

Waste Assessment Background Paper

WALKING THE TALK: REDUCING COUNCIL'S OWN IN-HOUSE WASTE

1. Background

This paper reviews Auckland Council's progress against the targets for waste produced by council as an organisation, as set out in the Waste Management and Minimisation Plan 2018 (WMMP 2018). The paper also provides recommendations for how the council's performance and reporting can be refreshed for inclusion in the Waste Management and Minimisation Plan 2024.

The **vision** of Auckland's WMMP 2018 is: "Auckland aspires to be Zero Waste by 2040, taking care of people and the environment, and turning waste into resources."

The **targets** to address the waste produced by council as an organisation as stated in the WMMP 2018 are:

- a) reduce council's own in-house office waste by 60 per cent per capita by 2024 (from a 2012 baseline) and;
- b) work across council to set a baseline for operational wastes and, by 2019, put in place targets for reduction.

The **actions** to meet these targets are set out in Section 10.2 of the WMMP 2018 - Leading By Example in Council's Operation¹, which covers council performance measures, council and CCO procurement, council and CCO waste streams, and events.

In-house office waste refers to material sent to landfill that is generated by council staff in corporate council office buildings. Operational waste refers to material sent to landfill that is generated by all other activities across the council group and council-controlled organisations.

Te Tāruke-a-Tāwhiri and Climate disclosures

Various other reporting requirements also apply to council's own waste management including impacts on climate change. Te Tāruke-a-Tāwhiri / Auckland's Climate Plan notes that the 'Waste' sector generates about 3.1 per cent of Auckland's total emissions. The plan includes actions linked to council's waste, our kerbside activities and our actions to minimize waste region-wide. Implementing the 2018 Waste Management and Minimisation Plan is a key action to address waste emissions.

The Auckland Council Group is also required to report climate-related disclosures under the Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act². Waste is considered part of that framework, and work will continue to support reporting for those disclosures into the future.

¹ <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/docs/wastemanagementplan/auckland-waste-management-minimisation-plan.pdf>

² Refer to [Auckland Climate Plan progress report, September 2022 \(aucklandcouncil.govt.nz\)](#)

2. Office Waste

2018 Target

Reduce council's own in-house office waste by 60 per cent per capita by 2024 (from a 2012 baseline of 0.75 kg per FTE staff member per week), i.e., reduce waste to 0.3 kg per FTE staff member per week by 2024.

Council actions relating to office waste

Council has enabled source separation of waste streams across our offices and administration buildings by providing bins/consolidation points for the following waste streams:

- refuse
- food scraps and compostable packaging
- mixed recycling
- paper (and separate for document destruction)

In addition, separate waste stream bins/consolidation points are provided in specific locations or being trialled for the following:

- cardboard
- polystyrene
- soft plastics
- batteries
- uniforms
- worm farms in Albert Street

The council also sends IT devices that can still be used for redistribution through charity groups and contracts an e-waste recycler to process end-of-life IT devices and peripherals.

We continue to review and update our in-house office and merchandise product catalogues, leveraging our council group's purchasing power to increase the durability and sustainability of operational supplies. This includes work across various product lines to find and test innovative solutions. Examples of initiatives trialled include sending used corflute for incorporation into fencing posts, moving to longer lasting solutions like rechargeable batteries and paper rather than plastic packaging, testing the use of on-site worm farms. We have also supported a circular bottle-to-bottle initiative with cleaning product brand will&able, separating our milk bottles for their closed loop recycling model.

Impact of COVID-19, other disasters and changes in technology

Responses to the COVID-19 global pandemic, involving periods of lockdown, have impacted work programmes, staff numbers, and accelerated the digitisation of work. Remote and flexible working became the norm during the pandemic. While staff occupancy rates have risen from 22% in 2022 to 39% in 2023 (as at July 2023), they are still below pre-Covid levels. Events such as the Auckland Anniversary floods and Cyclone Gabrielle early in 2023 have also impacted on staff in-office attendance council

offices. As a result, the way we assess staff occupancy has changed. This is discussed in Section 2 below.

Sale and consolidation of legacy council buildings

Since 2018, council has sold and consolidated several key administration buildings, reducing its total square meterage (of net lettable area) from 105,896m² in 2018 to 69,081m² in 2022, and with further changes taking place across 2023 and beyond. The changes to date are set out in Table 1 below.

Table 1: Council administration building consolidation as at August 2023

Council administration building	Status of tenure	Date
Waitakere Admin Building	Sold	2019/2020
35 Graham Street, City Centre	Sold	2020/2021
82 Manukau Road, Pukekohe	Sold	2020/2021
Pacific & Tasman Buildings, Orewa	Sold (leased until August 2023)	2023/2024
Kotuku House, Manukau	Sold (leased until December 2023)	2023/2024
Bledisloe House, City Centre	Sold (leased until Dec 2023)	2023/2024
35 Coles Avenue, Papakura	To be sold	TBD

Council also reduced the space used at 1-7 The Strand, Takapuna from 11,961m² to 406.96m² from 2020 to 2021. In addition, as of 2023 we have a newly leased asset at 6-8 Munroe Place in Albany to serve as a hub.

The consolidation of buildings may create greater opportunities for better waste minimisation.

Progress against the office waste target

The 2012 baseline of 0.75kg per FTE staff member per week was derived from an audit of a day's worth of waste from five key council administration buildings, extrapolated to a working week and divided by an estimate of number of FTEs in the building.

A waste audit using the same methodology of three key council administration buildings was undertaken in 2019, and the result was 0.42kg per FTE staff member per week.

Before COVID-19, the number of FTEs was considered an appropriate proxy for estimating the number of people in council buildings. Wi-fi connection data and security access card data are alternatives to assessing occupancy; with security access card information generally providing the most accurate metric. This provides the actual numbers of staff in each building³. These figures incorporate all employees for the organisation and the figures do not include contractors, visitors and tenants.

We have also been able to access data of actual tonnages of waste from a given building from our waste collection contractors. While these new data sources provide more accurate numbers (because they are actuals rather than estimates), the switch in

³ Note that individuals may visit multiple office locations within Auckland Council on any given day; but repeated access by an individual into the same building have been removed from the data.

Appendix X: Background paper on internal waste minimisation activities - 'Council Walking the Talk' 2023

metrics to calculate per capita waste presents challenges for comparing data sets and therefore tracking progress against the target.

Taking the total waste produced over a time period and dividing this by the number of visits in that period provides an average waste per visit. Table 2 shows the average waste per visit for some of the largest corporate council office sites for calendar year 2022⁴.

Table 2: Refuse collected (kilograms) from council administration buildings in 2022

Month	Refuse (tonnes)	Monthly Visits	Avg waste per visit (Kg)
Jan-22	1.506	6754	0.223
Feb-22	1.301	5805	0.224
Mar-22	1.358	8033	0.169
Apr-22	1.404	10631	0.132
May-22	2.976	25632	0.116
Jun-22	3.616	27343	0.132
Jul-22	3.975	24978	0.159
Aug-22	3.881	32484	0.119
Sep-22	4.141	31763	0.130
Oct-22	4.526	26849	0.169
Nov-22	4.242	37559	0.113
Dec-22	3.834	25148	0.152
Total	36.76	262979	

The average refuse per visit for calendar year 2022 is 0.14 kg. Interestingly, months with lower visitation have a higher refuse per visit, although this may be an anomaly due to weather events in January and February, for example making it difficult for the cafes to predict requirements.

⁴ Including Auckland House (but excluding tenants), Orewa (Pacific and Tasman Buildings), Manukau (Civic and Kotuku buildings). Note that council use of Bledisloe House in 2022 decreased significantly during 2022 so it has been excluded from this analysis. Monthly visit data for Henderson was not available.

Figure 1: Refuse per visit during 2022 across Auckland House, Orewa and Manukau locations



As explained above, comparison between the 2012 and 2022 data is compromised by the different methodologies.

Going forward we recommend using security card access data (i.e. visitation) and the refuse tonnages from the contractor reporting to assess performance, as these sources provide the most accurate numbers. We also recommend that the baseline is reset based on this new metric.

Recommendations for office waste actions for 2024-2030

Opportunities have been identified for improving waste management systems at Auckland House including waste from the cafeteria, office kitchenettes and bathrooms.

Waste systems in other key locations also need to be reviewed including an audit of waste, recycling and food scraps. We recommend that this be done once further consolidation of key office locations is largely completed (e.g., 2024).

Further actions to support waste minimisation include establishing baselines and targets for individual office buildings and providing transparent data on performance against those targets. Regular reporting on waste generation and/or diversion rates could be provided to staff and building occupants so that they can see the impact of their actions. This could be incorporated for example into an online portal linked to other sustainability outcomes on a building-by-building basis. Regular review of performance would trigger actions to investigate the waste and recycling systems in locations where waste volumes or diversion is not progressing, and initiatives to support greater waste minimisation.

In summary - we recommend:

- Establishing baselines and targets for individual office buildings and providing transparent data and information to employees on performance against those targets.

- Regular review of waste performance (e.g. with waste audits) to trigger actions where more support is needed.

A new office waste target for 2024-2030 across council administrative buildings

Based on information from our 2019 waste audit including the amount of recyclables in our refuse; together with preliminary work to identify opportunities at Auckland House to reduce waste, we think there are still opportunities to reduce waste substantially. As noted above, baselines should be reset based on more accurate data on actual volumes collected together with swipe card access.

We recommend the following target:

- Reduce the council's own in-house office waste by 50 per cent per visit by 2030 from a 2022 baseline of 0.14 kg per visit. This equates to a reduction to 0.07 kg per visit by 2030.

3. Operational Waste

2018 Waste Plan Target

Work across council to set a baseline for operational wastes and, by 2019, put in place targets for reduction.

Actions relating to operational waste.

Several initiatives have been launched incorporating or focusing on waste minimisation in various departments within the council and CCOs since 2018. Some examples of these are outlined in the Case Studies section below.

Across the council group, the Sustainable Procurement Framework (endorsed in 2018) includes the goal of zero waste by 2040. This included a target for 100% of contracts to incorporate waste considerations in all procurement processes.

With this approach, we had embedded waste minimisation considerations in 20% of our sourcing events and contracts in FY21. However, there remains a lack of clear information on measures employed, and waste minimisation achieved as a result of these changes as outlined above.

Across-council work for operational waste streams includes:

- A requirement to provide site waste management plans has been standardised in our procurement template for council projects with a value greater than \$300,000; introduced in July 2022.
- Creation of a panel of deconstruction contractors to deliver a range of deconstruction services is in progress. Use of the panel will be a requirement for Auckland Council and CCO (Eke Panuku, Auckland Transport, Tātaki Auckland Unlimited) deconstruction projects.
- Work to establish better data through development of a common reporting tool to be used across Council and CCO's for capital works.

- Work to link council departments and CCO's dealing with waste including a focus on collating data on waste and addressing areas of significant waste streams including excavation material and construction and demolition.
- a Supplier Relationship programme to create more value in our spending and support Sustainable Procurement Framework outcomes through better contract management and supplier relationships.
- Work to reduce textile waste from council uniforms and wearable personal protective equipment noting the large greenhouse gas impacts of textiles in landfills.⁵ Staff have been working at both the procurement level to reduce textile end of life impacts, and through operational systems to facilitate reuse and repair of uniforms, and recycling at end-of-life.

Progress against the operational waste target

Data collation

Work has begun to collate data from across council departments and council-controlled organisations where significant volumes of waste are generated. Data supplied to date reveals many differences in the ways that data is reported and recorded across Auckland Council units and CCOs. Comparing and collating data sets is compounded by the diversity of activities and waste streams that contribute to operational waste streams, which includes waste from:

- maintaining and repairing assets,
- projects to renew, demolish and build new assets and infrastructure and
- cleaning facilities and public land after use (including events),

While we have data linking specific waste streams and activities with diversion (e.g., composted material from our parks) and/or to landfill (e.g., silts and contaminants from clearing stormwater treatment devices), there are still gaps in the information for various activities and waste streams that need further investigation. Initial findings from available data across the Auckland Council Group confirm that the most significant waste streams (including diverted material) are likely from excavation (including for work associated with underground assets such as water infrastructure) and from construction and demolition activities. Identifying key waste streams by source and volume will be more meaningful when we have comprehensive reporting requirements that enable a more complete picture of waste across the organisation.

In regard to projects to renew, demolish and build new assets and infrastructure, we've had various projects within the council group that have diverted significant amounts of waste (refer to the case studies below). However, there is a gap in understanding waste volumes and diversion across a portfolio of projects and across the council. Work has begun to address this at a council department / CCO level (e.g., refer to Healthy Water's case study below); and across the Auckland Council Group for construction works. The

⁵ Over the last year Auckland Council ordered 13,102 units of uniforms and 20,605 units of PPE across the Auckland Council Group.

latter is in the initial phases of project investigation; and includes an additional workstream to look at accrediting waste providers to deliver on construction waste management including separation, diversion and reporting, similar to the deconstruction panel noted above.

Recommendations for operational waste actions for 2024-2030

We recommend that:

- work is continued to better **understand and collate cohesive data** (e.g., through a common reporting tool) on council operational waste. This includes **waste from maintenance activities, excavation and construction and demolition waste**.
- Once the dedicated **building deconstruction supplier panel** is in place, test and monitor use and outcomes related to its three sub-panels, and support displacement of demolition with deconstruction practices across the Auckland Council Group
- Investigate delivery of a panel of accredited waste contractors
- Continue to advocate for regulatory and systemic changes to support reuse or circularity of excavated materials and construction and demolition waste
- Work continues within the council group and with suppliers to:
 - **set up systems** to support waste reduction, including in the design phase of capital works projects (especially for waste with high environmental and greenhouse gas impacts)
 - promoting and supporting innovation, education and buy-in, and acknowledging quality sustainable waste procurement including through the council's Supplier Relationship Management (SRM) programme
 - provide and update **guidelines and tools** to support waste reduction
 - support the **development of site waste plans** together with auditing of projects to understand where improvements can be made.
 - **link departments and CCOs** to support opportunities to divert wastes including excavated materials and construction and demolition waste from projects and maintenance activities.
 - **reduce reliance on hard-to-recycle and environmentally problematic** materials such as expanded polystyrene in council's construction projects

A new operational waste target for 2024-2030

Setting a target for a specific reduction in operational waste is dependent on collating data and establishing baselines for particular waste streams and activities; and scoping the impact that actions will have on waste reduction.

We recommend that work is continued to better understand and collate cohesive data on council operational waste; focusing first on activities with significant waste streams. This involves establishing a system for reporting across projects including excavation and construction and demolition. Work on this has been initiated in 2023. Once those reporting systems are established and rolled out, baseline data can be collected to establish baselines by 2026; allowing for targets to be established for following years.

The opportunity and challenge of excavated materials and biosolids

Currently the majority of Auckland's biosolids are used beneficially to rehabilitate the Puketutu Island quarry. The completion of that project after 2030 means that the approximately 130,000 tonnes of biosolid waste per annum will need another home so that they are not redirected to Auckland's landfills. Watercare are actively looking to work with the council, iwi and communities to minimize waste including options to reduce volumes through technological improvements such as thermal hydrolysis and seek a practical regulatory framework to enable returning biosolids and excavation material to land.

Excavated soil from building and maintaining underground assets and building new assets across the council, together with sediments from pond renewals are also significant waste streams. There are opportunities for beneficial reuse, for example in on-site landscaping, but the large volumes are a challenge for both transport and disposal of those materials.

We recommend:

- Work across the council to collate data for significant operational waste streams by 2025, establish baselines by 2026 and set targets for the following years to 2030.

Case Studies

i) Materials Recovery Facility 2022 Upgrade:

For the upgrade of the Materials Recovery Facility in Onehunga, over 99% of materials and equipment from the deconstruction was repurposed, reused or recycled. The bulk of equipment removed was sold to a local engineering company to be used in the construction of a future waste sort line. Total waste diversion from the deconstruction and installation was 188 tonnes, with only 0.3 tonnes landfilled.

ii) Healthy Waters:

Healthy Waters has identified three key actions to address waste originating from its capital works program and ongoing maintenance and repair of the stormwater network. These actions include:

- collaborating closely with designers and suppliers to eliminate waste in construction projects;
- ensuring the creation of comprehensive waste management plans for all projects, with regular reviews as projects advance; and
- recording data on the quantities of waste materials effectively diverted from landfill.

As part of this work, Healthy Waters are working in collaboration with contractors to inform the most effective and practical data collection methods. Healthy Waters are also working closely with the Waste Solutions Team on select projects to explore opportunities for maximising waste reduction outcomes through innovation.

City Rail Link

The [City Rail Link project](#) (funded by central government and Auckland Council) is a benchmark-setting project for sustainable infrastructure in New Zealand. The project has used the Infrastructure Sustainability Council standard, obtaining certification with an 'Excellent' and a 'Leading' as built rating in 2021 and 2022 respectively.

One of the five key focus areas of the project's Sustainability Strategy is Zero Waste to Landfill. In 2021, Link Alliance and the TROW Group were joint winners in the innovation category of the 2021 Zero Waste Awards for their work on the Mt Eden demolition works for the project, in which they achieved 98% diversion of demolition waste to landfill through deconstruction of multiple buildings and relocation of two historic buildings.

In 2022, the project: diverted 57,802 tonnes of waste from landfill (which excludes the 1,087,678 tonnes of spoil also diverted from municipal landfill); reused 6,508 tonnes of waste; and removed 8,170 truckloads of concrete from the project's carbon footprint by replacing cement with fly-ash.

iii) Eastern Busway:

Waste minimisation has been a focus for Auckland Transport's Eastern Busway project including deconstruction and salvage of materials from site clearances from around 130 homes in 2022 and early 2023. Results to date include 25% of homes relocated, 80% of waste diverted from landfill, and 2-3% of materials re-used.

iv) Eke Panuku

In 2021, Eke Panuku published their own sustainable procurement approach which included adopting deconstruction as the preferred methodology for all physical works projects moving forward. Further guidance on their waste minimization approach including deconstruction methods was published in their 2023 Public Realm Environmental Guidelines⁶

v) Procurement

Procurement have developed a supplier portal to measure and report on all Greenhouse Gas Emissions as well as waste streams for Auckland Council's largest ongoing operational contracts (in facilities management, waste management, pools and leisure centres operation, stormwater operational maintenance). Our top 20 contracts are now being managed through this portal, representing 35% of our operational spend (and >50% of our 3rd party carbon and waste footprint for AC operations).

vi) All Heart:

As part of the refurbishment of the council's Manukau administration buildings, we engaged All Heart, a company that builds partnerships to redirect, repurpose and upcycle unwanted items like office furniture and equipment, sent for second use to community groups, schools and kindergartens, non-profit organisations etc. From August 2022 to April 2023 All Heart have achieved a 100% redirection rate, saving a

⁶ refer <https://www.ekepanuku.co.nz/media/ehpfbcfy/eke-panuku-public-realm-guidelines.pdf> and <https://www.ekepanuku.co.nz/media/rrylg0z3/eke-panuku-annual-report-2021-2022.pdf>

Appendix X: Background paper on internal waste minimisation activities - 'Council Walking the Talk' 2023

total of 1,220 items with a combined weight of 41,733kg, value of \$107,049, and 26.959 avoided emissions.