

16.0 Residential Waste Management

16.1 Proposed Amendments and Statutory Context

The following table provides a summary of the proposed residential waste collection standards of the AUP(OP) within the zones identified.

Zone	Summary of Key Operative AUP(OP) Standard	Summary of Key Proposed Standard	IPI Status
Residential – Mixed Housing Urban Zone	N/A	<u>On-site storage of individual or communal bins:</u> Individual = space 1.4m ² Communal = solid waste calculator <u>Collection requirements:</u> If kerbside – 1m per dwelling clear/unobstructed If onsite - adequate manoeuvring area; and accessible for collection	Achieving quality built environment outcomes when incorporating MDRS.
Residential – Terrace Housing and Apartment Buildings Zone	N/A	<u>On-site storage of individual or communal bins:</u> Individual = space 1.4m ² Communal = solid waste calculator <u>Collection requirements:</u> If kerbside – 1m per dwelling clear/unobstructed If onsite - adequate manoeuvring area; and accessible for collection	Achieving quality built environment outcomes when incorporating MDRS and giving effect to NPS-UD policy.

This proposed standard is not provided for under Schedule 3A of the RMA or the AUP(OP). Section 80E(1)(b)(iii) of the RMA provides for the amendment or inclusion of additional provisions that support, or are consequential on the MDRS or Policy 3 of the NPS-UD.

The overall intent of this standard is to ensure sufficient, accessible provision of space for the storage and collection of residential waste bins. The presence of rubbish and waste bins has the potential to generate adverse effects on amenity and to the health and safety of people.

Increased density as a result of giving effect to the RMA is anticipated to increase demand for waste collection. The proposed standard is considered necessary to ensure that in giving effect to the RMA, development continues to achieve quality built environment outcomes. Specifically, the proposed standard responds to RPS objectives B2.3.1(1)(a) and (3), and policies B2.3.2(1)(a), (b), (d), (e) and (5).

For the reasons discussed above and in the analysis below, the standard contributes to quality built environment outcomes, including RPS objectives B2.3.1(1)(a), (2) and (3), and policies B2.3.2(1)(a) and (5). It is proposed to be applied to both permitted and restricted discretionary activities as a built form standard in MHU, THAB and Walkable Catchment zones.

16.2 Key Issues and Standard Development

Introduction

Every dwelling needs to be designed to ensure the efficient, storage, separation, collection and handling of domestic waste to maximise resource recovery and provide safe and healthy spaces for people to live. The current provisions within the Auckland Unitary Plan have failed to deliver this outcome, with multiple examples where inadequate provision of space for waste has led to negative consequences for future residents, the street network and the environment. Planning controls are required so that Auckland Council meets its basic legislative requirements as a territorial authority to ensure appropriate waste services are provided that also deliver on Auckland's commitments to zero waste and climate change mitigation. The controls need to cater and be responsive to different scales of developments.

Current Performance

The Section 35 monitoring report findings showed waste management is a significant issue in terms of on-site storage, residents' access, amenity and the method of waste collection. There are also implications for the operational aspects of waste collection services (public and private), value for money (residents and council), and meeting waste reduction objectives to address climate change³⁴.

The monitoring showed the AUP(OP) (reliance on one assessment criteria applying to developments of 4 or more dwelling) is not effectively to managing on-site waste or collections. Council's Waste Management and Minimisation Bylaw 2019 applies to developments of 10 or more dwellings and the NZ Building Code G15 – Solid Waste provide some rules and a strategic framework for managing waste. However, this needs to be complemented with appropriate management for the type, scale and location of the development in all scales of development. Every household needs to manage waste efficiently. This includes on-site bin storage space as well as access and space for either private or public collections (on-site or street kerb).

There are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments and urban environments. Consent plans and observations from site visits from the monitoring showed there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents with waste management plans and a lack of implementation for access and facilities (including waste storage) on site.

The relevant recommendations from the s35 monitoring are³⁵:

- Develop a new standard for managing residential waste on all residential zone sites – including but not limited to bin storage location, screening, hygiene, access and collection of waste bins.

³⁴ p94. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

³⁵ p95. Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment, July 2022, Technical Report TR2022/11, Plans and Places Department, Auckland Council.

- Require a waste management plan for sites of four dwellings or more in residential zones and all residential developments in the Business – Mixed Use zone.

These recommendations have been considered and addressed in the standard proposed.

A standard is the most appropriate method to ensure residential waste management is provided in all residential developments, regardless of scale, or whether it is permitted or RD activity status. The standard will require developments containing 10 or more dwellings to provide and implement a waste management plan. This will manage the complexities of higher density developments.

Achieving a compact urban environment

Provisions for collections within a site and from the kerbside are essential to achieve efficiency of private and public land as the storage space provided correlates directly to the ability of residents to efficiently separate waste materials. The type, provision and location of storage space directly affects the collection frequency and methods.

Inadequate waste storage provision directly impacts residents' ability to properly separate and divert their waste. Developments using individual bins require a total storage space of 1.4m². This is equivalent to the maximum volume provided to each individual dwelling by the Auckland Council kerbside collection service for separated refuse, recycling and food scraps. Figure 33 shows the space requirements for three types of waste bins.

For developments using communal bins, developers will need to refer to the Auckland Council's Solid Waste Calculator³⁶ to determine the amount of storage space required. The space required will be different for each development depending on the number of dwellings and occupancy, bin sizes selected, and collection frequency.

Inadequate provision of waste storage areas can lead to arrangement for collections multiple times per week, costing more than the alternative weekly Council collection. As the number of times a site needs to be serviced each week increases, so does the risk of impacts on health, safety and amenity for the residents, waste collectors, neighbouring properties, and general road-users (both pedestrians and vehicles). High frequency collection which the proposed standards will ensure facilities are provided to avoid, also does not encourage waste minimisation.

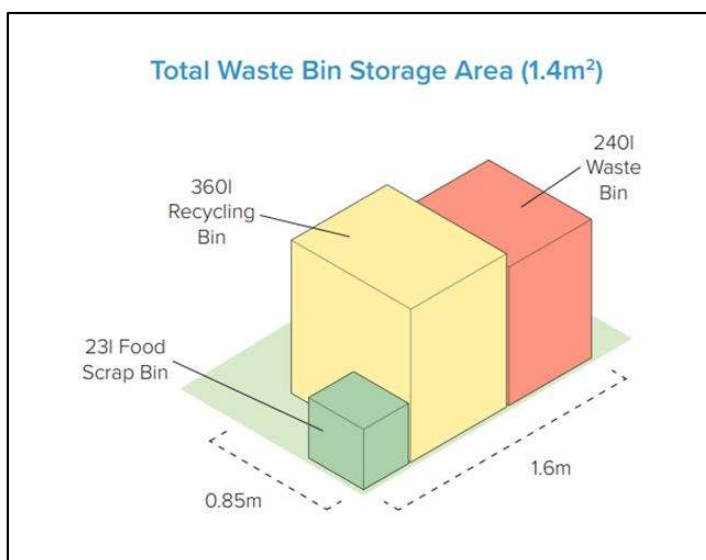


Figure 33: Space requirements for three types of waste bins.

³⁶ <https://www.aucklanddesignmanual.co.nz/resources/tools/swc>

Bin storage locations and collection points must be accessible and convenient for collectors and residents. They need to avoid access through dwellings, across unpaved surfaces, landscaped areas, steps or steep gradients which would make access and collection difficult.

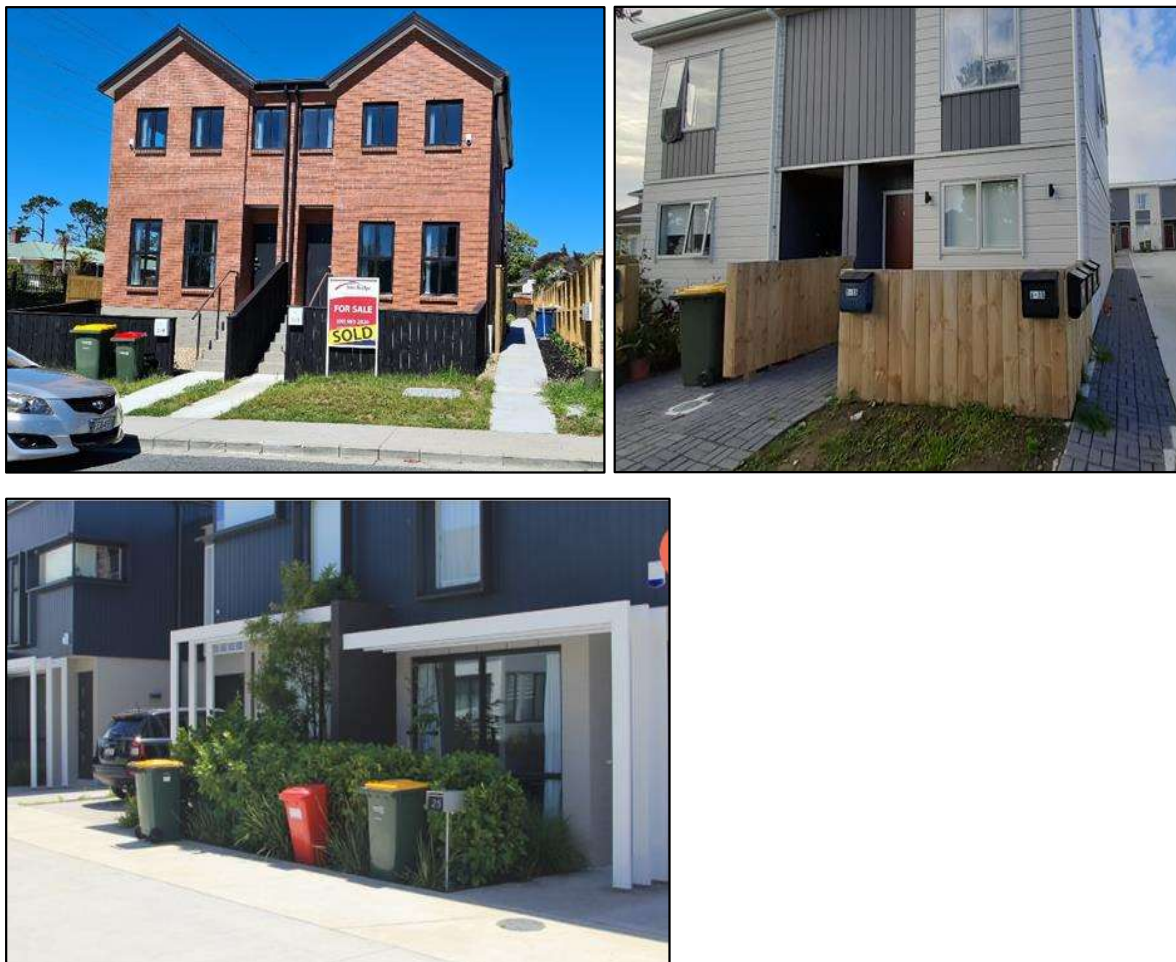


Figure 34: The first image (top left) shows waste bins stored on the public berm in the front of the property and in the side yard on the landscaped area adjacent to the primary pedestrian footpath for two further dwellings at the rear of the site. The second and third image show waste bins stored at the front of dwellings where they encroach on footpaths designed to provide safe pedestrian access and are visible to the street which detracts from the amenity of the site and urban environment. These locations illustrate poor outcomes when no spatial considerations are given to on-site waste storage from the S.35 monitoring site visits.

The following images show the incorporation of effective waste storage arrangements which the standard seeks to secure from development moving forward. Waste bins should be visually screened from the street, pedestrian footpaths within the site, shared driveways, outlook spaces, outdoor living areas, adjacent sites and neighbouring dwellings. This ensures the

storage of waste bins is spatially provided for in locations that minimise visibility or/and can be physically screened so they are not visible within the site, street and adjacent sites.



Figure 35: The left image shows a white fenced enclosed area to the right of the property which visibly screens the waste bins from the street while maintaining convenient access for residents. This dwelling is in Hobsonville where developments comply with design requirements set by the Hobsonville Land Company (now Kainga Ora). This requires rubbish bins be sited so as not to compromise outdoor living courts, be visually obtrusive and to be out of the view from the street. The right image shows communal waste bins stored in a well designed, ventilated, easily accessible communal waste area with good access for residents and on-site waste collection.

The proposed standard aligns with the amenity aspects of waste storage and accessibility as specified in the Design Element R7 Design for Residential Waste³⁷ and the NZ Building Code (2004)³⁸.

Waste collection

Waste management needs to be well-functioning and meet operational requirements for both residents and collectors. One of the most significant issues for waste management is collection. The growth enabled by the intensification provisions will create even more pressure on street environments to accommodate waste bins for collection where a significant issue already exists. This will be through the cumulative impact of multi-unit developments requiring space on streets for kerbside collection.

To manage this issue, the amount of kerb space for waste bins on a street to enable council kerbside collection service is a key determinant of the type of waste collection possible for a site.

Waste servicing from private waste collectors has the potential to significantly impact the flows of traffic around the city. It is the experience of council's Waste Management team when assessing waste management plans required under the Waste Minimisation Bylaw that many developers opt for a private waste collection from the outset, assuming a private service provider will be more adaptable and less intrusive than a council collection. If the storage space is inadequate and requires more frequent collections or the storage area is inaccessible to

³⁷ https://content.aucklanddesignmanual.co.nz/regulations/design-for-the-rules/Documents/Design_Element_R7_Design_for_Waste.pdf

³⁸ <https://www.building.govt.nz/assets/Uploads/building-code-compliance/g-services-and-facilities/g15-solid-waste/asvm/g15-solid-waste-amendment-3.pdf>

collection vehicles, private collectors will be required. There may also be extra costs to residents for this additional level of service.

There are options for different types of on-site collection:

- a collection vehicle entering the site with provision for a driveway, manoeuvring space for reversing and a loading area for a truck of an appropriate size to collect either individual or communal bins.
- a kerbside collection service where the collection service hand-wheel bins out to the waiting vehicle and then return them to the storage area.

Both options have implications for the spatial arrangement of the site and may affect the amount of development possible. The type of collection must be included in the site planning stage of developments as the spatial requirements for waste collection vehicles access, manoeuvring and loading can be significant

Waste storage areas need to be designed to hold a week's worth of refuse, food scraps and recycling. With respect to this, it is proposed that permitted collection methods should be limited to kerbside collections (individual bins placed out for collection on the kerbside) or on-site collections (individual or communal bins collected from within the site).



Figure 36: Shows waste management collection is becoming a significant issue for multi-dwelling developments. Waste bins for kerbside collections consume footpaths, forcing pedestrians onto the carriageway creating road safety risks.

Waste Management and Minimisation Bylaw 2019³⁹

The Waste Management and Minimisation Bylaw 2019 encourages a transformation in the way Aucklanders reduce, recycle, reuse and recover resources to help Auckland achieve a zero-waste future. The purpose of the bylaw is to manage and minimise waste, protect the public from health and safety risks and nuisance, and to manage the use of council-controlled public places by, among other things:

The current AUP(OP) provisions has resulted in frequent examples where waste storage is an afterthought, and then becomes a problem for both residents and collectors. Council's Compliance Monitoring team deals with ongoing site issues created by this failure to address

³⁹ <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/bylaws/docs/wasteminmgmtbylaw/waste-management-minimisation-bylaw-2019.pdf>

the spatial and operational requirements for waste management at the start of the development design process. This can lead to complaints from road users (pedestrians, cyclists and vehicles), site occupants, and neighbouring properties that their safety and amenity is being impacted. It is anticipated that the proposed residential waste management standards will provide much needed clarity on waste storage and collection responsibilities.

Climate change resilience

Waste makes up 3.1 per cent of Auckland's greenhouse gas emissions profile, and heavy vehicle transport emissions a further 6.8 per cent⁴⁰. The Government's first Emissions Reduction Plan (ERP) recognises the fundamental role waste reduction, in particular removing organic material such as food waste from landfill, will have in helping Aotearoa New Zealand achieve its 2050 emissions reduction target⁴¹. A ban on organic waste to landfill by 2030 is being explored as part of the ERP.

The C40 Cities Climate Leadership Group is a group of over 90 global cities that are committed to taking bold climate action, leading the way towards a healthier and more sustainable future.

Auckland has been recognised as an Innovator City within the C40 Cities network since 2015, and Auckland's Mayor has signed the C40 Cities Zero Waste Declaration, which commits to:

- cutting the amount of waste generated by each citizen by 15 per cent by 2030
- reducing the amount of waste sent to landfills and incineration by 50 per cent
- increasing the diversion rate to 70 per cent by 2030.

The Zero Waste Auckland programme is a key part of Te Tāruki a Tāwhiri: Auckland's Climate Plan commitments to reduce total emissions, by reducing waste to landfill by 30 per cent by 2027 and reach net zero waste by 2040.

On 8 June 2022 Auckland Council's Finance and Performance Committee approved a significant policy shift in the Waste Management and Minimisation Plan 2018 that will, among other things, significantly reduce refuse vehicle emissions by reducing the number of collection vehicles on Auckland roads. From 2025, for the properties serviced by the standard Auckland Council services, bin sizes, access and collection frequency are being carefully designed to optimise diversion behaviour and influence waste reduction. These efforts are at odds with - and risk being undermined by - developers who do not meet the same standards or provide equitable access for individual households to achieve optimum waste reduction and diversion opportunities.

Sites using the Auckland Council service may eventually be serviced as infrequently as once per fortnight or once per month, while multi-unit sites without minimum waste storage requirements may need to be serviced five or seven times per week, undermining Auckland Council's plan to reduce emissions refuse and recycling trucks.

From an emissions perspective, increasing the number of sites requiring daily collections or multiple collections per week could be calculated to estimate the tonnes of CO₂-e produced by the additional collection vehicles required to be on Auckland's roads each day to service these sites.

For example, if an additional 66,000 multi-unit dwellings are constructed Auckland by 2031 were on a weekly rather than daily collection of their refuse, recycling and food scraps, Auckland

⁴⁰ p42. Te Tāruke-ā-Tāwhiri: Auckland Climate Plan

⁴¹ <https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>

would be able to save 4,200 t CO₂-e / year or the equivalent of removing 2,500 cars off the road.

Keeping food waste out of landfill and preventing methane emissions is a key part of Zero Waste Auckland. The importance of this work programme to climate mitigation has recently been recognised by central government through an announcement all households in New Zealand's urban centres will need to be provided with a kerbside food scraps collection by councils, and all businesses will be required to separate food waste from general waste.

Individual households also need to be provided with the best infrastructure to facilitate dry recycling. Avoided emissions from increasing household recycling rates is significant because it prevents the need to mine/harvest virgin materials (glass, paper, metal) and petrochemicals (plastics).

Poor waste diversion behaviours begin to present themselves when residents have to walk longer distances from their property to a communal waste bin, (currently only able to be controlled in the NZ Building Code 2004 which is too late in the development phase). Where communal bins are used, personal responsibility reduces, and Council's ability to enforce against bin contamination issues is reduced. Evidence shows that diversion rates drop if residents are not provided with a means to keep recycling, food and general waste separated from one another until they can deposit these three waste streams into the appropriate bins.

WRAP UK data shows that individual food scraps bins divert 57 per cent more food scraps than communal bins, and Auckland Council waste audits showed a 25 per cent increase in dry recycling diversion when households have individual bins over communal bins.

17.0 Development Yield from Proposed Standards

To assess the implications on development yield of the proposed standards and the ability to enable the intensification provisions sought by the RMA whilst having regard to the identified QBE outcomes, three dimensional design modelling has been undertaken. This is presented in detail within the following two reports:

- Terrace Housing Residential Development Study, produced by the Tamaki Makaurau Design Ope, Auckland Council.
- Apartment Residential Development Testing, produced by Jasmax.

The terrace housing study compares the operative and proposed yield of notional development models within the MHU and THAB zone. The apartment study compares the operative and proposed yield of apartment development models within the THAB zone which is a typology of housing and development particularly anticipated in this zone given the planned character and heights enabled.

These yield studies provide a comparison and understanding of the effect of the proposed changes on the development of a site where in both the operative and proposed modelled scenarios the zoning is the same. However, it is important to recognise that alongside these changes to zone provisions, geographic changes to the zoning of land within Auckland are also proposed. Notably the increase in MHU and THAB zoned land (including the introduction of walkable catchments) will in itself significantly increase the planned development capacity of Auckland, before considering the intensification amendments proposed to the zone chapters of the AUP within PPC78.