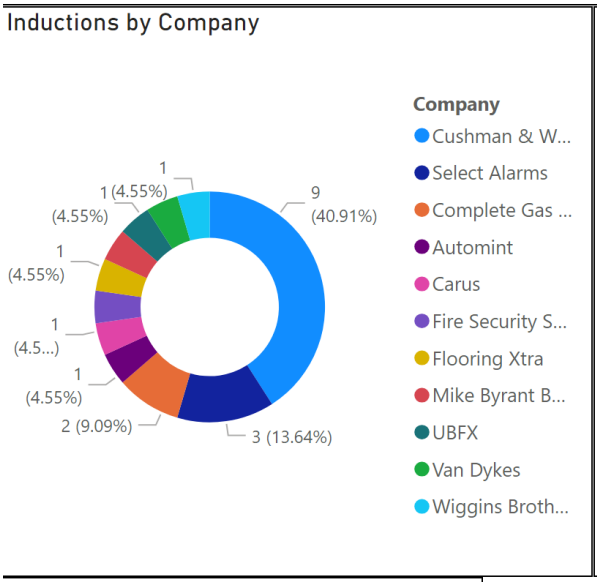


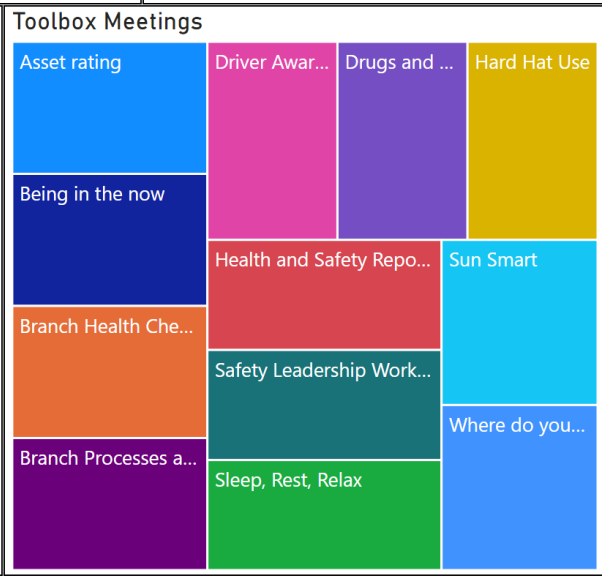


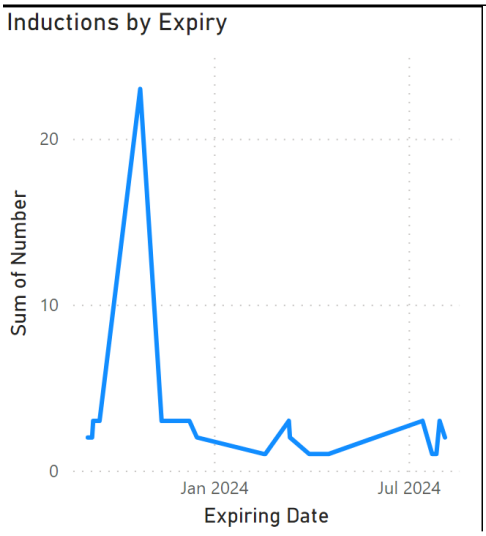


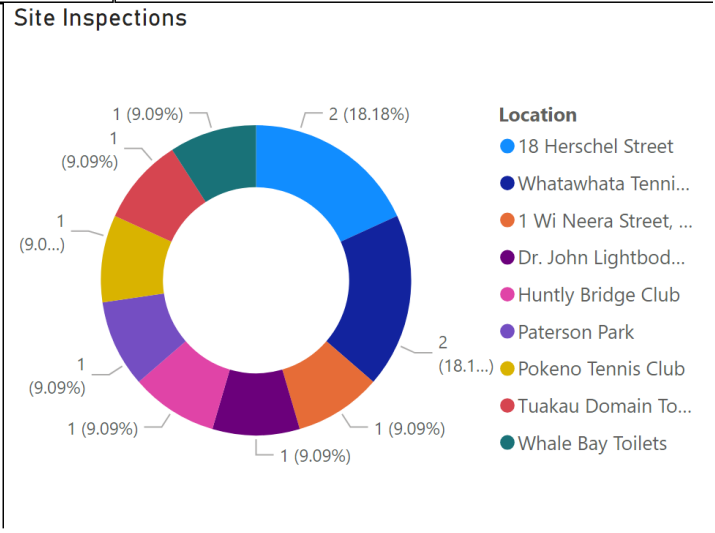












RISKS/CONCERNS AND UPCOMING FOCUSES

Upcoming focus – There will be focus on ensuring all reportable observations and events are captured. In addition, the utilisation of our new incident reporting platform, ARIIA, will be an area of attention over the coming months. The platform allows for easier capture of incidents and events in the field (including photographs) and the improved capability of the platform should allow for more in-depth analysis of events

KEY PERFORMANCE INDICATORS

ANNUAL PERFORMANCE

Key Performance Indicator (KPI)	Description	Purpose	Measurement	Frequency of Measure	Pass	Fail	*Analysis*
Regular Periodic Reporting	Did the Supplier deliver all regular periodic reporting requested by the Principal, within the timeframe(s) and to the quality specified?	To ensure the Principal's reporting requirements are met.	On-time reporting, via email to facilities@waidc.govt.nz, report must be of decent quality and contain accurate data. Timing of regular reporting detailed in the Reporting Matrix Table.	Monthly	Report provided via email to facilities@waidc.govt.nz in agreed time in the pre agreed format.	Report provided after the pre agreed date.	*We have successfully delivered all reports in our third year* *We have ensured to continuously consult and develop these reports to be as beneficial as possible.*
Customer Service	Did the Supplier perform the services subject to the Work Order in a customer-centric manner? Is the Supplier showing efficient issue resolution and striving for improvements in their customer service?	To ensure the Principal's key stakeholders are have a positive perception of the Supplier's performance and are receiving adequate customer service from their interactions with the Supplier.	The following measures will be used as a metric for customer service; Number of substantiated (where investigation into the complaint has validated it) Compliments/ Complaints received by the Principal or Supplier.	Monthly	Fewer than 2 complaints per calendar month.	2 or more complaints per calendar month	*We have achieved this KPI by having no more than 2 complaints*
Work Order Accuracy	Did the Supplier update the Work Order to accurately reflect the work done?	To ensure the details in the Work Orders are accurate and complete	Number of queries on specific work orders, from a Principals' Approved person, and what was done. To be detailed in the monthly report.	Monthly	Fewer than 5 Queries per calendar month.	5 or more Queries per calendar month	*We have achieved this KPI by only have 8 invoicing queries for the whole of year three*
Rework Level	Did the Supplier deliver the Work Order in an effective manner? How often did the Supplier dispatch to a site and have the skills and parts with them to resolve the issue on the first visit?	The Rework Level measures is an indicator of internal operational efficiency. The Principal will use this to determine whether the Supplier is providing effective and efficient solutions.	First Time Fix Rate (number and percentage of Work Orders that required rework). To be detailed in the monthly report.	Monthly	The Supplier achieved a greater than 80% First Time Fix Rate.	The Supplier achieved a less than 80% First Time Fix Rate.	*We have been able to keep our rework level at 0 for* the *third year.*

Timely Service Delivery - Response	Did the Supplier respond to each Work Order issued, within the timeframe(s) specified in the response classification?	To ensure the Supplier delivers on-time response required by the Priority Rating of the Work Order.	The Supplier is required to report on response time as per Section 18 of the Operational Requirement – Response and Completion Times. Performance will be measured by the number or percentage of Work Orders responded to within the times specified in the Priority Classifications table. The target completion requirements as per priority classification; • P1 100% • P2 100% • P3-P5 100%	Monthly	The Supplier met the Maximum response time requirements for each Work Orders specific Priority Classification.	The Supplier did not meet the target Maximum response time requirements for each Work Orders specific Priority Classification.	*Detail of KPI in Reactive Maintenance Section of Report*
Timely Service Delivery – Completion	Did the Supplier complete to each Work Order issued, within the timeframe(s) specified in the completion classification?	To ensure the Supplier delivers on-time completion required by the Priority Rating of the Work Order.	The Supplier is required to report on competition times as per Section 18 of the Operational Requirement – Response and Completion Times. Performance will be measured by the number or percentage of Work Orders completed within the times specified in the Priority Classifications table. The target completion requirements as per priority classification; • P1 100% • P2 100% • P3-P5 100%	Monthly	The Supplier met the Complete Resolution requirements for each Work Orders specific Priority Classification.	The Supplier did not meet the target Completion Resolution requirements for each Work Orders specific Priority Classification.	*Detail of KPI in Reactive Maintenance Section of Report*
Up to Date Asset Information	Does the Supplier ensure the Asset Register always reflects the current content and condition of assets? Did the Supplier amend and update the Asset Register as per requirement in Operational Requirements?	To ensure the Supplier is meeting the Asset Data requirements outlined in the Principal's Operational Requirements.	An Internal or External Asset Audit will identify the number of instances where data is found to be inaccurate	Monthly	90% or above accuracy based on an audit of work orders completed in the month – Condition Rating to be within 1 of the Principal deemed condition rating	Less than 90% accuracy based on an audit of work orders completed in the month.	*We have a clearly defined monthly asset update process with the support from the Waikato District Council assets team.*

Cost Savings with Bundled Works	The Principal requires the Supplier to report on instances of bundling Reactive and PPM works and the estimated cost savings. Has the Supplier made reasonable efforts to prioritise cost efficiency for the Principal by bundling Work Orders?	To ensure the Supplier is supporting the Principal's by implementing cost-savings and service efficiency by bundling works where possible and practicable. Year 1 figures will form the basis against which to assess future performance.	Number of instances where Reactive Works are bundled with Planned works Estimated Cost savings resulting from bundling of said services.	Monthly	The number of instances where Bundled works occur increases each month from the previous month. Following Year 1 a maintenance in occurrences is acceptable.	Decrease in the number of bundled works.	*Detail of KPI in Reactive Maintenance Section of Report*
Services delivered within agreed threshold or agreed amount	Were the Charges invoiced for the Services in accordance with the agreed rates and as recorded in the Work Order (as amended from time to time)?	To ensure Supplier accountability of budget control.	Where a estimate of costs has been requested, the final invoiced costs are within 10% of the estimate (unless otherwise agreed by the Principal).	Monthly	98% or above of estimates being within 10% of agreed budget.	Less than 98% of estimates within 10% of agreed budget	*All charges invoiced have been invoiced at contracted rates, we have provided full breakdown of costs and cost make ups and mark ups to confirm this.* *We have had no charges that have exceeded the requested estimate 10% of the agreed budget. We have made a conscious effort to continually update facilities officers of price increases and price/scope changes as they arise.*
Invoicing Accuracy	Does the invoice provide transparency and identified the actual costs incurred plus any agreed mark-ups or margins? Does the invoice value accurately reflect the quantum of work?	To ensure accurate service delivery and quality data inputs for the Principal.	Number and percentage of errors per billing period	Monthly	The Supplier completed 95% of all invoices and Work Orders accurately.	The Supplier did not accurately complete 95% of all invoices and Work Orders.	*We have achieved this KPI by only have 2 invoicing queries for the whole of year two*
Continuous Improvement	Did the Supplier present innovative and creative solutions to increase performance across one of more of KPI areas? Can the provider adequately demonstrate they are meeting the Continuous Improvement requirements outlined in Section 25 of the Operational Requirements?	Ensuring strategic alignment with the Principal's Continuous Improvement Strategy and ensure the Supplier is developing creative solutions. Continuous improvement adds value to the relationship and has potential to achieve broader outcomes and reduce costs.	Demonstrated progress against the Continuous Improvement Strategy (detailed in the Operational Requirements Schedule 2) i.e. count of innovative initiatives present or new developments started.	Quarterly	At the end of Year One the Supplier developed a Continuous Improvement Strategy for the Principal. The Supplier has demonstrated progress and value-add for the Principal when implementing the Continuous Improvement Strategy (detailed in the Operational Requirements Schedule 2).	The Supplier cannot evidence a concerted effort to implement the Continuous Improvement Strategy set out at the end of Year One and updated annually thereafter.	*We have made concerted effort to implement continuous innovation.*

Investigations	Did the Supplier complete event (incident) investigations when trigger limits met? As detailed in the Principal's Zero Harm Framework	To ensure compliance with the Principal's Zero Harm framework.	Evidenced completion of Event (incident) investigations for all events that meet the threshold.	Monthly	The Supplier completed Event (incident) investigations for all instances where trigger limits were met.	The Supplier failed to complete event (incident) investigations when trigger limits were met.	*We had no significant incidents that triggered the investigations threshold.*
Audit Programme	Did the Supplier complete and deliver their Health and Safety Audit Programme and Action Plan? Did the Supplier report on actions implemented?	To ensure the audit programme has been delivered and reported on and actions implemented.	Evidenced completion of the audit programme and evidence of implementation of actions	Monthly	The Supplier completed and delivered the Health and Safety Audit programme and Action Plan. The Supplier reported on actions implemented in all instances.	The Supplier did not complete and deliver to the Health and Safety Audit Programme and Action plan.	*We have completed all our internal and external auditing as laid out in our health and safety management plan.* *These audits are recorded in our monthly reports and stored in SWAP*
Safety plans	Did the Supplier complete and implement the appropriate level of Safety Plans for work undertaken?	To ensure controls for non-maintenance tasks or high-risk activity managed outside of SWAP system are in place.	The Principal will audit SSPs SWMS or JSEA	Monthly	The Supplier completed and implemented SSSP's for all non-maintenance work.	The Supplier failed to complete and/or implement SSSP's for all non-maintenance work. Any job being performed without risk assessment.	*Yes, the detail for this KPI is in the health and safety section of this report.*
Safety Observations	Did the Supplier encourage and provide a mechanism for reporting safety observations?	To promote a safety culture and provide proactive feedback of positive and negative safety indicators.	Number of safety observations reported per month	Monthly	Record and report 4 Safety Observations per month.	The Supplier failed to provide a mechanism for reporting and recording of safety observations.	*Yes, we achieved 32 health and safety observations*
Sub-contractor Management	Did the Supplier complete audits and inspections on work undertaken by Sub Contractors	To ensure sub-contractors are meeting the Supplier health and safety expectations	Evidenced completion of audits and inspections	Monthly	Provide evidence of audit of Subcontractors – Audit Program will need to contain this detail		*Yes, the detail for this KPI is in the health and safety section of this report.* *Audit data is held in the Cushman & Wakefield/ Waikato District Council teams page.*

Environmental	Is the Supplier meeting and reporting on the environmental requirements set by the Principal as per Section 7 of the Operational Requirements? Is the Supplier able to evidence action to reduce their emissions, drive energy conservation, or reduce travel etc.?	Presentation of behaviours that align to the Principal's commitment to achieving broader outcomes and the importance of environmental responsibility.	Evidence of adherence to Waste Minimisation requirements Record of Baseline data (emissions, travel, waste, energy use) in Year One baseline to measure against thereon. • Percentage of Recycled Materials vs. Non-Recyclable • Diversion rate in tonnage	Quarterly	The Supplier can evidence they have met the environmental outcome requirement as set by the Principal and can evidence improvements in baseline measurements of waste reduction metrics (specified in measures)	The Supplier has not met and/or been able to evidence they have met the Principal's Waste Minimisation requirements and/or have not made improvements on the baseline measurements captured in Year 1. The Supplier has not adequately met the environmental outcome requirements set by the Principal.	*We have continued to report on our recycling and waste usage as well as promoting waste reduction through toolboxes. In addition, we have provided more recycling options.* *We have continued to research and investigate sustainable alternatives.*
Local/Social Outcomes	Is the Supplier ensuring the social outcomes offered in their proposal are being met	Presentation of behaviours that align to the Principal's commitment to achieving social and local outcomes for our communities	Evidence of Cadets, local employment, local subcontractors used etc	Quarterly	The Supplier can evidence they have met the social outcome requirement as set by the Principal and can evidence improvements in baseline measurements of community engagements and where the Supplier has engage locally	Lack of evidence of local and Social engagement	*Detail in Broader Outcomes Section of Report.*

REACTIVE MAINTENANCE

REVIEW OF ANNUAL PERFORMANCE

OVERALL NUMBERS:

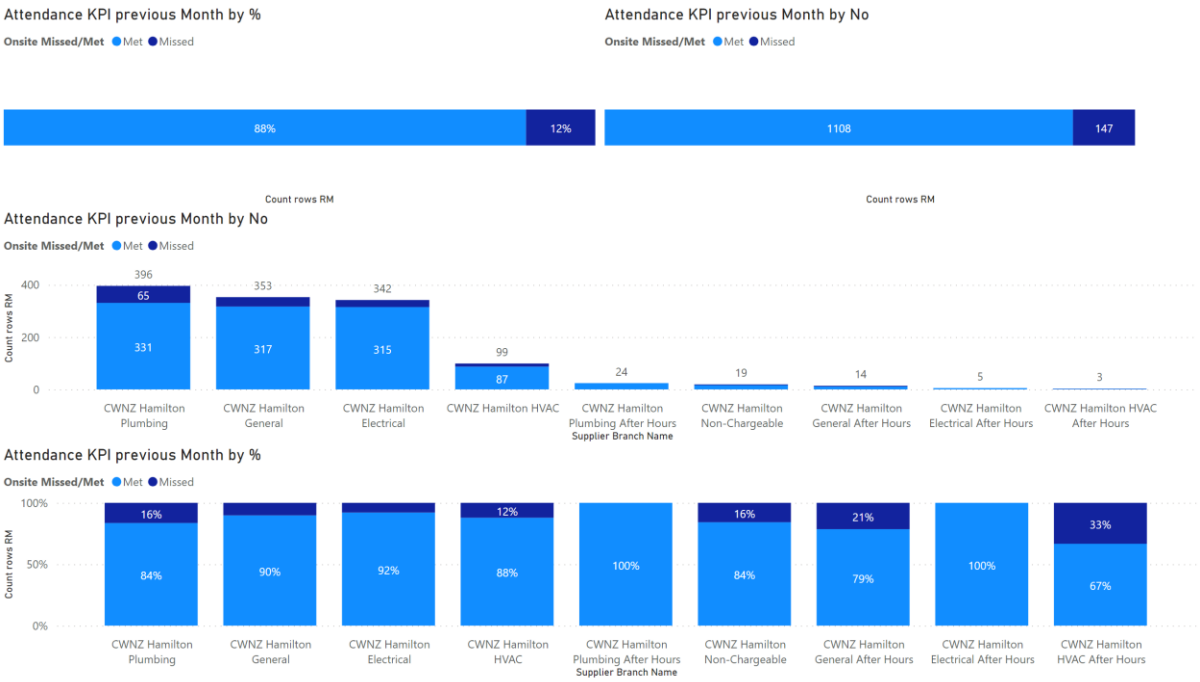
1670	1308	131	75	156
Total	Invoiced	Completed Awaiting Billing	Work In Progress	Cancelled

We have raised and processed 1670 reactive maintenance work orders for the third year of the contract. Of these work orders 1308 have been completed and invoiced, 75 work orders have been completed and are awaiting billing, 156 have been cancelled.

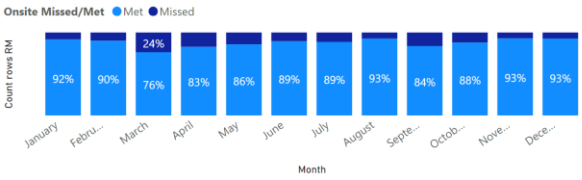
KEY PERFORMANCE INDICATORS

ATTENDANCE AND COMPLETION

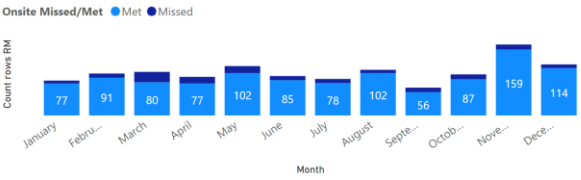
We have achieved and overall onsite “Met” percentage of 88% and an overall completion “Met” percentage of 91%. We achieved 81% from 12 months of our Priority 1 onsite KPIs.



Attendance KPI previous 12 Months by %

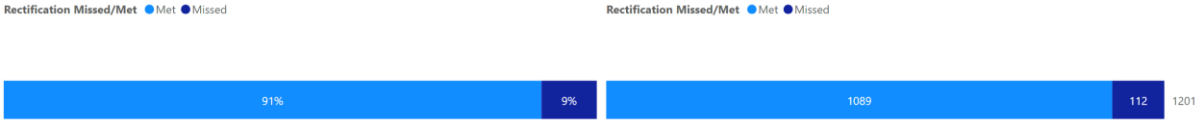


Attendance KPI previous 12 Months by No

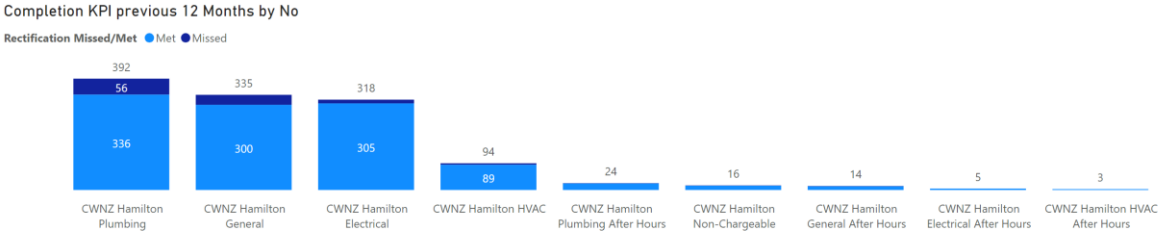


Attendance KPI previous 12 Months by Priority

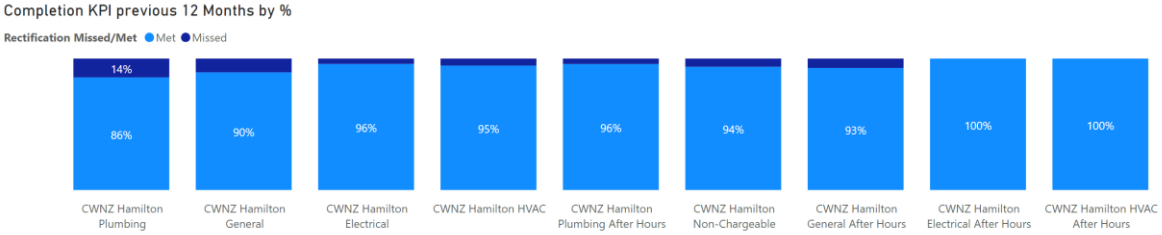
Completion KPI previous 12 Months by %

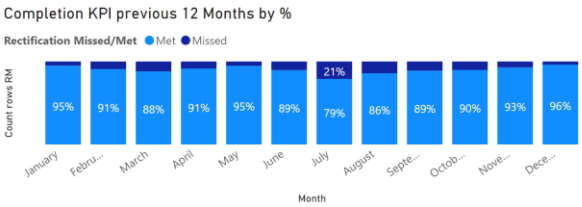


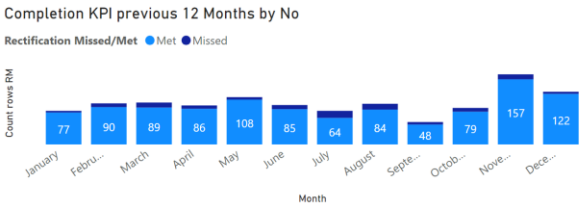
Completion KPI previous 12 Months by No

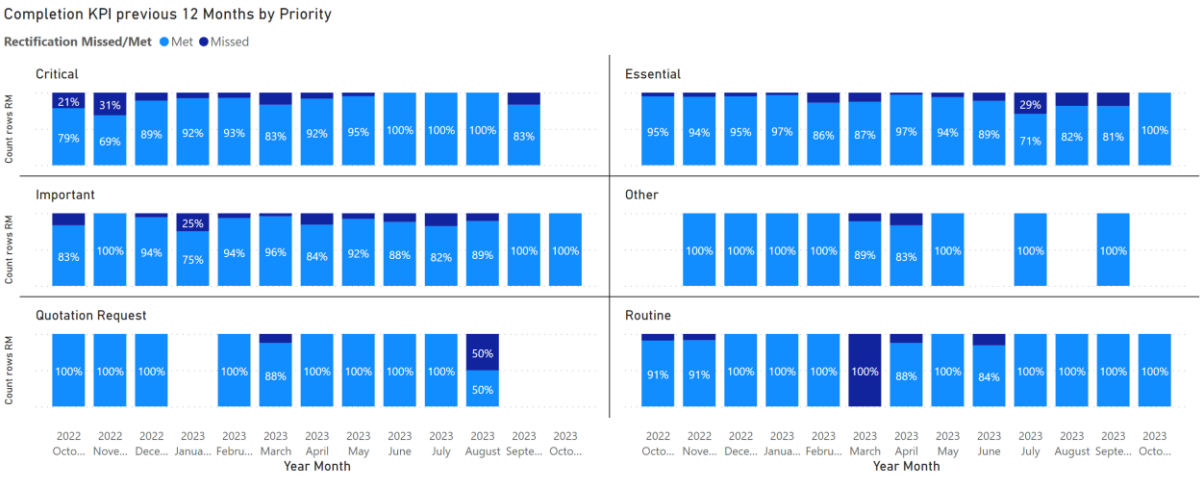


Completion KPI previous 12 Months by %



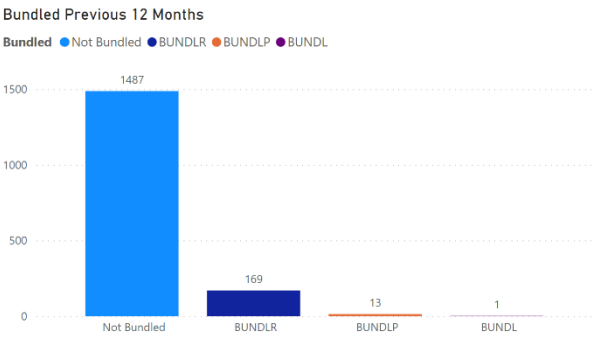


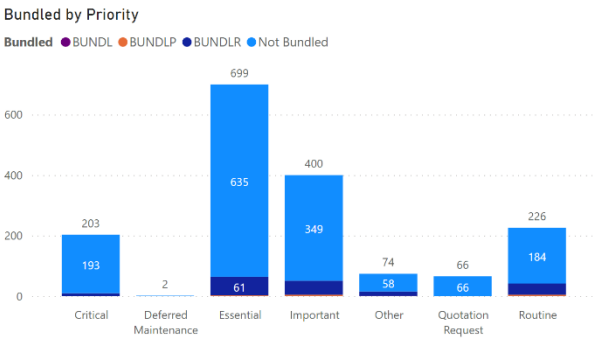


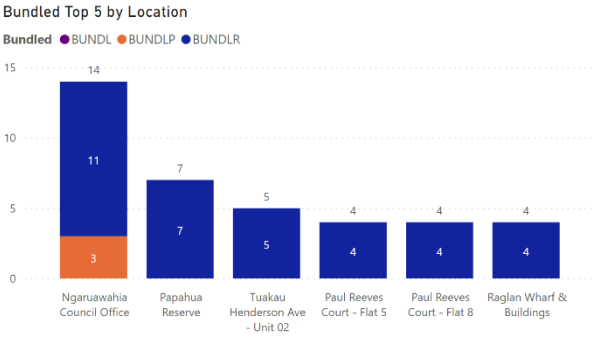


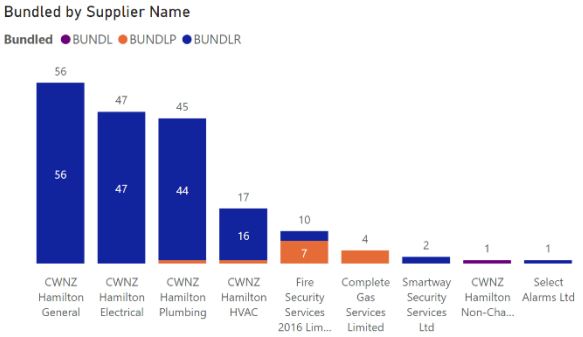
COST EFFICIENCIES ACHIEVED – WHERE WE HAVE BENEFITED FROM BEING ABLE TO BUY IN BULK, BUNDLE WORK, SHARE COSTS ACROSS THE SERVICES PROVIDED

Bundling: We have bundled 169 work orders in the third year of the contract. We have an estimated calculated a savings of **$16,174.99**. This is based on a 1-hour labour savings of $60.01 per work order and a first hour fee savings of $35.70 per work order.









Efficiencies:

We have continued with our investment into Microsoft Forms to streamline process and improve accuracy. We have trialled a work order upgrade form and flow and we are looking to complete more development before release.

The electrical team have undergone a van stock review and from this they have replenish vehicle stock but also added high use items to their standard items list. This exercise will reduce the number of times our team need to leave site to procure parts. Ultimately providing more cost efficiency but also delivering quicker more efficient works.

We have increased our stock level of Mitsubishi heat pumps to include at least one of each capacity size. We have done this due to the extensive lead times (months) we faced in the first half of 2023.

We have purchased a drone to assist us with our project of roof inspections around the district. To ensure an efficient approach, we have created a standard operating procedure. With the addition of the drone, the potential hazards associated with working at heights will be eliminated. The footage captured by the drone will offer enhanced clarity and precision of information. We have upskilled some of the team members to obtain a certificate to operate under CAA rule's Part 101 or 102. This measure ensures we comply with all the rules and regulations for safe and legal drone operations.

Training and Development:
We have restructured our trades management structure to be more efficiently manage our teams and their delivery. We have split the Service Manager role into two roles. One role is responsible for Electrical, and HVAC and the other role is for Carpentry and Plumbing. In addition to this we have added a Facilities Manager Role to oversee the contractual delivery.

We have had Freddy Travieso join our HVAC team as an Estimator – Freddy has a Bachelor of Engineering Technology on Mechanical Engineering, Diploma Level 6 on Mechanical. Freddy brings a wealth of knowledge to the team.

We have recently employed a carpenter who is multi-skilled and can-do minor glazing repairs. This will reduce the need for City Glass and expedite the duration of these smaller broken window repairs.

We have committed to a further 4 apprenticeships 2 in HVAC and 2 in electrical. These apprentices have shown great work ethic attitude towards their roles to date and have promising futures within Cushman & Wakefield and their chosen industries.

We have invested in training of the waterproofing product COHE. This is our preferred waterproofing method and product. The plumbing team are 90% trained. This allows us to self-deliver another service.

We have added an additional Health and Safety Rep due to our increased number of staff. This new representative is Krish Kumar. Krish will undertake Site Safe Health and Safety Representative training.

PLANNED MAINTENANCE

REVIEW OF ANNUAL PERFORMANCE

723	723	0
Count rows PM	COMPLETED PMS	OPEN PMS

Overall Numbers:
We have successfully completed 723 planned maintenances in year three of the contract. From these planned maintenances we have been able to raise 62 additional works orders in deferred maintenance and raised RM work orders.

Most planned maintenances have been for fire protection and detection, followed by HVAC and Electrical. Most planned maintenances have been between Woodlands Historic Homestead and the Ngaruawahia main office, this is attributed to the size of these sites combined with the large number of fire detection and protection assets.

The overall performance has been a positive. We have had no delays to building warrants of fitness being issued because of all maintenances completed within scheduled timeframes and an increased number of detected remedials identified before total failure or call out. We have one site that cannot have a 12a issued for its upcoming BWOF, this is the Huntly Aquatic Centre.

We are pleased to have been able to submit a further 144 non-compliance planned maintenances for approval. These maintenances include dump stations, pressure pumps, ovens and more.

ADDITIONAL WORKS FROM PPM

98	50	36
Total Remedials Submitted	Total PPM Remedials approved and completed	Total RM Remedials approved and completed

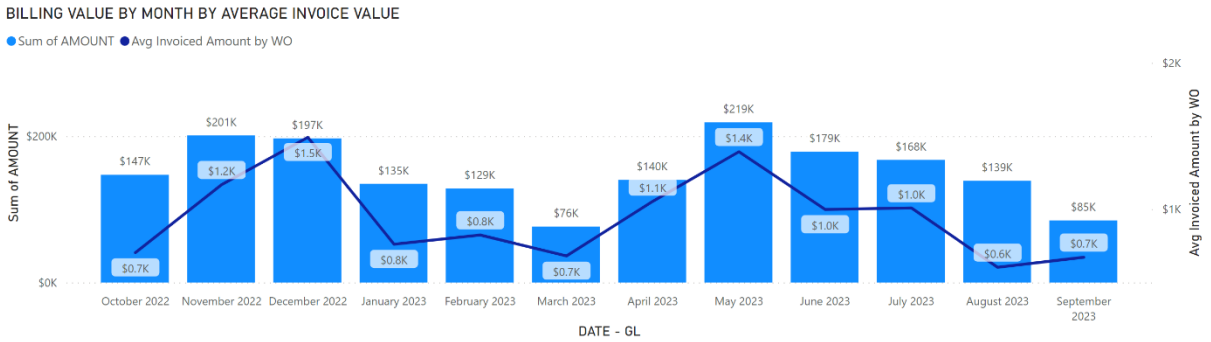
The most common service line to identify and raise remedials was HVAC, with 33% of the total remedials raised.

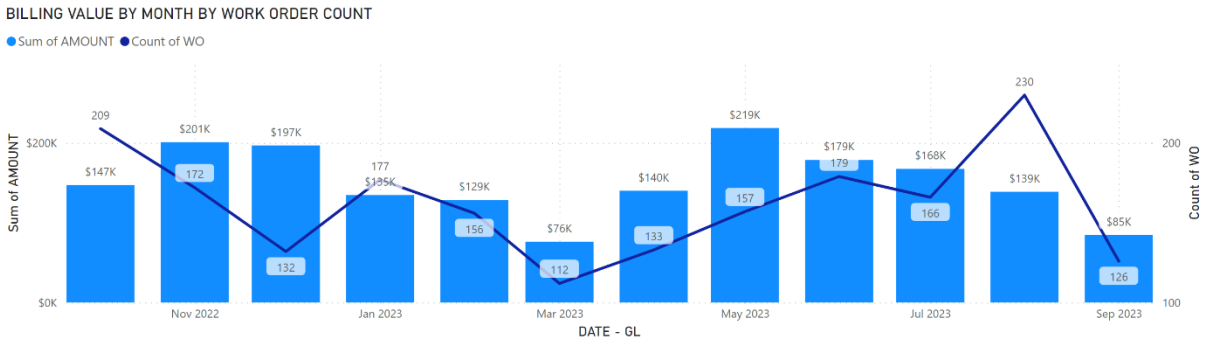
Year three benefitted from regular review meetings of outstanding deferred works between Vicki and Gavin. These meetings expedited urgent works (where needed) and provided greater clarity on the remedial requests. These meetings maintained outstanding deferred works to a smaller, consistent, and manageable level.

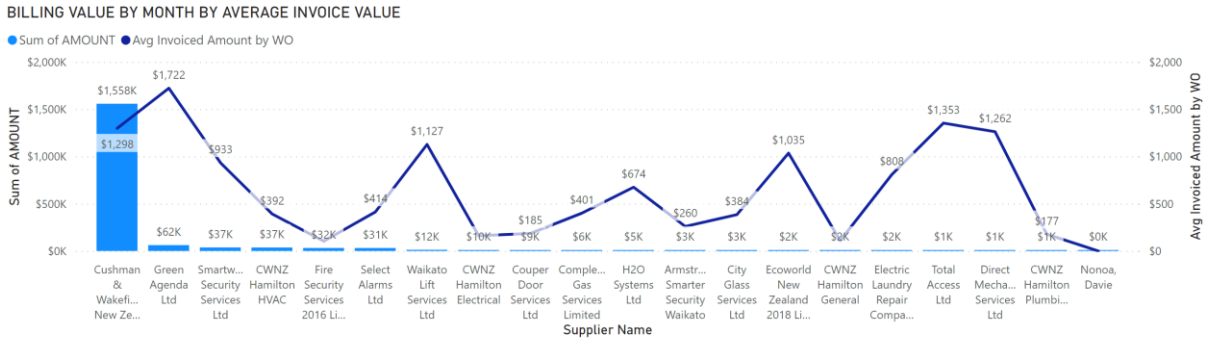
FINANCIAL

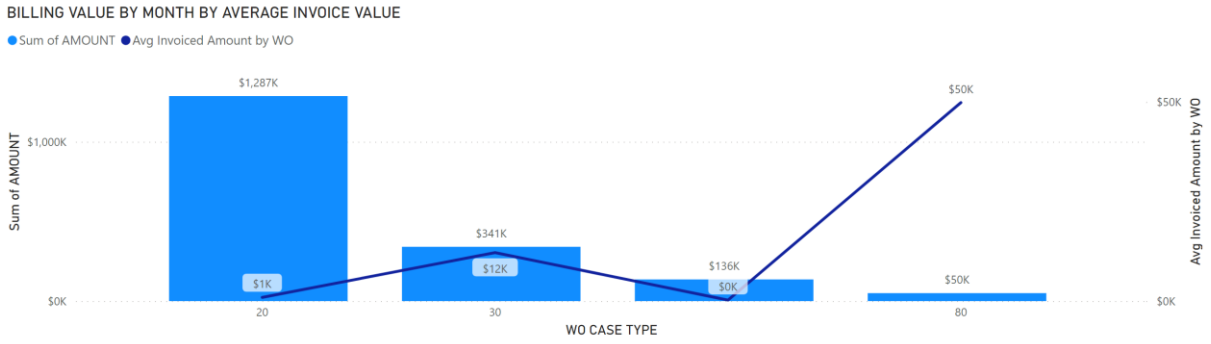
REACTIVE AND PLANNED MAINTENANCE COST VS BUDGET AS PER OPERATIONAL REQUIREMENTS

TOTAL ACTUAL SPEND: $1,813,564.52









SUB-CONTRACTOR MANAGEMENT

SUB-CONTRACTOR OVERVIEW:

We completed the renewal of all the back-to-back agreements with our sub-contractors for 2023

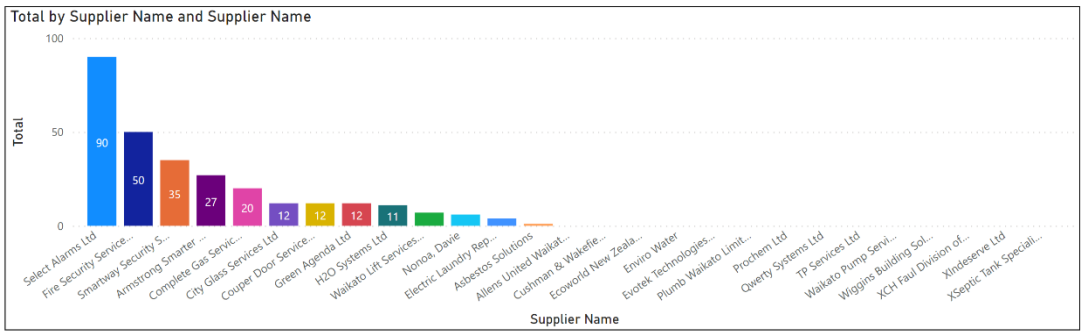
We continue to have quarterly contract/operational meetings with our sub-contractors. At these meetings we are able to evaluate performance, address concerns and highlight any achievements, as well as fostering open discussions.

We have registered Accurate Line Marking into Rapid Global our Vendor Management System (VMS) that allows our vendors to complete an online registration enabling full capture of services, licences, insurances, and other compliance documents.

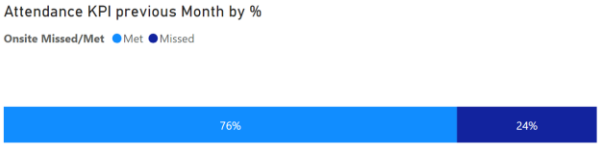
A continued concern for us is the reduced amount of hazard observations, we have raised this all our subcontractors in our recent contract renewal/quarterly discussions. We have amended the subcontractor meeting's agenda to focus on our back-to-back KPI's.

SUB-CONTACTOR PERFORMANCE:

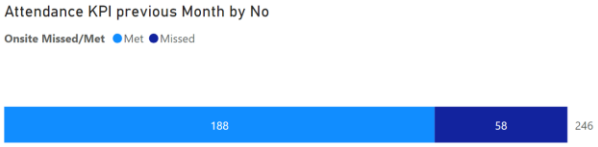
287	196	41	15	35
Total	Invoiced	Completed Awaiting Billing	Work In Progress	Cancelled

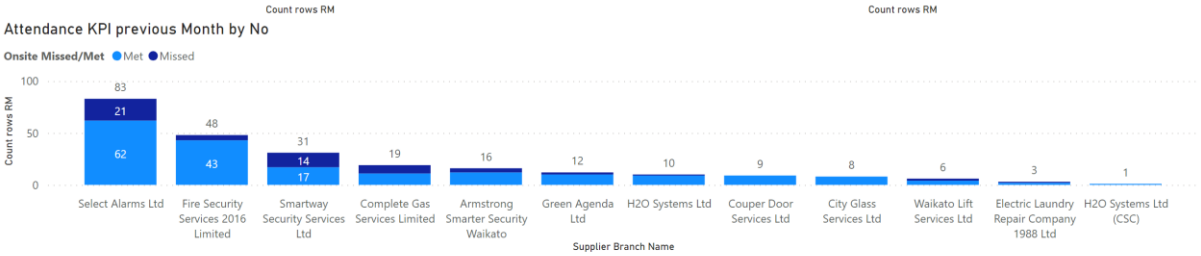


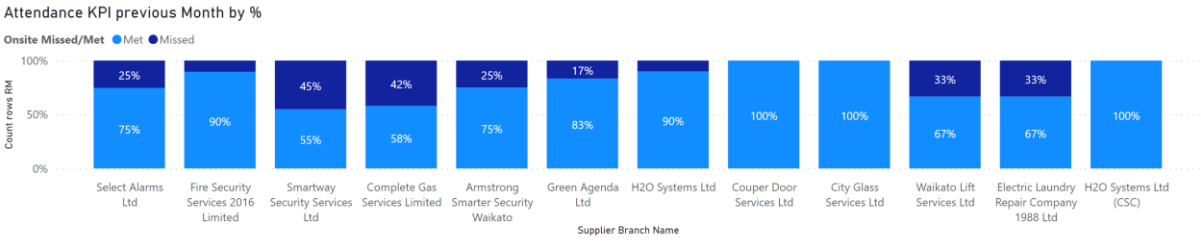
Attendance KPI previous Month by %



Attendance KPI previous Month by No



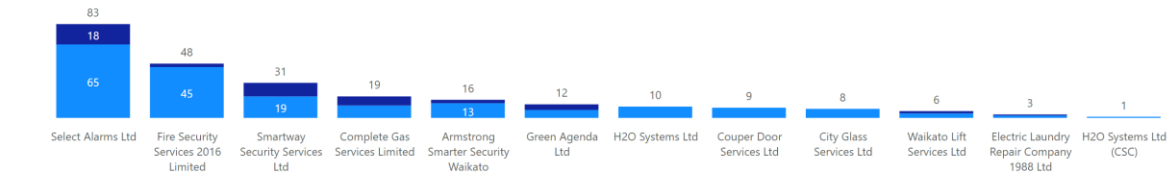




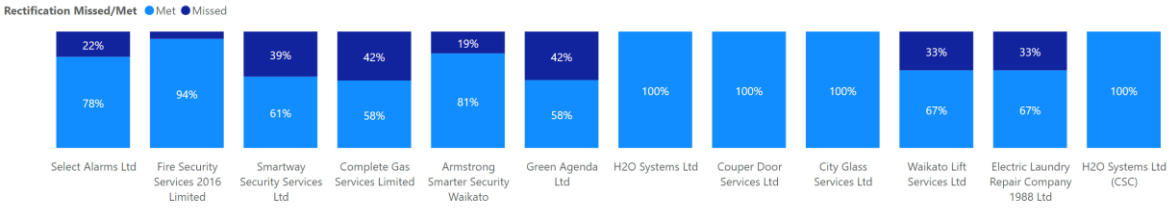
Completion KPI previous 12 Months by %

Completion KPI previous 12 Months by No

Completion KPI previous 12 Months by No



Completion KPI previous 12 Months by %



BROADER OUTCOMES

LOCAL AND SOCIAL OUTCOMES

We have placed a lot of importance on achieving this KPI and emphasized being as far reaching as possible.

Shoebox Christmas - Waikato 2022

Creating smiles for tamariki in Waikato, we signed up with by this innovative with Konnect and Waikato District Council to make sure our children know the community has their back.
For children in low-socio economic situations, the more positive experiences they receive, the more likely they are to make positive decisions later in life.
That's why Shoebox Christmas exists. As a whānau, we remind our children the community has their back.
We donated over 60 shoes boxes.

Earth Hour 2023

Pink Shirt Day

On Friday 19 May 2023 our workplace became a sea of pink as many other schools, workplaces and communities joined the Pink Shirt Day movement. By taking part we helped to stamp out bullying by celebrating diversity and promoting kindness and inclusion

We had a shared lunch with all Funds raised from the purchases of tee shirts given to help the Mental Health Foundation of New Zealand to raise awareness about bullying prevention, fund workshops and provide free resources nationwide

Horotiu Primary - Te Awa Tree Planting

Over 70 Horotiu Primary School students successfully completed the sixth annual Te Awa tree planting.

Horotiu Primary worked alongside Enviroschools Aotearoa to grow half of the 1100 natives plants needed for planting with WDC happily providing the rest.
We all had a great time getting our hands dirty and can't wait to do it all again next year.

Dirty Dog Challenge

On Saturday 22 July 2023, 489 dogs and 600 runners took part in the Dirty Dog Challenge. All proceeds went towards the Waikato Pounds Pups and Hamilton Adopt a Dog's desexing programmes

Cushman & Wakefield donated an obstacle and were able to provide a few volunteers to assist on the course as marshals.

FMANZ Update

The FMANZ Waikato Branch had a site visit to Waikeria Prison in May which was a great success with a full turnout and a sunny afternoon! Everyone enjoyed the once-in-a-lifetime visit to a different and interesting facility and the catch-up afterwards at Stallions in Te Awamutu.
CPB Contractors f allowed us onto the premises and for their interesting presentation about the new prison development project.
Cushman & Wakefield gave us an insight into what is involved in taking over a project like this upon completion, for 25 years, and sponsored the event

National Breakfast Series

On Wednesday 23 August we attended the National Breakfast Series, Off the Beaten Track with the Ministry of Education.
The Ministry of Education's Ngā Iti Kahurangi programme to improve the internal environments of 563 of our smallest and most remote schools has been highly innovative in the way it has approached a very complex programme of work.

Three quick examples: as part of their procurement they actively sought new technologies from the market, an engagement phase that involved 73 different companies; the existing light fittings are being dismantled and recycled by a charity that employs disabled workers; in order to iron out any creases, they ran an initial pilot of 18 schools – the hardest to tackle in the portfolio.

Programme Manager Wayne Tacon will talk about these examples and much more, as he takes us off the beaten track for a deep dive into this large and ambitious retrofit project.

FMANZ SUMMIT 2023

We joined hundreds of key players in the building and facilities management sector for the most innovative, progressive, and unmissable event in the entire building industry calendar to take part in the key discussions needed, and to hear international and national speakers address the big issues.
The awesome Pio Terei was the MC over the two days, the speakers provoked a range of forward-thinking discussions across sustainability, digital transformation, the economic impact of FM, leadership and much more in an exciting and wide-ranging two-day event.

During the summit Paul Huggins was also recognised with an Outstanding Service Award by the Association for his commitment to the FM industry in New Zealand.

Gateway Students 2023

We engaged with Raglan and Ngaruawahia High schools to offer work placements to Gateway students (year 12-13 subject). These placements are to offer trade work experience and a taster of the different trades. These placements took place during the Terms 2 and 3 and are for one day per week for 8 to 10 weeks.

We introduced the students to potential employment opportunities within the trades.

Fraser High School Year 10 Pathways Day

Te Wānanga o Aotearoa's, E2E (Education to Employment) service together with Fraser High School and our local community Employers and providers by collaborating to 'Expose, Educate & Excite' our rangatahi to local training & employment opportunities available to them in our region. By creating a fun, interactive, informative session, with the aim to excite rangatahi in a range of career pathways, through engagement with industry.

This was an awesome event organised by Te Wānanga o Aotearoa to engage with year 10 students ahead of picking their subject options for year 11 next year.

WIN -Women's Integrated Network

To accelerate the advancement of women working at Cushman & Wakefield by creating a real connection between employees in all areas of the organization and opportunities for Workforce, Workplace and the Marketplace

360 DEGREE SURVEY

We completed our annual 360-degree satisfaction survey in August. We sent this survey to 66 recipients with 10 responses a 15% response rate. 28 recipients opened the email and a further 17 began the survey but did not complete it. Below are the results by question and followed by summary of the comments:

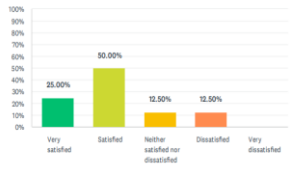
Q1 How would you rate your experience with SWAP portal (client work order interface)

Answered: 10 Skipped: 0

ANSWER CHOICES	RESPONSES
Very satisfied	12.50%
Satisfied	50.00%
Neither satisfied nor dissatisfied	37.50%
Dissatisfied	0.00%
Very dissatisfied	0.00%
TOTAL	

Q2 How would you rate your experience with the Service Request (work order creation interface)

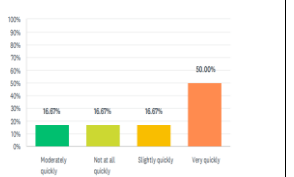
Answered: 10 Skipped: 0



ANSWER CHOICES	RESPONSES
Very satisfied	25.00%
Satisfied	50.00%
Neither satisfied nor dissatisfied	12.50%
Dissatisfied	12.50%
Very dissatisfied	0.00%
TOTAL	

Q3 How quickly were Cushman & Wakefield able to resolve any IT issues with the SWAP and Service Portal applications

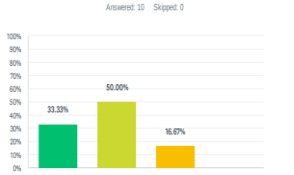
Answered: 10 Skipped: 0



ANSWER CHOICES	RESPONSES
Moderately quickly	16.67%
Not at all quickly	16.67%
Slightly quickly	16.67%
Very quickly	50.00%
TOTAL	

Q4 How user-friendly is Cushman & Wakefield software's interface

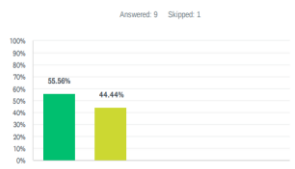
Answered: 10 Skipped: 0



ANSWER CHOICES	RESPONSES
Very user-friendly	33.33%
Somewhat user-friendly	50.00%
Not so user-friendly	16.67%
Not at all user-friendly	0.00%
TOTAL	

Q6 Do Cushman & Wakefield have an open and transparent communication resulting in no surprises

Answered: 9 Skipped: 1



ANSWER CHOICES	RESPONSES
Strongly agree	55.56%
Agree	44.44%
Neither agree nor disagree	0.00%
Disagree	0.00%
Strongly disagree	0.00%
TOTAL	

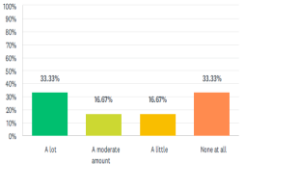
Q7 Overall, what effort does Cushman & Wakefield apply to social initiatives and outcomes

Answered: 9 Skipped: 1

ANSWER CHOICES	RESPONSES
Quite a bit of effort	75.00%
Some effort	25.00%
A little bit of effort	0.00%
Almost no effort	0.00%
TOTAL	

Q8 Do you feel involved in Cushman & Wakefield's social initiatives and outcomes

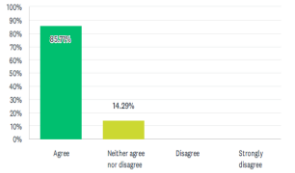
Answered: 9 Skipped: 1



ANSWER CHOICES	RESPONSES
A lot	33.33%
A moderate amount	16.67%
A little	16.67%
None at all	33.33%
TOTAL	

Q9 Do Cushman & Wakefield deliver on our promises in a timely manner

Answered: 9 Skipped: 1



ANSWER CHOICES	RESPONSES
Agree	85.71%
Neither agree nor disagree	14.29%
Disagree	0.00%
Strongly disagree	0.00%
TOTAL	

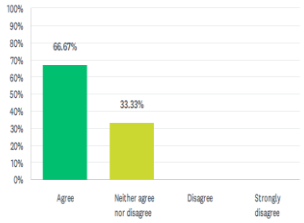
Q10 Do Waikato District Council and Cushman & Wakefield celebrate our successes jointly as a partnership

Answered: 9 Skipped: 1

ANSWER CHOICES	RESPONSES
Disagree	0.00%
Neither agree nor disagree	57.14%
Strongly agree	42.86%
Strongly disagree	0.00%
TOTAL	

Q11 Do Cushman & Wakefield have a high level of accountabili

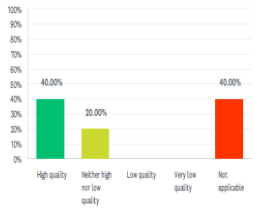
Answered: 9 Skipped: 1



ANSWER CHOICES	RESPONSES
Agree	66.67%
Neither agree nor disagree	33.33%
Disagree	0.00%
Strongly disagree	0.00%
TOTAL	

Q12 Do Cushman & Wakefield deliver valuable contract/operation reporting

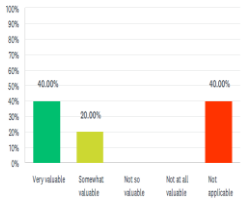
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
High quality	40.00%
Neither high nor low quality	20.00%
Low quality	0.00%
Very low quality	0.00%
Not applicable	40.00%
TOTAL	

Q13 How useful/effective is the contract/operational reporting by Cushman & Wakefield

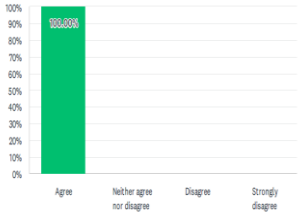
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
Very valuable	40.00%
Somewhat valuable	20.00%
Not so valuable	0.00%
Not at all valuable	0.00%
Not applicable	40.00%
TOTAL	

Q14 Do you believe Cushman & Wakefield effectively manage their contractors

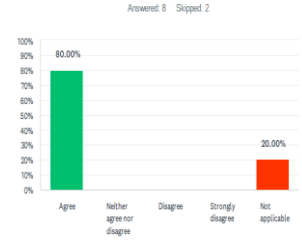
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
Agree	100.00%
Neither agree nor disagree	0.00%
Disagree	0.00%
Strongly disagree	0.00%
TOTAL	

Q15 Do you believe Cushman & Wakefield have a good working relationship with their sub contractors with delivery / communicatio reporting and safety

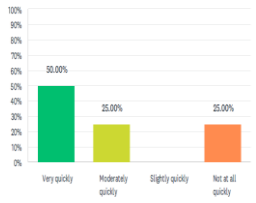
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
Agree	80.00%
Neither agree nor disagree	0.00%
Disagree	0.00%
Strongly disagree	0.00%
Not applicable	20.00%
TOTAL	

Q16 Overall, how quickly do Cushman & Wakefield respond to your questions and queries

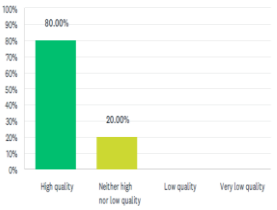
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
Very quickly	50.00%
Moderately quickly	25.00%
Slightly quickly	0.00%
Not at all quickly	25.00%
TOTAL	

Q17 Overall, how do you rate the quality of Cushman & Wakefield's workmanship

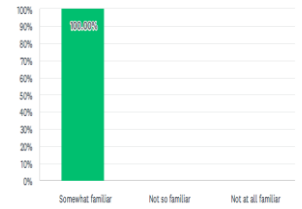
Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
High quality	80.00%
Neither high nor low quality	20.00%
Low quality	0.00%
Very low quality	0.00%
TOTAL	

Q18 Are you aware of the contract and operational processes that Wa District Council and Cushman & Wakefield operate under

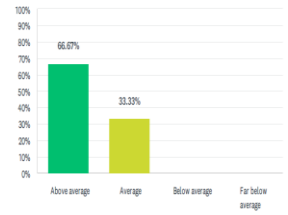
Answered: 8 Skipped: 2



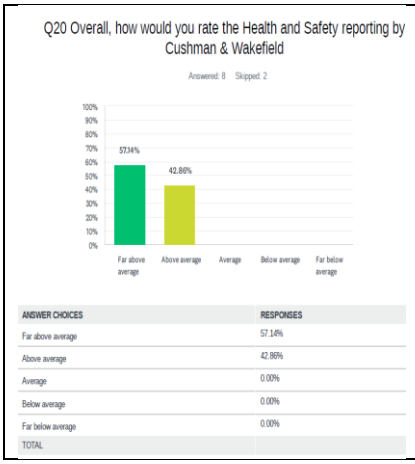
ANSWER CHOICES	RESPONSES
Somewhat familiar	100.00%
Not so familiar	0.00%
Not at all familiar	0.00%
TOTAL	

Q19 Overall, how well does Cushman & Wakefield manage Health Safety

Answered: 8 Skipped: 2



ANSWER CHOICES	RESPONSES
Above average	66.67%
Average	33.33%
Below average	0.00%
Far below average	0.00%
TOTAL	



ANSWER CHOICES	RESPONSES
Far above average	57.14%
Above average	42.86%
Average	0.00%
Below average	0.00%
Far below average	0.00%
TOTAL	

<u>If you could change one thing with the Cushman & Wakefield's IT systems, what would it be and why?</u>

There were no comments in this section

<u>Is there any other feedback you must help us understand what improved value we could do to continue to deliver to the Waikato District Council and/or the community?</u>

There was no feedback in this question with any suggestions or recommendations

Open

To	**Infrastructure Committee**
Report title	**Waste Assessment and Waste Minimisation and Management Plan process.**
Date:	17 April 2024
Report Author:	Sally Fraser, Waste Services Manager
Authorised by:	Anthony Averill, Deputy General Manager

1. Purpose of the report
Te Take moo te puurongo

To present the 2023 Waikato District Council Waste Assessment and provide a recommendation to proceed with developing a new Waste Minimisation and Management Plan.

2. Executive summary
Whakaraapopototanga matua

A Waste Assessment is required to be completed by Council in advance of formally reviewing its Waste Minimisation and Management Plan. The current Waste Minimisation and Management Plan was adopted in 2018 and is considered out of date. This report shares with the Committee the Waste Assessment completed in late 2023. Waste Assessments cover the strategic context at time of writing (international to local) and geographic and population influences on waste. The Waste Assessment also reviews all waste services (Council, community and private), waste infrastructure, future waste trends and targets. This leads to a gap analysis and options to address gaps. It is these latter two sections which would form the basis for a new Waste Minimisation and Management Plan (if Council chooses that option).

Due to time since the last Waste Minimisation and Management Plan was created, the number of completed actions, the changed national waste and carbon policy direction and contract timelines, staff recommend the decision is made to develop a new Waste Minimisation and Management Plan.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee recommend to Council:

a. **that Council receives the 2023 Waste Assessment including the Medical Officer of Health feedback.**

b. **that Council, in light of the completed Waste Assessment, resolves to proceed with a preparing a new Waste Minimisation and Management Plan in accordance with section 50(3) of the Waste Minimisation Act 2008.**

4. Background
Koorero whaimaarama

The Waste Minimisation Act 2008 (the Act) requires all local councils to produce a Waste Minimisation and Management Plan (the Plan), which should be reviewed every six years. Section 44 of the Act requires all Territorial Authorities to prepare a Waste Assessment before reviewing their Waste Management and Minimisation Plan, while Section 51 dictates the contents of the Waste Assessment. The attached Waste Assessment fulfils those requirements. A Waste Assessment covers the strategic context at time of writing from international to local, geographic influences on waste as well as looking at:

- What services Council deliver
- What's delivered by the private sector
- Waste infrastructure (inside and outside our boundaries)
- Future waste trends
- Progress on key targets for diversion
- Gaps in service.

This information is all pulled through into a section of options to make progress on or address these issues. These options (and any outstanding actions from current Plan) will be used to develop a more detailed action and delivery plan, as part of any future Waste Minimisation and Management Plan.

A decision to needs to be made on Waikato District Council's current Waste Management and Minimisation Plan by 31 May 2024 in order to be compliant with the Act and remain eligible for funding from the Waste Disposal Levy. That options after considering the Waste Assessment are, whether to amend or revoke the current Plan and replace it with a new Plan or to continue operating under current Waste Management and Minimisation Plan without amendment.

5. Discussion
Matapaki

The Council's current Waste Minimisation and Management Plan was adopted in 2018, based on a Waste Assessment done prior to that. At that time, the national context was based around the New Zealand Waste Strategy, published in 2010 which presented two guiding principles but set no goals, targets, timetables, actions, or responsibilities. Under this strategy New Zealand's waste disposal to municipal landfills increased by 48 per cent from 2010 - 2019 resulting in a different approach and renewed leadership from the Government amid an increased awareness, concern and passion from the community about plastics, historical waste (landfill blowouts) and climate impacts of waste. This resulted in *Te rautaki para - Waste Strategy* being released by the Government in March 2023.

It is a new roadmap for waste management in New Zealand for the next three decades and the goal of this strategy is to chart the nations course towards a low-emissions, low-waste society built upon a circular economy (Ōhanga āmiomio).

Te rautaki para - Waste strategy sets out a new requirement for Councils to provide a kerbside food scraps service by 2027 for urban households in settlements of more than 1,000 people and is also working towards businesses having to separate their food waste from general rubbish.

It also sets out performance standards for the amount of household kerbside waste diverted from landfill that all district and city councils will need to meet. The performance standard will increase over time:
ull; 30 per cent by July 2026
ull; 40 per cent by July 2028
ull; 50 per cent by July 2030

The new Waste Strategy includes goals for the three phases between now and 2050 and specified targets New Zealand must meet by 2030. *Te rautaki para - Waste strategy* states "*The targets focus on the three most important changes we need to make.*

1. *Waste generation: reduce the amount of material entering the waste management system, by 10 per cent per person.*
2. *Waste disposal: reduce the amount of material that needs final disposal, by 30 per cent per person.*
3. *Waste emissions: reduce the biogenic methane emissions from waste, by at least 30 per cent.*

These targets are ambitious. To achieve them, we need to take action in many areas and at every level of the waste hierarchy."

This will be funded (in part) by an increased Waste Disposal Levy, which (at time of

writing in early 2024) which sits at fifty dollars per tonne for class one municipal landfills. It will rise to sixty dollars per tonne in July 2024. levy has also been applied to Class 2-4 landfills (at a lower rate) for the first time. Compare this to 2008 when the levy was first applied at ten dollars per tonne and it never changed for thirteen years.

The impact of waste on Aotearoa New Zealand's carbon emissions has also increased the focus nationally on waste. New Zealand's first Emissions Reduction Plan was published in 2022 and sets the direction for climate action for the next 15 years. It lays out targets and actions the Government will take to meet those targets. There will be expectations to reduce emissions across every part of Government and every sector of the economy from transport, energy, building and construction, agriculture, forestry and waste. Councils are expected to play their part.

In 2019, 94 per cent of emissions from the waste sector in New Zealand were biogenic methane – largely generated by the decomposition of organic waste (such as food, garden, wood and paper waste) in landfills. While waste contributes a small percentage of our total emissions as a country, biogenic methane has a warming effect 28 times greater than carbon dioxide.

The Government has already committed to a minimum 10 per cent reduction in biogenic methane emissions by 2030, and a 24 to 47 per cent reduction by 2050 (compared with 2017 levels) and is indicating actions like these to get us there:

- enabling households and businesses to reduce organic waste
- increasing the amount of organic waste diverted from landfill
- reducing and diverting construction and demolition waste (and reusing it where possible)
- exploring bans or limits to divert more organic waste from landfill
- increasing the capture of gas from municipal landfills
- improving waste data and prioritising a national waste licensing scheme.

Locally, less change has been noticed over the same period and in some ways that is a positive, as it shows Waikato District Council is doing really well in some areas of waste management for example:

- Council is already in compliance with the standardised materials for recycling that became mandatory in February 2024, so no significant change to what we accept kerbside is needed.
- Data shows the amount of waste sent to landfill from the Waikato District has remained pretty static over the past five years, despite population growth.
- Waikato uses a crate based, kerbside sorted recycling methodology, that is known to be best practice, as it maintains a high quality of recycling materials and keeps contamination (non-recyclable items) to a very low level.

Waikato District Council has not changed collection methodologies since 2018 either with most households receiving weekly kerbside collection of recycling and rubbish. Most of the community use a bag system for rubbish, with an element of user pays / "Pay-as-you-throw" built in with sticker/tag use or full cost for pre-paid bags in Raglan. A small number of commercial properties and central Tuakau households use rubbish wheelie bins. This is a hangover from the Franklin District Council era. Having a different service in a small area does create a few issues:

- There is not a simple consistent message on rubbish services district wide.
- Requires stocks of tags (in addition to bag stickers) to be printed and held.
- The bins are aging. As they are large, customers can't pick up, so requires delivery of new wheelie bins to residents. With the additional admin of charging for that.
- Most importantly, providing wheelie bins does result in more rubbish being thrown out by those households weekly compared to areas where a rubbish bag is used.

There has been a change in one contractor, mid contract, with Green Gorilla taking over from Metro Waste. They have joined Xtreme Zero Waste in Whaingaroa-Raglan and Smart Environmental in the North providing excellent kerbside services to our community. Across all contracts valid service complaints (e.g. missed streets, missed bags etc) are very low and customer response via our contractors is really fast.

As all Council waste contracts are coming to an end in June 2026 it is timely to review all services and look for efficiencies and service improvements that still meet the communities needs. That will be done by undertaking a Section 17A Review under the Local Government Act 2002. This may result in suggestions, new ideas, service changes, that Council can then consult with the community on, through the consultation Council would have to do on any new Waste Minimisation and Management Plan.

Considering the large change in the direction of waste management in New Zealand, it also seems appropriate to develop a new Waste Minimisation and Management Plan, rather than continuing with the existing 2018 one, or just amending it slightly. This would allow the Waste Services Team to more closely align with Government direction and bring in new and emerging waste issues for consideration and attention.

5.1 Options
Ngaa koowhiringa

Staff have assessed that there are three reasonable and viable options for the Infrastructure Committee to consider. This assessment reflects the level of significance. Staff recommend option C. The options are set out in the table below.

Option	Advantages	Disadvantages
A. Status quo. Continue operating under current Waste Management and Minimisation Plan without amendment.	Save staff time. Would allow more work to be focused on actions that haven't been fully realised (though these can also be pulled through into the new plan).	Most of the actions are completed or progressed. As activities have to be in the WMMP to be paid for by the waste disposal levy, the current plan doesn't leave much room to focus on new waste issues. The strategic direction of waste in New Zealand has changed, that is not reflected well in the current plan.
B. Amend current Waste Management and Minimisation Plan.	As above.	This would allow some new ideas, strategy impacts and issues, but amending a plan written in 2018 for leading council waste direction for 2024-28 will make it a dated document early in the term of the Plan.
C. Revoke the current Waste Management and Minimisation Plan and replace it with a new plan.	This will allow a fuller alignment to the new New Zealand waste strategy goals and the circular economy. Emerging areas for focus can be included and worked on funded by the waste levy. Work deliverables can reflect our increased levy disposal funding envelope.	A new plan will take some staff time and cost to get designed. It will also need to be consulted on using the special consultative procedure under section 44 of the Act which does add cost and time. But this also can be seen as an opportunity to connect widely into our community, hear their view and ideas and share some ideas and the draft direction set out. This can all be funded using the waste disposal levy.

The deadline to inform the Ministry of the decision is the 31st of May 2024. Our current WMMP remains in effect until a new one has been developed, undergone special consultative procedure and has been formally adopted by Council through a resolution. There is no specific timeframe for Councils to develop and consult on the new Plan, once the WMMP review decision has been made. Staff intention is to get the new Plan before Council for adoption by late 2024.

5.2 Financial considerations
Whaiwhakaaro puutea

There are no material financial considerations associated with the recommendations of this report as the funding for this project is provided from the Waste Levy.

5.3 Legal considerations
Whaiwhakaaro-aa-ture

Staff confirm that the recommendation complies with the Council's legal and policy requirements, including Waste Minimisation Act (2008), section 51.

5.4 Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

The report and recommendations are consistent with the Council's policies, plans and prior decisions.

5.5 Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

In regard to developing a new WMMP, there is funding set aside to engage a local maaori consultancy to support Council staff in meeting and engaging with the relevant parties. This will be done in the pre drafting stage. Once written, effort will be put into sharing the opportunity to give feedback, ideas, suggestions with maaori groups, business and marae by utilising the pre-engagement work, Council and waste relationships.

5.6 Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

The decisions sought by, and matters covered in, this report are consistent with the Council's Climate Response and Resilience Policy and Climate Action Plan. Any actions that reduce waste, increase resource recovery or divert waste from landfill will have a positive carbon impact.

5.7 Risks
Tuuraru

Staff capacity is the largest risk. In developing the new Plan and getting an engaging and unique consultation programme in place.

There is also risk of a changing political direction from the Government. But until that is signalled or progressed, staff will continue to act under current strategy and legislation.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.1 Significance
Te Hiranga

The decisions and matters of this report are assessed as of high significance, in accordance with the Council's Significance and Engagement Policy as waste services affect most residents and is a weekly touch point with council. The cost of these services and how they are covered will also be of keen interest to the community.

6.2 Engagement
Te Whakatuutakitaki

Highest level of engagement	Inform	Consult	Involve	Collaborate	Empower
		✓			
Tick the appropriate box/boxes and specify what it involves by briefly explaining the tools used to engage (refer to the project engagement plan if applicable).	*Developing a new Waste Minimisation and Management Plan will include the opportunity to consult on that plan with the community.*				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
✓			Internal
✓			Community Boards/Community Committees
✓			Waikato-Tainui/Local iwi and hapū
✓			Affected Communities
✓			Interested Businesses
✓			Those with keen interest in zero waste. Industry players

7. Next Steps
Ahu whakamua

Staff will finalise documents and get the new Waste Assessment on Councils website.

Staff will inform the Ministry of Council's decision and share draft timeline for the new Plan development.

The 17a review will be done with preliminary results presented to council. Following some guidance from elected members, certain services will be modelled and costed to allow more informed consultation.

To develop the new Waste Minimisation and Management Plan. There is planned pre-engagement with tangata whenua, led by a local maaori consultancy, and our key stakeholders. The Waste Minimisation and Management Plan will then be drafted and shared with elected members.

Once approved, will move into a consultation and engagement programme to get out into our community and test the ideas in the WMMP with them and gather feedback, including through a hearing.

A consultation report will be presented to Council. Any changes made, then adopted.

Staff will inform the Ministry of adoption of new Plan and staff will get that updated on Councils website.

8. Confirmation of statutory compliance
Te Whakatuuturutanga aa-ture

As required by the Local Government Act 2002, staff confirm the following:

The report fits with Council's role and Committee's Terms of Reference and Delegations	Confirmed
The report contains sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages (section 5.1)	Confirmed
Staff assessment of the level of significance of the issues in the report after consideration of the Council's Significance and Engagement Policy (section 6.1)	High
The report contains adequate consideration of the views and preferences of affected and interested persons taking account of any proposed or previous community engagement and assessed level of significance (Section 6.2)	Confirmed
The report considers impact on Maaori (Section 5.5)	Confirmed
The report and recommendations are consistent with Council's plans and policies (Section 5.4)	Confirmed
The report and recommendations comply with Council's legal duties and responsibilities (Section 5.3)	Confirmed

9. Attachments
Ngaa taapirihanga

1. Waikato District Council Waste Assessment 2023.

Waikato District Council Waste Assessment

March 2023

Approved by

Duncan Wilson

(Project Director)

Eunomia Research & Consulting Ltd
PO Box 78 313
Grey Lynn
Auckland 1245

New Zealand

Tel: +64 9 376 1909

Web: www.eunomia.co.nz

Acknowledgements

Disclaimer

Eunomia Research & Consulting has taken due care in the preparation of this report to ensure that all facts and analysis presented are as accurate as possible within the scope of the project. However, no guarantee is provided in respect of the information presented, and Eunomia Research & Consulting is not responsible for decisions or actions taken on the basis of the content of this report.

Contents

Glossary of Terms

Class 1-5 facilities	Classification system for facilities where disposal to land takes place. The classification system is provided in appendix A.2.0 below for reference.
Cleanfill	A cleanfill (properly referred to as a Class 5 fill) is any disposal facility that accepts only cleanfill material. This is defined as material that, when buried, will have no adverse environmental effect on people or the environment.
C&D waste	Construction and Demolition waste. Waste generated from the construction or demolition of a building including the preparation and/or clearance of the property or site. This excludes materials such as clay, soil and rock when those materials are associated with infrastructure such as road construction and maintenance, but includes building-related infrastructure.
Diverted material	Anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Domestic waste	Waste from domestic activity in households.
ETS	Emissions Trading Scheme
ICI	Industrial, Commercial, Institutional
Landfill	A type of disposal facility as defined in S.7 of the Act, excluding incineration. Includes, by definition in the Act, only those facilities that accept 'household waste'. Also referred to as a Class 1 landfill.
LGA	Local Government Act 2002
Managed fill	A Class 3 disposal site requiring a resource consent to accept well-defined types of non-household waste, e.g. low-level contaminated soils or industrial by-products, such as sewage by-products.
the Ministry	Ministry for the Environment
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste

NZ	New Zealand
NZWS	New Zealand Waste Strategy
Putrescible, garden, greenwaste	Plant based material and other bio-degradable material that can be recovered through composting, digestion or other similar processes.
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
Service delivery review	As defined by s17A of the Local Government Act 2002. councils are required to 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. A review under subsection (1) must consider options for the governance, funding, and delivery of infrastructure, services, and regulatory functions.
TA	Territorial Authority (a city or district council)
Waste	Means, according to the Act: a) Anything disposed of or discarded, and b) Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste); and c) To avoid doubt, includes any component or element of diverted material, if the component or element is disposed or or discarded.
WA	Waste Assessment as defined by s51 of the Act. A Waste Assessment must be completed whenever a WMMP is reviewed
WMA	Waste Minimisation Act 2008
WMMP	A Waste Management and Minimisation Plan as defined by s43 of the Act
WWTP	Wastewater treatment plant

1 Introduction

This Waste Assessment has been prepared for the Waikato District Council (Council) by Eunomia Research & Consulting, in accordance with the requirements of the Waste Minimisation Act 2008 (the Act). This document provides background information and data to support Council's waste minimisation and management planning process.

1.1 Structure of this Document

This document is arranged into a number of sections designed to help construct a picture of waste management in the district. The key sections are outlined below.

Introduction

The introduction covers a number of topics that set the scene. This includes clarifying the purpose of this Waste Assessment, its scope, the legislative context, and key documents that have informed the assessment.

Waikato Region

This section presents a brief overview of regional plans that influence the quantities and types of waste generated and potential opportunities. It also provides an overview of regional waste facilities, and initiatives that may be of relevance to how the district manages its waste.

Waikato District

This section presents a brief overview of key aspects of the district's geography, economy, and demographics that influence the quantities and types of waste generated and potential opportunities.

Waste Infrastructure, Services, Data and Performance Measurement

These sections examine how waste is currently managed, where waste comes from, how much there is, its composition, and what infrastructure is required to manage it.

Gap Analysis and Future Demand

This section provides an analysis of what is likely to influence demand for waste and recovery services in the district and identifies key gaps in current and future service provision, and in the Council's ability to promote effective and efficient waste management and minimisation.

Statement of Options & Council's Proposed Role

These sections develop options available for meeting the forecast future demand and identify the Council's proposed role in ensuring that future demand is met, and that the Council is able to meet its statutory obligations.

Statement of Proposals

The statement of proposals sets out what actions are proposed to be taken forward. The proposals will be carried forward and developed further in the Waste Management and Minimisation Plan (the Plan).

Appendices

The appendices include the consultation response from the Medical Officer of Health as well as additional detail on the national context.

1.2 Purpose of this Waste Assessment

This Waste Assessment is intended to provide an initial step towards the development of a Plan by the Council and sets out the information necessary to identify the key issues and priority actions that will be included in the draft Plan.

Section 51 of the Act outlines the requirements of a waste assessment, which must include:

- a description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority's area;
- a forecast of future demands;
- a statement of options available to meet the forecast demands with an assessment of suitability of each option;
- a statement of the territorial authority's intended role in meeting the forecast demands;
- a statement of the territorial authority's proposals for meeting the forecast demands; and
- a statement about the extent to which the proposals will protect public health, and promote effective and efficient waste management and minimisation.

1.3 Legislative Context

Government is currently working on new comprehensive legislation to replace both the Act and the Litter Act (1979). Some decisions have been made on what the new legislation will entail, and further advice on some aspects will be provided in late 2023. The new legislation will then be drafted by the Parliamentary Counsel Office based on these decisions. The draft legislation will then go through the select committee process, and be enacted in 2025.

The stated purpose of the Act is to:

> "encourage waste minimisation and a decrease in waste disposal in order to
>
> (a) protect the environment from harm; and
>
> (b) provide environmental, social, economic, and cultural benefits.

To further its aims, the Act requires councils to promote effective and efficient waste management and minimisation within their district. To achieve this, all councils are required by the legislation to adopt a Plan.

The Act requires every TA to complete a formal review of its existing waste management and minimisation plan at least every six years. The review must be consistent with WMA sections 50 and 51. Section 50 of the Act also requires all councils to prepare a 'waste assessment' prior to reviewing its existing plan. This document has been prepared in fulfilment of that requirement. In order to comply with The Act, Council will need to make a decision to continue with the existing plan, amend, or revoke it and replace the existing plan with a new Plan by May 2024.

Further detail on key waste-related legislation is contained in Appendix A.3.0.

1.4 Scope

1.4.1 General

As well as fulfilling the statutory requirements of the Act, this Waste Assessment will build a foundation that will enable the Council to review and/or update their Plan in an informed and effective manner. In preparing this document, reference has been made to the Ministry for the Environment's 'Waste Management and Minimisation Planning: Guidance for Territorial Authorities'[1].

A key issue for this Waste Assessment will be forming a clear picture of waste flows, waste management options and waste reduction/diversion opportunities in the region. The Act requires that a waste assessment must contain:

"A description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority's district (whether by the territorial authority or otherwise)".

This means that this Waste Assessment must take into consideration all waste and recycling services carried out by private waste operators as well as the Council's own services. While the Council has reliable data on the waste flows that they control, data on those services provided by private industry is limited. Reliable, regular data on waste flows is important if the TA chooses to include waste reduction targets in their Plan. Without data, targets cannot be readily measured.

Te rautaki para | Waste strategy, the New Zealand waste strategy released in 2023, also repeatedly refers to central and local councils as being the key agencies by which many goals could be achieved, contributing to reduction in waste generation and the move to a low carbon and low waste circular economy.

1.4.2 Period of Waste Assessment

The Act requires Plans to be reviewed at least every six years, but it is considered prudent to take a longer-term view. The horizon for the Plan is not fixed but is assumed to be centred on a 10-year timeframe, in line with council long term plans (LTPs). For some assets and services, it is necessary to consider a longer timeframe and this is taken into account where appropriate. Therefore, the period of the Waste Assessment looks forward over at least the next ten years, and sometimes longer (in the case of facilities, e.g. landfill consenting).

1.4.3 Consideration of Solid, Liquid and Gaseous Wastes

The guidance provided by the Ministry for the Environment on preparing Waste Management and Minimisation Plans states that:

"Councils need to determine the scope of their WMMP in terms of which wastes and diverted materials are to be considered within the plan".

[1] Ministry for the Environment (2015), Waste Management and Minimisation Planning: Guidance for Territorial Authorities

The guidance further suggests that liquid or gaseous wastes that are directly managed by a TA, or are disposed of to landfill, should be seriously considered for inclusion in a Plan.

Other wastes that could potentially be within the scope of the Plan include gas from landfills and the management of biosolids from wastewater treatment plant (WWTP) processes.

In line with the Council's previous Plan, this Waste Assessment is focused on solid waste that is disposed of to land or diverted from land disposal, including solid waste collected and disposed of by commercial enterprise as well as waste collected by Council. However, given the current work on restructuring water services (including wastewater), this WA and any resulting Plans will not include management of solid wastes resulting from these activities.

1.4.4 Public Health Issues

Protecting public health is one of the original reasons for local authority involvement in waste management. Te rautaki para, the new Waste Strategy, refers to protection of human health as one of the outcomes from successful recovery of resources.

Protection of public health is currently addressed by a number of pieces of legislation. Discussion of the implications of the legislation is contained in Appendix A.3.0.

1.4.4.1 Key Waste Management Public Health Issues

Key issues that are likely to be of concern in terms of public health include the following:

- population health profile and characteristics;
- implications of pandemic management, e.g. increases in some waste materials;
- meeting the requirements of the Health Act 1956;
- management of putrescible wastes;
- management of nappy and sanitary wastes;
- potential for dog/seagull/vermin strike;
- timely collection of material;
- locations of waste activities;
- management of spillage;
- litter and illegal dumping;
- medical waste from households and healthcare operators;
- storage of wastes;
- management of biosolids/sludges from WWTP;
- management of hazardous wastes (including asbestos, e-waste, etc.);
- private on-site management of wastes (i.e. burning, burying);
- unknown impacts of discharges to air from any future large scale mixed waste incinerator
- closed landfill management including air and water discharges, odours and vermin; and
- health and safety considerations relating to collection and handling.

1.4.4.2 Management of Public Health Issues

From a strategic perspective, the public health issues listed above are likely to apply to a greater or lesser extent to virtually all options under consideration. For example, illegal dumping tends to take place irrespective of the local waste collection and transfer station

systems in place. Some systems may possibly exacerbate the problem (infrequent collection, user-charges, inconveniently located facilities etc.) but, by the same token, the issues can be reduced and managed through methods such as enforcement, education and by providing convenient facilities. It is also known that illegal dumping continues to be a problem even in areas where disposal is free of charge.

In most cases, public health issues can be addressed through setting appropriate performance standards for waste services. It is also important to ensure performance is monitored and reported on and that there are appropriate structures within the contracts for addressing public health issues that arise. There is now increased emphasis on workplace health and safety under the Health and Safety at Work Act 2015. This legislation can impact on the choice of collection methodologies and working practices and the design of waste facilities, for example.

In addition, public health impacts will be able to be managed through consideration of potential effects of planning decisions, especially for vulnerable groups. That is, potential issues will be identified prior to implementation so they can be mitigated for.

1.5 Strategic Context

1.5.1 New Zealand Waste Strategy

In March 2023 the Ministry for the Environment released Te rautaki para | Waste strategy[2], New Zealand's roadmap for the next three decades for a low-emissions, low-waste society built upon a circular economy[3]. This is the first time New Zealand's national strategic direction for waste has been reviewed since 2002, and unsurprisingly takes quite a different approach to the previous Strategy.

The vision of Te rautaki para is:

> *"By 2050, Aotearoa New Zealand is a low-emissions, low-waste society, built upon a circular economy.*
>
> *We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility"*

This vision is supported by six guiding principles:

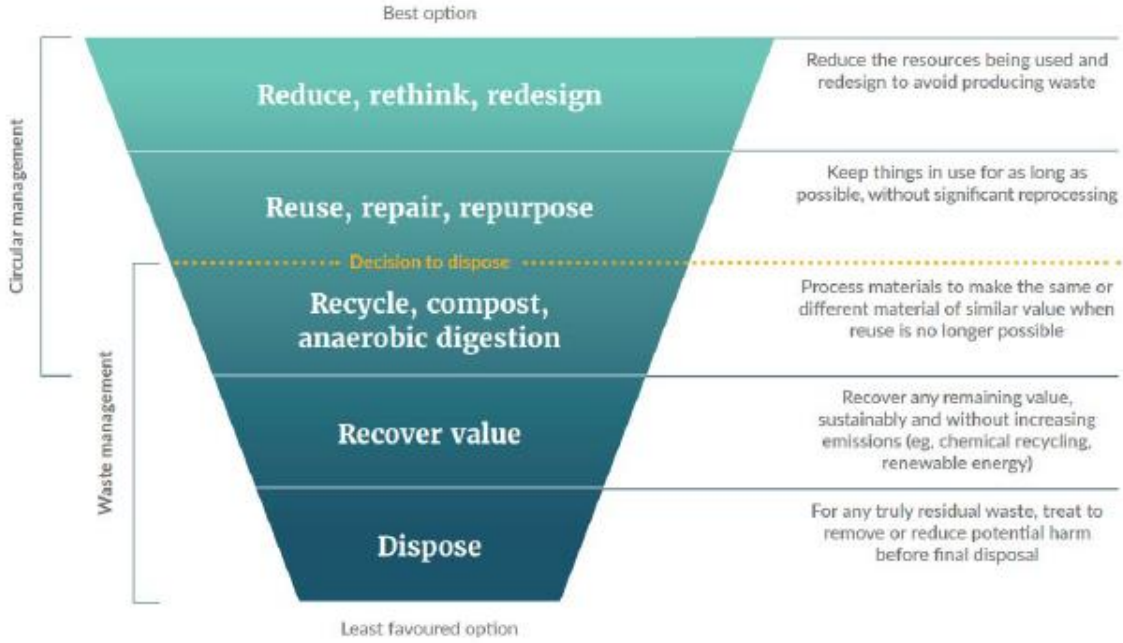
1) Take responsibility for how we make, use, manage and dispose of things
2) Apply the waste hierarchy preferences to how we manage materials
3) Protect and regenerate the natural environment and its systems
4) Deliver equitable and inclusive outcomes
5) Ensure our systems for using, managing and disposing of materials are financially sustainable
6) Think across systems, places and generations

A revised waste hierarchy is included in Te rautaki para, shown below; intended to illustrate which options are the best, and which are least favoured – the general principle being that

[2] Te rautaki para | Waste strategy | Ministry for the Environment
[3] Ōhanga āmiomio - Circular economy | Ministry for the Environment

options towards the top of the hierarchy have better waste minimisation outcomes and less environmental impact that those towards the bottom of the hierarchy.

Figure 1: Revised Waste Hierarchy



The strategy has three phases:

1) Embedding circular thinking into systems (by 2030)
2) Expanding to make circular normal (to 2040)
3) Helping others do the same (by 2050)

Each of the three phases has associated goals, some of which are particularly relevant to a Waste Assessment and Plan process; others more relevant to central government, the wider public, the community/private sector, or other local government roles such as contaminated land management.

The Strategy has three targets to be achieved by 2030:

1) Reduce waste generation by 10% per person
2) Reduce waste disposal by 30% per person
3) Reduce biogenic methane emissions from waste by at least 30%

However, at this point no baseline has been set.

The key role for local government is described in the Strategy as:

- getting involved in implementing the strategy and the process of developing the action and investment plan – using the strategy as a starting point for Plans;
- looking for opportunities to work with other councils, particularly on facilities and services that support a 'national circular resource management network';
- supporting local community groups and non-governmental organisations with waste reduction initiatives;
- incorporating national behaviour change programmes in local activity;

- ensuring planning and consenting processes consider the need for waste management infrastructure and services; and
- planning and resourcing contaminated land management including vulnerable landfills.

Further detail on the implications of Te ruataki para are set out in Appendix A.3.1.

As required by section 44 of the Act, Council has referred to Te rautaki para when preparing this Waste Assessment and Plan review.

These sections are discussed in more detail in Appendix A.3.0.

1.5.2 Waste Minimisation Act 2008

As signalled during consultation and in the recently-released Te rautaki para, the Ministry for the Environment (the Ministry) is also currently working on a review of the Act to improve or amend provisions and consider new provisions. The provisions for use of landfill levy funds (the government's fee which is added to every tonne of waste disposed of to landfills) and the administrative and decision-making processes around this use will also be reviewed and improved. This review will also consider whether, and how, the Litter Act (1979) could be reviewed to better integrate with and support the Act. In July 2023, The Ministry proactively released cabinet papers, a regulatory impact statement, and minutes of decisions for the initial stages of this process (occurring during March 2023). These proposals include the intention to replace the Act and the Litter Act with a new single Act.

The Act has been amended by the 2021 waste disposal levy regulations[4], which set out the progressive increase and expansion of the landfill levy starting 1 July 2021; and supplemented by regulations banning specific items, including microbeads[5] (2017), plastic shopping bags[6] (2018), and numerous tranches of plastics packaging during 2022 and 2023, as described in section **Error! Reference source not found.**.

Currently, the Act provides for half of the revenue from the waste levy to be distributed to councils. These funds are provided pro rata, based on population, and must be spent on waste minimisation and in accordance with each authority's Plan. There have been indications that issues with the current levy distribution may be addressed. One such issue is the amount of levy paid to councils that have a low residential population, but very high visitor numbers that create waste that needs to be accommodated in services and infrastructure.

The waste disposal levy is outlined further in the following subsection.

[4] https://www.legislation.govt.nz/regulation/public/2021/0068/latest/LMS474556.html#LMS474591
[5] https://www.legislation.govt.nz/regulation/public/2017/0291/latest/DLM7490715.html?search=ts_act%40bill%40regulation%40deemedreg_microbeads_resel_25_a&p=1
[6] https://www.legislation.govt.nz/regulation/public/2018/0270/6.0/whole.html

1.5.3 Other Relevant Waste Initiatives

1.5.3.1 Container Return Scheme

Container return schemes (CRS) place a deposit on all containers when sold. This deposit can then be redeemed by consumers when they return the containers. These schemes are in wide use worldwide including Australia and are designed to promote higher rates of recovery of containers and reduce littering by providing an incentive to consumers.

In 2019, the Ministry funded a project led by Auckland Council and Marlborough District Council on the research and design of a potential container return scheme for New Zealand. The outcomes from this project were reported to the Ministry, who analysed the information and produced advice for ministers.

As part of the 'Transforming Recycling' consultation, the Ministry then consulted on a detailed implementation proposal for a container return scheme in New Zealand; and feedback indicated widespread support.

In early 2023, government announced that the CRS development would be put on hold. This position has since been softened to a 'delay' but it remains unclear when, or how, a CRS would be introduced for New Zealand.

The implementation document proposed a deposit of 20c per container for a wide range of beverage containers, excluding 'fresh milk' (the logic being that this product is rarely consumed outside the home and can be recycled in kerbside collection). Depending on the details of the eventual container return scheme, and the extent to which containers may be captured in the scheme, two key effects on household kerbside recycling collections are likely:

- The quantity of containers collected in a kerbside collection would reduce; and
- The value of containers that are part of the CRS, but are still collected in a kerbside collection, will likely result in income for the 'owner' of the items. Usually, the owner is either Council and/or its contractor; so the impact of material lost from kerbside recycling schemes may be mitigated to some extent by deposit redemptions.

Possible implications for Council may be that the frequency of recycling collections could be reduced due to lower volumes of material.

1.5.3.2 Kerbside Standardisation

In 2019 the Ministry completed a national review of kerbside collections and made recommendations as to how to achieve consistency across the country. The report was completed in 2020[7], and the Ministry then considered implementing the three main recommendations:

1. A standard set of items accepted in kerbside recycling collections
2. Glass collected separately to other material streams

[7] https://www.wasteminz.org.nz/wp-content/uploads/2020/08/Final-1.0-Standardising-Kerbside-Collections-in-Aotearoa.pdf

3. A weekly kerbside food scraps collection service for households.

The Ministry consulted on a detailed implementation proposal for kerbside standardisation in New Zealand as part of the 'Transforming Recycling' consultation document[8].

The proposals included, alongside the points above from the original review, options to achieve the diversion of food scraps from businesses. The three possible options set out in the consultation document are:

- Phasing in source-separation of food scraps only from businesses that produce or sell food;
- Phasing in source-separation of food scraps from all businesses; or
- Prohibiting the disposal of food scraps to landfill entirely (which would also preclude disposal of food scraps from household sources).

In March 2023, the Ministry announced its decisions regarding kerbside standardisation alongside the release of Te rautaki para. The key aspects are:

- standardising materials in existing council kerbside recycling collections by 1 February 2024 to: glass bottles and jars, paper and cardboard (including pizza boxes), plastic bottles and containers grades #1, #2, and #5, and aluminium/steel tins and cans;
- requiring council kerbside recycling to be provided to households in urban areas (defined as those with more than 1000 people[9]) by 2027; and
- Council food scraps collections to be provided to households in urban areas (defined as above) by 2030, or earlier, by 1 January 2027if a nearby processing option is available. The latter timeline applies to Waikato District council.[10]

The Ministry advise it will also be working on business food scrap diversion by 2030.

Kerbside standardisation excludes tetrapak and other gabletop/liquid paperboard containers, foil, aerosols, soft plastics, polystyrene, and plastic bottles and containers #3, 4, 6 and 7. Councils will have the discretion to choose whether or not to include compostable bin liners in organic waste collections, and can also choose whether to collect glass separately or comingled with other materials; although best practise is recognised as separated glass collection.

Kerbside standardisation will only apply to council-provided services (either in-house or via a contractor) for now, with the hope that the private and community sector will choose to align their kerbside services with these requirements. However, the Ministry have indicated that they intend to provide for kerbside standardisation to be regulated more widely through the new version of the Act.

The kerbside standardisation changes also include performance standards for household waste kerbside diversion, and reporting requirements for private waste companies.

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[8] https://environment.govt.nz/assets/publications/Transforming-recycling-consultation-document.pdf
[9] As defined by StatsNZ as 'small urban areas' or larger, and shown on the StatsNZ Arc GIS system based on 2022 data.
[10] Defined as within 150km of a 'main centre'.

The performance standards relate to kerbside recycling and food waste, and set an increasing proportion of kerbside waste diverted from landfill:

- 30% by July 2026
- 40% by July 2028
- 50% by July 2030

Councils that do not comply with the requirements to collect a standard set of materials, and/or meet the minimum diversion requirements, can have all or part of their waste levy allocation withheld. Once withheld, this is not available at a later date (i.e. even if the council becomes compliant shortly after the due date, the levy funds will not then be released).

Councils that do not comply with the requirement to provide a kerbside recycling and food scraps collection service to householders in applicable urban areas will not, at this point, have waste levy funds withheld; however, it is likely that there will be regulatory requirements introduced for these aspects at a later date, and it would be very difficult for a council to achieve the minimum diversion requirements without having these services in place.

The performance requirements will be enacted by a gazette notice under the Act, and the two household kerbside collection provisions will be enacted by a regulation issued by the Governor-General.

The Ministry have also clarified that 'provision' of services will require a TA to provide these either through in-house services or a contract.

Council's kerbside recycling service is largely compliant with the requirements for kerbside recycling, but there is no household food scraps collection in the district apart from Raglan; and the Raglan service currently excludes fish waste[11], which is specified as accepted in the national standard. This would contravene existing resource consent conditions for the composting facility in Raglan.

1.5.3.3 Priority Products

The Act allows for products to be named as a 'priority product'. Once a product has been named as such, an extended producer responsibility approach must be taken and a regulated product stewardship scheme developed. The goal of product stewardship schemes is to place the full cost of managing end of life products with the producers/importers, retailers, and consumers; not the general community and/or councils.

The first seven priority products named are:

1. Plastic packaging
2. Tyres
3. Electrical and electronic products (e-waste including large batteries)
4. Agrichemicals and their containers
5. Refrigerants

[11] The resource consent for the Xtreme Zero Waste-operated site at Raglan specifically excludes fish waste from the list of 'food waste' that can be processed on site; along with oils, fats, and liquids.

6. Farm plastics
7. Single-use plastic packaging

The Ministry has taken a 'co-design' approach, which involves industry developing and operating product stewardship schemes with central government oversight. Progress on the schemes, and parties involved, are summarised below.

Priority product	Progress made	Lead agency/ies
Tyres	Consultation on proposed regulations late 2021 Scheme accredited October 2020 Regulation in effect from late 2023	Tyrewise
Large batteries	Consultation on proposed regulations late 2021 Accreditation expected late 2023 Regulation in effect from 2024	Battery Industry Group
Refrigerants (and other synthetic greenhouse gases)	Consultation on regulations in late 2022 Scheme accreditation mid 2023 Regulation in effect from 2024	Synthetic Refrigerant Stewardship group
Farm plastics, agrichemicals and containers (farm waste)	Consultation on regulations planned late 2023	The Agrecovery Foundation
Electrical and electronic products (e-waste)	Scheme design in 2023 Consultation on regulations in 2024	TechCollect
Plastic packaging	Co-design underway	Packaging Forum and Food & Grocery Council

1.5.3.4 Product Bans

In April 2022, the Ministry announced that regulations had been passed to enable the implementation of the first tranche of bans for problematic plastic items. These regulations include:

- plastic cotton buds;
- plastic drink stirrers;
- oxo- and photo-degradable plastic products;
- certain PVC food trays and containers (pre-formed and rigid);
- polystyrene takeaway packaging; and

- expanded polystyrene food and beverage packaging.

The bans took effect from 1 October 2022.

Two more 'tranches' of bans are planned. From 1 July 2023 the following were banned:

- plastic produce bags;
- plastic tableware;
- plastic straws; and
- non-compostable plastic produce labels.

From mid-2025, all other PVC and polystyrene food and beverage packaging will also be banned.

1.5.3.5 Infrastructure Investment Strategy

With the increased and expanded landfill levy comes an increased pool of funds that can be invested in waste management and minimisation initiatives.

The Ministry is developing a proactive strategic investment plan for waste infrastructure, supported by a detailed stocktake of current infrastructure and prioritisation of possible new infrastructure. The goal of this work is to give a national view of the waste investment New Zealand needs over the next 15 years. The outcomes will be incorporated into the action and investment plan that will supplement Te rautaki para, and will be released in the first half of 2024.

In April 2023, the Ministry released a summary report of a 2021 infrastructure assessment[12].

1.5.3.6 Data and Monitoring

Alongside the increase and expansion of the waste levy, the Ministry is developing protocols to collect data from the additional facilities that will now be paying the landfill levy (Class 2-4 landfills). The Ministry has also adopted regulations that enable the collection of some data from Class 5 fills and transfer stations[13], and has proposed an approach for performance reporting by councils in the current consultation. These protocols will be included in the revised National Waste Data Framework, which will be released in late 2023.

The Ministry has also indicated that it is likely the new Act will also include requirements for waste operators to be licensed by a central agency, and to report data on the quantities of waste handled; and that requirements for construction site waste management plans will be included in a revision of the Building Act. It is not clear what the timeframes or specific requirements will be.

1.5.4 Emissions Reduction Plan

The Climate Change Commission (CCC) was established to provide impartial expert evidence to government to support initiatives that would reduce greenhouse gas emissions and address climate change mitigation and adaptation, contributing towards the goals set out in

[12] Eunomia (2023) "Waste and Resource Recovery Infrastructure and Services Stocktake Summary Report", available at www.mfe.govt.nz

[13] https://www.legislation.govt.nz/regulation/public/2021/0069/latest/whole.html

the Climate Change Response Act 2002. The CCC reviewed the waste sector and provided its final advice to government in the Emissions Reduction Plan (May 2022)[14].

The advice of the CCC is that, unless waste management practices and policy settings in New Zealand change significantly, we will not meet the targets set in the 2002 Act:

> "*current policies will not deliver the emissions reductions we must achieve.*"

Comprehensive action is required to reduce waste overall, divert waste from landfill disposal, and improve/extend landfill gas capture systems.

The main source of biogenic methane emissions from the waste sector is the anaerobic decomposition of organic wastes in landfill (94% in 2019).

The key actions for the waste sector are:

- enable households and businesses to reduce organic waste (reduction of food scraps at home and in businesses, and participation in improved kerbside collections);
- divert more organic waste from landfill (improve household kerbside collections of food and garden waste, invest in processing and recovery infrastructure for organics, require organic waste to be separated);
- reduce and divert construction and demolition waste (minimisation, sorting and processing infrastructure, separation of material);
- bans or limits for organic waste to landfill – potentially by 2030;
- increase gas capture from Class 1 landfills (regulations requiring gas capture, investigate additional gas capture); and
- improve waste data including a national operator licensing scheme (which will improve information on greenhouse gas emissions).

The Plan includes a 'waste pathway to 2035' which is highly consistent with Te rautaki para. Key actions over the next ten years include:

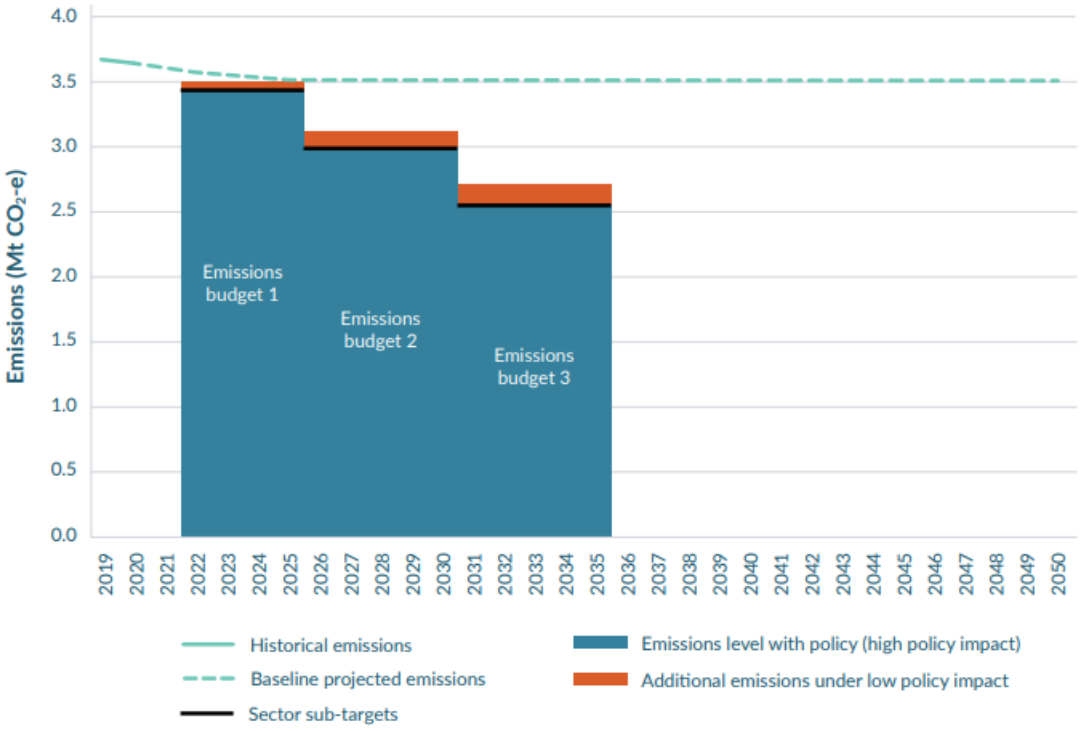
- 2023: organic waste prevention programmes and increased investment in resource recovery
- 2024: new waste legislation, national waste reporting, wider coverage of kerbside organics collections, more organics recovery/processing
- 2025: new regulations to drive emissions reduction, national waste licensing, all Class 1 landfills capturing gas
- To 2030: possibly organic waste landfill limits or bans
- To 2035: target of 40% reduction in biogenic methane (from 2017 levels)

New Zealand has a long-term target of net zero greenhouse gases by 2050, and a specific target for biogenic methane of 24 – 47% reduction by 2050 under the Climate Change Response Act (2002).

It is worth noting that even with all of the initiatives proposed the waste sector would still fall short of achieving the first sub-target (2022 – 2025) but would come very close to the target in the period 2026 – 2035, as shown in the chart below:

[14] https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf

Figure 2: Total projected methane emissions from waste showing the impact of proposed combined waste policy options



Source: Ministry for the Environment. 2022. *Te hau mārohi ki anamata | Towards a productive, sustainable, and inclusive economy.* Wellington: Ministry for the Environment. This assumes 40% of food waste diverted to composting and 60% to anaerobic digestion and 100% of green waste to composting.

1.5.5 Waste Disposal Levy and Information Reporting

In April 2021 the government introduced regulation to expand the scope of the levy from Class 1 landfills to also include classes 2-4,[15] and to require operators of industrial monofills and Class 5 fills to report data on the quantity of waste received. Section 2.1 defines the different types and classes of fills.

The table below shows the timetable and rates for the new levy regime:

Table 1: Levy Rates by Disposal Facility Type and Year

DISPOSAL FACILITY CLASS	1-Jul-21	1-Jul-22	1-Jul-23	1-Jul-24
Municipal landfill (class 1)	$20	$30	$50	$60
Construction and demolition fill (class 2)		$20	$20	$30
Managed fill (class 3)			$10	$10

[15] https://www.legislation.govt.nz/regulation/public/2021/0069/latest/whole.html

Controlled fill (class 4)			$10	$10

https://www.mfe.govt.nz/waste/waste-and-government

As the landfill levy is expanded and raised, there will be an impact on the quantity of material going to the different destinations; however, the extent to which this occurs, and for which materials, depends on a number of other factors. The potential impacts are explored further in appendix A.3.0.

The requirement for all fills to at least report data on the quantity of waste received will provide much greater understanding of the role that all types of facilities play in waste management. These requirements take effect from the beginning of 2023 at the latest with Class 3/4 disposal facilities, cleanfills, transfer stations, and industrial monofills the last to start reporting (from 1 January 2023).

1.5.6 Emissions Trading Scheme (ETS)

Since 2013, Class 1 landfill owners have been required by the Climate Change (Emissions Trading) Amendment Act 2008 to surrender emission units to cover methane emissions. If any solid waste incineration plants are constructed (without energy recovery), this act would also require emission units to be surrendered to cover greenhouse gas emissions from the incineration of household wastes.

The number of emissions units that needs to be surrendered is based on a calculation of how much methane is generated from a tonne of waste. As a starting point, landfills use a default emissions factor for waste (DEF). This is the methane assumed to be generated by each tonne of waste and is currently set at 0.91 tonnes of CO_2-e (CO2 equivalent) per tonne of waste.

However, landfill operators can reduce their liabilities under the ETS through use of a unique emissions factor (UEF). The UEF is a calculation of actual methane released by the specific landfill. This can be done by either capturing the methane that is generated or showing (based on the type of waste going into the landfill) that the landfill generates a different amount of methane to the default.

1.5.6.1 Carbon Price

The other component of the calculation of a landfill's liability under the ETS is the price of carbon. New Zealand units (NZU)[16] currently change hands for $45, up from a recent low of $37[17].

The cost of NZUs has been increasing steadily for the last couple of years, due largely to changes made to the types of offsets that are eligible under the ETS; however, the market has recently been disrupted due to uncertainty over the future of the ETS, and several large funds failing to complete transactions. Class 2-5 fills and closed landfills (along with certain other excluded landfills) are not currently covered by the ETS.

[16] NZUs are carbon credits that are officially accepted to offset liabilities under the NZETS
[17] Accessed from https://www.carbonnews.co.nz/tag.asp?tag=Carbon+prices

The implications of the ETS and carbon prices are explored further in appendix A.3.8.

1.5.7 Resource Management Act Review

Government has resolved to replace the Resource Management Act (RMA) with two new Acts; the Spatial Planning Act, and the Natural and Built Environment Act. These are currently making their way through Parliament as Bills.

The increased abilities and requirements for spatial planning will have a positive impact on waste management; in particular infrastructure, as demand and supply of waste infrastructure will be an essential consideration under a spatial planning approach.

However, there is no specific reference to waste in the Bills, and so the extent to which waste planning will be undertaken successfully for the Waikato region (by the applicable Regional Planning Committee) will depend on local implementation of the provisions.

The Bills both propose a more significant role for iwi in regional-scale planning, which could result in an approach that is more aligned with Te Ao Māori principles and a circular economy approach to waste management and minimisation.

1.5.8 Waste to Energy

There have been several applications to councils around New Zealand for waste to energy facilities, mostly incinerators (when waste is burned to create electricity, and sometimes heat). Due to the nature of these facilities, the ideal locations are the more rural areas and so it tends to be the smaller rural councils that are receiving applications for large waste to energy facilities.

The current national policy environment does not provide strong direction on what is appropriate to achieve the goals in Te rautaki para | the New Zealand Waste Strategy. It states *"Pyrolysis, incineration or gasification of municipal solid waste is unlikely to align with our circular economy goals, due to their negative effects on the climate, dependency on continued linear waste generation, and likelihood of causing hazardous discharge*" but does not contain any specific policy or legislation. Any such proposal for an incinerator can only be assessed by a local council as a land use consent, so many of the wider implications e.g. waste ownership, impact on council's strategic direction for waste, or te ao Māori beliefs are not factors for strong consideration.

In 2023 two local councils commissioned Eunomia Research & Consulting on key Waste to Energy (WtE) technologies and their potential application in the Aotearoa New Zealand context generally, and in Waikato and Tauranga specifically. The key findings from the study in a quantitative sense related to carbon emissions, and concluded:

1. If the waste stream going to an incinerator were similar in composition to waste currently sent to landfill from the Waikato district, carbon emissions would be higher than if it were to go to landfill;
2. A hypothetical waste stream that was proportionally higher in plastics, rubber, and other fossil carbon (with organic waste removed) would result in even higher emissions again from incineration compared to landfill. It should be noted that this situation aligns most closely with New Zealand's current policy and strategy settings;

3. The emissions from incinerating a hypothetical waste stream that represents mixed construction waste would produce lower emissions through incineration compared to sending this type of waste to landfill; and
4. Emissions from organic wastes are minimised by making use of anaerobic digestion rather than incineration or landfill (bearing in mind that this study only compared WtE technologies).

There are competing interests, varying levels of understanding, and complexities in navigating te ao Māori and iwi considerations in the WtE space. Iwi have the mandate for speaking on WtE issues within their rohe, but there is currently no dedicated collective iwi body specifically focused on waste management; such as there are with freshwater and climate. This is compounded by a lack of clarity and understanding generally of WtE in its various forms and little guidance for territorial authorities in how to appropriately engage with iwi on WtE projects. There is opportunity to develop a more cohesive approach to engaging with Māori views on waste issues.

While WtE as a way to deal with "waste" is still widespread in Europe (due to longevity in technology), there is a general trend towards moving away from WtE. This is because as rates of organic waste diversion increase, feedstocks are becoming more fossil-carbon intensive. At the same time electricity generation has steadily been decarbonising, with greater use of hydro, wind and solar power, complemented by nuclear power in some countries, with coal, oil and gas use reducing. Alongside this, circular economy policies focused at the top end of the waste hierarchy now drive the waste management strategies in Europe.

The recommendations from the study were that residual waste treatment and disposal technologies that are chosen should be those that best align with strategic aims to create a circular economy and reduce climate change impacts. Based on these considerations, the report recommends, for the Waikato region and Tauranga city and indeed Aotearoa New Zealand more generally, that:

• Food waste should be separated for anaerobic digestion, and/or composting with other organics, and this should be mandated nationwide;

• WtE 'incineration' for mixed waste and fossil-based materials should be avoided unless there is strong evidence that fossil fuel use will be directly offset, with a clear carbon benefit; and/or drives to increase circularity (as part of a circular economy) will not be impeded by the technology, in the short to medium term;

• In the view of the study's authors; if WtE for uses other than the above is to be effectively avoided, this will potentially require a strong level of sanction, and legislative and/or regulatory instruments should be considered;

• Advanced thermal treatments, such as pyrolysis and gasification, should be avoided for treatment of mixed solid waste as these technologies are unlikely to be viable in practice due to high technical and commercial risks;

• Burning mixed waste as refuse-derived fuel only be allowed in co-processing, e.g. in a cement kiln or a thermal power station, as a transitional solution where offsetting the burning of coal or oil;

• Landfill (with optimised gas capture and energy generation, to limit methane emission impacts) be used as the only waste management approach for genuinely residual mixed waste (i.e. that cannot be reused, recycled, anaerobically digested or composted) in the transition to a circular economy. It is important to note that waste to landfill can be gradually reduced in that transition, whereas waste to incineration can only realistically be reduced by closing whole facilities; and,

• Māori are proactively engaged in WtE matters. Options for this include establishing a representative iwi body for waste issues, providing iwi with the resources for well-informed decision making, engaging through genuine relationships and partnerships, and empowering councils to provide resources to support iwi and Māori to engage.

1.5.9 International Commitments

New Zealand is party to the following key international agreements:

1) Montreal Protocol – to protect the ozone layer by phasing out the production of numerous substances
2) Basel Convention – to reduce the movement of hazardous wastes between nations
3) Stockholm Convention – to eliminate or restrict the production and use of persistent organic pollutants
4) Waigani Convention – bans export of hazardous or radioactive waste to Pacific Islands Forum countries

1.6 Local and Regional Strategic Context

This Waste Assessment has been prepared within a local and regional planning context whereby the actions and objectives identified in the Waste Assessment reflect, intersect with, and are expressed through other planning documents. Key planning documents and waste-related goals and objectives are noted in this section.

1.6.1 Local Strategic Context

Council's current Plan was adopted in July 2018. It also has an LTP adopted in 2021.

1.6.1.1 Waste Management and Minimisation Plan

The July 2018 Plan states that "Zero waste and resource recovery are an integral part of our community." This vision was supported by five goals and six objectives:

Goals:

- G1. Our waste minimisation and management are best practice, and manage social, cultural, spiritual, economic, health and environmental impacts of waste
- G2. A reduced quantity of material entering the waste stream, increased resource recovery
- G3. Our nationally recognised, innovative local resource recovery industry is growing
- G4. Our collaborative partnerships with key stakeholders are growing our "zero-waste communities"
- G5. Access to good information about waste in the district, in alignment with the National Waste Data Framework

Objectives:

- O1. Waste management practices manage social, cultural, spiritual, economic, health and environmental impacts of waste
- O3. A commitment to work with Tangata Whenua to achieve the waste minimisation outcomes set out in the Plan.
- O2. Waste diversion is increasing and waste to landfill is decreasing including Council's waste generating activities.
- O4. Our communities are actively engaging in waste avoidance and minimisation, and becoming "zero-waste communities"
- O5. Partnerships with others to achieve efficient and sustainable waste minimisation and management, including joint working and co-operation with territorial and regional councils, and central government
- O6. Contributing to the national discussion advocating for effective product stewardship and a bottle deposit scheme

The targets in the 2018 Plan were:

1) 10% Reduction in per capita rubbish to landfill
2) 20% Increase in per capita kerbside diverted material
3) 5% Reduction in per capita kerbside rubbish to landfill
4) 20% Increase in per capita kerbside diverted material.

1.6.1.2 Long Term Plan

The 2021-31 Long Term Plan (LTP) overall vision states that "*Our vision is that we work together as a district to build liveable, thriving, connected communities as our townships grow.*"

The LTP highlights that council is seeking to position itself to provide leadership in the solid waste activities of the district and provide cost-effective services. Solid waste activities are funded by rates and fees. There are also educational activities in schools and early childhood centres and with the community funded from the Ministry for the Environments waste disposal levy. Throughout the LTP solid waste activities are related back to goals, objectives and targets highlighted in the 2018 Plan. The LTP also reinforces the intention set in the Plan to cease providing the annual inorganic rubbish collections.

Significant growth in the northern part of the district is contributing to increased demand for more waste infrastructure in this area; such as a refuse transfer station and/or resource recovery centre.

Funding is allocated in the LTP for a number of waste-related projects:

- Huntly resource recovery centre upgrades (2021/22 and 2022/23)
- North Waikato resource recovery centre (2022/23 and 2023/24)
- Raglan food scraps collection (2021/22)
- Raglan transfer station renewal work (2021/22 and 2022/23)
- Huntly transfer station renewal work (2021/22)

Council also completed a solid waste activity management plan in 2021.

1.6.1.3 Solid Waste Bylaw

Waikato District is one of only a few councils in the Waikato region that does not have a Solid Waste bylaw. There has been discussion on implementing a Solid Waste Bylaw in the 2021-2031 Solid Waste Activity Management Plan; however, this did not come into effect as planned in 2019.

1.6.2 Waikato Regional Council

The Waikato Regional Council has a statutory duty to adopt a plan to manage and mitigate the environmental impacts on air, land, and water. In the Waikato region, this is currently directed by three documents;

- The Waikato Regional Plan
- Waikato Regional Coastal Plan
- The Operative Waikato Regional Policy Statement

The Waikato Regional Plan aims to guide the Waikato region to achieve environmental outcomes that the region as a whole aspires to.

It recognises the long life of community infrastructure, including the fact that many critical infrastructural elements in the region are either the same structures or have been in the same location for the last century. Additionally, the effects of current activities are projected to take many years for their full impacts to be realised.

The relevant Environmental Results anticipated from the plan are:

- a decline in the number of contaminated sites created each year;
- an increase in the number and use of refuse transfer stations in rural areas and hazardous waste collection depots;
- solid waste on farms managed in a way that avoids adverse effects (this specifically refers to responsible management of offal holes or dumps. When they are closed, their location should be clearly identified so that future users or owners of the farm do not accidentally disturb the site);
- a reduction in the proportion of green waste in municipal solid waste streams going to landfill; and
- increased rates of waste oil recycling/recovery through the oil industry waste oil collection programme and TA collection systems.

The Waikato Regional Council has also produced the Waikato Regional Waste Prevention Action Plan 2020-2025. The Waikato Waste Prevention Plan aligns with Waikato Regional Council's 10-year strategy, the Waikato Regional Policy Statement, and the Waikato Wellbeing Project. A main driver for this plan comes from the Waikato Regional Policy Statement, which states:

"6.5.7 Waste minimisation

Waikato Regional Council will:

a) work with territorial authorities, industry and community groups to facilitate and encourage initiatives for the minimisation and reuse of waste; and
b) facilitate the collation and dissemination of regional waste data to support the identification of waste management priorities and trends.

Under the Waikato Wellbeing Project, goals for achieving a more environmentally sustainable, prosperous, and inclusive Waikato region by 2030 are being set using the Sustainable Development Goals framework.

As part of the Waikato Wellbeing Project, under SDG 12 Responsible consumption and production, the goal of reducing waste to landfill in the Waikato region by 50% has been set.

1.7 Our District

This section presents a brief overview of key aspects of the regional and local geography, economy, and demographics. These key aspects influence the quantities and types of waste generated and potential opportunities for the Council to manage and minimise these wastes in an effective and efficient manner.

1.7.1 Geography and Climate

Waikato district covers over 400,000 hectares with the northern area immediately to the south of Auckland Council. In the south we border Hamilton City , Waipa and Otorohanga council areas. In the east, we border Hauraki and Matamata Piako district councils. Following the restructuring of local government in Auckland in 2010, the Waikato district boundary shifted north to encompass the towns of Tuakau and Pōkeno.

Most of the key towns in the district are located close to the Waikato river and state highway 1 – Huntly, Ngāruawāhia, Tuakau, and Te Kauwhata; with the exception being Raglan, located on the coast west of Hamilton city. There are a number of smaller towns and settlements amongst large rural areas.

One of the key features in the district is the Waikato River, which threads its way through the Waikato region from Taupo to Port Waikato.

Figure 3: Map of the Waikato Region and Territorial Authority Areas

Source: Local Government website

The Waikato district boundary extends along the western coast of New Zealand from Aotea Harbour to Port Waikato, and touches the eastern coastline at the settlement of Miranda on the Hauraki Gulf. The district is also home to large areas of significant indigenous vegetation, containing highly productive soils, making it a key contributor to the country's economy in terms of agricultural yield.

The climate in Waikato district is generally mild, with a moderate level of annual rainfall. The temperature ranges from 13.5 degrees Celsius in July through to 24.2 degrees Celsius in February.

1.7.2 Population

The population in the Waikato district in 2020 was 81,533. 26% of the population are Māori, 76% are European, Pacific and Asian ethnic groups make up the next largest groups with 4.2% and 5.8% of the population respectively[18].

The Waikato district is experiencing high levels of growth. The population of 81,533 (2020) is expected to increase by more than 14,500 or around 18% in the next decade, and rise to 133,293 by 2060[19].

[18] https://www.stats.govt.nz/tools/2018-census-place-summaries/waikato-district
[19] Waikato District Council Long Term Plan population modelling, provided by Council

The district has a diverse socio-economic demographic, ranging from some of the lowest socio-economic communities to some of the most affluent.

1.7.3 Iwi

The Waikato is rich in Māori history, the home of Kiingitanga and has ties to many iwi. Tangata whenua ('people of the land') hold a significant physical and cultural relationship with the Waikato district. Waikato-Tainui are tangata whenua of the Waikato region. Thirty-nine of their marae are located within Waikato District Council's boundaries. There are four principal tribes that comprise the Tainui waka; Hauraki, Ngaati Maniapoto, Ngaati Raukawa and Waikato[20].

1.7.4 Economy

The rural environment, including rural villages, is and will continue to be an integral part of the district as it makes a significant contribution towards the district's economy.

Dairy farming and mining are the key contributors to the district, alongside other activities such as aggregate and sand extraction, education, adventure tourism, and events.

The district is located within the 'Golden Triangle' zone formed by the Auckland, Bay of Plenty and Waikato regions which generate the bulk of the nation's economic activity. Ongoing development of the Waikato Expressway and other roading projects in Auckland and the Bay of Plenty have the potential to further increase economy activity for the district.

The district has a median level of income of $34,700[21] compared to the national average of $62,774[22]. The diversity of the district shows differing results when comparing the rural wards with urban wards. A high number of people receive their income from the agriculture and fishing industries, which reflects the district's rural nature.

[20] www.waikatotainui.com
[21] https://www.stats.govt.nz/tools/2018-census-place-summaries/waikato-district#work-income-and-unpaid-activities
[22] odc-long-term-plan-2021-2031.pdf (otodc.govt.nz)

2 Waste Infrastructure

This section outlines existing waste management and minimisation infrastructure across the Waikato district, and further abroad where applicable. The facilities available in the Waikato district are a combination of those owned, operated and/or managed by Council, and those that are owned and/or operated by commercial entities or community enterprises.

This inventory is not to be considered exhaustive, particularly with respect to the commercial waste industry as these services are subject to change. It is also recognised that there are small private operators and second-hand goods dealers that are not specifically listed. However, the data is considered accurate enough for the purposes of determining future strategy and to meet the needs of the Act.

2.1 Disposal Facilities

In 2021, the Ministry adopted regulations to extend the landfill levy and apply information requirements to facilities that were not already subject to the levy and reporting requirements. These regulations also established legal definitions for disposal facilities and other fills. Previously, disposal facilities had been categorised according to the 2016 Waste Management Institute of New Zealand (WasteMINZ) Technical Guidelines for Disposal to Land.[23] As there are differences, albeit slight, between the two; the legal definitions take precedence[24].

The definitions of the six classes of facilities in the regulations are summarised below.

Class 1 - Municipal Disposal Facility

Accept any of the following:

- Household waste
- Waste from commercial or industrial sources
- Waste from institutional sources
- Green waste
- Waste that is not accepted at Class 2-5 disposal facilities.

Class 2 – Construction and Demolition Disposal Facility

Accepts waste from construction and demolition activities. Does not accept Class 1 waste.

Classes 3 and 4 – Managed or Controlled Fill Disposal Facility

Accepts any of the following:

- Inert waste material from construction and demolition activities
- Inert waste material from earthworks or site remediation

Does not accept Class 2 waste.

[23] www.wasteminz.org.nz/pubs/technical-guidelines-for-disposal-to-land-april-2016/

[24] www.legislation.govt.nz; It is likely that the Technical Guidelines will be revised so it is aligned as closely as possible with the the Ministry definitions.

Class 5 – Cleanfill

Accepts only virgin excavated natural material (such as clay, soil, or rock) for disposal – but is not a 'disposal facility'.

Industrial Monofill

A facility that accepts disposal waste that:

- Discharges or could discharge contaminants or emissions
- Is generated from a single industrial process (e.g. steel or aluminium making, or pulp and paper making) carried out in one or more locations.

Any facility that accepts Class 1 waste must be defined as a Class 1 facility.

The actual wording used in the regulations and examples of types of waste accepted at each facility is provided in appendix A.2.0.

The regulations also define a transfer station as a facility that receives waste and where waste is then transferred to a final disposal site or for further processing. Significantly, if a site does not accept waste that is then transferred to a final disposal site (i.e. residual waste), it is not a transfer station (but is instead a recycling drop-off site or similar) and isn't required to report data.

2.1.1 Class 1 Disposal Facilities

There is one Class 1 landfill in operation in the Waikato district; EnviroNZ Ltd's North Waikato Regional Landfill at Hampton Downs. While the landfill at Pukemiro has been operated as a Class 1 in the past, the current owners Green Gorilla are operating it as a Class 2 (essentially meaning no household waste is accepted).

2.1.2 Emissions from Waste to Class 1 Landfills

When waste is landfilled, it breaks down in the anaerobic (lacking oxygen) environment of the landfill and instead of producing carbon dioxide or CO2, as would be the case in an oxygenated environment), produces methane or CH4. Methane is a far more potent greenhouse gas than carbon dioxide, with an immediate (less than 20 years) global warming impact 80 times higher.

The New Zealand ETS requires Class 1 landfill operators to surrender carbon credits, based on the amount of greenhouse gases released. This in turn is calculated using the quantity of waste received by the landfill, and the composition of that waste – as different material types contain differing levels of carbon, and break down at different rates (for example food scraps breaks down very quickly, while timber breaks down extremely slowly).

Large Class 1 landfills (over 1 million tonnes total capacity) are required to operate landfill gas capture systems, where the methane is captured before escaping to the atmosphere and can be burned to create energy or to convert to the less harmful CO2. However, landfill gas capture and recovery systems do not capture all the methane gas that is produced, and so a proportion still escapes to the atmosphere. The Climate Change Commission estimates

the average lifetime gas capture for landfills in NZ to be 68%, which is broadly in line with international estimates of lifetime landfill gas capture rates[25].

2.1.3 Class 2-5 Landfills

Research estimates that waste disposed of to land outside of Class 1 landfills accounts for approximately 70% of all waste disposed of. Currently, these operators are not required to pay the waste levy to central government and some have only recently started reporting waste quantity data.[26] Other disposal sites include Class 2-5 fills and farm dumps.

Class 2-5 fills can be an issue for effective and efficient waste management as, for some materials, these disposal sites are competing directly with other options such as composting sites and Class 1 landfills; while Class 2-5 landfills are much less costly than Class 1 landfills to establish and require much lower levels of engineering investment to prevent discharges into the environment. Class 2-5 landfills also have much lower compliance costs than Class 1 landfills and have not previously been required to pay the waste levy. Because of these differing cost structures, Class 2 landfills generally charge markedly less for disposal than Class 1 landfills.

From 1 July 2022, Class 2 disposal facilities have been required to pay the levy at a rate of $20 per tonne (going up to $40 per tonne in 2024). Class 3 and 4 disposal facilities will be required to pay the levy from 1 July 2023 at a rate of $10 per tonne. True Class 5 disposal facilities (accepting virgin excavated and natural material only) will not be required to pay the levy, but are required to report on quantities starting from 1 January 2023.

Class 2 disposal sites and refuse transfer stations (RTS) were required to start reporting data on waste quantities from 1 January 2022.

Following these data requirement extensions, the Ministry will hold data on the quantities of waste disposed of at these sites and are in the process of developing a database of Class 2-5 facilities around the country. Because of the varying dates that the requirements become effective, the data currently available from the Ministry only includes Class 2-4 landfills; it may also not reflect closures since mid-2022.

The table below shows the number of known Class 2-5 fills in the district.

Site Type	Detail
Industrial monofils	None known

[25] CCC - He Pou a Rangi the Climate Change Commission.Ināia tonu nei: a low emissions future for Aotearoa May 2021, p125

[26] Ministry for the Environment (2014) Review of the Effectiveness of the Waste Disposal Levy. The report estimates 56% of material disposed to land goes to non-levied facilities, 15% to farm dumps and 29% to levied facilities.

Class 2 C&D landfill	Green Gorilla, Pukemiro Envirofert Ltd, Tuakau Wedding & Sons, Te Kowhai Ridge Rd, Pōkeno Panarimu Rd, Mangatawhiri
Class 3/4 managed or controlled landfill	EnviroNZ Ltd, Pōkeno Fulton Hogan, Tuakau Huntly Speedway, Huntly McWatt Ltd, Pōkeno Wood Ltd, Pōkeno Online Contractors, Horotiu Onroad Transport Ltd, Pukekohe Remediation NZ Ltd, Te Awamutu Rd Ridge Road Quarry Ltd, Bombay Watercare Services, Pukekohe Winstone Aggregates, Tauwhare
Cleanfill	McPherson Resources Ltd, Pōkeno Smythes Quarries Ltd, Waitakaruru WPBH Earthmoving, Mangatāwhiri
TOTAL	**18**

2.1.4 Transfer Stations, Resource Recovery Centres, and Recycling Drop-off Points

Refuse transfer stations or resource recovery centres (RRCs) and recycling drop-off points provide for those that can't or choose not to make the journey to a disposal facility, or have excess material than that accommodated in kerbside collections. Waste can be dropped off at these sites by the public and commercial collectors after paying a gate fee, and the waste is subsequently compacted before transport to a Class 1 disposal facility.

The terms 'RTS' and 'RRC' are frequently used interchangeably; however, RTS were traditionally, and primarily, established as a point to dispose of residual waste and where this waste could be bulked and prepared for transport to a disposal site. 'RRCs' are usually expected to have a focus on waste diversion, and include a wide variety of waste diversion opportunities – such as green waste, scrap metal, cleanfill, hazardous wastes, recyclables, batteries, etc. The most well developed RRCs would include additional aspects such as a reuse store and/or an education facility, support product stewardship schemes, and divert more difficult material streams. Appendix A.4.2.3 discusses the various forms that an RRC

(or RRP, resource recovery park) can take and how they can significantly contribute to a circular economy.

Recycling drop-off points can be defined by size and location; in that the sites are usually intended primarily as a site for recyclables, with perhaps a few other materials; but very seldom providing for the disposal of residual waste.

There are two transfer stations located in the district; in Huntly and Te Kauwhata. There is an RRC in Raglan.

In addition to this, there are two recycling drop-off points servicing the rural community around Raglan. In addition to these permanent drop-off locations there is also a recycling drop-off collection for Glen Murray residents on the first Saturday of each month.

These facilities accept the same range of materials as that taken by the urban kerbside service.

The table below shows the details of these facilities.

Table 2: Transfer Stations, Resource Recovery Centres and recycling drop-off points

Facility	Detail
Huntly Green Gorilla RTS **93 McVie Road, Huntly**	Accepts car batteries, clean fill, fridges, freezers, furniture, washing machines, greenwaste, metal, rinsed empty farm containers, spray/aerosol cans, TVs, wood (some) and household recycling crates, first three crates can be dropped off for free.
Te Kauwhata Green Gorilla RTS **Rata Street, Te Kauwhata**	Accepts car batteries, fridges, freezers, washing machines, greenwaste, metal, rinsed empty farm containers, spray/aerosol cans, TVs, wood (some) and recycling crates for a fee.
Xtreme Zero Waste Raglan RRC **186 Te Hutewai Road, Raglan**	A wide range of services on site including miniskips, compost for sale, woodyard (upcycled furniture for sale), metal yard (assortment of metals items for sale), greenwaste and cleanfill drop-off, and household items and clothes for sale. Also accepts animal carcasses, medical waste, batteries, clean fill, e-waste, fluorescent tubes, farm chemicals, fridges, freezers, washing machines, furniture, household items, paint, silage wrap, metal, rinsed empty farm containers, spray/aerosol cans, waste oil and wood.
Monthly recycling collection **Glen Murray**	First Saturday of every month, this site collects glass, tins, cans, household plastic numbers 1, 2 and 5, and flattened cardboard

Facility	Detail
Recycling drop-off points	Te Uku- Located at the back of the Te Uku Store- 3440 SH23 Te Mata- Located at the cnr of Te Hutewai/Te Mata Roads Collection sites for glass, tins, cans, and household plastic numbers 1,2 and 5, and flattened cardboard.

2.1.5 Closed Landfills

The six closed landfills for which Council has ongoing management and monitoring responsibility are located in Huntly, Ngāruawāhia, Aka Aka, Pukekohe, Raglan, and Te Kauwhata. The council carries out regular monitoring and inspection of closed landfills to ensure that they are remediated and managed according to the requirements of their resource consents.

There are also two closed landfills in the district under private ownership – a Department of Corrections facility at Waikeria, and a timber waste landfill in Pōkeno.

The figure below shows the location of all known major landfills in the Waikato region.

Figure 4 - Closed, Open and Consented Landfills Waikato Region

Source: https://www.waikatoregion.govt.nz/assets/WRC/WRC-2019/Waste-landfills.jpg

2.2 Hazardous Waste Facilities and Services

The hazardous waste market comprises both liquid and solid wastes that, in general, require further treatment before conventional disposal methods can be used. The most common types of hazardous waste include:

- Organic liquids, such as those removed from septic tanks and industrial cesspits
- Solvents and oils, particularly those containing volatile organic compounds
- Hydrocarbon-containing wastes, such as inks, glues and greases
- Contaminated soils (lightly contaminated soils may not require treatment prior to landfill disposal)
- Chemical wastes, such as pesticides and agricultural chemicals

- Medical and quarantine wastes
- Wastes containing heavy metals, such as timber preservatives
- Contaminated packaging associated with these wastes.

A range of treatment processes are used before hazardous wastes can be safely disposed.

Most disposal is either to Class 1 landfills or through the trade waste system. Some of these treatments result in trans-media effects, with liquid wastes being disposed of as solids after treatment. A very small proportion of hazardous wastes are 'intractable', and require exporting for treatment.

These include polychlorinated biphenyls, pesticides, and persistent organic pollutants.

There are four participants in the local hazardous waste market; EnviroNZ Technical Services, Waste Management Technical Services, Wastech Services, and provides hazardous waste management services for agricultural properties.

Council does not provide hazardous waste collection, however the two RTS and the RRC at Raglan accept some household hazardous wastes. There is no site in the district that accepts asbestos waste. This unwanted hazardous waste must be transported to a facility outside of the district.

2.3 Wastewater Treatment

As outlined earlier in this report, wastewater treatment is considered where it results in waste being managed through solid waste systems.

All management practices result in solid residual (sludges or biosolids) that are then disposed of to landfill, along with screenings from wastewater systems.

The future of wastewater management in the district, as across New Zealand, is currently depending on the implementation of the national three waters management and therefore won't be considered in this Waste Assessment.

2.4 Recycling and Reprocessing Facilities

There are a number of processing and reprocessing facilities within the district. These are shown in the table below.

Table 3: Processing/Reprocessing within the District

Facility	Detail	Annual Tonnage
Envirofert	Garden waste	3000
Envirowaste, Hampton Downs	Household garden waste, food waste	8000

Facility	Detail	Annual Tonnage
Xtreme Zero Waste, Whaingaroa-Raglan	Locally-collected food scraps, garden waste delivered to site, some compostable packaging	3,500
Green Gorilla, Huntly	Mixed recycling is sorted into bales of single materials for sale onwards into the recycling reprocessing market	3,000

In addition, there are a number of key processing facilities that are located out of the Waikato district, but accept material from the district. These are shown below in Table 4.

Table 4: Processing/Reprocessing Infrastructure Outside the District

Facility	Detail	Annual Tonnage
Visy Glass Auckland	Reprocessing glass	17,416
Revital Cambridge	Green waste, commercial garden waste, animal manure	24,500
Soilpro Auckland	Wood and timber and animal manure	28,000
Living Earth Tirohia	Garden waste, animal by-products, commercial garden waste	15,000
Carbon Cycle multiple locations	Household food waste (small/community scale only)	120
MyNoke multiple locations	Commercial sludge and waste water treatment plant sludge	70,000
Ecostock Auckland	Commercial foodwaste	5,250
EcoGas Reporoa	Household and commercial food scraps and organic processing wastes	6,000
Tyres	Multiple sites, via the Tyrewise product stewardship programme.	unknown
Treadlite Cambridge	Upcycles tyres into granular rubber product for reuse in sports and equestrian surfaces	30,000

Facility	Detail	Annual Tonnage
OJI Fibre Solutions Auckland	Fibre reprocessing	31,200
Ward Demolition and Green Gorilla Auckland	Construction and demolition waste, concrete, rubble and timber	37,000
Scrap metal yards	Numerous sites, industry estimate	58,568
Global metal solutions Waikato and Auckland	Shredder feed and scrap metal	2,870
Computer Recycling	e-waste reprocessing, Auckland	40
Recycling Group	e-waste reprocessing, Auckland	28
Abilities	e-waste reprocessing, Auckland	34
South Waikato Achievement Centre	e-waste reprocessing, Waikato	21
Urban Miners Cambridge	E-waste processing	17
Plasback	Nationwide product stewardship scheme for a variety of agricultural plastics	901
Agrecovery	Nationwide product stewardship scheme for unwanted agrichemicals, and the recycling or recovery of empty containers, drums and large bulk containers	43
Astron Auckland	Plastics reprocessing	425
Expol	Numerous sites, product stewardship programme for rigid, extruded polystyrene foam	21

Facility	Detail	Annual Tonnage
Terracycle	Numerous sites, product stewardship programme for recycling solutions for typically hard-to-recycle waste streams	1

In addition, there are a large number of charity shops, second-hand stores, and smaller scrap metal recyclers that have a role in diverting material from landfill disposal and keeping resources in circulation.

In Waikato district, like many other parts of New Zealand, many material types are transported out of the district and even out of the region. Reprocessing infrastructure for some materials requires significant throughput to be economic and so one site tends to service multiple regions.

2.5 Summary and Assessment

Access to landfill disposal for the district is assured for the medium to long term, with EnviroNZ's North Waikato Regional Landfill consented to 2030, but with capacity to 2045 at least. The district currently also has access to nearby Tirohia landfill, although this is forecast to be at capacity within the next five to ten years.

The Waikato district is almost ideally placed to access the majority of reprocessing options available to the upper North Island, providing the district with a wide range of options for diverted materials in addition to export markets.

Xtreme Zero Waste, which provides collection services to the Whaingaroa-Raglan community and runs an RRC, is one of the best-known examples of a community-led waste operation in New Zealand.

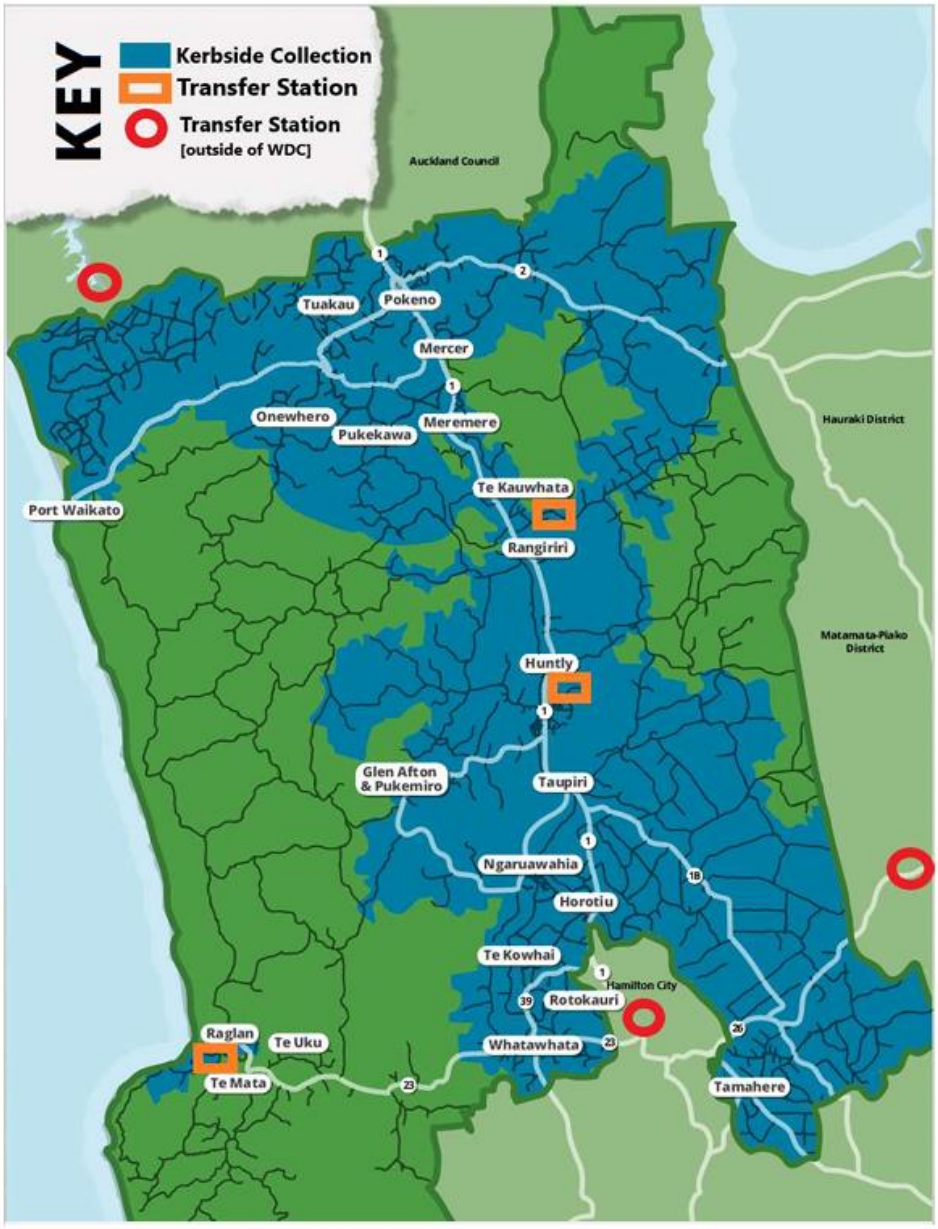
The Waikato district will soon need to identify the best processing option for the household food scraps, which will need to be collected at the kerbside by 1 January 2027 (as outlined in section 1.5.3.2). The central location of the Waikato district means many processing options are within reach, and it is anticipated that additional options will be available in the near future.

3 Waste Services

3.1 Council-provided Waste Services

The map below shows the parts of the district that are provided with a kerbside recycling service (as well as the locations of transfer stations).

Figure 5: Council Kerbside Collection Coverage in Waikato District



Source: Waikato District Council's Solid Waste Activity Management Plan

Collection services vary across the district. The table below summarises the various services offered.

Material stream	Majority of the district (approx. 24,200 households)	Tuakau Central (approx. 1,100 households)	Raglan (approx. 2,200 households)
Rubbish	Weekly collection from customer-supplied 60L rubbish bags, when using a $1.50 pre-paid sticker (maximum 15kg)	Weekly collection from a 120L wheeled bin, when using a $3 pre-paid sticker	Weekly collection from pre-paid bags, 60L or 25L
Recycling (glass bottles and jars; plastic containers #1, #2, and #5; aluminium and steel tins and cans)	Same service district-wide Weekly collection from blue crates (maximum of two)		
Paper/cardboard (no greater than 50cm in any dimension)	Same service district-wide Weekly collection, flattened and tied next to crates		
Food scraps (no fish waste)	No collection	No collection	Weekly food scraps collection from a 23L kerbside bin, with food contained in compostable liners

Glass should be kept separate from other materials, either using one bin for glass or if the household only has one bin, alternate weekly between glass and other materials.

While the kerbside rubbish collection in Tuakau and much of the district requires the purchase of a tag or sticker by the householder, these services are also partly funded through a targeted rate.

The food scraps and recycling collection provided in Raglan are funded through a council targeted rate.

As mentioned earlier in section **Error! Reference source not found.**, the Ministry has recently released the details of a standardised kerbside service. The household kerbside recycling collection services currently provided in the district are compliant with the list of approved materials. However, a food scraps service needs to be provided to all areas 'small urban' or larger in the district; but only Raglan currently receives a service.

Additional areas requiring a household food scraps collection services by 1 January 2027 include Ngāruawāhia, Huntly, Te Kauwhata, Pōkeno, and Tuakau.

3.1.1 Other Council Services

Council no longer provides an inorganic collection, This collection was ended to support waste minimisation goals, save money, and reduce health and safety issues for collection staff.

3.1.2 Waste Education and Minimisation Programmes

There are a wide range of education and waste minimisation programmes or initiatives funded or delivered across the district:

- General service promotion;
- Home composting;
- Para Kore;
- Enviroschools;
- Event waste reduction guidance;
- Support for national campaigns e.g. Love Food Hate Waste, Plastic-free July, Keep NZ Beautiful
- Waste-free Living education (parenting, food waste reduction, etc.)

3.2 Non-Council Services

A variety of services are provided across the district by commercial and community entities.

EnviroNZ Ltd provide a household rubbish collection service through the north of the district using yellow pre-paid bags.

Commercial refuse and recycling is collected by at least fifteen companies/community organisations who collect materials including refuse, recycling, and garden waste from a wide range of containers.

3.3 Summary and Assessment

A key factor going forward is going to be compliance with the kerbside standardisation requirements set by government. Council is currently providing kerbside recycling collection services to households in urban areas as defined by the Ministry (1000 people or more).

The council currently only provides a food scraps collection to one area in the district (Raglan) and will need to implement this to Tuakau, Pōkeno, Te Kauwhata, Huntly, and Ngāruawāhia by January 1st, 2027. In a practical sense, this means that council needs to introduce this collection by late 2026 (November at the latest) to avoid the holiday season.

4 Situation Review

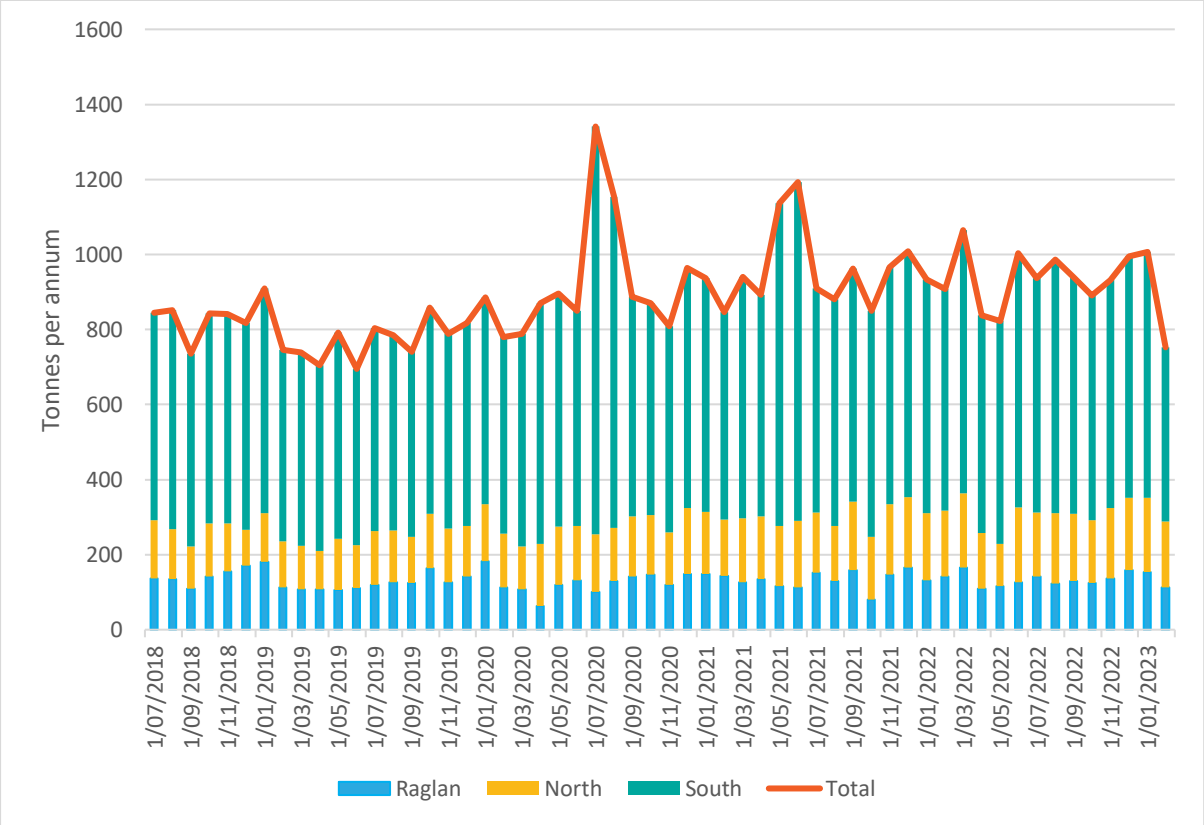
4.1 Waste to Class 1-5 Disposal

The terminology that is used in this section to distinguish sites where waste is disposed of to land are taken from the relevant the Ministry regulations, as discussed earlier in section 2.1.

4.1.1 Waste to Class 1 Disposal

The figure below summarises the historical waste to landfill in Waikato district, based on Council's records.

Figure 6: Waikato District Waste to Class 1 Landfill



The total waste to landfill from the district is also summarised in the table below:

Table 5: Waste to Class 1 Landfill from Waikato District Annually

Year	2018/19	2019/20	2020/21	2021/22	2022/23
Waste to landfill (tonnes)	9,519	10,401	11,968	11,148	10,896

4.1.2 Waste to Class 2-5 Fills

There are four known Class 2 landfills, 11 Class 3/4 landfills, and three Class 5 cleanfills in Waikato district.

As discussed earlier in this report, there is very little information available regarding most cleanfilled waste as the Waikato Regional Council does not require reporting on waste quantities.

A 2011 Ministry report on non-levied disposal facilities stated:[27]

> *No information about cleanfill quantities was compiled for this report because the few sites with available data are unlikely to be indicative of what is happening around the country.*

Several other studies have attempted to quantify the disposal of waste to Class 2-5 fills, often on a per capita basis, with widely varying results. In practical terms, the lack of precise data about disposal of waste to Class 2-5 landfills makes it impossible to reliably monitor any changes over time in the disposal of major waste streams, such as construction and demolition waste.

4.2 Composition of Waste

There is no recent composition data available for waste to landfill from Waikato District; although there is a good understanding of what is collected through council services.

In late 2022, Waikato's kerbside waste was surveyed on behalf of Council by Sunshine Yates Consulting. The composition data presented here is largely taken from the audit report. Waste was collected for auditing in rural and urban communities, and the three different service areas described above in section 3.1.

The figure below shows the relative weight of different materials in rubbish put out by householders (in bags or bins). The figure has been colour coded to show the highest and lowest weights.

[27] Ministry for the Environment (2011) *Consented Non-levied Cleanfills and Landfills in New Zealand: Project Report*. Wellington: Ministry for the Environment

Table 6: Composition of household rubbish (by weight, kg per week)

Material type	Rural bags	Urban bags	Raglan bags	Tuakau bins
Paper	1.23	1.24	0.85	1.32
Plastics	1.42	1.56	1.30	1.47
Food and garden waste	4.17	4.81	2.53	6.87
Metals	0.38	0.27	0.44	0.30
Glass	0.44	0.16	0.29	0.31
Textiles	0.43	0.36	0.64	0.76
Nappies and sanitary	1.34	1.78	1.62	1.52
Other (rubble, timber, rubber, potentially hazardous)	0.41	0.26	0.50	0.41
TOTAL	**9.82**	**10.44**	**8.18**	**12.94**

Source of Table: Council staff

Table 6. Colours indicate the lowest and highest volumes per service area.

Material type	Rural bags	Urban bags	Raglan bags	Tuakau bins
Paper	1.23	1.24	0.85	1.32
Plastics	1.42	1.56	1.30	1.47
Food and garden waste	4.17	4.81	2.53	6.87
Metals	0.38	0.27	0.44	0.30
Glass	0.44	0.16	0.29	0.31
Textiles	0.43	0.36	0.64	0.76
Nappies and sanitary	1.34	1.78	1.62	1.52
Other (rubble, timber, rubber, potentially hazardous)	0.41	0.26	0.50	0.41
TOTAL	**9.82**	**10.44**	**8.18**	**12.94**

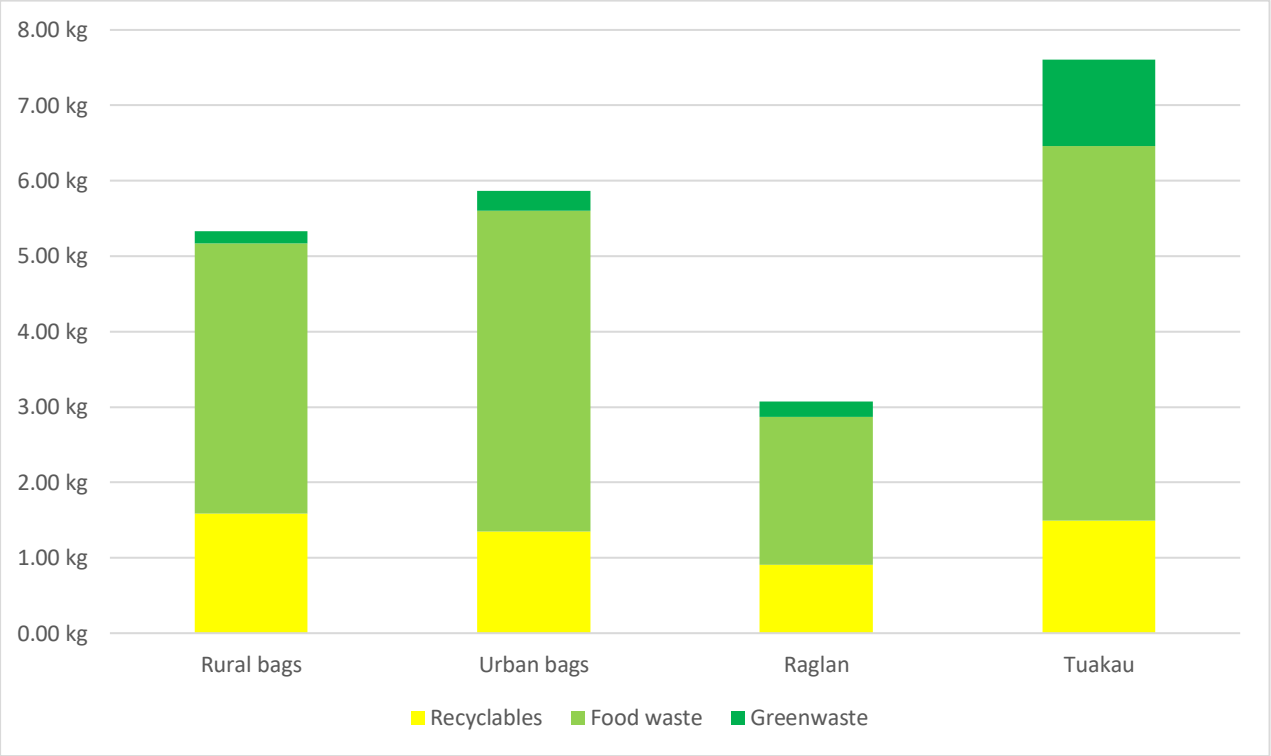
This data shows some significant difference between the four collection areas.

Raglan households put out less rubbish than other households – ranging from 1.64kg per household per week (17%) less than rural households to 4.76kg per household per week

(37%) less than Tuakau household wheeled bins. This is largely down to the reduced quantity of organic waste in the rubbish, showing the impact of Raglan's food scraps collection service.

Tuakau households (using wheeled bins) put out more rubbish overall, 12.94kg per household per week, than households that use a rubbish bag collection (with 8.18, 9.82, and 10.44kg per household week for Raglan, rural and urban households respectively) – and notably more garden waste, as shown in the figure below, which only shows the materials that could have been recycled or composted rather than being thrown out in the rubbish collection.

Figure 7: Potential for landfill diversion (per household, kg per week)



The table below shows the actual quantities, again colour-coded to show the highest and lowest *for each waste type*.

Table 7: Recyclable and compostable materials in kerbside rubbish (kgs per household per week)

	Rural bags	Urban bags	Raglan	Tuakau
Recyclables	1.58 kg	1.35 kg	0.91 kg	1.50 kg
Food waste	3.59 kg	4.26 kg	1.96 kg	4.97 kg
Greenwaste	0.16 kg	0.27 kg	0.20 kg	1.15 kg
TOTAL	**5.34**	**5.87**	**3.07**	**7.61**

Tuakau households throw out more divertible materials in general (7.6kg per week, compared to just over 3kg per week for a household in Raglan). This is a commonly-noted

effect of using wheeled bins larger than around 80L for weekly household rubbish collections.

The difference between a Raglan household and one in Tuakau is, over the course of a year, an additional 184 kg of potentially recyclable or compostable material thrown in household rubbish wheeled bins at the kerbside.

4.3 Current Performance Measurement

This section provides comparisons of several waste metrics between the Waikato district and other territorial authorities.

4.3.1 Per Capita Kerbside Rubbish

The amount of rubbish collected at the kerbside is particularly influenced by the method of kerbside collections, and how easy these are to use. If a kerbside rubbish collection service is convenient to use and has capacity (such as a large container, or frequent collections) then it is more likely to be well used – of course, the converse also applies.

Table 8: Kerbside-Collected Rubbish per capita

District/city and year of data	Kilos kerbside rubbish collected per capita per year	Commentary
Hamilton 2022	83	Rates-funded fortnightly 120L wheelie bins (with weekly food scraps)
Waikato District 2022	***131***	***Bags and wheeled bins***
Gisborne 2023	141	rates-funded bags with stickers
Ashburton 2021	144	rates-funded weekly 80L wheelie bins, private wheelie bins
Waikato region 2020	149	Various
Bay of Plenty region 2020	160	user-pays rubbish bags, rates-funded wheelie bins, and private wheelie bins
Central Otago 2022	168	Rates-funded fortnightly 240L wheelie bins
Taupo 2022	183	user-pays rubbish bags and private wheelie bins
Dunedin 2018	187	user-pays rubbish bags and private wheelie bins
Tauranga and WBoP 2019	192	user-pays rubbish bags and private wheelie bins
Queenstown 2020	195	rates-funded weekly 140L wheelie bin
Hastings/Napier 2022	197	rates-funded 120L wheelie bins and private wheelie bins

Clutha 2022	209	rates-funded fortnightly 240L wheelie bins
Palmerston North 2022	215	user-pays rubbish bags and private wheelie bins
Waitaki 2022	223	private wheelie bins

4.3.2 Summary

The quantity of waste sent to landfill from Waikato district's kerbside rubbish collection is low compared to other similar districts. To an extent, this may be influenced by the significantly lower kerbside quantities collected in Raglan and, to a lesser extent, other parts of the district that have a bag-based collection; but is tempered by the quantities collected in the wheeled bin-based service in Tuakau.

5 Review of the 2018 Waste Management and Minimisation Plan

As required by the Act, Council has carried out a review of their last Plan, which was adopted in July 2018. The 2018 Plan states that "Zero waste and resource recovery are an integral part of our community." This vision was supported by five goals and six objectives.

Table 9: Goals and Objectives

Goal	Objectives
G1. Our waste minimisation and management are best practice, and manage social, cultural, spiritual, economic, health and environmental impacts of waste	O1. Waste management practices manage social, cultural, spiritual, economic, health and environmental impacts of waste O3. A commitment to work with Tangata Whenua to achieve the waste minimisation outcomes set out in the Plan.
G2. A reduced quantity of material entering the waste stream, increased resource recovery	O2. Waste diversion is increasing and waste to landfill is decreasing including Council's waste generating activities.
G3. Our nationally recognised, innovative local resource recovery industry is growing	O4. Our communities are actively engaging in waste avoidance and minimisation, and becoming "zero-waste communities"
G4. Our collaborative partnerships with key stakeholders are growing our "zero-waste communities"	O5. Partnerships with others to achieve efficient and sustainable waste minimisation and management, including joint working and co-operation with territorial and regional councils, and central government
G5. Access to good information about waste in the District, in alignment with the National Waste Data Framework	O6. Contributing to the national discussion advocating for effective product stewardship and a bottle deposit scheme

The targets in the 2018 Plan were:

1) 10% Reduction in per capita rubbish to landfill
2) 20% Increase in per capita kerbside diverted material
3) 5% Reduction in per capita kerbside rubbish to landfill
4) 20% Increase in per capita kerbside diverted material

A detailed review of progress on the action plan is included in Appendix A.5.0.

There has been significant progress made on the action plan, and where actions have not been completed on schedule, there have been obvious reasons why – for example, the disruptions caused by COVID-19 pandemic management.

Considering this progress, the significant new requirements that have been set by central government, and the release of Te rautaki para with a new strategic direction of the circular economy; it is considered appropriate that Council agree to progress with development of a new Plan, revoking and replacing the 2018 Plan.

6 Future Demand and Gap Analysis

6.1 Future Demand

There are a wide range of factors that are likely to affect future demand for waste management and minimisation. The extent to which these influence demand could vary over time and in different localities. This means that predicting future demand has inherent uncertainties. Key factors are likely to include the following:

- Overall population growth
- Economic activity
- Changes in lifestyle and consumption
- Changes in waste management approaches

In general, the factors that have the greatest influence on potential demand for waste and resource recovery services are population and household growth, construction and demolition activity, economic growth, and changes in the collection service or recovery of materials.

6.1.1 Population

Population projections are shown in the following table:

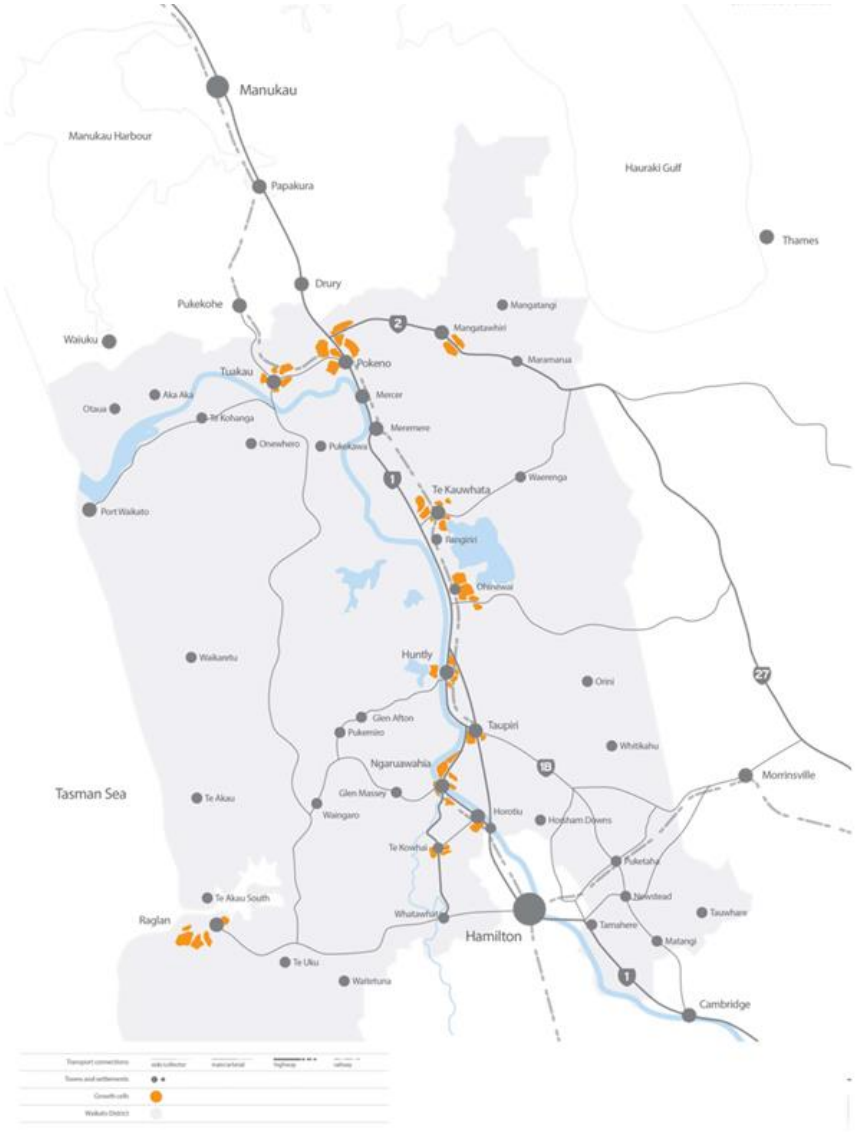
Table 10: Population and Household Number Projections to 2048

Estimated/ projection	2020	2025	2030	2035	2040	2045	Change 2020 – 2045: number	Change 2020 – 2045: average annual percent
Population	81,533	89,759	96,113	102,467	108,950	115,426	33,893	1.7%
Household numbers	26,963	29,952	32,504	35,059	37,572	40,081	13,118	2.0%

Household numbers are forecast to grow more quickly than population; which reflects a national trend towards an ageing population and smaller households. While smaller households create less rubbish, this also poses challenges for ongoing service provision to accommodate the variety of household sizes in the district.

The ”Waikato 2070” integrated growth strategy identifies specific areas where the growth in the district is anticipated; shown below.

Figure 8: Anticipated Growth Areas in the Waikato District

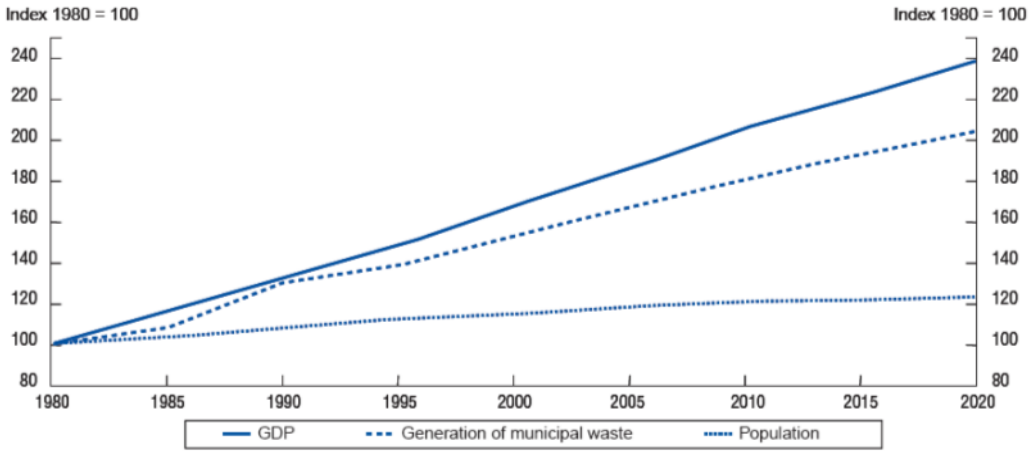


Source: Waikato District Council's growth strategy, Waikato 2070

GDP and waste production has been shown to have a strong relationship.

For reference, Figure 9 below shows the growth in municipal waste in the OECD plotted against GDP and population.

Figure 9: Municipal Waste Generation, GDP and Population in OECD 1980 - 2020



Source: OECD 2001.

Research from the UK[28] and USA[29] suggests that underlying the longer-term pattern of household waste growth is an increase in the quantity of materials consumed by the average household and that this in turn is driven by rising levels of household expenditure.

The relationship between population, GDP, and waste seems intuitively sound, as an increased number of people will generate increased quantities of waste and greater economic activity is linked to the production and consumption of goods which, in turn, generates waste.

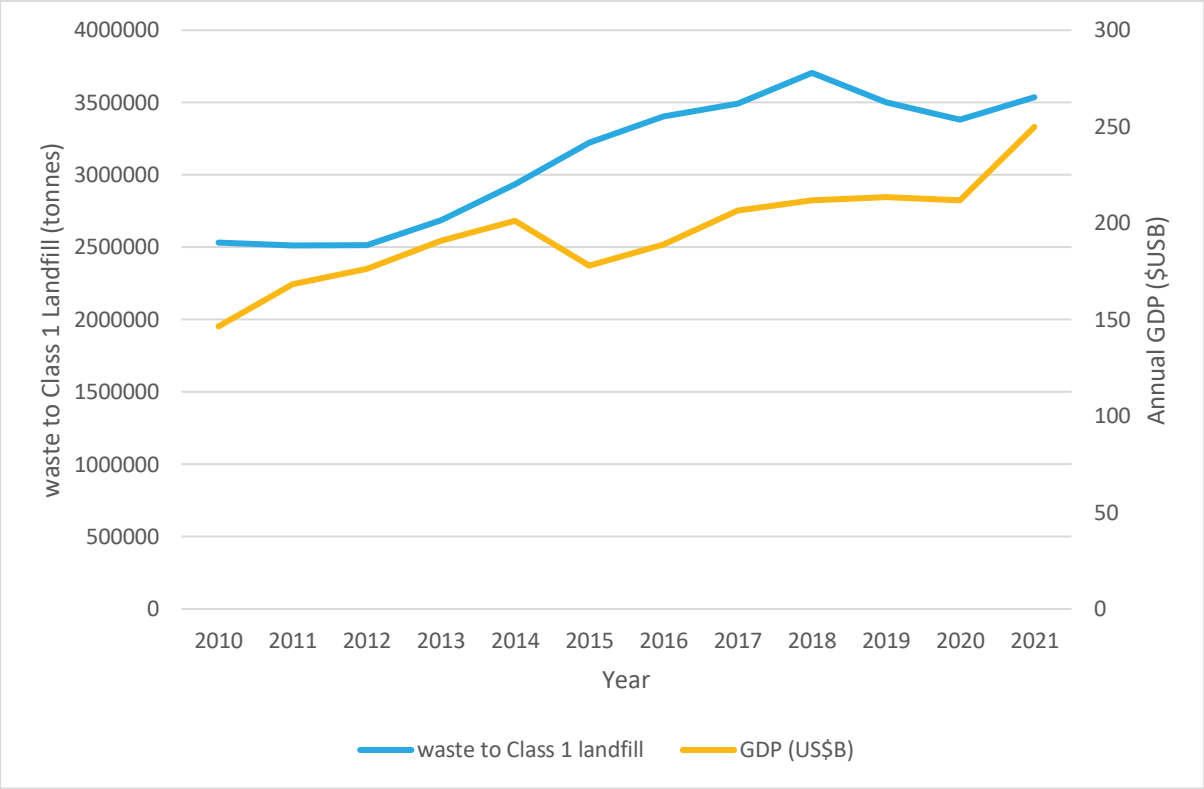
Total GDP is also a useful measure as it takes account of the effects of population growth as well as changes in economic activity. The chart suggests that municipal solid waste growth tracks above population growth but below GDP. The exact relationship between GDP, population, and waste growth will vary according to local economic, demographic, and social factors.

Figure below shows the annual tonnes sent to Class 1 landfill disposal, against the annual GDP of New Zealand (in billions of US$). This relationship is not a complete picture, as Class 1 landfills tonnes are a subset of all waste disposed of in New Zealand, and this further does not represent waste produced, but only waste disposed of. This data also can only be shown from 2010, as this was the first time that waste to Class 1 landfill disposal was measured accurately.

[28] Eunomia (2007), *Household Waste Prevention Policy Side Research Programme*, Final Report for Defra, London, England

[29] EPA, 1999. National Source Reduction Characterisation Report For Municipal Solid Waste in the United States

Figure 10: Waste to Class 1 Disposal and GDP (2010 - 2021)



As the Waikato district's population is anticipated to experience steady growth, alongside economic growth, it is likely that the region will experience an approximately similar increase in waste generated assuming no change to waste behaviour (e.g. consumption) or resource recovery rates.

6.1.2 Changes in Lifestyle and Consumption

Consumption habits affect the waste and recyclables generation rates. For example, there has been a national trend in the decline in newsprint production since 2005, likely as a result of increasing online news consumption[30]. Anecdotally, this has been accompanied by an increase in the use of printed direct mail ('junk mail') both in real terms and as a proportion of the overall paper/cardboard waste stream. This presents challenges for paper/cardboard recycling as this paper is a less desirable recycling commodity.

The ongoing growth in electronic devices will ensure that e-waste continues to be a growing waste stream, with (for example) data showing that households now tend to access the internet through multiple devices within the home and out, rather than a single home computer[31]. Electric vehicles are also becoming increasingly common[32], bringing specific end-of-life management issues for the large batteries used (noting that there is a product stewardship scheme prepared for these items).

[30] http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10833117
[31] Data from www.stats.govt.nz 'Household Use of Information and Communication Technology' accessed September 2018
[32] Electric vehicle imports continue to climb | Stats NZ

Retail purchasing habits are also changing. Increasingly, retail transactions are occurring online. The NZ Post Full Download Report on 2020 (the most recent year available)[33] reported a 13% growth in online spending from 2019. This is a trend likely to continue; NZ Post states "online makes up only 11% of all Kiwi shopping spend. In the UK and US, online penetration is well over 20%. This leaves plenty of room to grow in New Zealand". This is likely to result in more recyclable cardboard packaging; as well as soft plastics which are more difficult to capture and manage appropriately.

Growing access to international retail websites (e.g. Ali Express, Amazon etc) also means that there is an expanding range of products that can be ordered quickly, easily and often for a very low price, with the associated required packaging. This easier access to retail products and cheaper prices means the volume of purchases being made is increasing and may also be creating a more disposable approach to the items being bought. It's likely that these lower purchase prices would translate to lower quality products with a shorter lifespan and due to being bought online, returning for repair is very unlikely.

The ongoing restrictions and outright bans of various plastic packaging types, along with a general public perception that plastic packaging is to be avoided[34], is likely to have contributed to the growing variety of 'compostable' packaging types available in New Zealand[35]. These packaging types can vary significantly from a simple paper-based moulded container, which can easily be recycled or composted, to clear rigid packaging that looks and behaves in a similar way to petrochemical-based plastics. New Zealand currently doesn't have any clear standards or defined terminology around 'compostable' packaging, and there is a risk that adding these packaging types to composting processes will result in a lower quality end product[36] - for example, there is growing concern globally about the presence of persistent chemicals like PFAS in compostable packaging[37].

6.1.3 Changes in Waste Management Approaches

There are a range of drivers that mean methods and priorities for waste management are likely to continue to evolve, with an increasing emphasis on diversion of waste from landfill and recovery of material value. These drivers include:

- Recycling and recovered materials markets - recovery of materials from the waste stream for recycling and reuse is heavily dependent on the recovered materials having an economic value. This particularly holds true for recovery of materials by the private sector. Markets for recycled commodities are influenced by prevailing economic conditions, by commodity prices for the equivalent virgin materials, and by market controls in key destinations such as China. The risk is linked to the wider global economy through international markets, and the impact of the China National Sword policies has demonstrated this.

[33] Accessible from www.nzpostbusinessiq.co.nz
[34] Motivation for rethinking plastics | Office of the Prime Minister's Chief Science Advisor (pmcsa.ac.nz)
[35] Use-case-consultation-paper-02.06.2021.pdf (packagingforum.org.nz)
[36] compostables-packaging-position-statement.pdf (environment.govt.nz)
[37] Understanding PFAS in food packaging - The Packaging Forum

- Increased cost of landfill - landfill costs have risen in the past due to higher environmental standards under the RMA, introduction of the Waste Disposal Levy (currently $30 per tonne for Class 1 disposal facilities) and the New Zealand Emissions Trading Scheme. The current price for carbon credits, and the ongoing increases in the landfill levy, will make disposal prices a more significant consideration in waste management practices.
- Infrastructure investment - an increased landfill levy and other funding sources will drive increased investment in waste infrastructure. The Ministry are currently working a long-term strategic waste infrastructure investment plan.
- Te rautaki para – with a strong focus on reducing emissions and waste, to achieve a more circular economy
- Kerbside standardisation now requires that kerbside recycling and kerbside food waste collections are introduced, with associated performance standards for councils based on kerbside diversion; this will increase existing community demand for kerbside services where they don't already exist.
- Waste industry capabilities - as the nature of the waste sector continues to evolve, the waste industry is changing to reflect a greater emphasis on recovery and is developing models and ways of working that will help enable effective waste minimisation in cost-effective ways. COVID-19 pandemic management presents ongoing challenges in resourcing, both staff and vehicles.
- Local and national policy/legislative drivers, including actions and targets in the Plan, bylaws, and licensing; and the possible requirement for construction site waste management plans through the Building Act.

6.1.4 Summary of Demand Factors

The analysis of factors driving demand for waste services in the future suggests that demand will increase over time as a result largely of population growth and economic activity. It is likely that some new waste management approaches will be introduced as a result of the central government work programme, which could create demand in specific areas (and conversely, also open up new management options). Initial indications are that, for Waikato, this new demand is likely to be largely related to efforts to divert organic waste materials from landfill, including possible business food scraps diversion and recovery of construction wastes. There is also likely to be an increasing focus and demand in other waste activities and types, including:

- Disaster waste – recent events have highlighted the need for proactive disaster waste management plans, particularly with respect to local resilience where there is reliance on waste infrastructure located elsewhere in the region, or outside the region
- Equity of service cost allocation, balancing the increasing waste service contract costs between targeted rates (direct impact on property owners) and user-pays (sticker or tag) elements (direct impacts on both homeowner ratepayers and renters).
- Smaller but difficult waste streams such as soft plastics, packaging that isn't accepted in kerbside recycling collections, 'compostable' packaging as replacements for what will become banned packaging items, farm wastes
- The impact of a possible future container return scheme.

6.2 Future Demand – Gap Analysis

The aim of waste planning at a territorial authority level is to achieve effective and efficient waste management and minimisation. The following significant 'gaps' or key issues have been identified:

- **Compliance with government requirements for kerbside standardisation and performance standards** will create demand for Council in expanding household kerbside food scraps collections to Tuakau, Pōkeno, Te Kauwhata, Huntly, and Ngāruawāhia by 1 January 2027, and adding fish waste to the Raglan food scraps service;
- **Some households currently receive Council's kerbside rubbish and recycling collection service that are not included in the mandated areas for kerbside food scraps collection**. Council will need to decide whether or not it will provide the household food scraps collection service to these households also;
- **The capacity of the existing kerbside recycling collection is limited** compared to many other areas, with just two crates collected;
- Given the lack of diversion options locally and what is known about the composition of material collected in the Council household kerbside rubbish collection, there is likely to be **large amounts of organic waste (particularly food waste) going to Class 1 landfill**;
- There is a **general lack of data** (locally and nationally) relating to private waste collections, refuse transfer station waste, Class 2-5 fills, and farm waste management practices;
- **Provision for reuse and a wider range of recyclables beyond kerbside is limited**;
- Proactive liaison with tangata whenua is limited;
- Medical waste management will become an increasing issue with an ageing population;
- Disaster waste management is becoming an increasing issue; and
- Additional waste minimisation education could help address many of the issues above

Some of these gaps are explored in more detail below.

6.2.1 Organic Waste

As discussed earlier in section 4.2, nearly half of all waste collected in the Council household kerbside rubbish collection is compostable; and the majority of that is food waste.

Organic waste going to landfill breaks down anaerobically (without oxygen), creating methane, CH_4 – a very powerful greenhouse gas. EnviroNZ's North Waikato Regional Landfill which accepts waste from the district does have a gas capture system; however, no gas capture system is 100% effective. The Climate Change Commission uses a 68% lifetime gas capture rate for landfills in NZ[38]. This organic material also could have been processed

[38] February 2021 "Technical Modelling Assumptions in ENZ: Land and Waste Sectors" available at www.climatecommission.govt.nz

into some kind of soil amendment product such as compost or liquid digestate, potentially replacing manufactured nitrogen fertiliser with the associated carbon impacts.

6.2.2 Compliance with Government Requirements

The kerbside recycling collections is largely compliant with government requirements.

However, Council will need to introduce a household kerbside food scraps collection by 1 January 2027 to affected households other than Raglan; and decide whether they will extend this service to other households currently receiving the other Council collection services.

The district will also need to comply with performance standards requirements for diversion of household kerbside waste from landfill – 30% by 1 July 2026 (40% by 1 July 2028 and 50% by 1 July 2030). This figure will include household waste that is collected by private companies, as well as that from Council's collections.

While the introduction of a kerbside household food scraps collection will increase the diversion rate, this isn't required until 1 January 2027 and the first performance target date is under two years away. A risk emerging from this is that Council currently isn't able to make an accurate assessment of the kerbside diversion figure. Although private operators will be required to report kerbside data to the Ministry, this is unlikely to be available to Council on a regular basis and it will not be until the Ministry has completed their calculations (incorporating both council and private data) that the final diversion performance will be known.

As the payment of waste levy funds for the Waikato district is contingent on achieving the performance standards, it will be a much higher priority for Council compared to private operators. The negative impact will be on waste minimisation activities funded through the landfill levy.

6.2.3 Data Monitoring

There are a number of areas where data collection would enable better management and minimisation of waste, such as:

- Overall waste to Class 1 landfill from the district
- Quantities of kerbside waste collected by private operators – both rubbish and diverted materials
- Composition of the waste going to Class 1 landfill from RTS in the district
- Management and quantities of farm waste, and rural waste more generally
- Quantities and types of waste going to Class 2-5 fills

6.2.4 Medical Waste

Medical waste can be an issue at home and in medical facilities. Generally, it is comprised of:

- Hazardous waste (which can be sharps, such as needles, or non-sharps such as infectious waste or radioactive);
- Controlled waste (such as potentially infectious bodily fluids); and
- Non-hazardous waste (which is general waste or recyclables).

At home, non-hazardous waste can generally be managed through usual general refuse and recycling services (although there are some exceptions through either the size of the item, or the sheer quantity). However, the management of hazardous and controlled wastes at home can be difficult, and with the increasing prevalence of in-home medical care, this is becoming a more significant problem.

Anecdotally, a significant proportion of in-home medical waste is disposed of through general waste and recycling systems. This could result in significant health and safety concerns for the collection and processing staff.

Ideally, in-home medical care would include provision for appropriate handling and disposal of medical wastes. However, for various reasons such as lack of awareness or cost, this is not always the case.

For healthcare in medical facilities, The Pharmacy Practice Handbook states:[39]

> *4.1.16 Disposal of Unused, Returned or Expired Medicines*
>
> *Members of the public should be encouraged to return unused and expired medicines to their local pharmacy for disposal. Medicines, and devices such as diabetic needles and syringes, should not be disposed of as part of normal household refuse because of the potential for misuse and because municipal waste disposal in landfills is not the disposal method of choice for many pharmaceutical types. Handling and disposal should comply with the guidelines in NZ Standard 4304:2002 – Management of Healthcare Waste.*

While Council is not responsible for the provision of medical waste management services for either home-based care or medical facilities, it would be beneficial for Council to work proactively with the health service and other medical service providers to ensure that appropriate services are being offered and put in place.

6.2.5 Services

Council kerbside services are variable; with Tuakau households and businesses in the central area receiving legacy services using wheeled bins for rubbish collection, compared to the remainder of the district which has a bag-based rubbish collection.

Variability in service provision, with different containers, materials, and frequencies, makes consistent education and engagement campaigns on (for example) kerbside recycling contamination and organics diversion more difficult, as well as general community understanding and even use of the services provided.

[39] https://nzpharmacy.wordpress.com/2009/06/09/disposal-of-unwanted-medicines/

6.2.6 Rural Waste

6.2.6.1 Farm waste

Nationally rural wastes are estimated to account for up to 12% of waste disposed of.[40] There is very little information available regarding rural wastes. Rural wastes are most commonly managed on-farm with material stockpiled, burned, and/or buried. There are very few controls over waste disposal on farm sites, and much of the material which is currently managed on-farm in less desirable ways could be recycled or recovered, or properly disposed of.

The key issue is that current management methods are essentially no-cost and relatively convenient for farmers. Services that collect non-natural materials for recovery or proper disposal are likely to be costly due to the distances involved and remoteness from processing and consolidation points.

Current product stewardship programmes such as Agrecovery and Plasback apply charges to farmers that participate in the schemes. This may change as the mandatory product stewardship scheme is introduced, meaning manufacturers and retailers will become more responsible for their products and the cost for end of life will be captured at point of sale.

There have been a number of trials of on-farm waste collection services in the past; however, these have not developed into a full service, often due to cost concerns.

6.2.6.2 Rural household waste

There are some areas of the district that do not have waste collection services available at the kerbside (end of their driveway). As described earlier, there is one monthly collection 'in person' at Glen Murray for recycling and there are two unstaffed recycling and waste drop off points in the wider Raglan area. Anecdotally, there is desire from the rural community to have access to rubbish and recycling collection services and future service reviews will explore what options are available to this community and at what cost.

6.2.7 Textiles

Textiles are a material stream that has historically had a very low profile nationally, although the recent focus on carbon reduction through waste management has increased this profile as textiles can contribute significantly to carbon impact assessments. Various national programmes exist to divert specific textile types (such as socks and cotton clothing) but these are capturing very small quantities and are unlikely to have the ability to cope with large quantities.

6.2.8 Disaster waste

Disaster waste is increasingly becoming an issue, as climate change drives more extreme weather events such as flooding and slips, along with other natural disasters (such as earthquakes).

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[40]Ministry for the Environment. 2019. *Reducing waste: a more effective landfill levy – consultation document*. Wellington: Ministry for the Environment.

6.2.9 Leadership and Collaboration

Previous regional projects have highlighted the lack of structures and arrangements to progress collaboration projects. Various barriers are in place that make this difficult to improve, such as variable contract arrangements and expiry dates across the Waikato region and variable strategic approaches to waste as well as staff capacity issues.

As is commonly found nationally, collaborative projects tend to focus on the lower levels of the waste hierarchy, particularly recycling and reprocessing. The impact of (and therefore funding for) actions higher up the hierarchy such as prevention, reduction, and reuse initiatives is harder to define and measure/monitor.

The sector is experiencing a lack of suitably trained and experienced staff, and input from councils reinforces submissions to (in particular) vocational training organisations to address some of these issues. Sector groups (WasteMINZ and the Zero Waste Network) are also working to address barriers to new recruits joining the sector, and some neighbouring councils are offering paid internships for tertiary students.

7 Statement of Options/Proposals

This section sets out the range of options available to Council to address the key issues that have been identified in the previous section of this Waste Assessment. Options presented in this section would need to be fully researched and the cost implications understood, before being implemented through Council's Plan action plans and respective LTP/Annual Plan. Addressing these issues will ensure that Council is meeting their statutory obligations and improving waste management and minimisation in the Waikato district.

7.1 Options Categorised by Work Area

These sections present the high-level options to address the key issues described above, broken down into the categories of regulation, measuring and monitoring, education and engagement, collections and services, infrastructure, and leadership and management. Options are presented this way as the role of councils is likely to be fairly consistent within each of these categories and one option may address a number of key issues; also, this enables the options to show a progression of options in one category with (for example) an increasing level of circular economy alignment.

The Council's roles could be:

Strategic: Simply identify the need at a strategic level, with other sectors able to respond to the need as they wish

Facilitation/Leadership: Take a facilitation and leadership role in addressing the need, such as by creating working groups focusing on a particular material e.g. construction waste

Regulator: Use regulatory tools available to councils to create an environment that encourages solutions, such as requiring construction site waste management plans, banning certain materials from rubbish, etc.

Funder: Making funding available for specific initiatives that address a gap in some way e.g. funding pilot projects or funding set-up costs that can then operate commercially

Provider: Take direct action by providing services or facilities that address the need.

7.1.1 Regulation

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role
R1	Status quo – continue without specific local regulation for solid waste	NA	NA	NA
R2	Introduce a local solid waste management bylaw that enables private waste operators to be licensed and, as a licence condition,	General lack of data	Having access to better data enables better management of waste streams and future identification of issues	Regulator

	require provision of data to Council and consenting to having waste audited		Preventing the use of 240L wheeled bins for household rubbish collections will improve waste diversion Te rautaki para goal 1 priority 1.1	

7.1.2 Measuring and Monitoring

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role
M1	Increase monitoring and surveying of rural wastes; e.g. quantities and material types	More understanding and proactive management required for rural wastes – both from rural households, and from agricultural properties	Better understanding across the board of non-household waste management and opportunities to move up the hierarchy Te rautaki para goal 1, priority 1.5; goal 2, priority 2.4	Regulator, Provider Could be developed collaboratively with neighbouring councils
M2	Undertake solid waste audits	General lack of data	Closer monitoring will ensure Council can fulfil central government reporting requirements accurately and that materials comply with acceptance criteria Te rautaki para goal 1, priority 1.5; goal 2, priority 2.4	Regulator, Provider
M3	Undertake waste assessments and surveys at transfer stations and the sites of large waste producers	General lack of data, poor diversion of C&D and ICI wastes	Closer monitoring will ensure Council can fulfil central government reporting requirements accurately and that materials comply with acceptance criteria	Provider

			Te rautaki para goal 1, priority 1.5; goal 2, priority 2.4	
M4	Undertake more frequent kerbside service audits with more detailed analysis (e.g. of food waste – split into avoidable wasted food, unavoidable food waste, types of foods, etc)	Increased detail of data to inform better behaviour change projects.	Better able to identify opportunities to prevent and reduce food scraps going to landfill	Provider

7.1.3 Education and Engagement

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role
EE1	Increased behaviours change work with and for the community on general waste minimisation issues	Support action on many other waste issues Need for additional waste minimisation education	Need for education/ engagement (i.e. demand) is proactively identified and addressed Increased responsibility taken by various sectors for waste management within the community. Better understanding across the board of non-household waste management and opportunities to move up the hierarchy Te rautaki para goal 1 priority 1.5; goal 3 priority 3.1 and 3.2	Provider, Facilitation/Leadership/ Funder
EE2	Proactively seek engagement and partnering with industry, community, and other agencies (e.g. C&D, health, retail, industry)	Improve the management of specific materials, moving up the hierarchy, by engaging with the industries creating wastes – construction and demolition waste, non-household recyclables, agricultural wastes, vapes, etc.	Improved understanding of needs in the region and service gaps, and who is best to address them. Collaborate with the community and industry would improve their	Facilitation/Leadership, Funder, Provider Council could initiate groups and facilitate, possibly with

		Changes in management for wastes outside Council's direct control are required to achieve the longer term kerbside diversion performance standards. Reduced influence over the management of some wastes resulting from the new private refuse transfer station.	engagement, understanding, and awareness, and eventually action on waste issues, and enable closer relationships with other agencies such as Te Whatu Ora Increased responsibility taken by various sectors for waste management within the community. Better understanding across the board of non-household waste management and opportunities to move up the hierarchy. Te rautaki para goal 1, priority 1.5; goal 2, priority 2.4	low-level funding for project work. Council could provide options that support these other sectors in moving up the hierarchy.
EE3	Increased iwi- and community-led waste minimisation projects	Projects developed by iwi for iwi, or by community for community will increase Council's capacity to deliver waste minimisation education in our community		

7.1.4 Collection & Services

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role
CS1	Undertake a full review of kerbside services and implement preferred improvements – e.g. food scraps or a food and garden organic waste collection, kerbside rubbish collection from bags, wheeled bins, or both; extended or altered kerbside recycling collection.	Limited capacity for householders to recycle all their appropriate materials kerbside Compliance with central government requirements for kerbside standardisation and performance targets Reduce organic waste going to landfill	Maximises the effectiveness of kerbside recycling collection, capturing more recyclable material out of household rubbish (reducing waste to landfill and household rubbish collection cost)	Provider

			Kerbside services would meet central government's kerbside standardisation requirements Waste to landfill would be reduced, along with household rubbish collection cost Te rautaki para goal 2, priority 2.1; goal 5 priorities 5.2 and 5.3	
CS2	Review best practice for rural services, particularly for more remote communities, and implement preferred options to improve levels of service for rural communities.	Poor understanding of rural wastes and what services are needed	Te rautaki para goal 2, priority 2.3, 2.4; goal 4 priority 4.1; goal 5 priority 5.3; goal 6 priority 6.1;	Provider
CS3	Review contracts, cost, and provision policy for public litter bins	No consistent approach to provision and maintenance of public litter bins	Te rautaki para goal 2, priority 2.3, 2.4; goal 4 priority 4.1; goal 5 priority 5.3; goal 6 priority 6.1;	Provider
CS7	Work with product stewardship providers to encourage better service provision and awareness raising for key rural waste materials such as farm waste (containers and wrap), textiles, polystyrene	Management of specific materials needs to be improved, especially moving up the hierarchy, by engaging with the sources – C&D waste, non-household recyclables, agricultural wastes, medical wastes etc. and reducing environmental harm Other materials going to landfill such as cardboard, paper, and textiles from both residential and ICI sources	Te rautaki para goal 2, priority 2.3, 2.4; goal 4 priority 4.1; goal 5 priority 5.3; goal 6 priority 6.1;	Facilitation – ideally as a sub-regional initiative

7.1.5 Infrastructure

Infrastructure options have been categorised into infrastructure that addresses a specific material (such as construction and demolition, or organic waste) and then into progressively increasing levels of alignment with circular economy principles and achieving a Circular Resource Network.

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role
IN1	Establish a community resource recovery network district-wide.	Ensure that diversion options for a range of materials that can't be captured through kerbside recycling or food scraps collection – e.g. green waste, reusable or untreated timber, reusable building and household items, batteries, hazardous waste, plastic wrap, e-waste, etc are accessible to more of our community	Enable the district to divert a range of materials that are reuseable, recoverable, or recyclable; but are not suitable for kerbside collection Te rautaki para goal 2, priority 2.3 and 2.4; goal 4 priority 4.1; goal 5 priority 5.3	Facilitation/provider/funder
IN2	Work sub-regionally to identify appropriate organic waste processing options, e.g. vermicomposting or anaerobic digestion for food scraps, or aerobic composting	Supports the implementation of household kerbside food scraps collections (by providing a processing outlet for the collected material) Diverting organic wastes from Class 1 landfill disposal	Enable the district to divert a range of materials that are reuseable, recoverable, or recyclable; but are not suitable for kerbside collection Te rautaki para goal 2, priority 2.3 and 2.4; goal 4 priority 4.1; goal 5 priority 5.3	Strategic and/or facilitation/leadership and/or funder and/or provider

7.1.6 Leadership and Management

Ref	Option	Issues Addressed	Impact on Current/Future Demand Alignment with Te rautaki para	Council's Role

LM1	Advocate to central government for extended producer responsibility	Implementation of product stewardship addresses problem waste streams at the source, such as vape waste	Using the provisions in the Act will help to ensure that the true cost of waste management of a product is reflected in its price. Product stewardship schemes for difficult waste streams such as e-waste and tyres will minimise the cost burden on rate payers in provision of end-of-life options for these waste streams. Te rautaki para goal 1 priority 1.1; goal 4 priorities 4.1, 4.2 and 4.3; goal 5 priorities 5.1 and 5.3; goal 7 priority 7.1	Facilitate/leadership - advocate to central government for stronger regulation and extended producer responsibility. Work with other councils and agencies to support similar lobbying efforts. Funder – could support small scale pilots, for example to prove viability of instore returns.
LM2	Respond to central government consultations, engagements, technical advisory groups, and information sharing opportunities via the CNIWLG or directly as Waikato District Council.	Thos drafting national strategies, plans, regulation and actions are aware of Waikato district-specific issues	Ensures that central government work supports local/regional work, and that local/regional issues are recognised. Te rautaki para goal 1; goal 2 priorities 2.1 and 2.4	Facilitate/leadership - advocate to central government
LM3	Work with mana whenua, community groups, and the private sector sub-regionally to progress opportunities for increased waste reduction and diversion	Councils, mana whenua, community groups and the private sector working together will increase waste reduction and diversion	Encourage the community to be more involved in waste minimisation, and potentially reduce waste generation and increase waste diversion. Te rautaki para goal 1 priority 1.5; goal 2 priority 2.4; goal 4; goal 5 priorities 5.2, 5.3 and 5.4; goal 7 priority 7.1	Facilitate/leadership, funder: coordinate and support initiatives and capacity building.
LM5	Support regional and national initiatives and organisations campaigning for better waste management and minimisation such	Waikato district-specific issues are considered in industry work programmes and Waikato councils	Ensures that national scale work supports local/regional work, and that Waikato councils are well	Facilitate/leadership: be involved, coordinate and support initiatives.

	as WasteMINZ sector groups and the TAO Waste Manifesto	are aware and informed of work at the national scale	positioned to make the most of opportunities from these national initiatives and organisations Te rautaki para goal 1 priorities 1.1 and 1.5; goal 2 priorities 2.1, 2.2 and 2.3; goal 4 priorities 4.1, 4.2 and 4.3; goal 5 priorities 5.1 and 5.3; goal 7 priority 7.1	
LM6	Support proactive regional and national projects improving waste management planning in disaster situations	The Waikato district is better prepared to respond in case of a large-scale disaster event; with impacts on community (financial, health, access, etc.) minimised.	Proactive planning in place for disaster waste Te rautaki para goal 1 priority 1.5	Facilitate/leadership - provide information as requested, and any other input required.
LM7	Support national sector organisations in lobbying for better vocational training and to encourage new recruits to the sector	Relevant issues relating to staff and vehicle resources are incorporated in national-level work and addressed at a national level	Ensures that Waikato-focused issues are incorporated in national-level work on these issues Te rautaki para goal 1 priority 1.5; goal 2 priority 2.1; goal 5 priority 5.2	Facilitate/leadership – provide support and information to national sector organisations.
LM8	Council staff and elected members will receive ongoing education and information regarding emerging waste processing technologies, and consider these within the context of the waste hierarchy, circular economy, and the current WMMP	Waste infrastructure initiatives can be poorly aligned with national and local strategic direction	Ensures that a strategic lens is placed over any waste infrastructure initiatives that come before Council	Facilitate/leadership – receive and consider available information and education

The options identified and Council's possible role in meeting forecast demand comprise a range of proposals. The specific actions and timeframes for delivery would be identified through the development of a draft Waste Management and Minimisation Plan (assuming this is the decision taken by Council) after receiving this Waste Assessment. Any future Waste Minimisation and Management Plan will be dependent on the national strategy, the direction preferred by Council; the extent of collaboration that is desirable and possible; and the resources available (financial and staff).

It is expected that the implementation of the preferred options from these proposals, as would be set out in any future draft Waste Management and Minimisation Plan, will meet forecast demand as well as support Council's goals and objectives for waste management and minimisation and the phase 1, 2 and 3 goals of Te rautaki para. These goals and objectives will be confirmed as part of the development and adoption of a draft Plan.

7.2 Statutory Obligations and Powers

Councils have a number of statutory obligations and powers in respect of the planning and provision of waste services. These include the following:

- under the Act (currently under review) Council "must promote effective and efficient waste management and minimisation within its district" (s 42). The Act requires councils to develop and adopt a Waste Management and Minimisation Plan[41];
- the Act also requires councils to have regard to the New Zealand waste strategy, Te rautaki para;
- under Section 17A of the Local Government Act 2002 (LGA) local authorities must review the provision of services and must consider options for the governance, funding and delivery of infrastructure, local public services and local regulation. There is substantial cross over between the section 17A requirements and those of the Plan process; in particular in relation to local authority service provision;
- under the Local Government Act 2002 (LGA) councils must consult the public about their plans for managing waste;
- under the Resource Management Act 1991 (RMA), TA responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, non-complying and prohibited activities and their controls are specified within district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities;

[41] The development of a WMMP in the Act is a requirement modified from Part 31 of the LGA 1974, but with even greater emphasis on waste minimisation.

- under the Litter Act 1979 (currently under review) councils have powers to make bylaws, issue infringement notices, and require the clean-up of litter from land;
- the Health Act 1956 provisions for the removal of refuse by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956;
- the Hazardous Substances and New Organisms Act 1996 (the HSNO Act) provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances; and
- under current legislation and the Health and Safety at Work Act the Council has a duty to ensure that its contractors are operating in a safe manner.

Council, in determining its role, needs to ensure that its statutory obligations, including those noted above, are met.

7.2.1 Protection of Public Health

In accordance with section 51 (f), a Waste Assessment must include a statement about the extent to which the proposals will (i) ensure that public health is adequately protected, (ii) promote effective and efficient waste management and minimisation.

The Health Act 1956 requires councils to ensure the provision of waste services adequately protects public health. The Waste Assessment has identified potential public health issues associated with each of the options, and appropriate initiatives to manage these risks would be a part of any implementation programme.

In respect of Council-provided waste and recycling services, public health issues will be able to be addressed through setting appropriate performance standards for waste service contracts and ensuring performance is monitored and reported on, and that there are appropriate structures within the contracts for addressing issues that arise.

Privately-provided services could be regulated through local bylaws until national regulation is in place.

Uncontrolled disposal of waste, for example in rural areas and in cleanfills, can be regulated through local and regional bylaws and through central government regulation.

It is considered that, subject to any further issues identified by the Medical Officer of Health, the proposals would adequately protect public health.

7.2.2 Effective and Efficient Waste Management and Minimisation

The Waste Assessment has investigated current and future quantities of waste and diverted material, and outlines Council's role in meeting the forecast demand for services.

It is considered that the process of forecasting has been robust, and that Council's intended role in meeting these demands is appropriate in the context of the overall statutory planning framework for Council.

Therefore, it is considered that the proposals would promote effective and efficient waste management and minimisation.

Appendices

A.1.0 Medical Officer of Health Statement

13 March 2024

Health New Zealand
Te Whatu Ora

Waikato District Council
Private Bag 544
Ngāruawāhia

Dear Team

Re Waikato District Council Waste Assessment consultation with the Medical Officer of Health

Thank you for providing the draft Waikato District Council Waste Assessment for Medical Officer of Health consultation. It has been useful to be able to discuss and clarify aspects of this draft waste assessment with Lisa Eve prior to providing feedback. I have made some comments below:

- The draft Waste Assessment outlines a number of key waste management issues that are important for public health in section 1.4.4.1.
- The Waste Assessment has acknowledged that there is a general lack of data, and I recognize that information is often difficult to find. Data gaps include information relating to private waste collections, refuse transfer station waste, hazardous waste volumes, and farm waste management practices. Introducing a solid waste management bylaw, that requires private waste operators to provide data to Council as a licensing condition, as well as the range of proposed options outlined under section 7.1.2, "Measuring and Monitoring", would likely improve data quality.
- Food waste makes up a considerable proportion of potentially divertible materials within kerbside collected waste. This proportion is smaller in Raglan which already has a kerbside food scraps service. There is a plan to standardise kerbside recycling nationally, which will require introducing a kerbside food scraps service to Ngāruawāhia, Huntly, Te Kauwhata, Pōkeno and Tuakau by January 2027. I recommend that this is introduced as soon as possible, to provide greater consistency across the District. Council could also consider introducing food scrap collections for other households, that receive kerbside collections, in which it is not mandated. Reducing the amount of organic waste sent to landfill will extend the life of existing landfills and reduce the amount of greenhouse gas generated.
- It is clear that there are inconsistencies in waste service availability across the Waikato District, not just in terms of kerbside collection services, but also in the access to transfer stations and in the degree of service at transfer stations compared to Raglan's Resource Recovery Centre. It would be good to work towards greater consistency across the district, to provide greater opportunities for all residents to make use of resource recovery services.
- Kerbside collection for the majority of the district uses rubbish bags, whereas Tuakau Central utilises wheeled bins. The use of bins has an advantage over bags from a public health perspective in that bins provide better isolation of refuse from interference by domestic and wild animals, control of odour, and better isolation from insect pest species

Health New Zealand
Te Whatu Ora

such as flies and wasps. I note that Tuakau households throw out more divertible materials in their household waste than other parts of the district, and that the large bins may contribute to this. There is potential for the size of bins or frequency of collection to be adjusted, along with the size of recycling bins, to provide increased incentive for recycling.

- Quantifying waste managed on farms is difficult. Poor management of farm waste can lead to contamination of the environment with hazardous waste. The Waste Assessment notes that rural waste is often stockpiled, burned or buried on farms. I recommend that Council further investigate solutions for monitoring and managing rural waste generated on farms. As such I would support the proposed options M1 (Increase monitoring and surveying of rural wastes), CS2 (review best practice for rural services, particularly for more remote communities, and implement preferred options to improve levels of service for rural communities) and CS7 (work with product stewardship providers to encourage better service provision and awareness raising for key rural waste materials such as farm waste).

- Collection and management of hazardous waste is important for protecting the environment and health. There is limited data available within the draft Waste Assessment on the quantities or types of hazardous waste disposed of. I understand that household quantities of some hazardous waste is able to be dropped off at transfer stations or the Raglan Resource Recovery Centre free of charge. Other hazardous waste is required to be transported out of the District for disposal. I recommend that Council investigate ways of encouraging stewardship programs in the district for disposal of hazardous waste.

- The draft waste assessment has identified that proactive liaison with Tangata Whenua has been limited. I encourage Council to seek to actively engage and partner with Tangata Whenua to ensure that their views and aspirations are reflected in the final Waste Management and Minimisation plan.

I hope that these comments will add to the Waste Assessment and be helpful in development of the Waste Management and Minimisation Plan.

Yours sincerely,

Dr Richard Wall
Public Health Medicine Specialist/Medical Officer of Health
Te Manawa Taki Region | National Public Health Service

TeWhatuOra.govt.nz
PO Box 3200, Hamilton, 3204

Te Kāwanatanga o Aotearoa
New Zealand Government

A.2.0 Classifications for Disposal to Land

The Ministry have classified disposal and other waste facilities under two regulations, which enable the application of the disposal levy and the collection of data. Facilities had also previously been categorised according to the WasteMINZ 'Technical Guidelines for the Disposal of Waste to Land', and there are some slight variations between the two.

A.2.1 Technical Guidelines Definitions

Class 1 - Landfill

A Class 1 landfill is a site that accepts municipal solid waste. A Class 1 landfill generally also accepts C&D waste, some industrial wastes and contaminated soils. Class 1 landfills often use managed fill and clean fill materials they accept, as daily cover.

Class 1 landfills require:

- a rigorous assessment of siting constraints, considering all factors, but with achieving a high level of containment as a key aim;
- engineered environmental protection by way of a liner and leachate collection system, and an appropriate cap, all with appropriate redundancy; and
- landfill gas management.

A rigorous monitoring and reporting regime is required, along with stringent operational controls. Monitoring of accepted waste materials is required, as is monitoring of sediment runoff, surface water and groundwater quality, leachate quality and quantity, and landfill gas.

Waste acceptance criteria (WAC) comprises:

- municipal solid waste; and
- for potentially hazardous leachable contaminants, maximum chemical contaminant leachability limits (TCLP) from Module 2 Hazardous Waste Guidelines – Class A4.

WAC for potentially hazardous wastes and treated hazardous wastes are based on leachability criteria to ensure that leachate does not differ from that expected from non-hazardous municipal solid waste.

For Class 1 landfills, leachability testing should be completed to provide assurance that waste materials meet the WAC.

Class 2 Landfill

A Class 2 landfill is a site that accepts non-putrescible wastes including C&D wastes, inert industrial wastes, managed fill material and clean fill material. C&D waste can contain biodegradable and leachable components which can result in the production of leachate – thereby necessitating an increased level of environmental protection. Although not as strong as Class 1 landfill leachate, Class 2 landfill leachate is typically characterised by mildly acidic pH, and the presence of ammoniacal nitrogen and soluble metals, including heavy metals. Similarly, industrial wastes from some activities may generate leachates with chemical characteristics that are not necessarily organic.

Class 2 landfills should be sited in areas of appropriate geology, hydrogeology and surface hydrology. A site environmental assessment is required, as are an engineered liner, a leachate collection system, and groundwater and surface water monitoring. Additional engineered features such as leachate treatment may also be required.

Depending on the types and proportions of C&D wastes accepted, Class 2 landfills may generate minor to significant volumes of landfill gas and/or hydrogen sulphide. The necessity for a landfill gas collection system should be assessed.

Operational controls are required, as are monitoring of accepted waste materials, monitoring of sediment runoff, surface water and groundwater quality, and monitoring of leachate quality and quantity.

Waste acceptance criteria comprises:

- a list of acceptable materials; and
- • maximum ancillary biodegradable materials (e.g. vegetation) to be no more than 5% by volume per load; and
- • maximum chemical contaminant leachability limits (TCLP) for potentially hazardous leachable contaminants.

Class 3 Landfill – Managed/Controlled Fill

A Class 3 landfill accepts managed fill materials. These comprise predominantly clean fill materials, but may also include other inert materials and soils with chemical contaminants at concentrations greater than local natural background concentrations, but with specified maximum total concentrations.

Site ownership, location and transport distance are likely to be the predominant siting criteria. However, as contaminated materials (in accordance with specified limits) may be accepted, an environmental site assessment is required in respect of geology, stability, surface hydrology and topography.

Monitoring of accepted material is required, as are operational controls, and monitoring of sediment runoff and groundwater.

Waste acceptance criteria comprises:

- a list of acceptable solid materials; and
- maximum incidental or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and

- maximum chemical contaminant limits.

A Class 3 landfill does not include any form of engineered containment. Due to the nature of material received it has the potential to receive wastes that are above soil background levels. The WAC criteria for a Class 3 landfill are therefore the main means of controlling potential adverse effects.

For Class 3 landfills, total analyte concentrations should be determined to provide assurance that waste materials meet the WAC.

Class 4 Landfill – Controlled Fill

A Class 4 landfill accepts controlled fill materials. These comprise predominantly clean fill materials, but may also include other inert materials and soils with chemical contaminants at concentrations greater than local natural background concentrations, but with specified maximum total concentrations.

Site ownership, location and transport distance are likely to be the predominant siting criteria. However, as contaminated materials (in accordance with specified limits) may be accepted, an environmental site assessment is required in respect of geology, stability, surface hydrology and topography.

Monitoring of accepted material is required, as are operational controls, and monitoring of sediment runoff and groundwater.

Waste acceptance criteria comprises:

- a list of acceptable solid materials; and
- maximum incidental or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and
- maximum chemical contaminant limits.

A Class 4 landfill does not include any form of engineered containment. Due to the nature of material received it has the potential to receive wastes that are above soil background levels. The WAC criteria for a Class 4 landfill are therefore the main means of controlling potential adverse effects.

Class 5 – Landfill

A Class 5 landfill accepts only clean fill material. The principal control on contaminant discharges to the environment from Class 5 landfills is the waste acceptance criteria.

Stringent siting requirements to protect groundwater and surface water receptors are not required. Practical and commercial considerations such as site ownership, location and transport distance are likely to be the predominant siting criteria, rather than technical criteria.

Clean filling can generally take place on the existing natural or altered land without engineered environmental protection or the development of significant site infrastructure. However, surface water controls may be required to manage sediment runoff.

Extensive characterisation of local geology and hydrogeology is not usually required.

Monitoring of both accepted material and sediment runoff is required, along with operational controls.

Waste acceptance criteria:

- virgin excavated natural materials (VENM), including soil, clay, gravel and rock; and
- maximum incidental inert manufactured materials (e.g. concrete, brick, tiles) to be no more than 5% by volume per load; and
- maximum incidental5 or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and
- maximum chemical contaminant limits are local natural background soil concentrations.

Materials disposed to a Class 5 landfill should pose no significant immediate or future risk to human health or the environment.

The WAC for a Class 5 landfill should render the site suitable for unencumbered potential future land use, i.e. future residential development or agricultural land use.

The WAC for a Class 5 landfill are based on the local background concentrations for inorganic elements, and provide for trace concentrations of a limited range of organic compounds.

Note: The Guidelines should be referred to directly for the full criteria and definitions.

A.2.2 Ministry for the Environment Classifications

The Ministry for the Environment have recently extended the payment of the landfill levy to a wider range of disposal facilities, and have also required reporting of data from 'cleanfills' and transfer stations. This has entailed two regulations – the first to extend the levy to other facilities[42] and the second to require data reporting from 'cleanfills' and transfer stations[43].

These regulations establish definitions for a range of disposal and other waste facilities beyond the Class 1 landfills that were captured by the landfill levy when it was first introduced.

These are summarised in the table below:

[42] https://www.legislation.govt.nz/regulation/public/2021/0068/latest/LMS474556.html
[43] https://www.legislation.govt.nz/regulation/public/2021/0069/latest/whole.html

Disposal facility class	Description	Types of waste not accepted	Examples of types of waste accepted
1 Municipal Disposal Facility	A facility, including a landfill: • where waste is disposed of • that operates, at least in part, as a business to dispose of waste • accepts waste that is or includes any one or more of the following: household waste waste from commercial or industrial sources waste from institutional sources (eg, hospitals, educational facilities and aged-care facilities) green waste (eg, degradable plant materials such as tree branches, leaves, grass, and other vegetation matter) waste that is not accepted at other disposal facilities in the WMA. It is not a: • class 2: construction and demolition disposal facility • class 3 and 4 managed or controlled fill disposal facility • an industrial monofill facility • a cleanfill facility.		Types of waste may include (but not limited to): • mixed municipal waste from residential, commercial and industrial sources • construction and demolition waste • contaminated soils • rocks, gravel, sand, clay • sludges • slurries • putrescible waste • green waste • biosolids • clinical waste • treated hazardous waste • incidental hazardous waste.
2 C&D Disposal	Accepts waste from construction and demolition activity It is not a: • class 3 and 4 managed or controlled fill disposal facility • an industrial monofil facility • a cleanfill facility.	Does not accept any of the following for disposal: • household waste • waste from commercial or industrial sources • waste from institutional sources (eg, hospitals, educational facilities, and aged-care facilities) • waste generated from a single industrial	Mixed construction and demolition waste including: • rubble, plasterboard, treated and untreated timber • wood products,including softboard, hardboard, particle board, plywood, MDF, customwood, shingles, sawdust

		process (eg, steel or aluminium-making, or pulp and paper-making) carried out in one or more locations • Is not a class 3 and 4 managed or controlled fill facility	• concrete, including reinforced or crushed concrete blocks • clay products including pipes, tiles • asphalt (all types), and roading materials, including road sub-base • plasterboard and Gibraltar board • masonry, including bricks, pavers • metal, or products containing metals, including corrugated iron, steel, steel-coated tiles, wire, wire rope, wire netting, aluminium fittings • plastic products, including plastic bags, pipes, guttering, building wrap • insulation products • laminate products, including Formica • flooring products, including carpet and underlay, vinyl/linoleum, cork tiles • paper and cardboard products, including wallpaper, lining paper, building paper • site clearance and excavation materials including soils, clays, rocks, gravel, tree stumps
3/4 Managed or Controlled Fill Disposal	Accepts any one of the following for disposal: • inert waste material from construction and demolition activities	Does not accept: • household waste • waste from commercial or industrial sources	Types of waste may include (but not limited to): • lightly contaminated soil below applicable consent limits and inert

	• inert waste material from earthworks or site remediation	• waste from institutional sources (eg, hospitals, educational facilities, and aged-care facilities • waste generated from a single industrial process (eg, steel or aluminium-making, or pulp and paper-making) carried out in one or more locations • waste material from construction and demolition activity (except for inert waste material).	construction and demolition materials, including: site facilities clearance and excavation materials including soils, clays, rocks, gravel, tree stumps masonry, including bricks and pavers clay products, including pipes, tiles concrete, including crushed concrete and blocks (for reinforced concrete, exposed reinforcing must be removed) asphalt (bitumen-based only) road sub-base.
5 **Cleanfill**	A facility that accepts only virgin excavated natural material (such as clay, soil, or rock) for disposal	Any materials other than virgin excavated natural materials (VENM)	VENM such as clay, soil and rock
Industrial monofill	A facility that accepts for disposal waste that: • discharges or could discharge contaminants or emissions • is generated from a single industrial process (eg, steel or aluminium-making, or pulp and paper-making) carried out in one or more locations.	• household waste • waste from commercial or institutional sources (eg, hospitals, educational facilities, and aged-care facilities) • waste not generated by a single industrial process.	Waste generated by industrial processes such as: • steel-making • aluminium-making • pulp and paper • oil exploration and extraction
Transfer station	A facility: • that contains a designated receiving area where waste is received; and • from which waste or any material derived from that waste is: transferred to a final disposal site transferred elsewhere for further processing that does not itself provide	N/A (no disposal of waste occurs)	N/A

	long-term storage for waste or material derived from that waste.		

A.3.0 National Legislative and Policy Context

A.3.1 The New Zealand Waste Strategy 2023

The New Zealand Waste Strategy 2023 provides the Government's strategic direction for waste management and minimisation in New Zealand. This strategy was released in 2023 and replaced the 2010 Waste Strategy.

The strategy aims to provide direction to central and local government, businesses (including the waste industry), and communities on where to focus their efforts to manage waste. It will be supported by an action and investment plan (AIP) which will be developed in consultation with local authories, the waste management sector, and others; and will set out priority actions required over the next five years. The 2023 strategy has a focus on achieving a more 'circular economy' for waste and sets out a multi-decade pathway towards this.

Under section 44 of the Waste Management Act 2008, in preparing their waste management and minimisation plan (WMMP) councils must have regard to the New Zealand Waste Strategy, or any government policy on waste management and minimisation that replaces the strategy. Guidance on how councils may achieve this is provided in section 4.4.3.

A copy of the current New Zealand Waste Strategy is available on the Ministry's website.

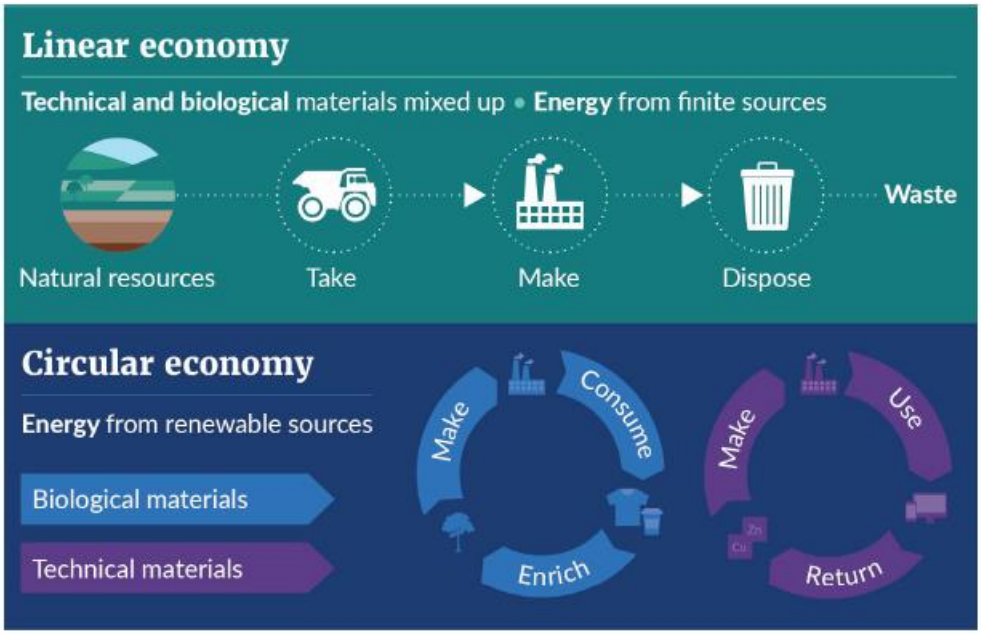
Sections of the new strategy are discussed here in more detail.

A.3.1.1 Circular Economy principles

The strategy includes some background on circular economy, including some summary figures that compare a linear economy to a circular economy, and a revised waste hierarchy. It also emphasises the role of te ao Māori in considering waste appraoches.

The figures mentioned above are shown here (with permission from the Ministry):

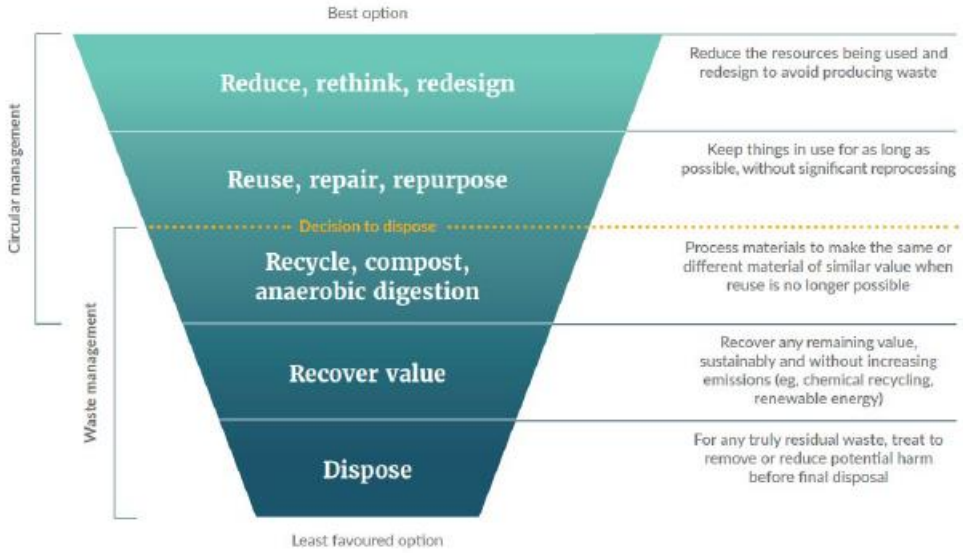
Figure 11: Characteristics of Linear and Circular Economies



Source: Te rautaki para | Waste Strategy (page 14), Ministry for the Environment 2023

The waste hierarchy is still a core principle guiding waste management and minimisation in New Zealand, but has been refined to more closely support and align with a circular economy approach.

Figure 12: Revised Waste Hierarchy



Source: Te rautaki para | Waste Strategy (page 14), Ministry for the Environment 2023

The strategy highlights several key facts that demonstrate New Zealand's relatively poor performance in waste management and minimisation:

- Emissions from waste produce 9% of New Zealand's biogenic methane emissions, and 4% of our total greenhouse gas emissions, with organic waste decomposing in landfills contributing 94% of these emissions.
- On average, nearly 700 kg of waste per capita goes to municipal landfills[44] annually – compared to the OECD average of 538 kg; and trends are for this to increase
- Domestic recovery infrastructure is limited, and exporting challenging due to our relative geographic isolation and distance from markets
- Lack of data relating to waste practices, significantly non-municipal landfills and diverted materials
- Historical management has been poor, with numerous legacy disposal sites around the country causing local environmental harm.

A.3.1.2 The Strategy

The direction of the strategy is important in many, very practical, ways; it provides a clear vision through to 2050, principles that support this vision, a phased approach with three clear stages, and targets to measure progress and encourage ambitious action.

Three key strategic issues are core to the strategy – domestic resource recovery and recycling, the role of waste to energy, and net zero emissions by 2050.

The vision is:

> *"By 2050, Aotearoa New Zealand is a low-emissions, low-waste society, built upon a circular economy.*
>
> *We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility."*

Six guiding principles are included.

A.3.1.3 A staged process

While the strategy has a view out to 2050, the work required to get there has been divided into three high level work stages:

1. 2022 – 30: embedding circular thinking into systems
2. 2030 – 40: expanding to make circular normal
3. 2040 – 50: Helping others do the same

Each stage has a number of goals, some of which are more relevant to councils than others – Phase 1 is shown in the table below and has been addressed in the options list.

[44] 'municipal landfill', 'municipal solid waste landfill' 'sanitary landfill' and 'Class 1 landfill' are all terms that essentially refer to the same type of facility.

Phase 1 Goals – By 2030, our enabling systems are working well and behaviour is changing	
The building blocks are in place to enable change	
Strategic planning, regulatory, investment and engagement systems are in place and operating to drive and support change	councils have a role in strategic planning at a local level (through WMMPs), which will both inform and be informed by the AIP councils also have a role, albeit limited compared to the national role, to contribute through local bylaws and any local funding pools that are available councils carry out local engagement and can support national campaigns
We have a comprehensive national network of facilities supporting the collection and circular management of products and materials	councils will be well placed to understand what this means at a local level, and be able to drive and coordinate the development of a network approach
We all take responsibility for how we produce, manage, and dispose of things, and are accountable for our actions and their consequences	This is likely to be aimed mainly at personal responsibility – although councils can encourage this attitude locally
Specific Priorities:	• Support the creation of national planning, regulatory and investment systems. • Consider how the timing and interactions of central government and local government waste planning could best be integrated, and communicate to the Ministry • Consider how to use waste levy funding to support the overall strategic framework of funding and investment, given the AIP context, direction and priorities – collaborate with other councils and with central government to a greater extent • Support the development of simple ways for central and local government to collaborate and work in partnership

	• Work with central government, the waste sector, and others to develop a shared view of what a 'comprehensive national network of facilities' looks like • Align overall direction and approach with this • The network needs to have nationwide coverage (significant for the Waikato region), include a range of products and materials, and focus on circular management options where possible • Prioritise reducing greenhouse gas emissions • Ensure planning and consenting teams require new builds to have appropriate space for waste management, there is space for community facilities, and feed in to regional plans to ensure they provide for a 'coherent network' • Identify and work with community partners to extend services into hard-to-reach areas • Promote waste minimisation using long-term, evidence-based hehaviour change programmes • Provide timely, accurate and clear information when creating additional obligations through bylaws or introducing new services •
More activity is circular and we produce less waste	
We use fewer products and materials, and using (sic) them for longer, by making them more durable, and repairing, reusing, sharing and repurposing them	As above, councils have a detailed understanding of what is required to enable repair, reuse, sharing and repurposing at the local level
Resource recovery systems are operating effectively for core materials and across all regions	Question: what are 'core materials'? Goal 5 doesn't say. Is it meant to align with kerbside standardisation? Councils will have a key role in developing and maintaining resource recovery systems at the local level. Regional and cross-regional collaboration will be needed to ensure these form part of a cohesive network.

We look for ways to recover any remaining value from residual waste, sustainably and without increasing emissions, before final disposal	Councils will need to consider any potential role for energy-from-waste technologies at the local and/or regional level – particularly those that operate landfills
Specific Priorities	• Support repair initiatives by, for example, making space in resource recovery centres or other community facilities • Think about how to cater for future reuse systems when developing infrastructure to support collection and processing of products and materials • Take responsibility for kerbside collection of household recycling and general waste • Find solutions to provide services to small towns and rural areas • Implement kerbside standardisation locally • Recover value from 'truly residual waste' without harming the environment • Consider the purpose, feedstock, processing and potential energy production of any 'waste to energy' methodology
Emissions and other environmental indicators are improving	
Emissions from waste are reducing in line with our domestic and international commitments	Councils will need to model and monitor emissions from their local activities – waste emissions are being considered at a regional level for the Waikato region
Contaminated land is sustainably managed and remediated, to reduce waste and emissions and enhance the environment	Councils are responsible for the management of their closed landfills.
Specific Priorities	• Maximise the amount of organic waste being recycled into beneficial uses (composting and anerobic digestion are options) • Implement standardised kerbside collections locally for organic wastes (with support and education) • Fund and invest in infrastructure to collect, process, manage and recycle organic waste (food, garden and C&D organics)

- Landfill gas capture at Class 1 facilities by the end of 2026 or cease accepting organic waste
- Potentially implement landfill organics ban by 2030 at all Class 1 facilities
- Address the management of ‘vulnerable landfills’ if any are identified that are council’s responsibility that are not already included in a closed landfill management plan.

A.3.1.4 Targets

The strategy includes targets; although it is acknowledged that there currently isn't enough (or reliable enough) data to set an accurate baseline or monitor these fully.

Councils should consider these, however, when setting targets in their WMMPs as it would make sense for these metrics to be reflected in local target setting and monitoring. This will also provide more support to the process of monitoring these targets at a national level.

A.3.1.5 Strategic Planning Cycle

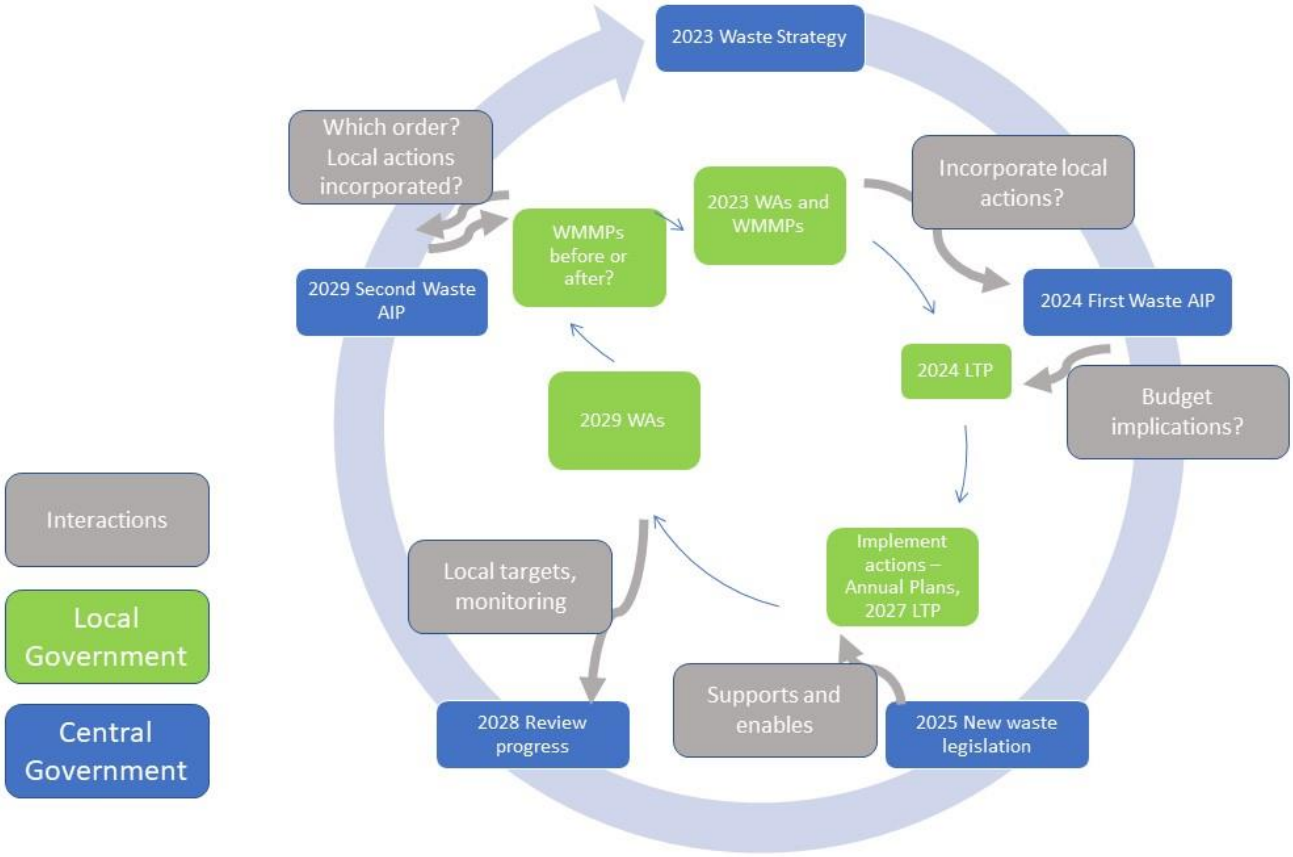
Many councils are currently in the process of completing a Waste Assessment with a veiw to reviewing their WMMPs (if necessary) during the second half of 2023 so actions can be budgeted and included in 2024 LTPs. The current proposal is for the first of the Ministry's AIP to be out in 2024, and then a five year cycle to occur from there – so the second AIP will be due in 2029. This doesn't fit neatly with the local government planning cycle.

It is not yet clear the extent to which local planning (through WMMPs) will be used to build, and be incorporated in, the AIPs. It is also not clear what the impact would be if the AIP included actions or investments that would require implementation at a local level, as is likely – and therefore may need to be included in WMMPs. Significant amendments to WMMPs do, of course, require that the full special consultative process is completed again.

The question then arises as to how councils handle the situation where they are required, through regulation or through implementation of national AIPs, to implement actions that their local communities disagree with (and therefore essentially make the consultation process pointless).

The figure below attempts to align and show the interactions between the central and local government waste planning cycles.

Figure 13: Central and Local Government Waste Planning



A.3.1.6 Summary

The direction of the New Zealand Waste Strategy, the supporting goals, and the proposed targets all have clear implications for the future direction of waste disposal facilities in this country.

- The overall direction of the Waste Strategy is towards a circular economy, which is not supported by a landfill disposal-based linear system;
- there are specific actions relating to reducing a wide range of waste streams, and specifically and particularly organic waste – in concert with work to reduce emissions. This could extend to a ban on organic waste going to landfill; and
- the targets focus on reducing waste generation and waste disposal by 2030 – by quite significant proportions.

The overall tone of the strategic direction is not in support of continued or extended disposal of waste; and particularly not organic wastes.

A.3.2 Waste Minimisation Act 2008

The purpose of the Act is to encourage waste minimisation and a decrease in waste disposal to protect the environment from harm and obtain environmental, economic, social and cultural benefits.

The Act introduced tools, including:

- waste management and minimisation plan obligations for territorial authorities
- a waste disposal levy to fund waste minimisation initiatives at local and central government levels
- product stewardship provisions.

Part 4 of the Act is dedicated to the responsibilities of a council, in that it "must promote effective and efficient waste management and minimisation within its district" (section 42).

To meet this requirement, councils are required to develop and adopt a WMMP. The development of a WMMP in the Act is a requirement modified from Part 31 of the Local Government Act 1974, but with even greater emphasis on waste minimisation.

To support the implementation of a WMMP, section 56 of the Act also provides councils the ability to:

- develop bylaws
- regulate the deposit, collection and transportation of wastes
- prescribe charges for waste facilities
- control access to waste facilities
- prohibit the removal of waste intended for recycling.

A number of specific clauses in Part 4 relate to the WMMP process. It is essential that those involved in developing a WMMP read and are familiar with the Act and Part 4 in particular.

The Act provides a regulatory framework for waste minimisation that had previously been based on largely voluntary initiatives and the involvement of territorial authorities under previous legislation, including Local Government Act 1974, Local Government Amendment Act (No 4) 1996, and Local Government Act 2002. The purpose of the Act is to encourage a reduction in the amount of waste disposed of in New Zealand.

In summary, the Act:

- Clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation e.g. updating Waste Management and Minimisation Plans (WMMPs) and collecting/administering levy funding for waste minimisation projects.
- Requires that a Territorial Authority promote effective and efficient waste management and minimisation within its district (Section 42).

- Requires that when preparing a WMMP a Territorial Authority must consider the following methods of waste management and minimisation in the following order of importance:
    - Reduction
    - Reuse
    - Recycling
    - Recovery
    - Treatment
    - Disposal
    - Put a levy on all waste disposed of in a landfill.
    - Allows for mandatory and accredited voluntary product stewardship schemes.
    - Allows for regulations to be made making it mandatory for certain groups (for example, landfill operators) to report on waste to improve information on waste minimisation.
    - Establishes the Waste Advisory Board to give independent advice to the Minister for the Environment on waste minimisation issues.

Various other aspects of the Act are discussed in more detail below.

A.3.3 Waste Levy

The waste levy originally came in to effect from 1st July 2009, adding $10 per tonne to the cost of landfill disposal at sites which accept household solid waste (essentially Class 1 disposal facilities). The levy has two purposes, which are set out in the Act:

- to raise revenue for promoting and achieving waste minimisation
- to increase the cost of waste disposal to recognise that disposal imposes costs on the environment, society and the economy.

This levy is collected and managed by the Ministry who distribute half of the revenue collected to territorial authorities (TA) on a population basis to be spent on promoting or achieving waste minimisation as set out in their WMMPs. The other half is retained by the Ministry and managed by them as a central contestable fund for waste minimisation initiatives (the Waste Minimisation Fund).

In April 2021, the government introduced regulation to expand the scope of the levy from Class 1 landfills to also include classes 2-4.[45]

[45] https://www.legislation.govt.nz/regulation/public/2021/0069/latest/whole.html

The table below shows the timetable and rates for the new levy regime:

Table 11: Levy Rates by Fill Type and Year

LANDFILL CLASS	1-Jul-21	1-Jul-22	1-Jul-23	1-Jul-24
Municipal landfill (class 1)	$20	$30	$50	$60
Construction and demolition fill (class 2)		$20	$20	$30
Managed fill (class 3)			$10	$10
Controlled fill (class 4)			$10	$10

https://www.mfe.govt.nz/waste/waste-and-government

If the landfill levy is expanded and raised as planned this will have an impact on the quantity of material going to the different destinations; however, the extent to which this occurs, and for which materials, depends on a number of other factors.

One impact that has been noted in some areas of New Zealand, for example, is Class 2 landfill operators choosing to close rather than add $20 per tonne to their gate fee, and undertake the administrative task of monitoring waste quantities to the extent required by the online waste levy system (OWLS). Some of these facilities don't have weighbridges in place and instead base their charges on volume estimates. To report to the OWLS, these facilities then need to translate volumes to weights, and it is on this basis that their landfill levy obligations are calculated. Therefore, any variances in conversion rates between volume and weight could result in an over- or under-calculation of the required landfill levy at the gate.

A.3.4 Product Stewardship

Under the Act, if the Minister for the Environment declares a product to be a priority product, a product stewardship scheme must be developed and accredited to ensure effective reduction, reuse, recycling or recovery of the product and to manage any environmental harm arising from the product when it becomes waste.[46]

The following voluntary product stewardship schemes have been accredited by the Minister for the Environment:[47]

- Agrecovery rural recycling programme
- Envirocon product stewardship

[46] Waste Management Act 2008 2(8)
[47] http://www.mfe.govt.nz/waste/product-stewardship/accredited-voluntary-schemes

- Fonterra Milk for Schools Recycling Programme
- Fuji Xerox Zero Landfill Scheme
- Holcim Geocycle Used Oil Recovery Programme (no longer operating)
- Interface ReEntry Programme
- Kimberly Clark NZ's Envirocomp Product Stewardship Scheme for Sanitary Hygiene Products
- Plasback
- Public Place Recycling Scheme
- Recovering of Oil Saves the Environment (R.O.S.E. NZ)
- Refrigerant recovery scheme
- RE:MOBILE
- Resene PaintWise
- The Glass Packaging Forum

Further details on each of the above schemes are available on: http://www.mfe.govt.nz/waste/product-stewardship/accredited-voluntary-schemes

Until July 2020, the ability under the Act to name a product as a 'priority product' had not been used. Once a product has been named such, an extended producer responsibility approach must be taken and a regulated product stewardship scheme developed. The first six priority products named are:

1. Plastic packaging
2. Tyres
3. Electrical and electronic products (e-waste including large batteries)
4. Agrichemicals and their containers
5. Refrigerants
6. Farm plastics

The Ministry has taken a 'co-design' approach, which involves industry developing and operating product stewardship schemes with central government oversight. To date regulated product stewardship schemes are in development for tyres, large batteries, e-waste, refrigerants, and agrichemicals and farm plastics, although only tyres have currently been accredited. Consultation on regulations to enable the schemes for tyres and large batteries was undertaken in late 2021 and is due to take place in the second half of 2022 for refrigerants and farm plastics.

A.3.5 Waste Minimisation Fund

The Waste Minimisation Fund has been set up by the Ministry for the Environment to help fund waste minimisation projects and to improve New Zealand's waste minimisation performance through:

- Investment in infrastructure;

- Investment in waste minimisation systems and
- Increasing educational and promotional capacity.

Criteria for the Waste Minimisation Fund have been published:

1. Only waste minimisation projects are eligible for funding. Projects must promote or achieve waste minimisation. Waste minimisation covers the reduction of waste and the reuse, recycling and recovery of waste and diverted material. The scope of the fund includes educational projects that promote waste minimisation activity.

2. Projects must result in new waste minimisation activity, either by implementing new initiatives or a significant expansion in the scope or coverage of existing activities.

3. Funding is not for the ongoing financial support of existing activities, nor is it for the running costs of the existing activities of organisations, individuals, councils or firms.

4. Projects should be for a discrete timeframe of up to three years, after which the project objectives will have been achieved and, where appropriate, the initiative will become self-funding.

5. Funding can be for operational or capital expenditure required to undertake a project.

6. For projects where alternative, more suitable, Government funding streams are available (such as the Sustainable Management Fund, the Contaminated Sites Remediation Fund, or research funding from the Foundation for Research, Science and Technology), applicants should apply to these funding sources before applying to the Waste Minimisation Fund.

7. The applicant must be a legal entity.

8. The fund will not cover the entire cost of the project. Applicants will need part funding from other sources.

9. The minimum grant for feasibility studies will be $10,000.00. The minimum grant for other projects will be $50,000.00.

Application assessment criteria have also been published by the Ministry.

The Ministry recently announced that the next Waste Minimisation Fund round would work in quite a different way. Instead of opening for a fixed period of time in May 2022, it will instead open in October 2022 and will consider applications as they are received, and will agree to fund successful applications until funds are exhausted.

Further details will be released soon on how the restructured fund would work.

A.3.6 Local Government Act 2002

The Local Government Act 2002 (LGA) provides the general framework and powers under which New Zealand's democratically elected and accountable local authorities operate.

The LGA contains various provisions that may apply to councils when preparing their WMMPs, including consultation and bylaw provisions. For example, Part 6 of the LGA refers to planning and decision-making requirements to promote accountability between local authorities and their communities, and a long-term focus for the decisions and activities of the local authority. This part includes requirements for information to be included in the long-term plan (LTP), including summary information about the WMMP.

More information on the LGA can be found at ww.dia.govt.nz/better-local-government.

A.3.6.1 Section 17A Review

Local authorities are now under an obligation to review the cost-effectiveness of current arrangements for meeting community needs for good quality infrastructure, local public services and local regulation. Where a review is undertaken local authorities must consider options for the governance, funding and delivery of infrastructure, local public services and local regulation that include, but are not limited to:

a) in-house delivery
b) delivery by a CCO, whether wholly owned by the local authority, or a CCO where the local authority is a part owner
c) another local authority
d) another person or agency (for example central government, a private sector organisation or a community group).

Local authorites had three years from 8 August 2014 to complete the first review of each service i.e. they must have completed a first review of all their services by 7 August 2017 (unless something happened to trigger a review before then).

Other than completion by the above deadline, there are two statutory triggers for a section 17A review:

- The first occurs when a local authority is considering a significant change to a level of service
- The second occurs where a contract or other binding agreement is within two years of expiration.

Once conducted, a section 17A review has a statutory life of up to six years. Each service must be reviewed at least once every six years unless one of the other events that trigger a review comes into effect.

While the WMMP process is wider in scope – considering all waste service provision in the local authority area – and generally taking a longer term, more strategic approach, there is substantial crossover between the section 17A requirements and those of the WMMP process, in particular in relation to local authority service provision. The S17A review may however take a deeper approach go into more detail in consideration of how

services are to be delivered, looking particularly at financial aspects to a level that are not required under the WMMP process.

Because of the level of crossover however it makes sense to undertake the S17A review and the WMMP process in an iterative manner. The WMMP process should set the strategic direction and gather detailed information that can inform both processes. Conversely the consideration of options under the s17A process can inform the content of the WMMP – in particular what is contained in the action plans.

A.3.7 Resource Management Act 1991

The Resource Management Act 1991 (RMA) promotes sustainable management of natural and physical resources. Although it does not specifically define 'waste', the RMA addresses waste management and minimisation activity through controls on the environmental effects of waste management and minimisation activities and facilities through national, regional and local policy, standards, plans and consent procedures. In this role, the RMA exercises considerable influence over facilities for waste disposal and recycling, recovery, treatment and others in terms of the potential impacts of these facilities on the environment.

Under section 30 of the RMA, regional councils are responsible for controlling the discharge of contaminants into or on to land, air or water. These responsibilities are addressed through regional planning and discharge consent requirements. Other regional council responsibilities that may be relevant to waste and recoverable materials facilities include:

- managing the adverse effects of storing, using, disposing of and transporting hazardous wastes
- the dumping of wastes from ships, aircraft and offshore installations into the coastal marine area
- the allocation and use of water.

Under section 31 of the RMA, council responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, noncomplying and prohibited activities, and their controls, are specified in district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.

In addition, the RMA provides for the development of national policy statements and for the setting of national environmental standards (NES). There are currently two enacted NESs that directly influence the management of waste in New Zealand:

5) The Resource Management (National Environmental Standards for Air Quality) Regulations 2004; this NES requires certain landfills (e.g., those with a capacity of more than 1 million tonnes of waste) to collect landfill gases and either flare

them or use them as fuel for generating electricity. Unless exemption criteria are met, the NES for Air Quality also prohibits the lighting of fires and burning of wastes at landfills, the burning of tyres, bitumen burning for road maintenance, burning coated wire or oil, and operating high-temperature hazardous waste incinerators. These prohibitions aim to protect air quality.

6) The Resource Management (National Environmental Standards for Storing Tyres Outdoors) Regulations 2021; this NES provides nationally consistent rules for the responsible storage of tyres.

The implementation of the National Policy Statement for Freshwater Management[48] may reduce the application rates of some organic wastes to land, which is currently a low cost management option for wastes such as effluent. This may increase the quantities of these organic materials that will be available for processing, which would then impact on the types of materials requiring processing, the technologies best suited to these material mixes, and the markets for the end product.

The RMA is currently subject to extensive reform, which will entail repealing the RMA and replacing it with three separate pieces of legislation:

1) National and Built Environments Act;
2) Spatial Planning Act; and
3) Climate Adaptation Act.

It is likely that this reform process will be completed before the end of 2023.

A.3.8 New Zealand Emissions Trading Scheme

The Climate Change Response Act 2002 and associated regulations is currently the Government's principal response to manage climate change. A key mechanism for this is the New Zealand Emissions Trading Scheme (NZ ETS). The NZ ETS puts a price on greenhouse gas emissions, providing an incentive for people to reduce emissions and plant forests to absorb carbon dioxide. Certain sectors are required to acquire and surrender emission units to account for their direct greenhouse gas emissions or the emissions associated with their products. Landfills that are subject to the waste disposal levy are required to surrender emission units to cover methane emissions generated from landfill. These disposal facilities are required to report the tonnages landfilled annually to calculate emissions (this is separately to the tonnages required to be reported for the landfill levy, through the OWLS).

The NZ ETS was introduced in 2010 and, from 2013, landfills have been required to surrender 'New Zealand emissions units' or NZUs for each tonne of CO_2 (equivalent) that they produce. Until around 2017, however, the impact of the NZETS on disposal prices was limited. There were a number of reasons for this:

[48] https://environment.govt.nz/publications/national-policy-statement-for-freshwater-management-2020/

- The global price of carbon crashed during the GFC in 2007-8 and was slow to recover in the following years. Prior to the crash it was trading at around $20 per tonne. The price had been as low as $2, although in June 2015, the Government moved to no longer accept international units in NZETS and the NZU price increased markedly. NZUs[49] currently change hands for between $70 and $85, with prices at $74.40 at the time of writing[50].
- The transitional provisions of the Climate Change Response Act, which were extended in 2013 but have now been reviewed, meant that landfills only had to surrender half the number of units they would be required to otherwise. These transitional provisions were removed in January 2017, effectively and immediately doubling the price per tonne impact of the ETS.
- Landfills are allowed to apply for 'a methane capture and destruction unique emissions factor (UEF)'. This means that if landfills have a gas collection system in place and flare or otherwise use the gas (and turn it from methane, CH_4 into carbon dioxide, CO_2) they can reduce their liabilities in proportion to how much gas they capture. Up to 90% capture and destruction is allowed to be claimed under the regulations, with large facilities applying for UEF's at the upper end of the range.

Taken together (a low price of carbon, only two-for-one surrender required, and methane destruction of 80-90%) the actual cost of compliance with the NZETS had been small for most landfills – particularly those that were able to claim high rates of gas capture. Disposal facilities typically imposed charges (in the order of $5 per tonne) to their customers, but these charges mostly reflected the costs of scheme administration, compliance, and hedging against risk rather than the actual cost of carbon.

The way the scheme has been structured has also resulted in some inconsistencies in the way it is applied – for example class 2-5 landfills and closed landfills do not have any liabilities under the scheme. Further, the default waste composition (rather than a SWAP) can be used to calculate the theoretical gas production, which means landfill owners have an incentive to import biodegradable waste, which then increases gas production and which can then be captured and offset against ETS liabilities.

Recently, however the scheme has had a greater impact on the cost of landfilling, and this is expected to continue in the medium term. Many small landfills which do not capture and destroy methane are now beginning to pay a more substantial cost of compliance. The ability of landfills with high rates of gas capture and destruction to buffer the impact of the ETS will mean a widening cost advantage for them relative to those without such ability. This appears to be putting further pressure on small (predominantly Council-owned) facilities and will drive further tonnage towards the large regional facilities (predominantly privately owned).

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[49] NZUs are carbon credits that are officially accepted to offset liabilities under the NZETS

[50] According to carbon prices on www.carbonforestservices.co.nz and https://www.carbonmatch.co.nz/

For example, with a price of carbon at $75 per tonne, the liability for a landfill without gas capture will be $68.25 (based on a DEF of 0.91 tonnes of CO_2e per tonne of waste), whereas for a landfill claiming 90% gas capture (the maximum allowed under the scheme), the liability will be only $6.83. This type of price differential will mean it will become increasingly cost competitive to transport waste larger distances to the large regional landfills.

More information is available at www.climatechange.govt.nz/emissions-trading-scheme.

A.3.9 Litter Act 1979

Under the Litter Act[51] it is an offence for any person or body corporate to deposit or leave litter:

- in or on any public place; or
- in or on any private land without the consent of its occupier.

The Act enables Council to appoint Litter Officers with powers to enforce the provisions of the legislation.

The legislative definition of the term "litter" is wide and includes 'refuse, rubbish, animal remains, glass, metal, garbage, debris, dirt, filth, rubble, ballast, stones, earth, waste matter or other thing of a like nature'.

Any person who commits an offence under the Act is liable to:

- An instant fine of $400 imposed by the issue of an infringement notice; or a fine not exceeding $5,000 in the case of an individual or $20,000 for a body corporate upon conviction in a District Court.
- A term of imprisonment where the litter is of a nature that it may endanger, cause physical injury, disease or infection to any person coming into contact with it.

Under the Litter Act 1979 it is an offence for any person to deposit litter of any kind in a public place, or onto private land without the approval of the owner.

The Litter Act is enforced by territorial authorities, who have the responsibility to monitor litter dumping, act on complaints, and deal with those responsible for litter dumping. Councils reserve the right to prosecute offenders via fines and infringement notices administered by a litter control warden or officer. The maximum fines for littering are $5,000 for a person and $20,000 for a corporation.

Council powers under the Litter Act could be used to address illegal dumping issues that may be included in the scope of a council's waste management and minimisation plan.

[51] https://www.legislation.govt.nz/act/public/1979/0041/latest/DLM33082.html

The Litter Act may be reviewed alongside the review of the Act.

A.3.10 Health Act 1956

The Health Act 1956 places obligations on TAs to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part 2 – powers and duties of local authorities, section 25). Where the Ministry of Health considers that a local authority is not taking the necessary action to meet these obligations and protect public health, it can require a local authority to do so.

It specifically identifies certain waste management practices as nuisances (S 29) and offensive trades (Third Schedule) and section 23 directs every local authority to improve, promote, and protect public health by inspecting its district regularly to identify any nuisance or condition likely to be offensive or harm human health. If any issues are noted, the local authority should take steps to rectify the situation. Improperly managed waste would be considered a nuisance. Section 34 enables councils to abate nuisances without notice and recover costs.

Section 54 places restrictions on carrying out an offensive trade and requires that the local authority and medical officer of health must give written consent and can impose conditions on the operation. The local authority's responsibilities under section 54 only applies where resource consent has not been granted under the RMA (i.e., no need to give written consent twice). Local authorities should seek to coordinate with their local public health unit where offensive trades are being established, such as refuse collection and other waste treatment practices.

The Health Act enables TAs to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.[52] It also means that where TAs incur costs in meeting their responsibilities to abate nuisances by (for example) removing refuse that is likely to harm public health, the TA can seek payment of these costs.

Health Act provisions to remove refuse by local authorities have been repealed.

A.3.11 Hazardous Substances and New Organisms Act 1996 (HSNO Act)

The HSNO Act addresses the management of substances (including their disposal) that pose a significant risk to the environment and/or human health. The Act relates to waste management primarily through controls on the import or manufacture of new hazardous materials and the handling and disposal of hazardous substances.

[52] From: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.

Depending on the amount of a hazardous substance on site, the HSNO Act sets out requirements for material storage, staff training and certification. These requirements would need to be addressed within operational and health and safety plans for waste facilities. Hazardous substances commonly managed by councils include used oil, household chemicals, asbestos, agrichemicals, LPG and batteries.

The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.[53]

A.3.12 Health and Safety at Work Act 201554

The new Health and Safety at Work Act, passed in September 2015 replaces the Health and Safety in Employment Act 1992. The bulk of the Act came into force from 4 April 2016.

The Health and Safety at Work Act introduces the concept of a Person Conducting a Business or Undertaking, known as a PCBU. The Council will have a role to play as a PCBU for waste services and facilities.

The primary duty of care requires all PCBUs to ensure, so far as is reasonably practicable:

4) the health and safety of workers employed or engaged or caused to be employed or engaged, by the PCBU or those workers who are influenced or directed by the PCBU (for example workers and contractors)
5) that the health and safety of other people is not put at risk from work carried out as part of the conduct of the business or undertaking (for example visitors and customers).

The PCBU's specific obligations, so far as is reasonably practicable:

- providing and maintaining a work environment, plant and systems of work that are without risks to health and safety
- ensuring the safe use, handling and storage of plant, structures and substances
- providing adequate facilities at work for the welfare of workers, including ensuring access to those facilities
- providing information, training, instruction or supervision necessary to protect workers and others from risks to their health and safety
- monitoring the health of workers and the conditions at the workplace for the purpose of preventing illness or injury.

[53] From: the Ministry 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.
[54] http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html#DLM6564701

A key feature of the new legislation is that cost should no longer be a major consideration in determining the safest course of action that must be taken.

WorkSafe NZ is New Zealand's workplace health and safety regulator. WorkSafe NZ will provide further guidance on the new Act after it is passed.

A.3.13 Other legislation

Other legislation that relates to waste management and/or reduction of harm, or improved resource efficiency from waste products includes:

- Biosecurity Act 1993
- Radiation Protection Act 1965
- Ozone Layer Protection Act 1996
- Agricultural Chemicals and Veterinary Medicines Act 1997.

For full text copies of the legislation listed above see www.legislation.govt.nz.

A.3.14 International commitments

New Zealand is party to international agreements that have an influence on the requirements of our domestic legislation for waste minimisation and disposal. Some key agreements are the:

- Montreal Protocol
- Basel Convention
- Stockholm Convention
- Waigani Convention
- Minamata Convention.

More information on these international agreements can be found on the Ministry's website at www.mfe.govt.nz/more/international-environmental-agreements.

A.4.0 A Circular Resource Recovery Network

Historically, our economic system has operated primarily on the basis of linear processes. This system involves extraction, processing, manufacturing, consumption and disposal (end-of-life). This system is not sustainable as it involves systematically using up non-renewable raw materials (such as minerals and fossil fuels) and degrading the natural environment, which is necessary to support life, through unsustainable agricultural and extractive activities (such as logging of native forests), and the creation of waste and pollution. To address this, a paradigm shift is needed. This requires a change in how the economic system produces, assembles, sells and uses products in order to minimise waste and maximise the value of materials in use. The circular economy is a model that enables resources to be kept in use for as long as possible, extract maximum value from them, and then recover and regenerate materials at end-of-life.

Within the context of enabling a circular economy, it is proposed to re-organise how the recovery of materials in the economy occurs by establish a **'circular resource network'**.

The key organising principle behind the concept of a circular resource network is that the resource recovery system should be consciously designed to facilitate the circular flow of materials through the economy, by 'completing the circle'. To date, the 'reverse logistics' aspect of the economy that is responsible for collecting widely dispersed and mixed materials has been a poor relation to the 'logistics' part of the economy that is responsible for the dispersion.

The following subsections expand on what a circular resource network concept that is designed for the circular economy could entail. The circular resource network concept borrows from and builds on the existing concept of a resource recovery network (RRN).

A.4.1 Conventional Resource Recovery Network (RRN)

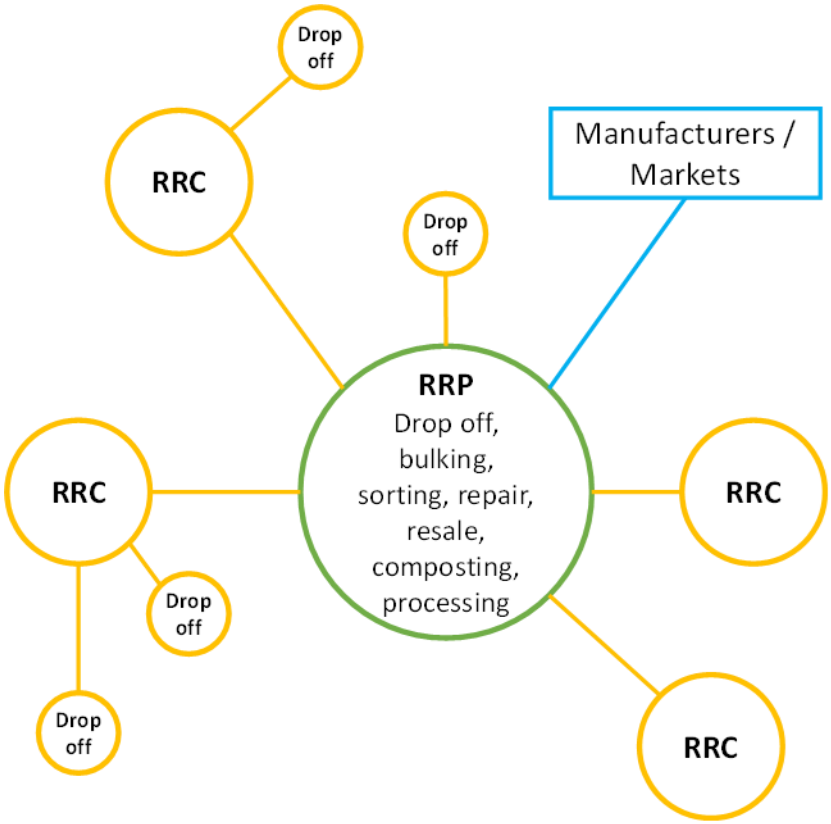
The concept of a RRN is a longstanding one with various examples including Auckland Council working to develop a network of community run facilities in partnership with the Zero Waste Network[55], the development of a Māori and Pasifika Eco Park, in South

[55] https://www.makethemostofwaste.co.nz/resource-recovery-network/

Auckland[56], and Selwyn District Council recently announcing their resource recovery park concept[57].

These examples (which have different approaches) can be expanded into a nationwide state of the art network of resource recovery parks (RRPs) which consist of linked (sub) regional hubs, with smaller satellite facilities (resource recovery centres or RRCs) feeding recovered materials into the hub for processing and sale. These potentially can be further supplemented by local drop off sites that feed the satellite facilities. This concept is illustrated in the figure below.

Figure 14: Network of Resource Recovery Centres Linked to Resource Recovery Parks



The functions that are performed by the RRP consolidate a range of resource recovery functions into a single site. The intent is both to provide a 'one stop shop', but also to take advantage of economies of scale and sharing of infrastructure, services, and overheads, and optimising transport of materials to reduce costs. Furthermore, by co-locating functions there can arise the possibility of synergies between the different functions. For example, reclaimed timber and building materials can provide materials

[56] https://www.stuff.co.nz/business/126810349/the-1-billion-plan-to-lift-mori-and-pasifika-prosperity-in-aucklands-south-and-west
[57] https://www.selwyn.govt.nz/services/rubbish,-recycling-And-organics/recovery-park/reconnect-project

for a 'Community Shed' type operation[58], or items salvaged from the waste stream can be sold at low cost to the public. The proposed form of a resource recovery network is to have a series of sites with physically co-located functions, and for these to be operated by or overseen by a single entity.

A.4.2 Expanding the Resource Recovery Network

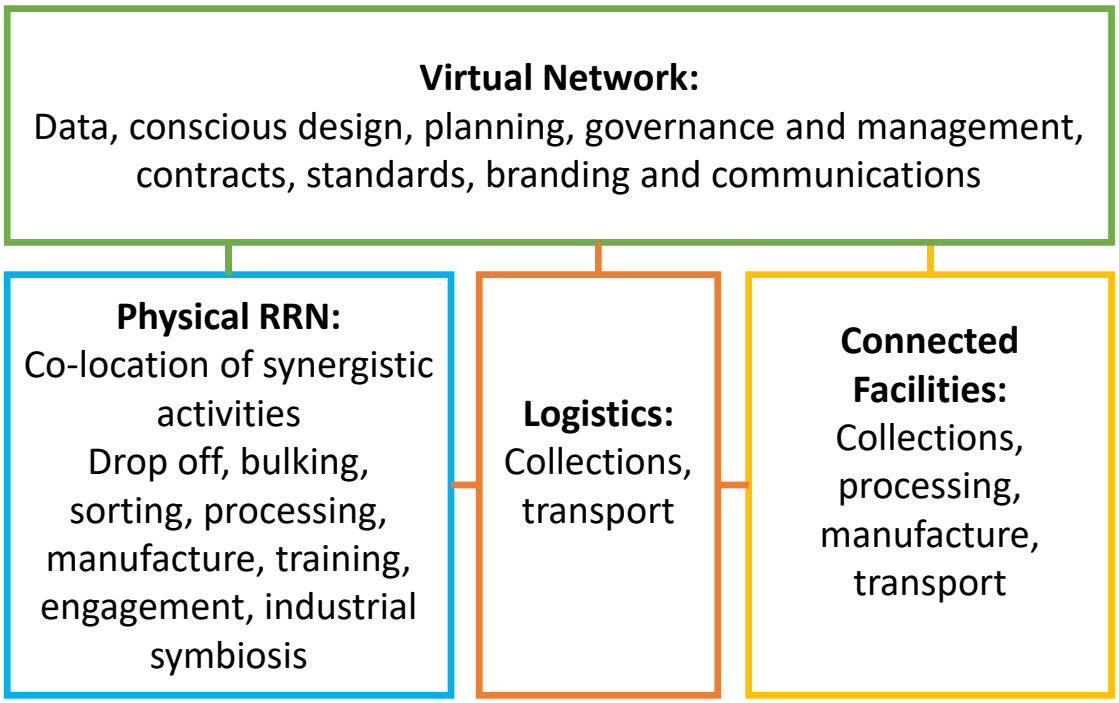
While the conventional concept of a resource recovery network has much to recommend it, in our view there is potential to evolve it further to create the core functionality needed to enable the circular economy.

It is proposed to evolve the concept of physical co-location of synergistic activities to encompass a virtual and holistic network of sites, some co-located (where this provides efficiency gains, and is practical), but also including other sites that may be physically stand-alone sites, but which are connected to the circular resource network. The method of connection would be through supplying and receiving material, utilising network transport arrangements, operating to agreed performance standards, utilising standardised signage and specifications, providing and receiving data, and being linked through virtual directories.

A physical network of sites and logistic can be replicated virtually in an information management system. A nation-wide virtual circular resource network could, eventually, track and/or manage the flow or materials through the entire resource recovery sector in Aotearoa, and enable the optimisation of infrastructure, logistics, and services. Underpinning the virtual network is a physical network of sites and facilities that operate to agreed standards (akin to the traditional RRN concept), supplemented by standalone sites that are connected to the network. Connecting the physical network and standalone sites is a highly efficient, flexible, and low-carbon logistics network. The high-level structure of the network is illustrated in the figure below:

[58] https://menzshed.org.nz/about-us/what-is-a-shed/

Figure 15: Circular Recovery Aotearoa High-Level Structure



A.4.2.1 Spatial Representation

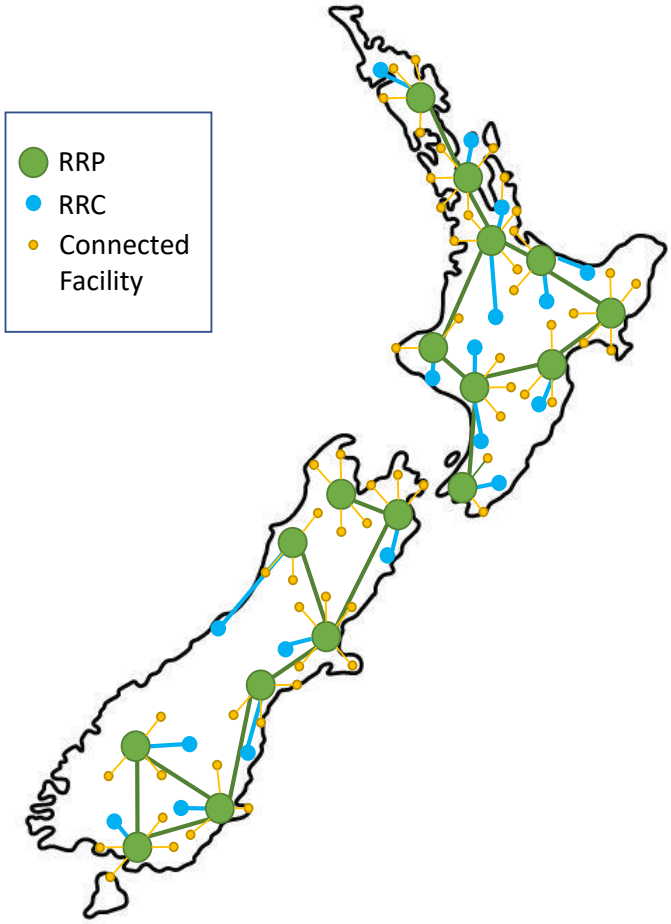
Figure 16 below shows a high-level visual representation of a national resource recovery network.

The large green dots represent regional RRPs that consolidate and process material at a regional level. Depending on the material stream, materials could also be transported between the regional hubs (for example glass being consolidated in Christchurch for shipping to Auckland for manufacture). Regional hubs could also specialise in processing certain materials and swap materials accordingly.

The mid-sized blue dots represent local RRCs that accept a full range of materials and send to the regional RRPs for bulking (or to 'connected facilities' for local processing). Not shown are smaller drop-off sites.

The small yellow dots represent the potentially hundreds of facilities that are not co-located at an RRP or RRC but are linked and operate to the standards of the network. These facilities could accept materials from the RRP or RRC for processing, or supply materials to these sites.

Figure 16: Concept Map of Circular Resource Network

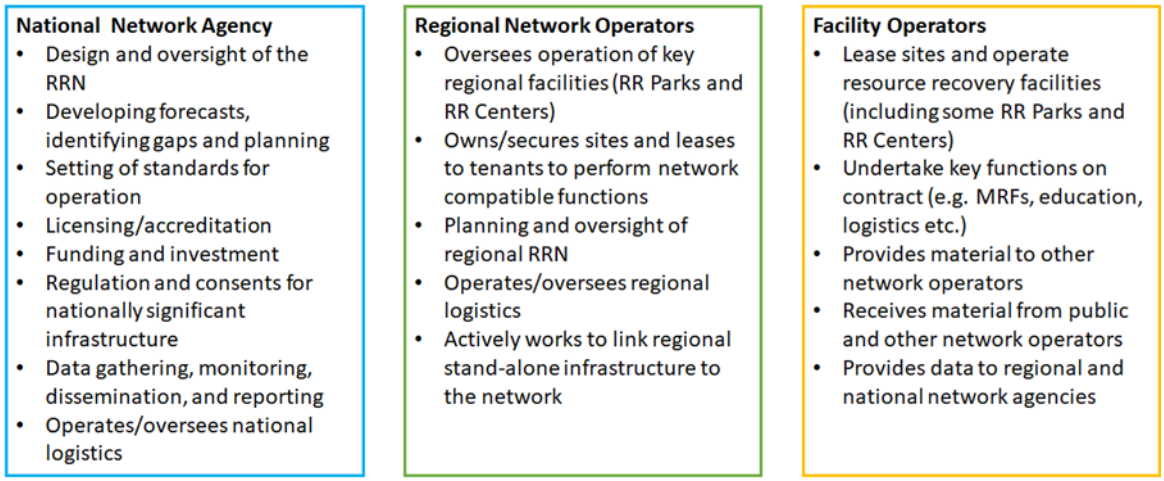


A.4.2.2 Virtual Network

The core of the concept is that the reverse logistics system is actively planned and optimised to 'close the circle' and enable a circular economy. This requires planning, analysis, and data gathering and analysis functions, alongside the active ongoing management of material flows. This is what is covered by the 'virtual network' element.

The roles of the key organisations involved in the circular resource network are shown in the figure below:

Figure 17: Key Agents and Roles in the Resource Recovery Network



A digital model could be developed of the key material flows within the resource recovery sector (ideally this would ultimately encompass a mass balance of materials through the economy, although this is likely to be more difficult to achieve and therefore a more long-term aspiration).

By digitally mapping material flows nationally, across both core facilities and connected facilities, potential gaps and issues could be quickly identified and planning undertaken to ensure the system remains optimised and is resilient and adaptive in the face of change.

The digital model would include current material flows and allow for projections and modelling of new facilities, changes to material types and quantities, logistics etc. This would enable the potential impact of new facilities and options to be investigated before implementation.

The core of the circular resource network is the establishment of a set of standards of operation that all facilities that form part of the circular resource network operate to. These standards would apply to both operations co-located at an RRP or RRC, as well as connected facilities. In this regard what is proposed is similar to a franchise model: as well as designing the overall system the government (or its agents) set the basis by which the circular resource network would function.

A.4.2.3 Physical RRN – Structure

The 'Physical RRN' is the aspect of the system that is most recognisable interface of the network. A national network could be made up of regional nodes (circular resource networks) that are linked but that can operate as independent regional entities.[59] This

[59] For the purposes of this exercise, it should be assumed that 'regional' broadly corresponds to current regional council and unitary council boundaries.

would enable planning with a national perspective (as noted above) but empower the governance and management at a regional level to enable agile response to regional and local requirements. It should be noted, however, that there could be a number of different models.

The role at a regional level is primarily:

- Site ownership, management, development, and leasing.
- Operating region-wide logistics to consolidate materials from RRCs and Connected Facilities at the regional RRP for bulking, sorting, processing and bulk transport or local manufacture.
- Overseeing and applying the operating standards for the network
- Advocating for the development of the network and working with operators and stakeholders to facilitate its continued development.
- Promotion and communication with users.

Regional networks would operate to national standards that include the following (as noted above):

- Branding and communications
- Core materials accepted and material acceptance criteria
- Output material quality standards and contamination levels (referencing existing market specifications or official standards where appropriate)
- Customer service levels
- Appropriate employment conditions
- Standard contracts and agreements for supply of services, provision or sale of materials, leases etc.
- Access to and participation in online marketplaces for recovered materials generated by network participants.

The regional network operators in turn would be responsible for applying and enforcing these standards for local and connected facilities.

A.4.2.4 RRPs – Regional Hubs

The heart of a regional network consists of one or two large RRPs, where a range of key functions are co-located. The purpose of the RRP is to provide a 'hub' for the efficient regional consolidation of a wide range of materials collected at the RRC and Connected Facilities, as well as those that may be collected at the RRP itself.

The core of the concept is to have regional consolidation of materials and provide a hub for the regional network. In addition, these sites could provide a 'flagship' centre with a full range of services for drop-off and community engagement etc.

The RRP all can have different mixes of facilities depending on local requirements. The logistics and flagship public facing operations could be co-located or at different sites depending on local situations.

Typical facilities may include:

- Material recovery facilities for sorting of collected comingled materials.
- Anaerobic digestion facilities to process putrescible wastes and generate biogas that is used to fuel the regional logistics collection fleet.
- Logistics sorting centre for managing the inputs and outputs of a range of facilities.
- Construction and demolition waste sorting facility
- Wash plants and fleet management facilities for reusable containers
- Regional consolidation and logistics for a range of product stewardship schemes such as:
    - E-waste dismantling and processing operations.
    - Used large battery (EV and stationary storage) assessment and consolidation centres.
    - Farm plastics and agrichemical containers
    - Tyres
    - Mattresses
- Education centre
- Reuse stores/mall
- Food rescue
- Manufacturing businesses utilising recovered materials. In some instances, these businesses are co-located to utilise others' discarded materials and surplus process heat, with ongoing work to develop industrial symbiosis models.
- Research on material reuse/recovery
- Drop off facilities for a full range of materials.

A.4.2.5 Local RR Centres

While the RRPs are the hub of the regional networks, the RRC form the primary nodes where the majority of material is dropped off and consolidated locally. Many RRCs will start off as local transfer station sites that are upgraded and re-purposed to have a predominant focus on resource recovery. The RRCs are the local centre for community activity, with many run by community enterprises or iwi, and serve to engage, educate and empower the local communities to not only recover materials but extract and apply the value of those materials for community benefit.

There are a range of different services and facilities at each site, but a set of core facilities could include the following:

- Drop off facilities for a standard range of materials (nominally as follows):
    - Cardboard
    - Metals
    - Paper
    - Glass
    - Plastics 1,2,5
    - Shrink-wrap
    - Garden waste
    - DIY construction and demolition waste
- Dropoff/consolidation sites for current and future product stewardship schemes, for example:
    - Reusable containers
    - Single use containers
    - E-waste and batteries
    - Farm plastics and chemical containers
    - Tyres
    - Mattresses
    - Textiles
    - Paint and household chemicals
- Reuse drop off, refurbishment and resale (furniture, household items, furnishings and clothing, toys, books, tools).

Optional services and facilities could include:

- Café
- Construction and bulky materials sales yard
- Education, training
- Workshops/refurbishment
- Food rescue
- Cooking oil – biodiesel/soap manufacture
- Reusable nappies
- Mattress recycling
- Business incubator space.

A.4.2.6 Logistics

A core feature of the concept is the establishment of an efficient logistics network that is able to consolidate and transport materials as efficiently as possible, including utilising

back-loading, bulk transport, and using flexible methodologies to facilitate bulk transport of smaller volume materials (for example, modular bins transported on side loaders).

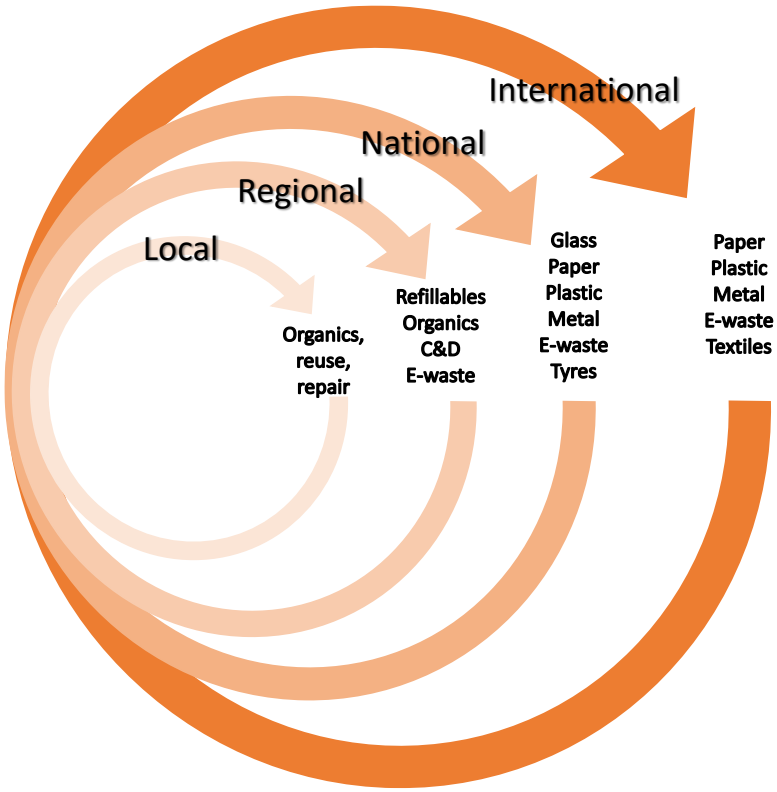
Vehicles utilised by the network could take advantage of low-carbon and waste-based technologies to minimise the carbon footprint of materials managed by the network. For example:

- Vehicles could be powered by gas/energy generated from anaerobic digestion of organic waste.
- Battery electric vehicles could utilise second-life batteries or charging infrastructure built using second life batteries.
- Bulk transport using rail (ideally electrified).

Materials are dealt with in the most appropriate manner through the network with some materials manged locally or regionally, and other materials utilising the logistics capabilities of the network to be delivered to national end uses at low cost.

The figure below illustrates how certain materials are likely to be managed locally, regionally, nationally, or internationally.

Figure 18:Geographical Circulation of Material Types



In the above indicative representation, organics (such as garden waste), reusables, and repairable items are likely to be utilised in local communities; refillables, organics that require more capital intensive processes (such as food waste or sludges), construction and demolition waste, and e-waste dismantling are likely to be undertaken on a regional level; processing and manufacture of products from glass, paper, plastic, metal, e-waste,

and tyres are likely to be processed at national or sub-national scale facilities. Finally, there will be a range of materials that are sold into international commodity markets. These are likely to include paper, plastics, metals, e-waste, and textiles.

The above is intended purely for the purposes of illustration – as markets, material types, and processing technologies evolve these circles of re-integration into the economy are likely to change. The key point is that the network will involve a redistribution of different products and materials to different points and designing this redistribution to be as efficient and effective as possible will be critical to the functioning of the circular economy.

Local Logistics

A key part of the concept is to facilitate the ability to capture the widest possible range of materials by taking advantage of economies of scale to capture economic quantities. This can be achieved through a standardised modular approach to material separation and collection. An example of this is the system deployed in Upper Austria, which utilised 1 cubic metre stackable bins that can be moved using forklifts and transported on curtainsider trucks (see **Error! Reference source not found.**).

Figure 19: Standardised Bins Being Loaded onto Curtainsider Truck

The system collects 80 different types of separated material. The possible downside of it taking time to gather economic quantities of less common material types is minimised as

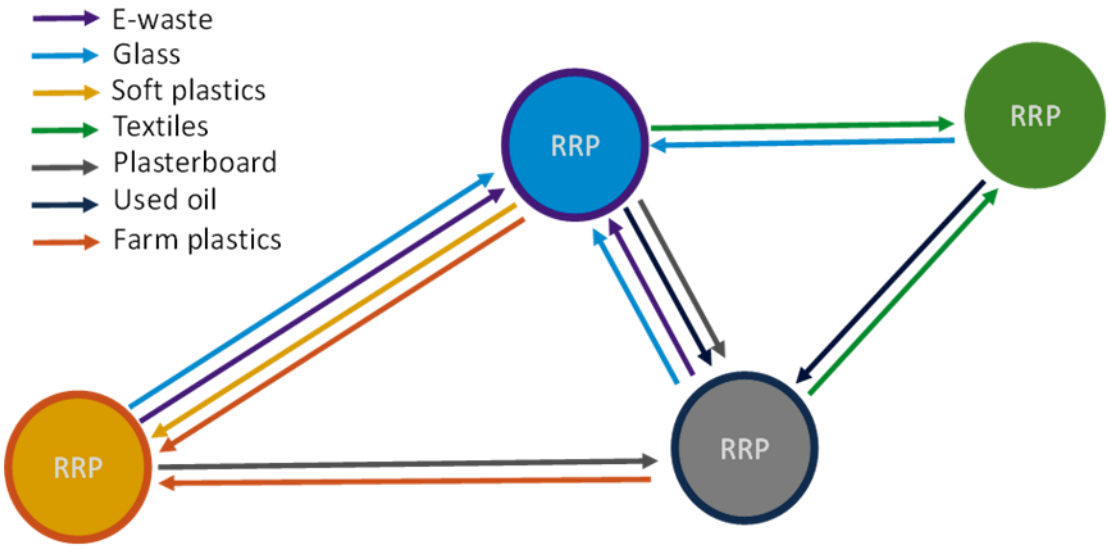
economic quantities can be achieved across the whole region, and the systems components are low cost and have proven efficiency.

The use of the same bins the same types of materials and common signage provides standardisation across the network, despite a wide range of operators being responsible for the individual resource recovery sites.

Inter-Regional Logistics

There is also potential to optimise the flows of materials between regional/sub regional hubs. For example, each regional hub could specialise in processing of one or more material types, with flows of materials then able to be balanced between sites, optimising logistics through backloading, as well as creating economies of scale. A hypothetical illustration is provided in the figure below.

Figure 20: Inter-Regional Logistics Model

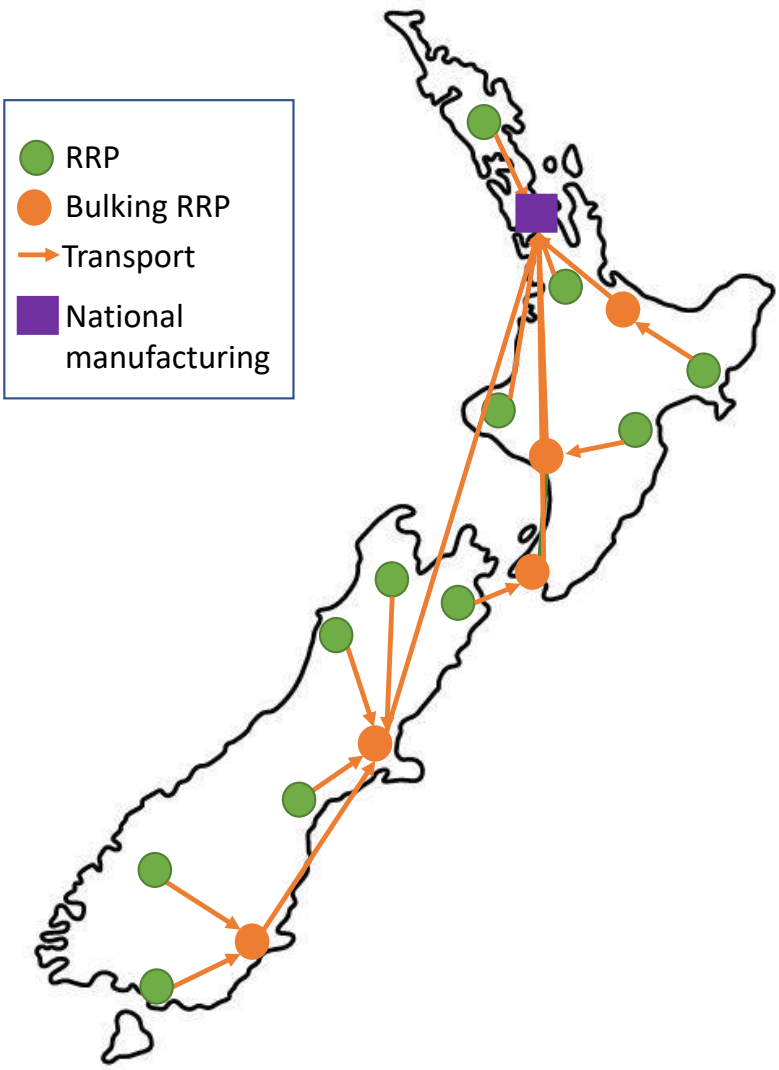


In the above hypothetical illustration, the blue RRP processes e-waste and glass from other proximate RRPs, while sending other materials such as soft plastics, farm plastics, textiles, plasterboard and used oil to other proximate RRPs. This is repeated across the RRPs, so that the quantities and movements of material are approximately balanced. The location of specialised processing and balancing of logistics would be part of the design and planning role of the national level 'virtual network'.

National Logistics

In addition to the local and inter-regional flows of materials, a range of materials handled by the network would need to go to national scale processing/manufacturing facilities (e.g. glass, paper, plastics). Logistics across the network could be optimised to take advantage of bulk transport through strategic bulking points, and there is even the possibility of constructing new national scale facilities in locations to balance national materials flows. The figure below illustrates how materials could be consolidated through regional networks to key bulking points for long-haul transport.

Figure 21: National Logistics Illustration



A.4.2.7 The Role of Local/Regional Government

Local government has historically had a major role in waste management planning and service delivery, and this is likely and desirable to continue. Local government own a significant proportion of the existing transfer station sites, and well as processing infrastructure sites and are familiar with local circumstances. Many councils are already in the process of developing resource recovery parks or local networks. These existing and planned sites could form a starting point for the physical circular resource network. It would primarily be a matter of collaborating to establish consistency and linkages across the existing and planned sites as well as promoting the development of new sites by local government.

In addition, there may be a vital role for regional entities. One of the key issues identified in the stocktake work was a lack of appropriate delivery structures for regional level infrastructure. Some facilities require a regional level approach to achieve appropriate economies of scale (for example processing of food waste, MRFs, regional bulking for key materials such as glass etc.). The proposed circular resource network concept is centred around a regional approach, with one or two regional scale RRPs that form the core hubs for collecting and consolidating material from the RRC sites, and undertaking processing and, potentially, manufacture. Key aspects of the roles for regional and local government could include:

- Service operation/contracting
- Local and regional expertise and coordination
- Local infrastructure investment and operation
- Identification and provision of appropriate sites
- Local consents monitoring, and enforcement
- Gathering and analysis of data

A.4.2.8 The Role of Iwi

Iwi also have an important role to play in the co-development of the circular resource network. The concept of resource recovery is aligned with the te ao Māori principle of kaitiakitanga, and the Para Kore programme is already in place in 476 marae across the country[60]. In addition to performing a similar role to the private and community sectors in service delivery, iwi have a role as kaitiaki of the land and people, and where resources are available, iwi can contribute financial investment and sites to the network and provide leadership in the development of the network. Key aspects of the roles for iwi could include:

[60] https://www.parakore.maori.nz/our-story/

- Service operations
- Infrastructure investment and operation
- Guardians / developers of RR Park and RR Centre sites
- Recovering value from materials
- Ownership and sale of recovered materials
- Utilising recovered value to leverage other community outcomes (e.g. employment, training, rehabilitation)

A.4.2.9 The Role of Private Sector Operators

Private sector operators currently manage the vast majority of waste materials recovered and disposed of in NZ, whether via private commercial arrangements or under contract to the public sector, and this would be expected to continue under the proposed model. The expectation is that, for the operation of the physical circular resource network, the public sector would generally own the land and generic infrastructure (such as buildings or, concrete pads, roading etc.) but would lease the sites or contract out for the delivery and operation of the circular resource network sites (such as separation of materials, composting, processing, manufacture). Sites could have a range of private and community sector operators involved (see below). Key aspects of the roles for private sector operators could include:

- Service operations
- Infrastructure investment and operation (either privately or under contract)
- Recovering value from materials (including repair and reuse)
- Ownership and sale of recovered materials

A.4.2.10 The Role of the Community Sector

Although the community sector is a minor player in terms of the total quantity of waste materials managed in New Zealand, they have had a significant role in the industry in terms of community engagement, innovating around recovery, and extracting value from waste materials to apply to social and community outcomes. The community sector role can potentially be further embedded and given added importance in the delivery of the circular resource network concept. Community groups could not only provide services such as reuse and repair across multiple sites but could also be empowered to deliver all services on sites (as has been demonstrated in Auckland). Key aspects of the roles for community sector operators could include:

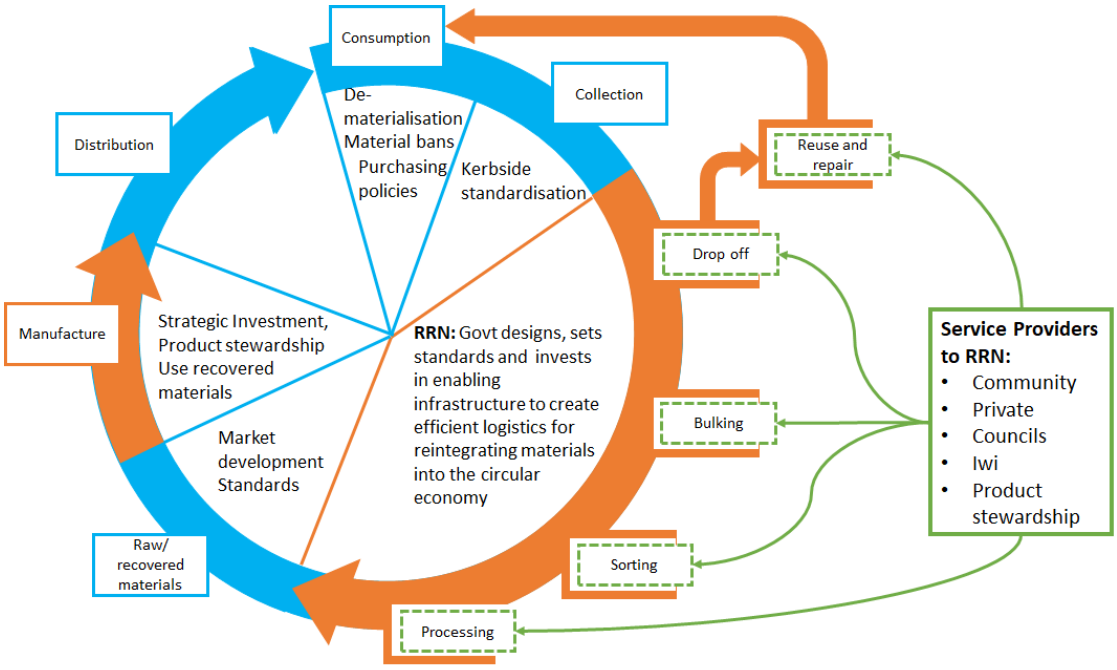
- Service operations
- Infrastructure operation
- Recovering value from materials (including repair and reuse)

- Ownership and sale of recovered materials
- Utilising recovered value to leverage other community outcomes (e.g. employment, training, rehabilitation)

A.4.2.11 Summary

The figure below illustrates how the roles and functions of a national resource recovery network could integrate to provide key reverse logistics functions in the circular economy. The orange elements of the circle are the parts that form the circular resource network.

Figure 22: Roles and Functions of a Circular Recovery Network in the Circular Economy



In the above chart material flows around in a clockwise direction. The arrows represent the material flows. The boxes indicate the key steps within the value chain. The graphic shows how different providers to the can deliver all of the key functions, but within an overall connected framework (that is established and overseen by central/regional/local government).

A.4.3 Benefits of Circular Resource Network Approach

A Circular Resource Network approach would have a range of benefits. These include:

- **Consistent with the Waste Strategy.** At its core the approach is about enabling the circular economy by building out the infrastructure required for the circular flow of materials in the economy. The circular resource network concept synthesises this into a practical approach with wide ranging applications.
- **A practical, easily articulated, investment strategy**. Because the core component of the circular resource network concept is an arrangement of physical infrastructure it is intuitively easy to communicate the intent.
- **Improved efficiency and value.** By focusing on how value can be preserved and enhanced through the resource recovery value chain rather than purely on environmental and social outcomes, it is possible to unlock the potential value of recovered materials and unleash the innovative power of the sector to achieve environmental and social outcomes.
- **Future flexibility.** Flows of materials will change over time. By government investing in the skeleton structures that enable functions, then investment is not locked into a time-limited solution. As materials, markets and processes change over time existing

infrastructure and governance can be efficiently and nationally adapted for the new functions.

- **Data harvesting.** The development of the digital model circular resource network will enable an unprecedented level of insight into recovered material flows and enable effective and intelligent planning and nimble responses by the sector to evolving situations.
- **Baskets of materials.** By co-locating and handling of a range of material and product types at single locations this enables efficiencies through the sharing of support structures and cross subsidisation, and hence the viable recovery of a wider range of materials.
- **Builds on existing infrastructure.** As noted, existing infrastructure (such as existing and planned RR Parks, and transfer stations) would form the foundation of the circular resource network, and these could be progressively integrated.
- **Provides valuable roles for all stakeholders.** The circular resource network will be significant in scale and scope, and it will require the input, collaboration, innovation, and power of all parts of the sector to fully realise its' potential.
- **'No regrets' approach.** The circular resource network concept proposed here is potentially far reaching in its scope and what it could eventually encompass. However, whatever level the concept is implemented to, it will still have multiple benefits. At a minimum it would result in the creation of a number of RR Parks or regional circular resource networks, which will still be positive outcomes.
- **Scalability.** The network can be "right"-sized in a flexible manner with the ability to effectively respond to changing circumstances.

A.5.0 WMMP Action Plan Review

The table below shows the key actions from the previous Plan, and a brief comment on the extent to which each has been achieved as assessed by Council staff.

Table 12: Review of the Previous Action Plan (actions with contribution towards targets)

Ref	Action	Planned timeframe and progress	Contribution to target and commentary
		Services	
1	Review funding model for council services to align with waste minimisation activities (including but not limited to contracting of solid waste services, kerbside refuse, inorganic collection, food waste and drop off collections).	Plan by end of 2019, implement by end of 2021	Some work was done on this action, but this was delayed and then COVID-19 pandemic management disrupted the project. A full service review has been restarted and will be completed during the first few years of the next Plan action plan.
2	Assess the viability of other areas for kerbside services.	Implement by 2019	This has been under discussion, particularly for recycling in some remote rural areas like Te Akau, but no decisions made. Will be considered in the current service review.
3	Consider increasing the use of a social procurement approach to the procurement of waste services to achieve	Ongoing	Currently used when supporting waste reduction initiatives and community groups, but not for kerbside service.
4	Evaluate Raglan food waste service and assess suitability for expansion. Expand if suitable.	Implement by 2022	Now mandated by the Ministry.

5	Continue litter and illegal dumping services, while improving data collection in alignment with the Waste Data Framework.	Ongoing	Levels of service are good. Illegal dumping is not currently the responsibility of the Solid Waste Team except for a few specific areas like Raglan where it's part of the contract.
6	Monitor, evaluate and manage council provided services and contractors to ensure they meet contractual obligations.	Ongoing	Monthly contractor meetings and reports, periodic third-party safety audits completed.
7	Procure council services and waste related contracts as required, ensuring new contracts are in alignment with this Plan and utilising a social procurement approach.	Implement by 2021	Done
		Facilities	
8	To progress Resource Recovery facilities in Huntly and to consider the development of resource recovery facilities for the Northern part of the district. This will be encouraged through collaboration and partnerships before 2024.	Implement by 2022	Underway: Huntly is at early stage. Tuakau is a significant infrastructure project that is in the current LTP with a staged approach to development of the site.
Data and Licensing			

9	Introduce a Solid Waste Bylaw & licensing system for operators and facilities, aligning with the regional template developed by Waikato Regional Council.	Implement by 2019	Paused: Early workshops held, but due to internal capacity this is on hold.
10	To support the introduction of a Waste Bylaw and licensing system; develop internal waste data collection and monitoring systems to enable waste data management in alignment with the Waste Data Framework. This may require internal changes to council roles and responsibilities to account for licensing management and enforcement as well as implementation of the activities in this Plan.	Implement by 2019	No progress with data collection apart from monthly contractor reporting (kerbside only). Collab has a project underway and in discussions with the Ministry.
11	Undertake Waste Compositional Audit every 3-6 years	Plan and implement by 2020, then by 2023 again	Done.
Event Waste Management			

12	Develop Event Waste Management Guidelines and promote to events in the district, including mandatory utilisation for events at Council facilities. This may be undertaken in partnership with other councils.	Implement by 2024	Events strategy currently under development, involves many other teams in Council.
		Behaviour Change	
13	Council will provide quality behaviour change programs focused on waste minimisation, and that support the goals and objectives of this Plan.	Ongoing	Ongoing at a low level; constrained by staff capacity.
		Partnerships	
14	Engage in regional cooperation including appointing a Regional Coordinator to assist with joint projects. Each Council would be responsible for own jurisdiction	Ongoing	Ongoing – Central North Island Waste Liaison Group
15	Work closely with Tangata Whenua, community groups and private sector to enhance economic development through resource recovery	Ongoing	Good connection with community groups and a smaller number of businesses. More effort and skill needs to be bought in to do better working with tangata whenua.

16	Work with business, farms, and industry organisations assisting to reduce waste, increase diversion and recycling (potentially as a sub-regional project).	Implement by 2023	No progress – lack of resources Have run a couple of Agrecovery collection events.
17	Identify and support community and business champions in waste reduction and avoidance; including but not limited to initiatives focusing on e-waste and/or construction and demolition waste.	Ongoing	Underway. Have supported various local initiatives. Business audits and education in current Xtreme Zero Waste regional education contract.
		Grants	
18	Investigate introducing a Grants scheme (funded through the Waste Levy) for waste minimisation projects - this may be in the form of low interest loans and/or targeted grants	Implement by 2018	Commmunity fund approved late 2023. Will be open for the first time March 2024. Have supported various initiatives from the Waste Minimisation reserves e.g. Para Kore-led community composting hub.
		Advocacy	
19	Advocate for effective product stewardship and regulation and support independent organisations advocating for similar outcomes	Ongoing	Ongoing through Central North Island Waste Liaison Group & WasteMINZ.
		Partnerships	

20	Ensure that services provided by Council are in line with and promote current health and safety guidelines; and meet legislative obligations.	Ongoing	Ongoing, complies.
21	Undertake Waste Assessment and develop and adopt 2024 - 2030 Plan (by June 2024).	Plan and implement 2023-2024	Underway, on track.
22	Investigate alternate treatments to Council wastewater sludge and other Council's waste generating activities.	Implement from 2021-2024	Single biggest waste stream at around 25,000 tonnes per year, but currently under commercial contract. Potential to divert to MyNoke or similar in the future.

Open

To	**Infrastructure Committee**
Report title	**Request to Lease Land - Avon Reserve, Pookeno**
Date:	17 April 2024
Report Author:	Anthony Averill, Deputy General Manager
Authorised by:	Megan May, General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To inform the Infrastructure Committee of a request to lease Council land at Pookeno for the establishment of an urban Marae.
AND
To seek approval to engage with the Community to obtain submissions on the proposal to lease a site and reclassify part of a reserve of to enable the establishment of an urban marae.

2. Executive summary
Whakaraapopototanga matua

The Council has received a request from Te Hau Kainga Me Nga Mana Whenua O Pokeno Incorporated (Te Hau Kainga) to lease a portion of Council recreation reserve in Pookeno for the purposes of establishing an urban Marae.

Te Hau Kainga is a collective of mana whenua from Pookeno and they are seeking a site that will enable the establishment of a wharenui, a wharekai and whareiti.

The reserve is currently held by Council as a recreation reserve and part of the reserve is home to the Pookeno Tennis Club, the recently refurbished courts and the dog park. This proposal has no change to the tennis club and courts, but would require the relocation of the very popular dog park to the northern part of the reserve.

Te Hau Kainga are at the early stages and before they progress their ideas and seek funding they require an indication of support from Council for their proposal by making a site available.

This report seeks the Committee support for progressing a community engagement process and seeking submissions under the Reserves Act 1977 on the proposal to change the status of part of the reserve and grant a lease for this purpose. The outcome of this process would be reported back to the Committee.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee:

a. **In respect of Allotment 336 Section 1 PSH of Mangatawhiri and under the Reserves Act 1977, approves the notification and call for submissions on:**

   i. **an intention to reclassify part of the reserve from recreation reserve to Local Purpose (Community Centre), and**

   ii. **an intention to grant a lease for a term of up to 30 years to Te Hau Kainga Me Nga Mana Whenua O Pokeno for the establishment of an urban marae.**

4. Background
Koorero whaimaarama

The Council has received a request from Te Hau Kainga Me Nga Mana Whenua O Pokeno (Te Hau Kainga) for a site in Pookeno to establish an urban marae. Te Hau Kainga is a collective of generational whanau who have lived in Pookeno for decades and this is now Incorporated entity under the Charitable Trust Act 1957. It is proposed that this marae would initially include a wharenui, a wharekai and and a whareiti.

It is intended that the marae would become a community place that can be used for Tangihanga, Te Ao Maaori Services, a place to welcome new residents and a place for hui, wananga, conferences and community gatherings.

The proposed location for the marae is on part of the recreation reserve (Pookeno Domain) at Avon Road, Pookeno. This reserve comprises some 5.9 hectares and is legally described as Allotment 336 Section 1 PSH of Mangatawhiri. The reserve became Crown land by Gazette in 1865 and is part of the Waikato Raupatu claim confiscation area.

The land was vested in the Auckland Education Board as a school site. In 1961 than land was declared Crown land and in 1962 was set apart as a recreation reserve. In 1979 the reserve was formally classified as a recreation reserve and vested in the Franklin District Council.

In recent times the reserve while largely undeveloped has been used for a very popular dog park, the recently upgraded tennis courts and is home to the Pookeno Tennis Club.

The above image shows the location of the reserve.

The proposed location of the community marae is shown in Attachment 1 to this report. This is an indicative location and scale of the land that would be subject to engagement and submission. It shows the dog park relocated to the north of the reserve, to the site of the former school and incorporates the area under the trees. The Pookeno Tennis Club and courts do not change. The plan shows the possibility of a carpark at some stage in the future that could serve all reserve users, as well as the balance land that could be further developed for recreational uses.

Reserve Provisions

The current provisions for Pookeno Sports and Recreation category spaces is as follows.

Current Sport & Rec

14.06 ha	Munro ~ 8 ha
	Avon Road 5.9 ha*
	Pokeno Hall 0.16 ha

Provisions**	2023	2033	2043	2053
Population	4435	7017	8054	8331
Land required (ha)	-2.53	4.18	6.88	7.60

*1.3ha of Avon Road is developed for tennis / outdoor courts, parking and dog park.
** Provisions are calculated on 2.6 ha per 1000 residence (Parks Strategy).

Once Munro Sports Park comes online Pookeno's residents will be appropriately catered for. However, this includes the entire site of Avon Reserve which is not fully developed. As population growth is predicted to be rapid in the next 10 years an additional 4.18 ha is predicted to be required in addition to the full development of Avon Reserve.

Therefore, if part of this reserve is used for the urban marae it may add to the shortfall, if the levels of service for reserve provisions remain the same. The intended community use aspect of the marae, would mean it could also be considered to be part of the space available for the community.

Pookeno's sports park provisions is a 'moderate priority' with other townships or reserve categories are higher priority for strategic land acquisition. The impact of repurposing a portion of the reserve will result in Pookeno sports park provisions falling into deficit sooner and remain in deficit for longer.

5. Discussion
Matapaki

This report presents a proposal for the committee to consider if it wishes the matter to progress to community engagement and formal notification. The notification would be in two parts.

Firstly, Council would need to consider the right status of the reserve for leasing the land to Te Hau Kainga. It would be the recommendation of staff that the area that would be leased for a marae would be more appropriately classified as a Local Purpose (Community Centre) Reserve. The notification of this proposed change would be done in conjunction with the proposal to notify an intention to grant a lease to Te Hau Kainga and the two matters would be considered together.

Te Hau Kainga have advised that while they are not seeking funding from Council, they have yet to obtain funds for the project. They require an indication from Council that land is available for this project before fundraising can progress.

If the Committee supported this matter progressing to be notified, then a follow up report would be provided which considered any submissions that had been received. Should the Council then subsequently approve the granting of such a lease, it would be conditional on a number of matters being achieved. This would include amongst other matters, a requirement to obtain regulatory consenting and fundraising by the lessee and suitable funds being provided for the relocation of the dog park.

Should a lease be granted then it would be on terms that are consistent with other Council leases where there is a significant investment by the community lessee and likely be up to 30 years.

If this is supported for the next stage, it will be necessary to engage with mana whenua, Waikato Tainui, the Pookeno Community Committee and the wider Pookeno Community in regard to this proposal.

It should be noted that the Council is currently working with the Pookeno Community to develop the scope and confirm the location for the proposed Community Hub/ Library in central Pookeno.

5.1 Options
Ngaa koowhiringa

Staff have assessed that there are two reasonable and viable options for the Infrastructure Committee to consider. This assessment reflects the level of significance (see paragraph 6.1) and other relevant factors considered in completing the options assessment. The options are set out below.

Option 1: Approve the intention to reclassify part of the Avon Reserve for Local purpose (Community Centre) reserve and the intention to grant a lease for the establishment of an urban marae.

This option has the proposal put to the community for feedback before the Committee makes a decision. The process will require Council having engagement discussions in Pookeno then calling for formal submissions.

Option 2: Do not progress the request. Under this option the matter would go no further and Te Hau Kainga would need to find an alternative site to establish this urban marae.

Staff recommend option **One** because the proposal would enable mana whenua to have a marae in Pookeno, although it will have an impact on Council's reserve provisions, it is suggested to seek Community and feedback prior to a final decision being made.

5.2 Financial considerations
Whaiwhakaaro puutea

There are no material financial considerations associated with the recommendations of this report. Council staff would work with the applicant to lead the community engagement. The costs of relocating the dog park are not expected to be significant and these would be further discussed in the follow up report.

5.3 Legal considerations
Whaiwhakaaro-aa-ture

Staff confirm that the staff recommendation/the preferred option complies with the Council's legal and policy requirements. This matter is being considered under the requirements of the Reserves Act 1977 for the classification and leasing of reserve land.

5.4 Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

The staff recommendation is inconsistent with the Sports Park Reserve Management Plan and is therefore required to be publicly notified, as outlined in this report.

5.5 Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

This proposal has come from a Pookeno based mana whenua collective. If supported for wider engagement, then there will be engagement with Iwi and hapuu as well as Waikato Tainui.

5.6 Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

The matters in this report have no known impact on climate change or resilience for the Council.

5.7 Risks
Tuuraru

This report seeks to notify a proposal, it is not make a decision to grant a lease. That will be addressed in a follow up report.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.1 Significance
Te Hiranga

The decisions and matters of this report are assessed as of moderate significance, in accordance with the Council's Significance and Engagement Policy. The following criteria are particularly relevant in determining the level of significance for this matter:

- There is a legal requirement to engage with the community.
- The likely impact on present and future interests of the community, recognising Maaori Tikanga (culture values) and their relationship to land and water.
- The local community interest is likely to be high.

6.2 Engagement
Te Whakatuutakitaki

Highest level of engagement	Inform	Consult	Involve	Collaborate	Empower
	✓	✓	✓	✓	✓
Tick the appropriate box/boxes and specify what it involves by briefly explaining the tools used to engage (refer to the project engagement plan if applicable).	Engagement will be a combination of inform and consult with respect to this proposal, to enable informed submissions to be made on the proposal.				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
✓	✓	✓	Internal
✓	✓		Community Boards/Community Committees
✓			Waikato-Tainui/Local iwi and hapū
✓			Affected Communities
			Affected Businesses

7. Next Steps
Ahu whakamua

The next steps will be to work with the applicant to develop an engagement plan with information to then engage with key stakeholders. Following this engagement, the matter will be notified for submissions.

Submissions will be assessed and then considered to inform a future report on this matter.

8. Confirmation of statutory compliance
Te Whakatuuturutanga aa-ture

As required by the Local Government Act 2002, staff confirm the following:	
The report fits with Council's role and Committee's Terms of Reference and Delegations	Confirmed
The report contains sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages (section 5.1)	Confirmed
Staff assessment of the level of significance of the issues in the report after consideration of the Council's Significance and Engagement Policy (section 6.1)	Moderate
The report contains adequate consideration of the views and preferences of affected and interested persons taking account of any proposed or previous community engagement and assessed level of significance (Section 6.2)	Confirmed
The report considers impact on Maaori (Section 5.5)	Confirmed
The report and recommendations are consistent with Council's plans and policies (Section 5.4)	No - refer to section 5.4
The report and recommendations comply with Council's legal duties and responsibilities (Section 5.3)	Confirmed

9. Attachments
Ngaa taapirihanga

1. PDF WDC concept with added ajustments


Dog Park
Community Recreational Facility
Shared Carparking
Marae
FUTURE MAORI DEVELOPMENT
SOCIAL SERVICES
TAIAO
EDUCATIONAL
KOHANGA REO
KURA KAUPAPA/KURA A IWI
WHAREKURA

Open

To	**Infrastructure Committee**
Report title	**Motor Sport Events – Use of Waikato District Roading Network**
Date:	17 April 2024
Report Author:	Joban Singh, Roading Corridor Engineer
Authorised by:	Megan May, General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To inform the Infrastructure Committee of the application received from the Hamilton Car Club NZ for the specific use of the Waikato District Council's roading network to conduct a motorsport event requiring a road closure.
AND
To seek approval for the event as detailed in the report.

2. Executive summary
Whakaraapopototanga matua

On 1 February 2024, the Hamilton Car Club NZ applied for Temporary Road Closure to hold a Motorsport Event. The Ruapuke Rally is scheduled to take place on Sunday 12 May 2024 from Te Mata Road to Waimaunga Road.

For the proposed period of closure, the road would be manned at intersections by clearly identifiable marshals equipped with radio communication and access will be provided in the event of an emergency.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee:

a. **approves the application to close the sections of Te Mata Road and Waimaunga Road for the Ruapuke Rally, on Sunday 12 May 2024 from 9:00am to 4:00pm.**

4. Background
Koorero whaimaarama

On the 1 February 2024, the Hamilton Car Club NZ applied for Temporary Road Closure to hold a Motorsport Event in the Waikato District.

The rally is scheduled to take place on Sunday 12 May 2024 and the temporary road closure would involve Ruapuke Road between Te Mata Road and Waimaunga Road.

Ruapuke Road is a sealed road of approximately 4.7km in length with the course of the rally being approximately 4km with both lanes of Ruapuke Road being utilized for the course. A detour route has been specified for road users during that time shown in the attached detour map.

The proposed road closure for the rally was publicly notified by Waikato District Council on 18 March 2024, including a notice on WDC's website. Any person wishing to object to or support the proposal was required to lodge their feedback to communications@waidc.govt.nz by 5pm 31 March 2024 or in writing to: Proposed Ruapuke Road Temporary Closure, Waikato District Council, Private Bag 544, Ngaruawahia, 3742.

In total, five (5) responses were received, two in support and 2 in opposition and 1 neutral.

5. Discussion
Matapaki

In accordance with WDC Motor Sport Event Policy, Hamilton Car Club NZ applied for the Road Closure on 1 February 2024. Since then, they have supplied a fully compliant Traffic Management Plan with maps of the roads affected, a copy of their insurance policy, evidence of resident consultation, and are in the process of providing a bond of $1,000 (maximum amount specified in the policy for a sealed road event).

A copy of their event Safety Plan has also been provided for our review.

Following Council approval, Waikato District Alliance will organise a pre-rally drive over inspection with video capture of Te Mata and Waimaunga Road and arrange for a post-rally drive over noting any subsequent damage done to the road and or associated assets due to the rally.

5.1 Options
Ngaa koowhiringa

There are two options available to the Infrastructure Committee:

Option 1: Decline the application to close Te Mata and Waimaunga Road. This will result in the rally being unable to progress.

Option 2: Approve the closure of Te Mata and Waimaunga Road.

5.2 Financial considerations
Whaiwhakaaro puutea

There are no material financial considerations associated with the recommendations of this report.

5.3 Legal considerations
Whaiwhakaaro-aa-ture

As required the following legislation has been taken into consideration during the process:

- Section 342 Local Government Act 1974
- Section 342 of the Local Government Act 1974 (LGA 74) allows WDC to close any road on a temporary basis in accordance with the requirements in Schedule 10 of the LGA 74 (Schedule 10).
- Clause 11(e) of Schedule 10 stipulates that WDC may, subject to conditions it thinks fit (including the imposition of a reasonable bond) and after consultation with the Police and NZTA close any road or part of road for a period or periods not exceeding in the aggregate 31 days in any year for any race or other sporting event, provided that no road may be closed for any race or other sporting event if that closure would, in the opinion of the council be likely to impede traffic unreasonably.
- Clause 11A of Schedule 10 requires WDC to give public notice of its intention to consider closing any road or part of a road under clause 11(e) and to give public notice of any decision to close any road under that provision.
- Clause 12 of Schedule 10 provides that the powers conferred on WDC by clause 11(except 11(e) can be made by the Chairman or any officer authorised by the Council.
- Application of section 342 LGA 1974

5.4 Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

Waikato District Council requires the temporary closure of the roads for the rally to be subject to adherence to the WDC Road Closure for Motor Sport Events Policy (which includes the requirement for a bond.)

Within the last year WDC has approved temporary road closures for other rallies, so the temporary closure of the road for the rally will not exceed aggregate of 31 days in any year.

The proposed road closure for the Rally was publicly notified by WDC via its website on 18th March 2024.

5.5 Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

As there was no significant decision involving land or water merely use of an existing road, no consultation was undertaken with Maaori stakeholders.

5.6 Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

The matters in this report have no known impact on climate change or resilience for the Council.

5.7 Risks
Tuuraru

According to the policy in the event of this application being declined, the organisers have a right of appeal, for which a sub-committee needs to be formed rapidly to address their appeal.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.1 Significance
Te Hiranga

The decisions and matters of this report are assessed as of low significance, in accordance with the Council's Significance and Engagement Policy.

6.2	**Engagement** **Te Whakatuutakitaki**

Consultation with the community has been carried out as required by the process to manage applications for motorsport events in our district. A public notice was placed on the Waikato District Council website advising the community that Council had received an application to use sections of Te Mata Road and Waimaunga Road for a rally event. A social media post was also put up with the same advice.

The public was given an opportunity to provide feedback on the proposal to close sections of Te Mata Road and Waimaunga Road on Sunday 12th May 2024 from 9 am to 4pm. During the feedback period, Council received just 5 responses. Of those responses, two were in support of the proposed closure and two were in opposition and one neutral. The responses are attached.

Highest level of engagement	**Inform** ✓	**Consult** ✓	**Involve**	**Collaborate**	**Empower**
Tick the appropriate box/boxes and specify what it involves by briefly explaining the tools used to engage (refer to the project engagement plan if applicable).	*Refer details in 6.2 above*				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
☐	☐	✓	Internal
☐	☐	✓	Community Boards/Community Committees
☐	☐	☐	Waikato-Tainui/Local iwi and hapuu
☐	☐	✓	Affected Communities
☐	☐	✓	Affected Businesses
☐	☐	☐	Other (Please Specify)

7. Next Steps
Ahu whakamua

If this application is approved, the WDC Corridor Manager will notify the Hamilton Car Club NZ and work with them to complete all processes required for the approval and subsequent running of the event.

These include:

- Review and approval of the Temporary Traffic Management Plan.
- Receipt and approval of all relevant documentation
- Issuing of the Event Permit
- Inspection of the network prior to the event.
- Further engagement with affected parties where required.
- Post event inspection to identify any damage needing repair.

8. Confirmation of statutory compliance
Te Whakatuuturutanga aa-ture

As required by the Local Government Act 2002, staff confirm the following:

The report fits with Council's role and Committee's Terms of Reference and Delegations	Confirmed
The report contains sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages (section 5.1)	Confirmed
Staff assessment of the level of significance of the issues in the report after consideration of the Council's Significance and Engagement Policy (section 6.1)	Low
The report contains adequate consideration of the views and preferences of affected and interested persons taking account of any proposed or previous community engagement and assessed level of significance (Section 6.2)	Confirmed
The report considers impact on Maaori (Section 5.5)	Confirmed
The report and recommendations are consistent with Council's plans and policies (Section 5.4)	Confirmed

The report and recommendations comply with Council's legal duties and responsibilities (Section 5.3)	Confirmed

9. Attachments
Ngaa taapirihanga

1. Ruapuke sealed sprint road closure application
2. Ruapuke_Rally_Detour_Map
3. Ruapuke Rd Tarma Rally Feedback

Waikato DISTRICT COUNCIL

District Office
15 Galileo Street
Private Bag 544
Ngaruawahia 3742

Telephone *(all hours)* 07 824 8633
Call Free 0800 492 452
Fax 07 824 8091

Huntly Area Office 142 Main Street 0800 492 4
Raglan Area Office 7 Bow Street 07 825 8
Tuakau Area Office 2 Dominion Road 0800 492 4

Email: info@waidc.govt.n
www.waikatodistrict.govt.n

APPLICATION FOR TEMPORARY ROAD CLOSURE TO HOLD A MOTORSPORT EVENT

This application form must be submitted to WDC at least 3 months prior to the proposed event and, if approved, will be advertised publicly twice to allow for any objections.

An 'Affected Persons' form must be submitted with this application, if applicable.

Applicant Details	
Name	Bruce Airey
Organisation	Hamilton Car Club
Address	116 Vaile rd New Stead Hamilton
Phone	027 2713961
Mobile	027 2313961
Email	~~Bru~~ Secretary@hamiltoncarclub.org.nz

Road Closure Details	
Event Name	Ruapuke Sealed Sprint
Roads or road sections to be closed *List all roads proposed to be closed*	**Proposed closure period** *Eg Tuesday 2nd February 2012 from 10am to 2pm*
Ruapuke rd (from Tamata rd to Waimaunga rd)	12th May 2024 7.30Am to 5Pm

Traffic Management Plan	
Name of STMS	**Contact Telephone Number for entire period of Road Closure**
Traffic Managment NZ	07 849 5800

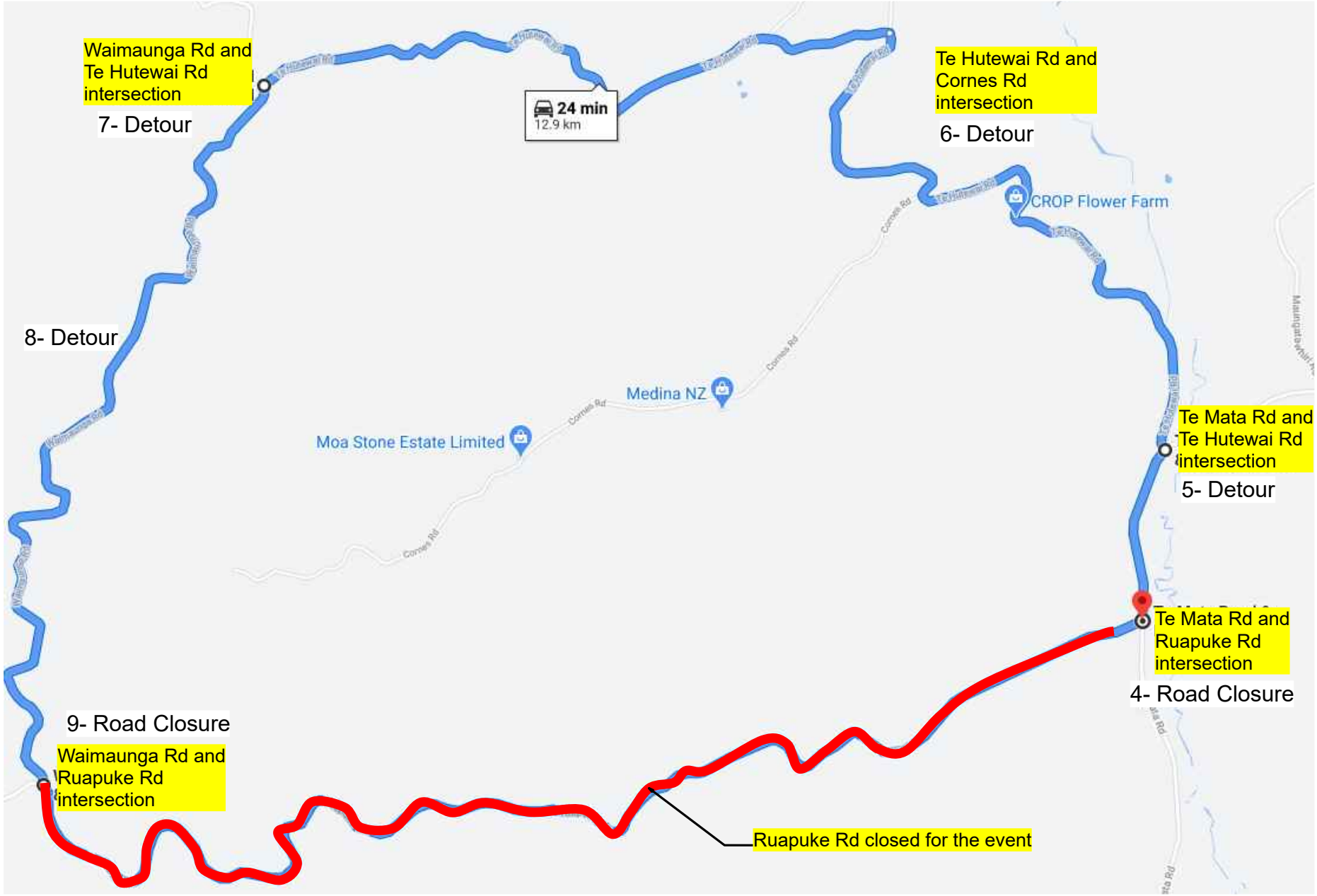
I confirm that I have read and understand the WDC Motorsport Events Policy and certify that these will be met	
Signed :	***Date :*** 31/1/24

For WDC Use Only

Date Application Received	Advertising Dates 1st	2nd	TMP Supplied	Bond Received	Insurances Sighted	Notification
Previous events held on this/these roads:						

RECEIVED
By Kevin.Briggs2 at 3:22:23 pm, 1/02/2024

11/07/12



Situation: Ruapuke Rd, Raglan	Drawing No: TMNZ-HOF-210054-1	Revision: A	TMC Approval:
Traffic Management NZ	Drawing Title: Location	Drawing By:	
		Checked:	
		Date: April 2021	

Ruapuke Rd Targa Rally Feedback.

This was advertised via public notices on our website, e-newletter and social media.
We only received 5 responses.
2 in support, 2 in objection and 1 neutral.
There are as follows.

Against

To Whom it May Concern
Every year the Hamilton car club somehow convinces WDC that closing a main road for their fun is a great idea. Ruapuke Rd is a MAIN ROAD, used by ratepayers, local businesses and tourists. Why can't the car use an alternate road?
When will WDC STOP this selfish action and say NO to the Hamilton Car club?
Regards
Phil Swann

Raglan Rate Payer
Haven't we had enough of Rally Events.
* They damage the roads
* Encourage reckless and dangerous driving
* Cause the excessive release of greenhouse emissions
Jeff Lim

For

I fully support the Hamilton Car Club Tarmac Rally in Raglan.
Sent from my iPhone
Kiwi Mark

Proposed Ruapuke Rd Temporary Closure, Waikato District Council.
Temporary close of Ruapuke Road to enable Hamilton Car Club to hold a tarmac rally on Sunday 12 May 2024.
The temporary closure would be between the intersection with Te Mata Road and Waimaunga Road from 9am to 4pm.
I'm all for it. Sounds great. That windy road should show up some spectacular driving.
Really looking forward to the event.
Dominic

Neutral

I wonder why we are still having these events when our roads are in such a state of disrepair and the added traffic at speed adds to their wear and tear.
Does the council receive any money for the use of the roads by the Hamilton Car Club??
Kelly

Open - Information Only

To	**Infrastructure Committee**
Report title	**Road Resilience Study**
Date:	17 April 2024
Report Author:	Luke McCarthy, Acting Roading Manager
Authorised by:	Megan May, General Manager Service Delivery

1. Purpose of the report
Te Take moo te puurongo

To inform the Infrastructure Committee on work being undertaken by the Roading Team to develop a resilience programme and proposed investment to increase the security of the roading network.

2. Executive summary
Whakaraapopototanga matua

Staff have been working over the past 6-8 months to carry out field work to capture sites across our network that can impact the overall resilience of the roading network. The funding for this study is initially from the Department of Internal Affairs (DIA) for an amount of $100K.
This study aims to develop a full prioritised programme of work ready to procure for physical work delivery. To achieve this, the following phases are proposed:

1. A full inspection and survey of the network to identify all sites that are of Medium to High risk of failure.
2. Desktop Assessment of network vulnerabilities and site requirements to inform prioritisation and Development of a proposed resilience programme of works for prioritisation for future investment.
3. Feasibility assessment, cost estimation and packaging of works to prepare applications for investment.
4. Detailed design and procurement documentation development.

Phase 1 has been completed which includes collation of known sites (captured in RAMM) and a full network inspection to capture the unknown sites. A total of 216 sites have been prioritised as part of Phase 1.

3. Staff recommendations
Tuutohu-aa-kaimahi

THAT the Infrastructure Committee receives the Road Resilience Study report.

4. Background
Koorero whaimaarama

Resilience of the network is a historic and increasing problem on the Waikato District road network, as a result of:

- Quantum of resilience issues – historic slip sites, failing historic repairs, lack of adequate drainage. In some cases emergency works funding has not been accessed and failures have not been able to be repaired;
- The underlying structure of some of our roads is of poor quality (peat, weak subgrades, sidling cuts, ridgelines with steep unstable sides);
- Unsealed network degradation - overtime there has not been adequate investment to replace metal, maintain the shape and drainage;
- Drainage networks not built to factor in current climate change variables and are therefore vulnerable;
- Councils ability to fund is limited to maintaining the network, the ability to increase the resilience of the network requires more than maintenance – there needs to be a focussed investment to systematically address these issues in a prioritised manner.

Currently, the council is continuing the emergency works recovery from the impact of the Jan-Feb 2023 storms. This includes $6M of repairs to be completed in 2024/25 to complete the programme of repairs/reinstatement.

Due the widespread needs of the network, council have been unable to keep up with the level of repair work needed due to limited budget availability. A dedicated budget is critical to enable the response needed to provide more security to the network.

The DIA have contributed $100K towards this resilience study. The Transport Team have confirmed with NZTA Waka Kotahi that this DIA funding can be used as council's local contribution for the study and that Waka Kotahi subsidy can also be claimed through our standard processes. This provides for up to $202k without the need for any funding.

Study Phases:

This study aims to develop a full prioritised programme of work ready to procure for physical work delivery. To achieve this, the following phases are proposed:

1. A full inspection and survey of the network to identify all sites that are of Medium to High risk of failure.
2. Desktop Assessment of network vulnerabilities and site requirements to inform prioritisation and Development of a proposed resilience programme of works for prioritisation for future investment.
3. Feasibility assessment, cost estimation and packaging of works to prepare applications for investment.
4. Detailed design and procurement documentation development.

5. Discussion
Matapaki

Phase 1 – Full inspection:

- Investigations to inspect the road network and identify sites that require investment to improve resilience are nearly complete. This includes a risk assessment of all sites to enable prioritisation of investment.
- To date, a total of 216 sites have been identified at a rough estimated cost of $17.43M. This cost is expected to increase as a result of feasibility assessment, which will take into account Geotech assessment and wider environmental, safety and resilience needs. Therefore, we recommend using a contingency of 30% at this stage to allow for increases – which takes the total forecast cost to $21M.
- The cost of Phase 1 is estimated as $65K which includes network inspectors identification of sites, engineer's desktop assessment of the list of sites, consultant assistance to develop investment proposal.

Phase 2 – Desktop Assessment of Network Vulnerabilities and Development of a proposed resilience programme of works

- This includes assessment of weather and climate prediction models to understand areas of high risk of impact from flooding and storm events and consideration of permitting needs.
- Further inspection of unsealed roads is also proposed to identify drainage deficiencies.
- This phase allows for mapping of the resilience repair sites against the network vulnerabilities to identify further contributing factors to the prioritisation of packages of work.

- Output will include a prioritised programme proposing packages of work and suggested timeframe to provide a starting point for the feasibility assessment.
- The cost of Phase 2 is estimated at $35K which includes support from an external consultant to research vulnerabilities and development of the prioritised programme.

Phase 3 – Feasibility assessment, cost estimation and packaging of works

- This phase allows for an engineer's assessment of the sites to review scope and packaging, carry out an initial Geotech assessment to identify extent of repair work necessary.
- Feasibility will recommend standard repair options to fit within three investment scenarios:

1. Lowest cost short-term repair to hold the site until the next scheduled pavement rehabilitation;
2. Medium-term repair to provide resilience that will allow one-lane to be maintained through a significant storm event;
3. Long-term repair that will ensure the full width of the road is secure for the foreseeable future.

- The development of repair options may depend on the ONF category of the road, eg. Option C for long-term repairs may only be offered for the connecting roads and above.
- Cost estimates will be provided on each of the options to allow a final assessment of the programme.
- The cost of this phase has yet to be confirmed, but is estimated at $100K.

Phase 4 - Detailed design and procurement documentation development

- The Detailed Design phase is proposed to develop engineering plans and specifications to enable the development of procurement documentation.
- This will include the development and management of applications for resource consent where required.
- Detailed Design will be scoped and a proposal developed as part of Phase 3.

A risk assessment of the full list of 216 hazard sites has been undertaken. Below is the summarised list of the prioritised high-risk sites:

Completed To Date: Phase 1 Output – Prioritised Programme of worksites
Collation of the known sites, identified by network inspections and yet to be funded, and identification of unknown sites through a full resilience inspection of the network has been completed.

A risk assessment of the full list of 216 hazard sites has been undertaken. Below is the summarised list of the prioritised high-risk sites:

	Count	$ Value	# High Risk (Network Resilience >19, Lifeline Impact >14)	$Value of High Risk Sites
Total number of sites unfunded:	**216**	**$ 17,432,500.00**		
Number of sites with no alternate route	6	$ 297,500.00		
Number of sites with >40% of lane affected	12	$ 2,030,000.00		
Number of sites at M-H risk of further failure	122	$ 13,240,000.00		
Value of work in North West Area	26	$ 2,875,000.00	7	$ 1,635,000.00
Value of work in North East Area	11	$ 627,500.00	0	$ -
Value of work in South West Area	178	$ 13,510,000.00	33	$ 3,750,000.00
Value of work in South East Area	3	$ 420,000.00	0	$ -
			Total	$ 5,385,000.00

Staff have requested funding in the Enhanced Annual Plan of $4.55M for Resilience Improvements, co-funded by Waka Kotahi for 2024/25 FY. This includes district wide resilience sites identified in the table above, retaining wall improvements, drainage improvements and a specific programme for Port Waikato.

5.1 Options
Ngaa koowhiringa

No options are available for Council to consider because the study is in progress and this report is for information only.

5.2 Financial considerations
Whaiwhakaaro puutea

There are no material financial considerations associated with the recommendations of this report.

5.3 Legal considerations
Whaiwhakaaro-aa-ture

There are no legal considerations for this report.

5.4 Strategy and policy considerations
Whaiwhakaaro whakamaaherehere kaupapa here

The report and recommendations are consistent with the Council's policies, plans and prior decisions.

5.5 Maaori and cultural considerations
Whaiwhakaaro Maaori me oona tikanga

There are no Maaori and cultural considerations associated with this report.

5.6 Climate response and resilience considerations
Whaiwhakaaro-aa-taiao

The matters in this report have no known impact on climate change or resilience for the Council as it relates to the Climate Response and Resilience Policy.

5.7 Risks
Tuuraru

Individual sites are evaluated against a number of criteria to determine priority and therefore by default manage the risk associated with the site(s) and route.

6. Significance and engagement assessment
Aromatawai paahekoheko

6.1 Significance
Te Hiranga

The decisions and matters of this specific report are assessed as of low significance in accordance with the Council's Significance and Engagement Policy. However, this report is part of a broader project or process that is, or may be in future, assessed as of moderate/high significance.

6.2 Engagement
Te Whakatuutakitaki

As the resilience study is in its initial stages we are looking to inform first and foremost. As noted above this report is part of a broader project and the communities impacted by potential works will need to be consulted. Again, $4.55M is currently being consulted on as part of the 2024/25 Annual Plan.

Highest level of engagement	Inform	Consult	Involve	Collaborate	Empower
	✓	✓	☐	☐	☐
Tick the appropriate box/boxes and specify what it involves by providing a brief explanation of the tools which will be used to engage (refer to the project engagement plan if applicable).	*Refer above*				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
✓	☐	☐	Internal
✓	☐	☐	Community Boards/Community Committees
✓	☐	☐	Waikato-Tainui/Local iwi and hapuu
✓	☐	☐	Affected Communities
☐	☐	☐	Affected Businesses
☐	☐	☐	Other (Please Specify)

Highest level of engagement	**Inform**	**Consult**	**Involve**	**Collaborate**	**Empower**
	✓	✓	✓	✓	✓

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
✓	✓	✓	Internal
✓	✓	✓	Community Boards/Community Committees
✓	✓	✓	Waikato-Tainui/Local iwi and hapū
✓	✓	✓	Affected Communities
✓	✓	✓	Affected Businesses

7. Next Steps
Ahu whakamua

Complete the stages of the study as outlined in this report. Should the 2024/25 Annual Plan projects be approved and Waka Kotahi approves its funding for the submitted projects works will commence in 2024/25 FY.

8. Confirmation of statutory compliance
Te Whakatuuturutanga aa-ture

As required by the Local Government Act 2002, staff confirm the following:

The report fits with Council's role and Committee's Terms of Reference and Delegations	Confirmed
The report contains sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages (section 5.1)	Not applicable
Staff assessment of the level of significance of the issues in the report after consideration of the Council's Significance and Engagement Policy (section 6.1)	High / Moderate
The report contains adequate consideration of the views and preferences of affected and interested persons taking account of any proposed or previous community engagement and assessed level of significance (Section 6.2)	Confirmed
The report considers impact on Maaori (Section 5.5)	Not applicable
The report and recommendations are consistent with Council's plans and policies (Section 5.4)	Confirmed
The report and recommendations comply with Council's legal duties and responsibilities (Section 5.3)	Confirmed

9. Attachments
Ngaa taapirihanga

None

Open

To	**Infrastructure Committee**
Report title	**Exclusion of the Public**
Date:	17 April 2024
Report Author:	Thomas Rowland, Democracy Advisor
Authorised by:	Gaylene Kanawa, Democracy Manager

1. Staff recommendations
Tuutohu-aa-kaimahi

THAT the public be excluded from the following parts of the proceedings of this meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Item PEX 1 **Minutes from meeting held on Tuesday, 5 March 2024.**	**Good reason to withhold exists under Section 6 or Section 7 Local Government Official Information and Meetings Act 1987**	**Section 48(1)(a)**
Item PEX 5 **Actions Register**		
Item PEX 6.1 **Review of Raglan Lease Land**		

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

Item No.	Section	Interest
Item PEX 1 **Minutes from meeting held on Tuesday, 5 March 2024.**	**Refer to the previous Public Excluded reason in the agenda for the previous meeting.**	
Item PEX 5 **Action Register**		
Item PEX 6.1 **Review of Raglan Lease Land**	**7(2)(i)** **7(2)(b)(ii)**	**To enable negotiations to carry on without prejudice or disadvantage.** **To protect information that would otherwise unreasonably prejudice a person's commercial position.**

2. Attachments
Ngaa taapirihanga

None