BEFORE THE HEARINGS PANEL
HUTT CITY COUNCIL

UNDER the Resource Management Act 1991

IN THE MATTER of the Proposed Lower Hutt District Plan

Hearing Stream 3: Residential and Rural Zones

STATEMENT OF EVIDENCE OF KAAREN ROSSER (PLANNING) ON BEHALF OF ENVIRO NZ SERVICES LTD – SUBMITTER (323)

5 JUNE 2026

---

1. Executive Summary

1.1 By way of summary, it is my opinion that the changes sought to the provisions of the Residential Zones and the Rural Zones, as detailed in the evidence below, are appropriate and should be adopted by the Hearings Panel.

1.2 Under the Medium Density Residential Zone (MDRZ) and the High Density Residential Zone (HDRZ), Enviro NZ sought some amendments to the urban design outcomes policies to incorporate a further outcome for 'adequate waste storage and collection'. A new standard was also sought for the MDRZ and the HDRZ to define the minimum storage area for waste management bins and a minimum width of kerb space for bins (submission points 323.048, 323.055, and 323.52), along with changes to specific rules to incorporate the standard.

1.3 I support an amended waste management standard on the basis that minimum thresholds are required to support the allocation of well-designed waste areas, and the separation and collection of waste in intensive residential developments. Monitoring in Auckland for developments less than 10 units has shown that space for waste needs to be designed at the outset with minimum space criteria to avoid the safety, amenity and operational issues that arise when insufficient and poorly located space is allocated for waste management bins. The proposed standard will ensure that good urban design outcomes will result from medium density intensification promoted by the Plan. It will ensure adequate waste storage provision so that residents can properly separate and divert their waste in order to meet waste minimisation targets. The standard will also ensure that collection of waste can be achieved without causing safety concerns within the development and the street.

1.4 I do not agree with the reporting planner's conclusion that the notified PDP provisions, in conjunction with the Transport Chapter and the Solid Waste Bylaw, adequately address the provision of waste management in the MDRZ and HDRZ. Both TR-S10 and the Solid Waste Bylaw only apply to developments of 10 or more units. However, a significant proportion of intensified residential development occurs at smaller scales (e.g. 3–9 units), and with tight building envelopes so that waste bin locations are often an afterthought.

1.5 While the definition of servicing areas includes refuse collection, the definition is generic and effects-based, without specifying the minimum spatial requirements for bin storage, or safe and practical access arrangements, along with kerbside interface requirements for collection. The MDRZ and HDRZ have no service area standard, therefore this leaves too much discretion for consenting more than 3 units, which has demonstrably resulted in poor outcomes in other intensification contexts.

1.6 The proposed amendments to the urban design outcomes policies support the waste management standard and allow for integration with the other urban design elements necessary for quality built environment outcomes. Without clear zone-specific urban design minimum direction there is a disconnect in providing practical on-site waste storage and collection requirements.

1.7 For the Rural zones, Enviro NZ requested some new definitions for **cleanfill** and **landfill** that have the same meaning as the National Planning Standards. I support the acceptance of these submission points.

1.8 Enviro NZ requested a change to the definition for rural industry. I support the rejection of the submission point.

2. Introduction

2.1 My full name is Kaaren Adriana Rosser.

2.2 I am an Environmental Planner with Enviro NZ Services Limited (Enviro NZ). My qualifications and experience are detailed at **Attachment 1**.

2.3 My evidence is given on behalf of Enviro NZ in relation to those matters to be heard within Hearing 3 of the Proposed Lower Hutt District Plan (PDP). Within my evidence I have addressed the matters relating to the provision of waste collection, treatment and disposal relevant to the Residential zones and the Rural zones.

2.4 I have reviewed the Section 42A Hearing Report ("S42A") completed for the Council by Kate Pascall for the Residential zones, Rezoning and Strategic Directions UDSD-O3 and UDSD-O7, along with the S42A Hearing Report prepared by Sean Bellamy for the General Rural Zone, Rural Lifestyle Zone and related strategic directions, definitions and maps. I have reviewed the S32 Report for the Residential zones and the Rural Zones, and the Summary of Submissions document for the relevant topics within Hearing 3.

2.5 I am generally familiar with the Lower Hutt area.

Code of Conduct

2.6 While this matter is being heard at Council level, I have read the Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note (2023) and I agree to comply with it (as if I was presenting to the Environment Court). I can confirm that the issues addressed in this statement are within my area of expertise and that in preparing my evidence, I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

3. Scope of Evidence

3.1 This statement of evidence will, in the context of Enviro NZ's submission, address the following matters:

(a) The background and reasons for the submission points heard at this hearing;
(b) Comment on the Hearing Reports in terms of the submission points relating to waste management for the Medium Density Residential Zone, the High Density Residential

Zone, and those submission points pertaining to the Rural zones, along with any other relevant submission points, and the relevant definitions.

4. Background and Reasons for Submission

4.1 In general, the submitter is generally supportive of the notified version of Proposed Plan but specifically seeks some inclusion of matters pertaining to waste infrastructure within the residential chapters of the Plan. The submitter was largely supportive of the wording within the Rural zones but had sought some changes to specific definitions.

4.2 As previously outlined in my evidence for both Hearing 1 and Hearing 2, work is now focussed on shifting NZ to a circular economy, with addressing waste a key component of that work. Enviro NZ considers that District Plans have a key part to play in enabling appropriate waste infrastructure for each area/region.

4.3 Compared with other countries, our reuse and recycling rates are poor. For the year of 2021, each New Zealander is estimated to have sent nearly 700 kilograms of waste to municipal landfills. To enable a circular economy, waste must be separated, collected and sorted and/or processed for re-use of the constituent materials. As waste management specialists and collectors of waste generated on sites, operators of transfer stations, recycling facilities and landfills, Enviro NZ considers that having appropriate standards for the separation of waste and the collection of waste is necessary to achieve a circular economy. It also helps to achieve climate change directives.

4.4 The Emissions Reduction Plan (Dec 2024) is a requirement of the Climate Change Response Act 2002. As waste plays a significant role in climate change (being approximately 5% of emissions), this document is relevant to any intensification planning provisions. The Emissions Reduction Plan has a particular focus on reducing organic waste disposal. Hutt residents can opt in for the collection of garden waste. The collection of food waste is being investigated. Reducing organic waste disposal is significantly easier if the size and design of the waste management spaces on sites being developed in the higher density zones are fit for the current, but more importantly, the future kerbside waste collections.

4.5 Against this context, I also consider the provision of an effective and efficient waste management system is vital to ensure the safe and effective delivery of a quality built and a well-functioning urban environment as directed by the National Policy Statement on Urban Development.

4.6 As stated in the submission, to ensure a quality-built environment at greater densities, providing for waste (rubbish) storage and collection needs to be carefully planned to ensure that waste is able to be managed and minimised easily and effectively, with accessible and safe collection. Monitoring in Auckland for multi-unit developments has shown that the spatial and operational requirements for waste management need to be designed at the start of the design process. In not having a clear standard defining minimum standards for waste storage and collection there was a disparity in the commitment to waste management in processing the resource consents, and therefore often a lack of implementation of locating suitable facilities on site. Therefore, ensuring that the higher density zones appropriately provide for waste facilities allows that waste can be separated on site, stored in a healthy manner that is visually appropriate, and provides for safe collection of waste materials.

5.0 Residential Zones

5.1 Waste storage and collection - Enviro NZ sought an amendment to the Urban Design Outcome policy for MRZ-P12 (323.043), and HRZ-P12 (323.050) to include a new clause as follows:

…….*7. incorporates adequate space for waste storage and collection*

5.2 Enviro NZ also sought an amendment to MRZ-P13 (323.044), and HRZ-P13 (323.051) to explicitly reference waste as part of storage and servicing areas at clause 4 of the policy.

5.3 These submission points were discussed at paragraphs 169-173 of the S42A report, where the reporting planner rejected the submission points given that other parts of the PDP address waste management and storage in the Transport Chapter policy and standard TR-S10, along with the Solid Waste Bylaw. The definition for servicing areas was discussed as including refuse.

5.4 Enviro NZ sought a new standard for the MDRZ and the HDRZ to define the minimum storage area for waste management bins and a minimum width of kerb space for bins (323.048, 323.055, and 323.052), along with amendment to R3 and R4 of MDRZ and HDRZ to require compliance with the proposed waste management standard. The proposed standard is as follows:

1. *Each independent dwelling unit shall provide a waste management area with a minimum area of 1.5m2 and a minimum dimension of 1 metre in any direction, except:*
   a) *Where a communal waste management area is provided to accommodate bulk collection from within the site;*
2. *Waste management areas must be screened so they are not visible from a legal road, ground floor of adjoining residential sites, and open space zones;*
3. *Waste management areas must not encroach onto driveways, manoeuvring areas, parking, and outdoor living areas and be accessible for residents to get to the kerb without stairs or steep gradients.*
4. *A kerbside space of 1m per dwelling is available without impeding the footpath*

5.5 At paragraphs 334-336 of the s42A report the waste management standard proposed by Enviro NZ is discussed and recommended for rejection for the same reasons as at paragraphs 169-173.

5.6 In terms of the additions to the policies P12 and P13, I do not agree with the s42A report at paragraphs 169-173 that the management of waste under these policies is sufficiently dealt through TR-S10 in the transport chapter, the Solid Waste Bylaw and being part of service areas (as referred to in MRZ-P13 and HDRZ-P13).

5.7 Both TR-S10 and the Solid Waste Bylaw only apply to developments of 10 or more units. However, a significant proportion of intensified residential development occurs at **smaller scales (e.g. 3–9 units)**, within the MDRZ and HDRZ zones.

5.8 Site sizes for units in these zones can be considerably less than 200m^2, which is very tight. All the urban design elements need careful planning at such densities to ensure that good design and functionality results. The Solid Waste Bylaw is also operational rather than spatial and does not control site layout or building design at the point of development. As it applies at a different stage of the development process, it does not allow for the integration of well-planned waste storage areas.

5.9 While I am aware that the medium density development areas in Hutt City may not be similar to Auckland, I do consider that recent intensification undertaken in Auckland provides multiple examples where poorly thought-out waste design has had a big impact on the quality and functionality of residential developments, and led to unsafe street environments when pedestrians and cyclists cannot navigate around bins, along with difficulty for collection vehicles to pick up bins in a safe manner. Importantly, these issues arose even while the assessment criteria for more than 4 dwellings in the Mixed Housing Suburban and Urban Zones, and any dwelling in the Terrace Housing and Apartment Zone, included having regard to waste collection and recycling facilities (similar but more specific waste storage areas than the clause within P13 to have storage and service areas). The Mixed Housing Zone assessment criteria at H5.8.2(2)(e)(iv) of the Auckland Unitary Plan (Operative in Part) ("AUP(OP)") refers to "*Provide the necessary waste collection and recycling facilities in locations conveniently accessible and screened from streets and public open spaces*. "

5.10 Accordingly, the intensification Plan Change 78 of the AUP(OP) and the more recent Plan Change 120 has introduced a waste management standard for which the rationale is explained in the extracts from the s32 report attached at **Appendix 2**. The conclusions from monitoring multi-unit developments is that the spatial and operational requirements for waste management need to be designed at the start of the development design process. Without minimum standards for waste management storage and collection, planners are left to decide what is appropriate, and this has often resulted in poor waste management facilities. Complaints from road users (pedestrians, cyclists and vehicles and collection trucks), site occupants, and neighbouring properties occur when safety and amenity is being impacted from:

- Too many bins blocking the footpath to allow safe pedestrian access;
- Too many bins along the frontage to allow for safe collection of waste by the collection vehicle;
- Inadequate bin storage on site in terms of physical space provided, leading to bins being located in common areas or within outdoor living spaces;
- Poor on-site location of waste storage requiring negotiation of steep gradients, steps, or through buildings, to get bins to the kerb for collection.

5.11 Three examples of these issues are provided below at Figures 1 -3.

5.12 Therefore, while waste management for residential activities is referred to in the elsewhere in the PDP, this is fragmented and not integrated into the other urban design elements necessary for good built form outcomes. Without clear zone-specific urban design minimum direction there is a disconnect in providing practical on-site waste storage and collection requirements.

Figure 1 and 2 – bin locations forcing pedestrians to the carriageway and/or impeding bus entry and exit and waste pickup from collection vehicles

Figure 3: Bins areas without screens and stair access.

5.13 The other impetus for a waste management standard is that inadequate waste storage provision directly impacts residents' ability to properly separate and divert their waste. This has direct impacts on meeting the targets in the Wellington Region Waste Management & Minimisation Plan and in reducing greenhouse gas emissions.

5.14 I also note that while the definition of servicing areas includes refuse collection, this remains generic and effects-based, without specifying the minimum spatial requirements for bin storage, the safe and practical access arrangements; or kerbside interface requirements for collection. In practice, as there is no service area standard, this leaves too much discretion at the consenting stage, which has demonstrably resulted in poor outcomes in other intensification contexts.

5.15 I therefore consider the proposed waste standard to be appropriate as it provides minimum storage sizes to be adhered to. However, noting the transport standard TR-S10 which requires on-site storage areas for 10 or more units, I propose some amendments to the proposed standard to integrate with this standard. The proposed amended standard is as follows:

1. *Each independent dwelling unit shall provide a waste management area with a minimum area of 1.5m^2 and a minimum dimension of 1 metre in any direction, except:*
   a) ~~*Where a communal waste management area is provided to accommodate bulk collection from within the site*~~ *Where TR-S10 applies for 10 or more residential units;*
2. *Waste management areas must be screened so they are not visible from the street ~~a legal road~~, ground floor of adjoining residential sites, and open space zones;*
3. *Waste management areas must not encroach onto driveways, manoeuvring areas, parking, and outdoor living areas and be accessible for residents to get to the kerb without stairs or steep gradients.*
4. *A kerbside space of 1m width per dwelling is available without impeding the footpath.*

5.16 The clauses within the proposed standard require the screening of bins which will assist with exposure to wind and resulting safety to residents, along with amenity of the streetscape and within multi-unit developments. It also requires accessibility for the bins to be taken from the dwelling to the street. This would mean not having to transport bins through dwellings, across steep ground or via stairs.

5.17 The spatial dimension for kerbside collection deals with the number of bins between vehicle crossings. Long sites may have up to 10 dwellings for a narrow site width (10 or over the plan requires on-site waste management). The proposed standard provides for a 1m kerb width for bins that would need to be picked up on collection day per dwelling. This allows for two bins at a time. If the kerb width is insufficient, then on-site collection will be needed and assessed through a resource consent. The spatial requirements on-site would then be re-assessed.

5.18 If the Panel is considering shifting the criteria proposed within the waste management standard to be provided within a Residential Design Guideline, I still consider that a zone standard is preferable to provide minimum areas for waste storage areas. My evidence has demonstrated that these minimums are needed to allow for bin areas at the design stage.

5.19 In conclusion, I do not agree with the reporting planner's conclusion that the notified PDP provisions, in conjunction with the Transport Chapter and the Solid Waste Bylaw, adequately address the provision of waste management in the MDRZ and HDRZ, and consider the relief

proposed ensures that waste management and minimisation are properly integrated into the design and functioning of intensified residential development.

5.20 Servicing Hours - The only other Enviro submission point for the residential zones was in relation to amending the timeframe for start time for servicing hours from 8am to 7am (323.042, 323.047, and 323.054) for MRZ-R21, HRZ-R22 and LLRZ-R20. I support the acceptance of the relief to amend the start time to 7am.

6.0 Rural Zones

6.1 GRUZ-O4 - Of the rural zone submission points, Enviro NZ supported objective GRUZ-O4. The proposed amendment by the Pork Industry Board to add reverse sensitivity to the objective is recommended to be accepted by the reporting planner. I support this amendment for the reasons given in the S42A report.

6.2 GRUZ-P2- In terms of supporting the Waste Management NZ Ltd amendment of GRUZ-P2 to amend clause 2(e) to include cleanfill and quarrying activities that support development in general rather than just rural development in the list of potentially compatible activities, I do not support the rejection of the Waste Management NZ amendment.

6.3 While some larger scale cleanfill and quarrying activities may not be compatible as discussed in the S42A report, the limb of the policy is prefaced with the words "potentially compatible activities". This signals that these necessary activities have the potential to be compatible, and therefore provides a more balanced framework to recognise the functional need for these activities in the zone.

6.4 GRUZ-R16 - I agree with the acceptance of the submission point by Waste Management NZ Ltd to amend GRUZ-R16 to add managed fills to the rule. Managed fills are nationally recognised under the Technical Guidelines for Disposal to Land[1] and other District Plans specifically recognise them.

6.5 Rural Industry Definition – Enviro NZ proposed an addition to the rural industry definition to recognise that organic composting is included in the definition. I accept the rejection of the submission point noting that the definition is a NZ Planning Standards definition. Interpreting the notified definition would still allow for composting to be defined as a rural industry given its role in supporting plant growth.

6.6 Cleanfill Definition – I support the recommendation of the reporting planner to accept the Enviro NZ submission point to include a NZ planning standards Cleanfill definition. I agree that this definition will aid the interpretation of the District Plan, given the existing definition for Cleanfill Material.

6.7 Landfill Definition – I agree with the recommended acceptance of the submission point 323.011 requesting a new definition for landfill, being the same as the NZ Planning Standards.

[1] Technical Guidelines for the Disposal to Land - Project Team Draft - Revised B, MfE comments

6.8 Managed Fill Definition – I support the proposed definition by Waste Management for a managed fill definition.

7.0 Conclusion

7.1 I support those points which have been accepted within the s42A report.

7.2 For the MDRZ and HDRZ zones, the proposed waste management standard, will, in my opinion, ensure that good urban design outcomes will result from the increased intensification promoted by the Plan, by designing for waste at the beginning of the development design process in accordance with minimum standards.

7.3 I consider that the urban design outcomes policies need to reference waste storage and collection areas given the regulatory gap for developments less than 10 units, and that effective waste management is a core amenity and urban design issue.

7.4 In terms of the rural zone, I support the Waste Management NZ Ltd amendment of GRUZ-P2 clause 2(e). I also support having clear definitions for landfill and cleanfill and managed fill which will assist in the interpretation of the PDP.

7.5 Thank you for your consideration.

Kaaren Rosser
Kaaren.rosser@environz.co.nz

Appendix 1

Qualifications and Experience

I hold a Bachelor of Science (Earth Sciences) from the University of Waikato and a Post-Graduate Diploma in Natural Resources from the University of Canterbury, along with a Certificate of Proficiency in Planning from the University of Auckland. I am an Associate Member of the New Zealand Planning Institute.

I have over 25 years' experience, which includes both working in local government and the private sector. I have undertaken policy analysis and the preparation of submissions for a wide range of clients as a consultant planner and I have also written precinct provisions for the Auckland Unitary Plan (Clevedon Waterways Precinct). I have advised clients on a wide range of planning matters, but with a particular focus on water and air discharge matters relating to industrial sites and airport infrastructure. I have also processed complex planning applications for Auckland Council including chicken farms and large multi-unit developments.

I currently specialise in waste management sites and processes, undertaking consenting and policy analysis for this specialised sector.

Appendix 2

S32 Extract for Waste Management Standard PC78 AUP

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	On-site storage of individual or communal bins: Individual = space 1.4m^2 Communal = solid waste calculator Collection requirements: 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	On-site storage of individual or communal bins: Individual = space 1.4m^2 Communal = solid waste calculator Collection requirements: 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 change[34].

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 are[35]:

- 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 1.4m^2. 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.

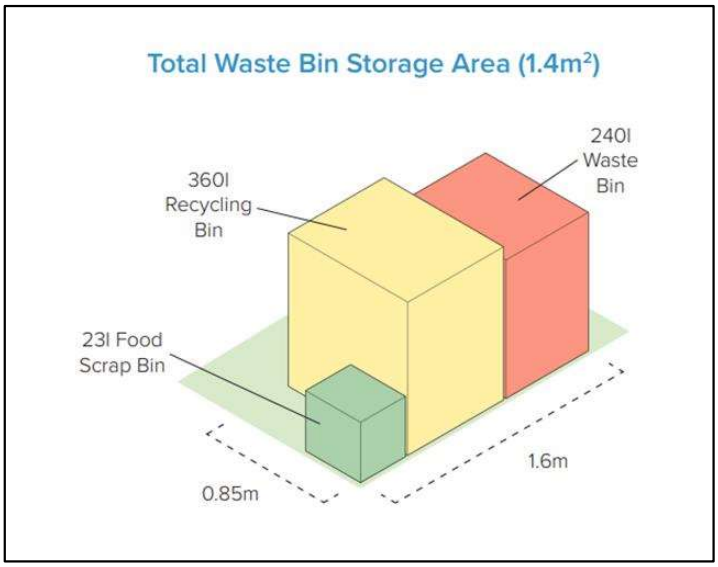

Figure 33: Space requirements for three types of waste bins.

For developments using communal bins, developers will need to refer to the Auckland Council's Solid Waste Calculator[36] 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.

[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.

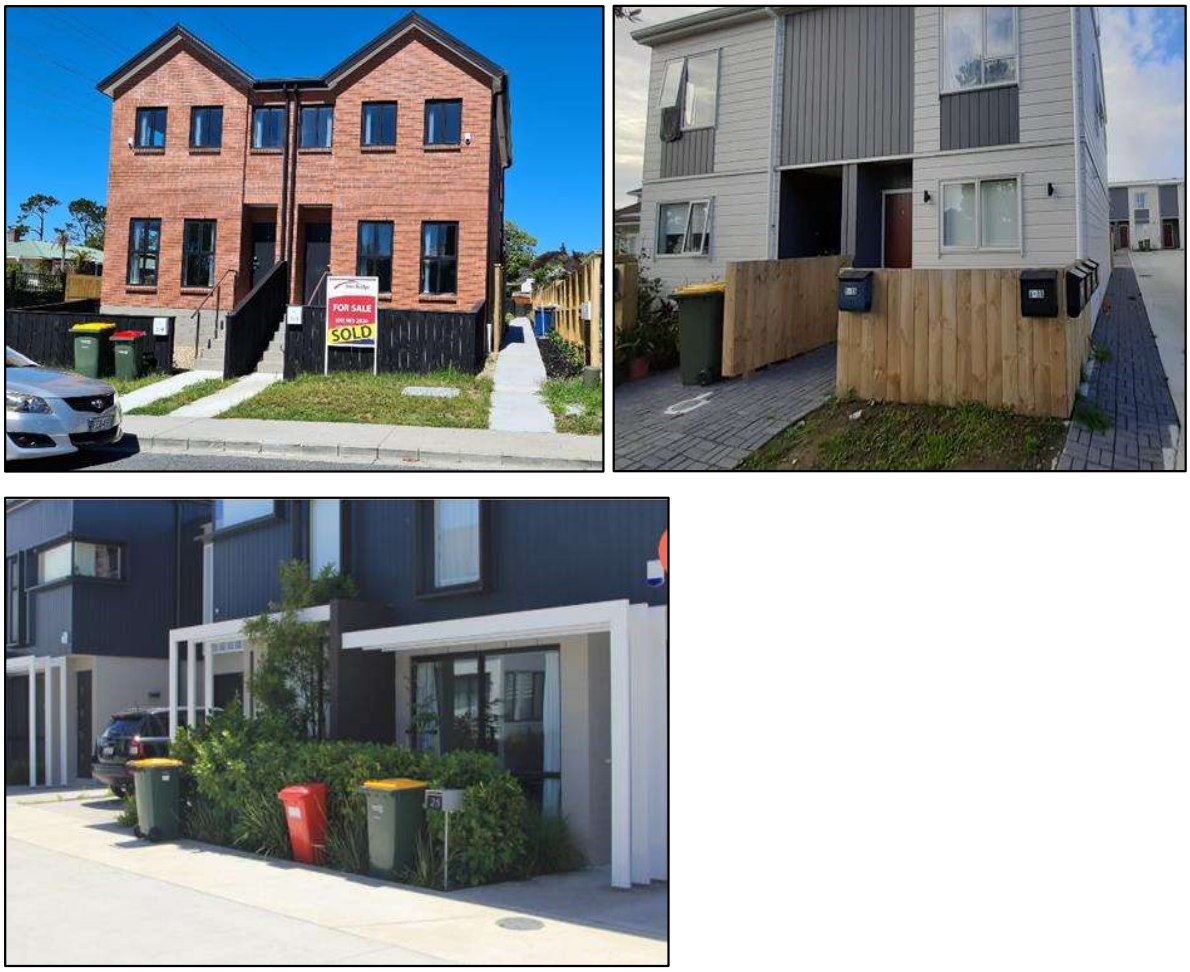

Figure 34: The first image (top left) shows waste bins stored on the public berm in the front of the property and in the side yard on the landscaped area adjacent to the primary pedestrian footpath for two further dwellings at the rear of the site. The second and third image show waste bins stored at 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 Waste[37] 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 creatin road safety risks.

Waste Management and Minimisation Bylaw 2019[39]

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/docswasteminmgmtbylaw/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 cent[40]. 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 target[41]. 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 CO_2-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 CO_2-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.